

VITAL & HEALTH STATISTICS

Midwife and Out-of-Hospital Deliveries United States

An analysis of the demographic characteristics and pregnancy history of mothers and birth weight of babies delivered in a nonhospital setting or by a midwife in a hospital.

**Data from the National Vital
Statistics System
Series 21, No. 40**

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Symbols

- - - Data not available
 - . . . Category not applicable
 - Quantity zero
 - 0.0 Quantity more than zero but less than 0.05
 - Z Quantity more than zero but less than 500 where numbers are rounded to thousands
 - * Figure does not meet standards of reliability or precision
-

Midwife and Out-of-Hospital Deliveries

Selma Taffel, Division of Vital Statistics

Introduction

Almost all national natality data reflect the characteristics of births delivered by physicians in hospitals since this group accounts for 97 percent of all births (table 1). Consequently, there is a paucity of information concerning mothers and birth outcome when delivery is in a nonhospital setting or when delivery is by a midwife in a hospital. The demographic characteristics and pregnancy history of these mothers and the health of their babies as measured by birth weight are described in this report. The information was obtained from entries on live birth certificates filed throughout the United States for 1978 and 1979. Not all States include on their birth certificates all of the items discussed; the reporting States for these items are shown in table I.

In all but two tables in this report, data are presented as an average of the 2-year period 1978-79 to minimize the effect of random year-to-year fluctuations due to the small number of births for some categories. Information on out-of-hospital births attended by persons other than midwives or physicians (probably relatives or friends of the mother) or by unspecified attendants is shown in all tables to present a complete picture of such deliveries. However, the focus of the analysis is on midwife and physician out-of-hospital deliveries.

Information for physician-in-hospital deliveries is shown in only four tables of this report. These tables include basic data on race of the child and age and residence of the mother. It is evident from these data that the distribution of physician-in-hospital deliveries is nearly identical to that of all births. Therefore the information shown in other tables for "all births" can be used as a surrogate for physician-in-hospital deliveries.

Because the data for this report were derived from birth certificates, the figures shown refer to numbers of births rather than to numbers of mothers. However, for simplicity, the terms "mothers" and "women" rather than "births" are often used. The child's racial designation is also used to identify the mother since the race of the mother and child are identical for the majority of births.

Three distinct types of women deliver in a nonhospital setting. Exact numbers are not available, but the largest group is probably composed of women for whom hospital delivery is not feasible for geographic or economic reasons. Women in the second group choose to deliver at home because of the desire for a more natural, family-centered birth experience and the opportunity for immediate bonding between baby and mother. The third group is composed of women who intended to deliver

in a hospital but have an accidental delivery at home, usually as a result of precipitous labor.¹ (The terms "out-of-hospital," "nonhospital," and "home deliveries" are used interchangeably in this report.)

Recently, the development of free-standing birthing centers has provided an alternative to home or hospital birth. These are facilities that are separate from hospitals, where women give birth supervised by nurse-midwives with physician backup. As in a home delivery, the emphasis in this setting is for as natural a birth as possible. Some birthing centers in the United States are considered to be nonhospital facilities because of their limited medical resources but many are licensed and classified as "hospital." The number of births occurring in birthing centers is not known since the centers are usually classified as hospital or nonhospital facilities by individual State health departments and are not separately identified. Consequently, in this report births occurring in birthing centers are included in both the hospital and out-of-hospital categories.

Nurse-midwives are registered nurses who have obtained additional education and training in the care and delivery of essentially healthy and normal mothers. They usually work in association with and under the supervision of a physician, generally an obstetrician. High-risk mothers (those with major medical or obstetrical problems) or mothers who develop complications during pregnancy are referred to physicians for their prenatal care and delivery or are collaboratively managed. According to a 1976-77 survey of nurse-midwives by the American College of Nurse-Midwives,¹ about half of the nurse-midwives who managed deliveries in the United States were employed in hospitals; only about 12 percent practiced in either maternity services operated predominantly by nurse-midwives or in private nurse-midwifery practices. An additional 13 percent were in private practice with a physician. The remaining nurse-midwives were employed by public health agencies, by the U.S. military, or by universities and prepaid health plans. The number of nurse-midwives has almost doubled every decade since the 1950's. In 1978, there were an estimated 2,200 nurse-midwives in the United States,² more than 43 percent of whom managed deliveries.³

The lay or "granny" midwife provides assistance to women during childbirth in the absence of a medical practitioner. She usually has limited formal education and learns midwifery largely through apprenticeship. She commonly serves in low economic or rural areas. According to the latest available infor-

mation, there were approximately 1,800 lay midwives practicing in the United States in 1976, almost half of whom were located in Texas.² The number of lay midwives has declined steeply in the last three decades. In 1948, there were an estimated 20,700 practicing lay midwives.⁴

For this report, it was not possible to differentiate between a nurse-midwife and lay midwife attendant since the entries on many State birth certificates do not make this distinction. However, since only nurse-midwives are permitted to deliver in hospitals, it can be assumed that they constitute all midwife

deliveries in hospitals. It can also be assumed that a very large proportion of home deliveries are managed by lay midwives since the 1976-77 survey found that not more than 5 percent of all nurse-midwife deliveries were in a nonhospital setting. However, there has almost certainly been a substantial increase in out-of-hospital deliveries by nurse-midwives since that time.⁵ According to this survey, nurse-midwives who managed such deliveries practiced mainly in California, Illinois, Kentucky, New York City, Texas, and Washington.¹

Highlights

In recent years, there has been increasing interest in home births and in hospital births attended by midwives. Desire for information about them has been stimulated by an increased preference for natural childbirth and by an interest in differences between these deliveries and the usual deliveries by physicians in hospitals. Data for 1978–79, presented in this report, permit such comparisons by a number of variables.

The number of babies delivered by nurse-midwives in hospitals more than doubled between 1975 and 1979, but even so they remained a very small proportion of all births. The increase was from 19,686 (0.6 percent of all births) in 1975 to 44,496 (1.3 percent of all births) in 1979. Out-of-hospital deliveries remained relatively constant during this period, increasing from 27,297 to 33,914 births (0.9 percent to 1.0 percent of all deliveries).

A number of substantial differences are apparent among hospital births attended by midwives, home births, and total births (predominantly in-hospital births delivered by physicians). About 30 percent of the mothers attended by midwives in hospitals are black—nearly double the proportion of mothers who are black delivering at home with a midwife attending (16 percent) or in a hospital with a physician attending (16 percent). American Indian births (1 percent of all births) accounted for 4 percent of the midwife-in-hospital births. Other races were generally underrepresented in midwife deliveries.

Foreign-born mothers are more likely than mothers born in the United States to be attended by midwives, both in and

out of hospitals. About 10 percent of all women giving birth in 1978–79 were foreign born but 15 percent of women attended by midwives in hospitals and 29 percent of the women attended by midwives at home were of foreign nativity. Almost all of the foreign-born mothers delivering at home (89 percent) were born in Mexico.

Women delivering at home tend to be older than either physician-attended or midwife-attended women delivering in hospitals and are far more likely to be having a third, fourth, or higher order child and less likely to be having their first child.

Mothers having home deliveries or midwife-attended hospital deliveries are less likely to have completed high school than mothers delivered in hospitals by physicians. Additionally, mothers attended by midwives at home are more likely to have completed college than women delivering at home with other attendants or women who deliver in hospitals. White women attended by midwives or “others” at home have the highest median years of schooling (12.8) and black women giving birth at home with a midwife attending have the lowest median years of schooling (11.4).

The percent of infants with low birth weight, less than 2,500 grams or 5½ pounds, is lower for midwife-attended home and hospital births than for other births. This is partially explained by the referral to physicians of high risk mothers and by the large proportion of Mexican women having home births, since Mexican women have fewer low birth weight babies than other Hispanic women or black women.

Trends

Until about 1940, the majority of babies in the United States were born at home. From 1940 to 1970, there was a dramatic decline in the proportion of births delivered outside of a hospital—from 44.2 percent to 0.6 percent. Although there has been a small rise in such deliveries since the low point of 1970, the proportion has not risen above one percent, the level it remained at from 1977 to 1979 (table 1). These overall figures primarily reflect the trend in out-of-hospital deliveries of white births. The proportion of babies of other races delivered in a nonhospital setting continued to decline after 1970,⁴ and by 1979 was lower than that of white births (0.8 percent compared with 1.0 percent) (table 1 and figure 1).

The 33,914 births delivered outside of hospitals in 1979 were attended in about equal numbers by physicians, midwives,

and other or unspecified attendants. This is in sharp contrast to several decades ago. In 1940 about four-fifths of home births were attended by physicians, and about one-fifth by midwives. Only about 1 percent of home births were attended by other or unspecified persons.

Coincident with the recent rise in nonhospital deliveries is the growing number of hospital births attended by midwives. National information on the number of midwife deliveries in hospitals has been available only since 1975. The number of such births has risen from 19,686 (0.6 percent of all births) in 1975 to 44,496 (1.3 percent) in 1979. Some of this increase may reflect the concomitant drop in the number of hospital births when the attendant was not stated on the birth certificate.

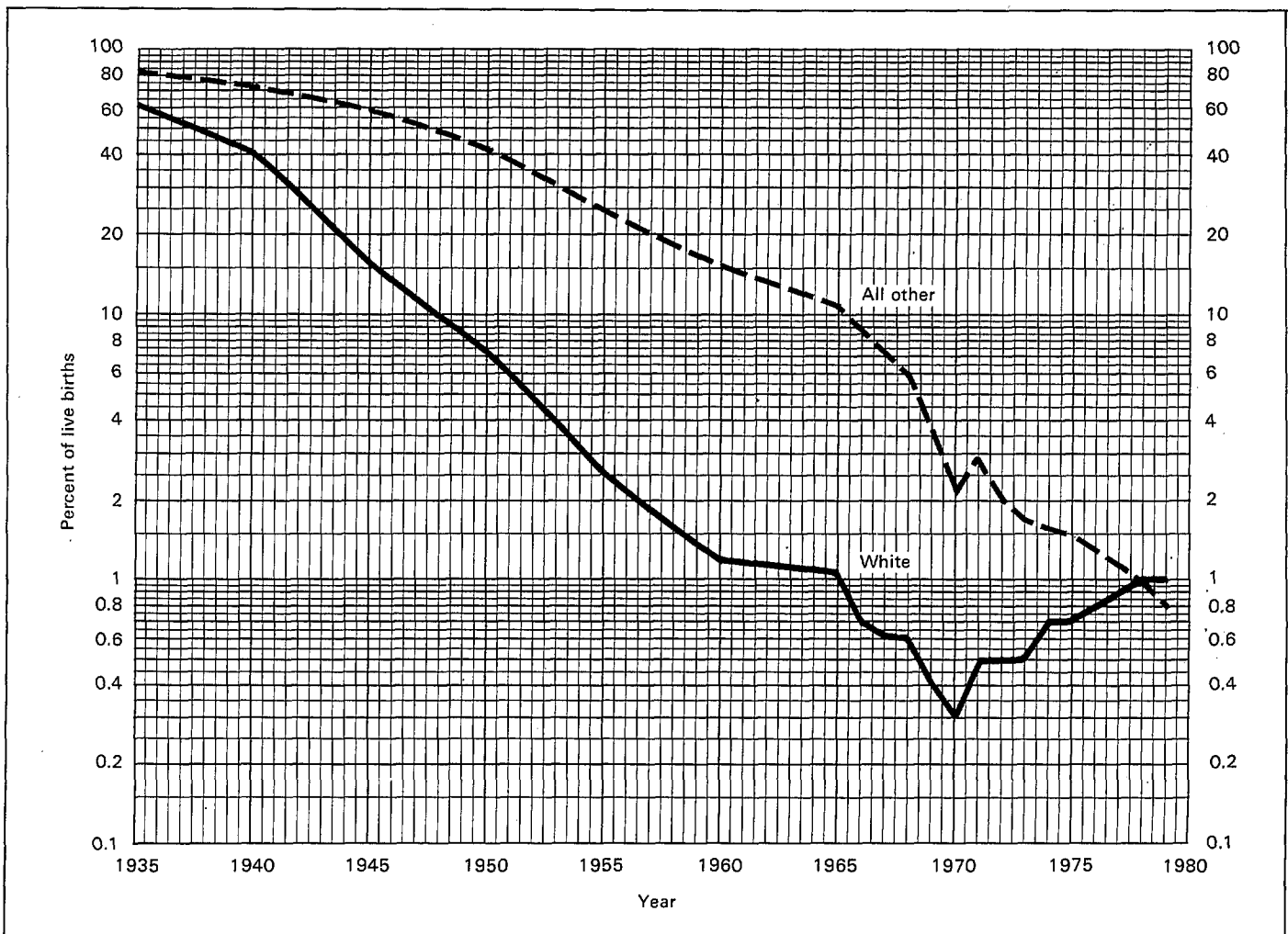


Figure 1. Percent of live births delivered outside of hospitals by race of child: United States, 1935-79

Demographic characteristics of the mother

Race and nativity

In 1978–79, more than 80 percent of the mothers giving birth outside of hospitals were white, and 15 percent were black. This is similar to the racial composition of all women giving birth during this time period (table 2). In sharp contrast, only 64 percent of the mothers attended by midwives in hospitals were white and 30 percent were black, about double the proportion of all women giving birth or those giving birth at home that were black. With the exception of American Indian women, few women of other races had home deliveries or midwife-attended hospital deliveries. American Indian births accounted for 4 percent of the midwife-in-hospital deliveries but they represented only 1 percent of all births during these years.

Foreign-born mothers are more likely than native-born mothers to be attended by midwives, both at home and in a hospital. About 10 percent of all women giving birth in 1978–79 were foreign born: 29 percent of the women attended by midwives at home were of foreign nativity, almost all (89 percent) born in Mexico. Fifteen percent of the mothers attended by midwives in hospitals were foreign born. The proportion of mothers who were native or foreign born, with separate information for those born in Puerto Rico, Cuba, or Mexico, according to the attendant and place of delivery, is shown in table 3. Since the vast majority of all births to mothers of Hispanic nativity are white, the few black births of such nativity are not shown separately.

Residence

There are substantial differences in place of residence for mothers delivering in hospitals compared with mothers delivering at home. Almost half of the women attended by midwives in hospitals (44 percent) resided in the South Region (see the appendix for States in each geographic region). Large numbers also lived in the Northeast Region (23 percent) and in the West Region (24 percent). Over half of those living in the Northeast Region resided in cities of 1,000,000 or more population while those living in the North Central, South, and West Regions resided mainly in rural areas and in small cities (tables 4 and 5).

A far larger proportion of women with home deliveries attended by midwives lived in the South (72 percent), and relatively fewer lived in the West (16 percent), in the Northeast (9 percent), or in the North Central region (3 percent). In all

regions the great majority of these mothers lived in rural areas or in cities with less than 50,000 population.

Among mothers attended at home by physicians, the smallest number lived in the Northeast (15 percent), with the remaining women living in about equal numbers in the North Central, South, and West Regions. These women lived primarily in rural areas or in small cities with less than 50,000 population. Mothers attended at home by “others” lived predominantly in the West, as did those delivering at home with the attendant not stated on the birth certificate.

These data primarily reflect the residence of white mothers and even larger differences in place of residence are apparent for black women (figure 2). Nearly one-third (31 percent) of the black women who gave birth in hospitals with a midwife attendant lived in the Northeast. Three-quarters of these mothers resided in large urban places with populations of 1,000,000 or more.

Almost all black mothers (92 percent) attended at home by midwives lived in the South, appreciably more than the proportion of all black mothers living in this region (53 percent). A greater than average proportion of black women attended by physicians at home (67 percent) and by midwives in hospitals (61 percent) also lived in the South.

The number of inhospital and out-of-hospital deliveries by attendant for individual States are shown in table 6.

Maternal age

A woman's age at time of childbirth is an important determinant of her baby's health and often plays a critical role in her pregnancy experience. Very young girls and women in the oldest years of childbearing have a greater risk of bearing a low-birth-weight baby,⁶ and infants of mothers aged 35 years and older are far more likely to be born with a congenital defect.⁷ Older women are also more likely to start pregnancy with an underlying medical condition, which is associated with a higher incidence of complications during pregnancy.⁸

About one-fifth of the white mothers attended by midwives in hospitals were under 20 years old—about twice the proportion in this age group attended by midwives and physicians at home and nearly 1½ times the proportion of all white mothers under 20 years of age (table 7). During 1978–79, 28 percent of all black births in the United States were to teenage girls. This was double the percentage of white births to teenage girls. An even higher proportion of the black mothers attended by midwives in hospitals and by physicians at home were in their

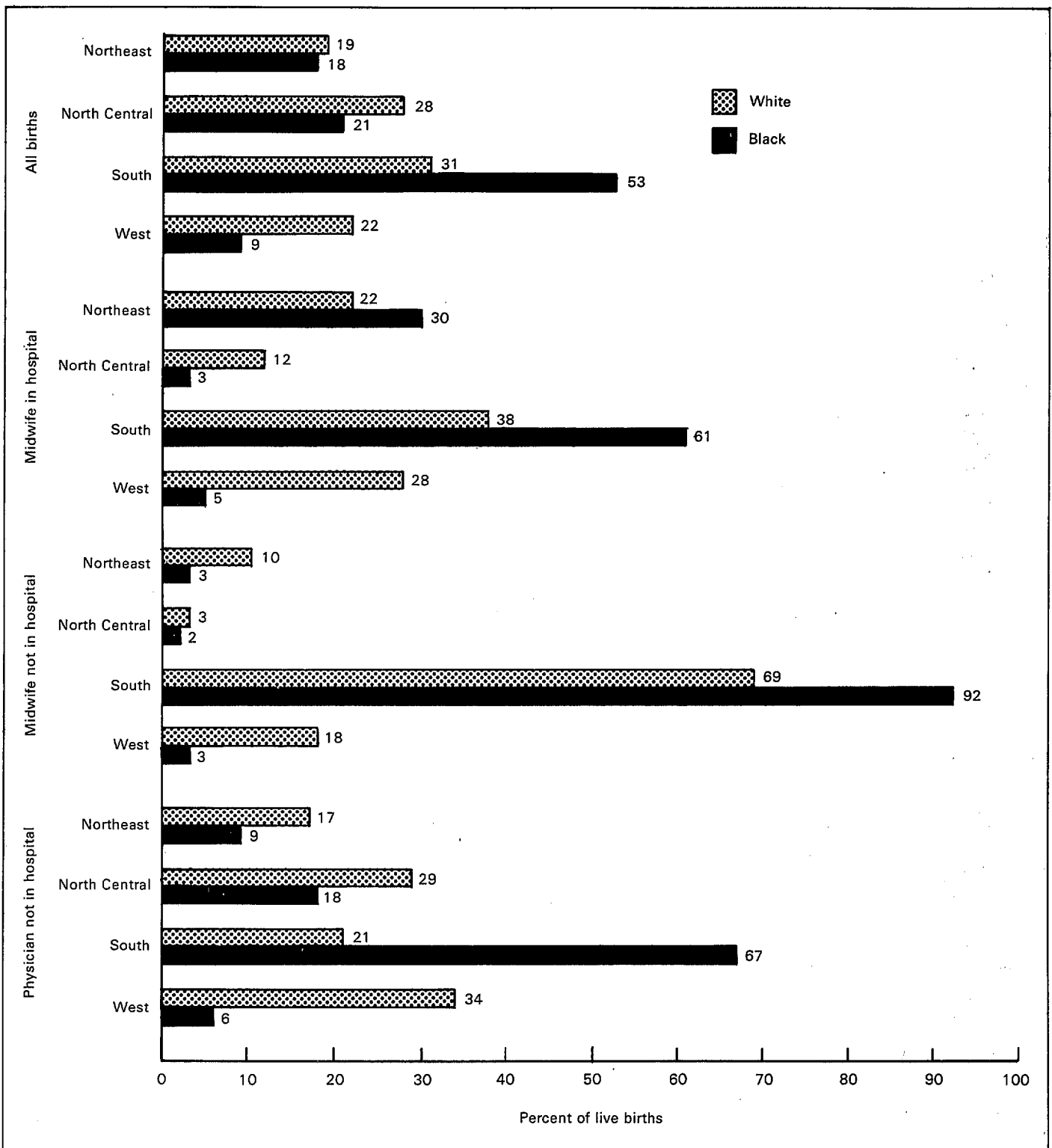


Figure 2. Percent distribution of live births by geographic region for each attendant and place of delivery category according to race of child: United States, 1978-79 average

teens (33 and 30 percent, respectively). Relatively fewer black mothers delivered at home by midwives were under 20 years of age (26 percent of the total).

Women giving birth at home were more likely to be in the older years of childbearing than women delivering in hospitals (figure 3). Between 16 and 18 percent of women with home

deliveries were 30-34 years of age, compared with 11 percent of the mothers delivered by midwives in hospitals. Even larger differences were apparent for women in the oldest years of childbearing. About twice the proportion of women with home deliveries than with midwife-in-hospital deliveries were 35 years of age or more (6 to 7 percent compared with 3 percent).

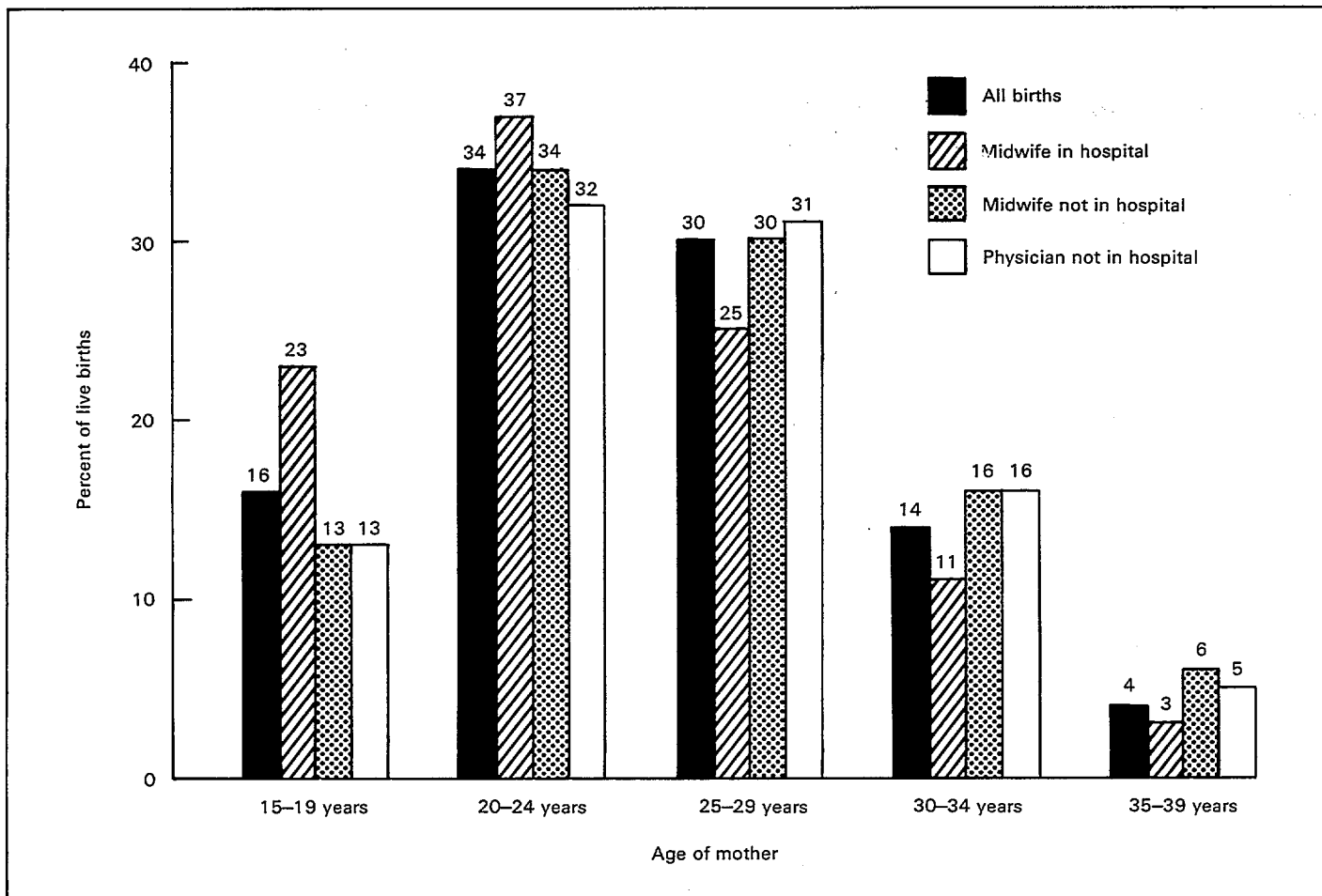


Figure 3. Percent distribution of live births by age of mother, for each attendant and place of delivery category: United States, 1978-79 average

Live-birth order

Women delivering in hospitals were far more likely to be having their first child and less likely to be having a third, fourth, or higher order birth than women delivering at home (table 8 and figure 4). About 42 percent of women with hospital deliveries were having their first child, compared with only 26 percent of women with home deliveries attended by midwives and 32 percent of the women attended by physicians at home. Similar large differences were found for both white and black mothers.

Differences in the ages of these mothers do not fully explain the proportionately larger number of higher order births in home deliveries. As shown in table A, women in each age group delivering at home were more likely than women delivering in hospitals to be bearing a third or higher order child. As noted earlier, more than one-quarter of the women attended by midwives at home were born in Mexico, more than nine times the proportion of all women delivering at this time who were of Mexican nativity. Women of Mexican origin have higher fertility than do other Hispanic or non-Hispanic women,⁹ which is one reason for the disproportionate number of higher order births in home deliveries attended by midwives. The role played by a previous childbirth experience in the choice of attendant for the present birth is unknown since information for prior births is not available from birth certificates.

Demographic risk

The age of the mother and total-birth order of the child (the sum of the live births and fetal deaths that a mother has had, including the present delivery) considered together can be used as an indicator of an infant's chance of survival.^{10,11} Infants born to mothers under 15 years of age and to mothers aged 40 years and over have less chance of surviving past the first year of life than do infants born to mothers at intermediate ages, regardless of birth order. There is also an increased risk of death during infancy for second or higher order babies of mothers in their teens and for babies of older mothers at extreme birth orders. For this report, mothers in these categories are considered as a group and are referred to as mothers at demographic risk. It can be assumed that a substantial number of women at demographic risk also had preexisting medical or antepartum obstetric conditions that could adversely affect their infant's health or survival. In one study,¹¹ medical and obstetric conditions such as syphilis, tuberculosis, and malformed pelvis were found to be more common among women who had been classified at demographic or socioeconomic risk than among those not so classified. A more complete description of the age and total-birth order combinations included in the demographic risk category are in the appendix.

Women having home deliveries were more likely than women delivering in hospitals to be at demographic risk (table

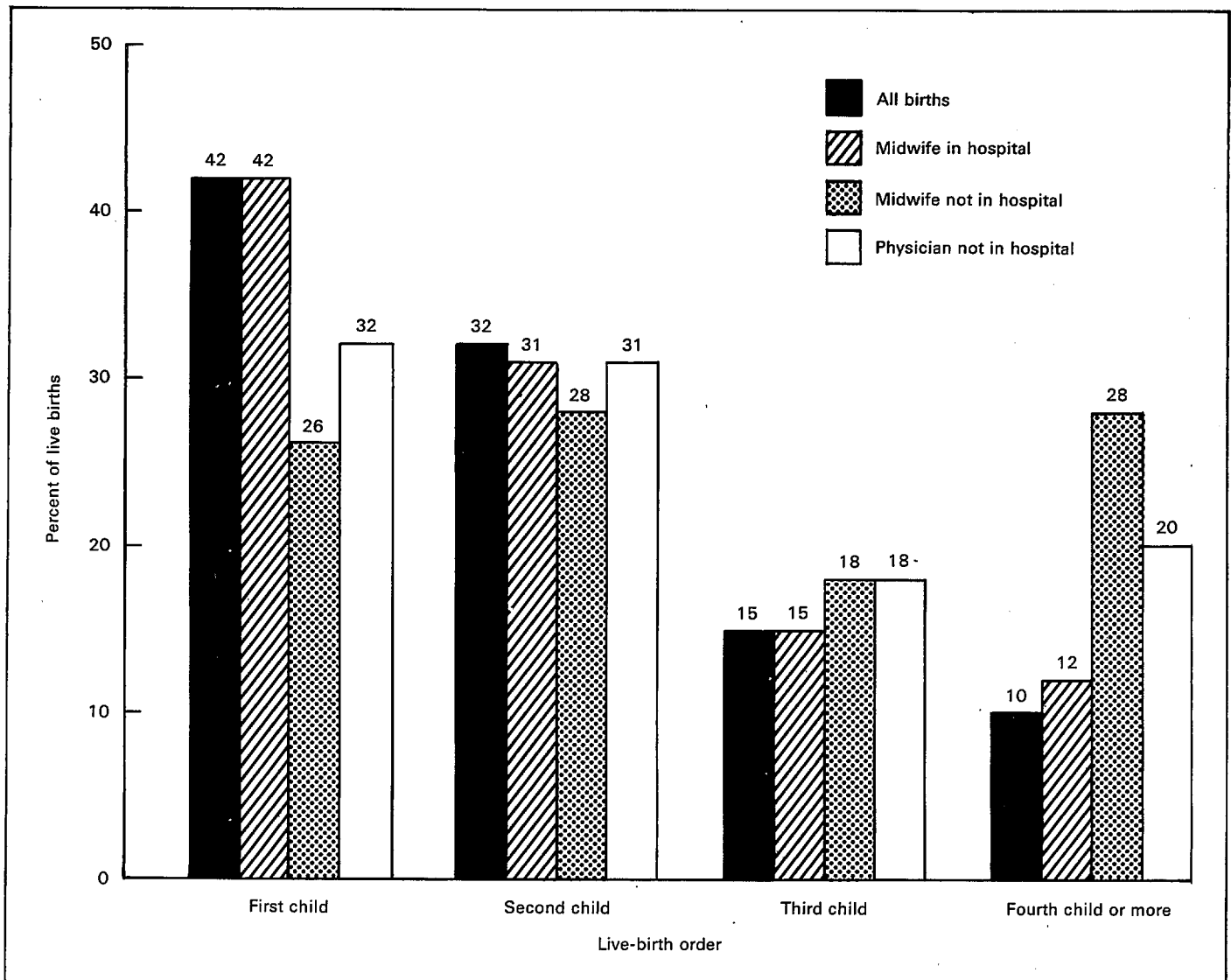


Figure 4. Percent distribution of live births by live-birth order, for each attendant and place of delivery category: United States, 1978-79 average

B). About 30 percent of the women with a home birth attended by a midwife were at risk, about twice the national average of 15 percent and higher than the proportion at risk for other out-of-hospital categories. Women delivered by midwives in hospitals were also more likely than the average mother to be at risk (20 percent). Black mothers, regardless of location of delivery or attendant, were more than 1½ times as likely as white mothers to be at demographic risk. The prenatal care received by mothers at risk is discussed later in this report.

Education

When interpreting data on educational attainment, it should be kept in mind that Texas, where 55 percent of all home births delivered by midwives occurred, does not request this item on the birth certificate. Information on education of the mother is also lacking for California, New Mexico, and Washington, with a combined total of 6 percent of midwife-delivered home births and 22 percent of the physician-delivered home births. These four States also accounted for 16 percent of all midwife-

in-hospital deliveries. Texas, California, and New Mexico have large Hispanic populations. If information on educational attainment of mothers were available for these States, the relationships by attendant shown in this report would undoubtedly be different because of the relatively lower educational attainment of Hispanic mothers.⁹

There are two distinct groups of women having out-of-hospital deliveries in greater than average numbers—those who completed only 8 years of school or less and those who completed one or more years of college. Women attended by midwives in hospitals were also more likely than the average mother to have completed only 8 years of school or less, but were not as likely as any other group to have completed one or more years of college (table 9).

There are large racial differences in educational attainment when delivery is at home or with a midwife attendant in a hospital. While 44 percent of the white women delivering at home with a midwife attendant had completed 13 years or more of school, only 9 percent of their black counterparts had achieved this educational level. On the other hand, there were propor-

Table A. Percent of live births of third and higher order by place of delivery, type of attendant, age of mother, and race of child: United States, 1978-79 average

Race of child and age of mother	All live births ¹	Midwife in hospital	Not in hospital			Not stated
			Midwife	Physician	Other	
All races ²	25.3	26.9	45.9	37.7	42.4	42.1
Under 20 years	3.3	3.9	10.2	5.8	6.8	6.9
20-24 years	15.8	21.3	36.0	25.1	26.8	27.1
25-29 years	29.9	37.8	51.0	43.3	46.3	43.6
30-34 years	48.3	55.0	68.5	62.5	65.7	69.7
35-39 years	68.4	75.0	86.2	80.1	84.4	84.7
40 years and over	81.4	89.3	92.3	90.8	92.7	81.5
White	24.1	24.2	44.5	36.8	42.0	41.1
Under 20 years	2.3	2.8	9.1	3.7	4.4	6.2
20-24 years	13.3	17.2	32.4	20.7	24.6	24.3
25-29 years	27.7	32.0	48.4	40.7	45.0	41.6
30-34 years	47.1	49.6	66.3	60.5	65.1	68.9
35-39 years	67.8	69.1	84.8	79.5	84.2	83.8
40 years and over	80.6	86.6	91.1	89.8	92.4	84.4
Black	30.9	30.6	53.6	41.9	46.5	47.8
Under 20 years	5.6	5.4	12.8	8.5	12.9	9.6
20-24 years	27.3	29.4	53.4	41.8	44.6	41.3
25-29 years	46.0	51.9	73.6	61.0	64.8	61.1
30-34 years	61.0	68.5	86.5	78.5	74.6	83.1
35-39 years	75.5	84.2	94.9	85.8	87.5	92.3
40 years and over	87.0	89.3	100.0	97.1	100.0	*57.1

¹Includes all resident births regardless of attendant or place of delivery.

²Includes races other than white and black.

Table B. Percent of births to mothers at demographic risk by place of delivery, type of attendant, and race of child: United States, 1978-79 average

Race of child	All live births ¹	Midwife in hospital	Not in hospital			Not stated
			Midwife	Physician	Other	
All races ²	15.3	19.7	29.5	21.9	23.3	23.9
White	13.7	16.1	27.1	19.5	21.7	21.9
Black	24.1	26.9	42.4	32.2	38.7	36.2

¹Includes all resident births regardless of attendant or place of delivery.

²Includes races other than white and black.

NOTE: Mothers at demographic risk are those who are very young, in the oldest years of childbearing, or who had a high or low birth-order child relative to their age. See appendix for further details.

tionately fewer white than black women with less than a grade school education having a home delivery attended by a midwife. For midwife deliveries in hospitals, almost twice the proportion of white as black women had completed more than 13 years of schooling (29 percent compared with 15 percent). Overall, white women attended by midwives or "others" at home had the highest median years of schooling (12.8 years) and black women giving birth at home with a midwife attendant the lowest (11.4 years).

Marital status

There were 11 States that did not include a question on marital status on birth certificates during this period. These States (California, Connecticut, Georgia, Maryland, Michigan, Montana, Nevada, New Mexico, New York, Ohio, and Texas) comprised 40 percent of midwife-in-hospital deliveries, 57

percent of midwife out-of-hospital deliveries, and 37 percent of physician out-of-hospital deliveries. Lack of information on marital status for these States may affect comparisons among categories of birth attendants.

While 17 percent of all mothers in States reporting marital status were unmarried at the time of delivery in the 1978-79 period, a far higher proportion of the women with midwife-attended births in hospitals were unmarried (27 percent). Women delivering at home were less likely to be unmarried than women attended by midwives in hospitals: 15 percent of those attended by midwives and "others" and 22 percent of those delivered by physicians at home were unmarried. Regardless of the attendant or whether the birth was at home or in a hospital, the proportion of black mothers who were unmarried was more than 4 times the proportion of white mothers who were unmarried (table C).

Almost all mothers under 15 years of age, and about half

Table C. Number of live births and percent distribution by marital status of mother, according to place of delivery, type of attendant, and race of child: Total of reporting areas, 1978-79 average

Race of child and marital status of mother	All live births ¹	Midwife in hospital	Not in hospital			
			Midwife	Physician	Other	Not stated
All races ²						
Total	2,028,390	24,173	4,305	7,436	6,047	450
Percent distribution						
Total	100.0	100.0	100.0	100.0	100.0	100.0
Married	83.2	72.8	84.4	78.5	84.9	74.5
Unmarried	16.8	27.2	15.6	21.5	15.1	25.5
White						
Total	1,630,982	15,584	3,081	5,527	5,302	314
Percent distribution						
Total	100.0	100.0	100.0	100.0	100.0	100.0
Married	91.2	86.6	91.9	89.1	89.2	87.6
Unmarried	8.8	13.4	8.1	10.9	10.8	12.4
Black						
Total	339,014	6,994	1,150	1,737	532	121
Percent distribution						
Total	100.0	100.0	100.0	100.0	100.0	100.0
Married	45.3	42.3	64.7	44.6	44.6	41.9
Unmarried	54.7	57.7	35.3	55.4	55.4	58.1

¹Includes all births to mothers residing in areas reporting marital status of mother regardless of attendant or place of delivery. See appendix, Table I for a listing of these areas.

²Includes races other than white and black.

of those aged 15-19 years were unwed at the time of delivery. The proportion of unwed mothers declined with advancing age, and was generally lowest for women aged 30-34 years (table 10).

Prenatal care

The early initiation of prenatal care affords the opportunity to identify high risk patients, to treat existing medical problems, and to educate the mother about nutrition, exercise, and other aspects of pregnancy.¹² Information on who provides prenatal care is not recorded on birth certificates; only the attendant at delivery is recorded. The attendant at delivery and provider of prenatal care are not necessarily the same person, although this is probably true for the large majority of births.

During the 1978-79 period, three-quarters of all mothers made their initial prenatal visit during the first trimester (three months) of pregnancy. Women delivering in hospitals attended by midwives were more likely to delay care; only 57 percent of these mothers made their initial visit during the first trimester. Even relatively fewer women delivering at home started care this early—slightly more than one-half of those attended by midwives, 55 percent attended by physicians, and 53 percent attended by "others" (table 11 and figure 5).

The proportion of women starting care in late pregnancy (third trimester) or receiving no care was 1½ to 2 times as high

when birth was at home (16 to 25 percent) as when delivery was in a hospital attended by a midwife (11 percent). For all groups, care was started earlier for white than for black mothers, and proportionately fewer white mothers had late or no care.

White mothers attended by midwives in hospitals made an average of 11.0 prenatal visits; black mothers averaged 9.4 visits. Racial differences were even more pronounced for mothers with home births. For midwife-attended home deliveries, white mothers averaged 10.1 visits compared with only 6.3 visits for black mothers. For physician-attended home deliveries, the median number of visits was 9.3 for white mothers and 6.8 for black mothers.

Women at demographic risk were much more likely than those not at risk to start prenatal care late in pregnancy or to receive no care at all (table 12). About 17 percent of the women at risk with midwife-in-hospital deliveries, and 24-37 percent of the women at risk delivering at home started care in the third trimester of pregnancy or received no care. These proportions were considerably higher than the proportion of all women at risk who had late or no care (10 percent). As noted earlier, women at demographic risk are probably more likely than other women to have a pre-existing medical or prenatal obstetric condition which would affect pregnancy outcome. Delay in seeking care can therefore be particularly detrimental to these women and their babies.

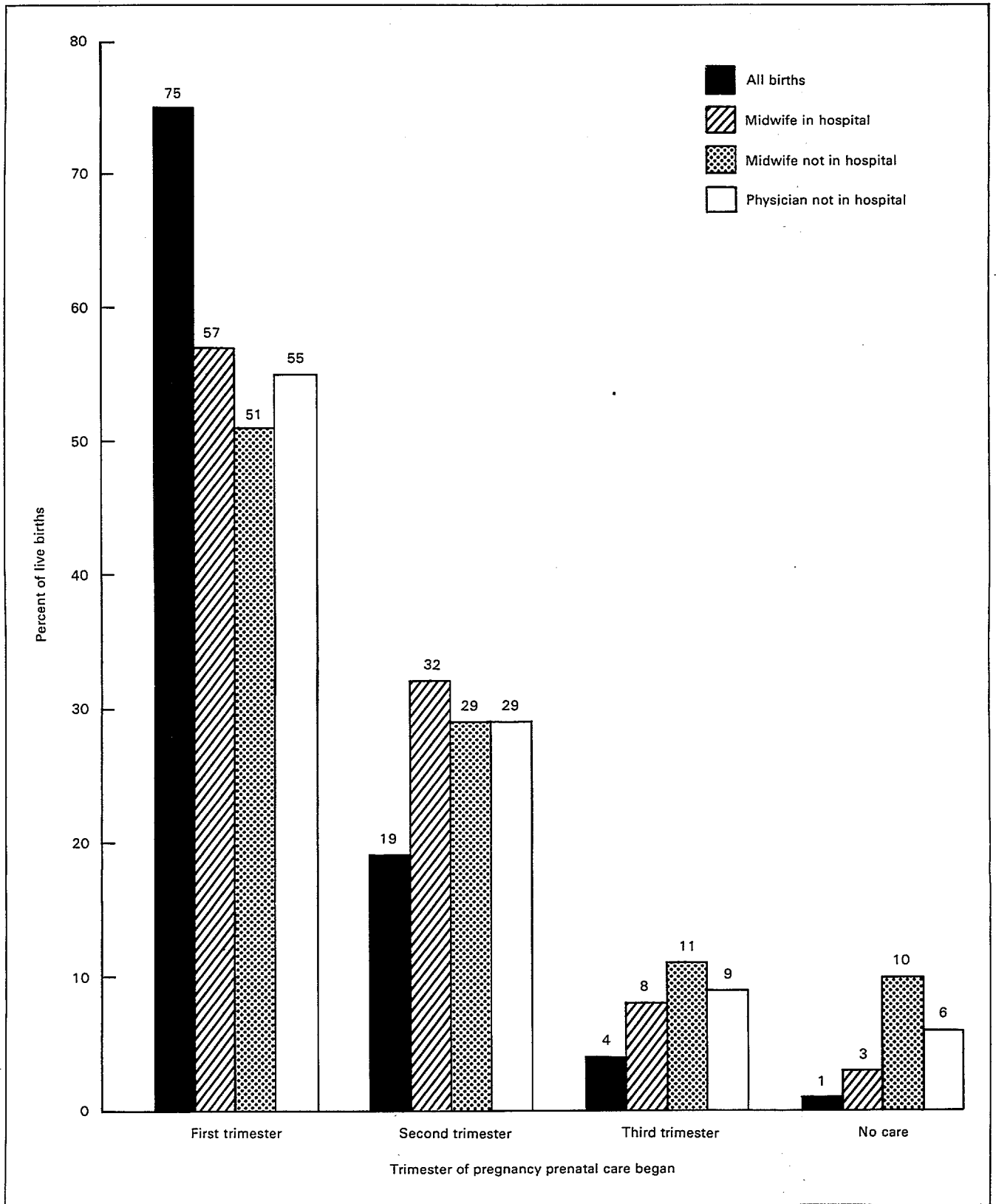


Figure 5. Percent distribution of live births by trimester of pregnancy prenatal care began, for each attendant and place of delivery category: Total of reporting areas, 1978-79 average

Birth weight

Low birth weight (less than 2,500 grams or 5½ pounds) has been associated with a greatly elevated risk of infant mortality,¹³ congenital malformations,⁷ and other physical and mental impairments.¹⁴ Patterns of low birth weight are examined in this study according to the race and birth order of the child, and the age, education, marital status, and prenatal care of the mother. These factors all have a bearing on birth-weight outcome.⁶ Infants with excessive fetal growth, sometimes defined as birth weight of 4,000 grams (8 lb 13 oz) or more, are also at a somewhat greater risk of morbidity, although most infants of this size have normal development.¹⁴

It should be borne in mind when interpreting data shown in this section that differences in birth outcome are partly due to the screening process performed by midwives. Women initially judged to be at medical risk or who develop significant complications during pregnancy are generally referred to physicians for further prenatal care and delivery. Additionally, the high proportion of Mexican women with home deliveries affects birth weight comparisons for white mothers. Mexican mothers have fewer low-birth-weight infants than other mothers.⁹

Proportionately more babies born at home weighed 4,000 grams or more (13–18 percent) than babies delivered by midwives in hospitals (9 percent) or than all babies (10 percent). The same pattern of larger babies in home than hospital deliveries is evident for both white and black births (table 13).

The proportion of babies born at home weighing less than 5½ pounds varied widely by attendant. Only 4 percent of babies in midwife-attended home deliveries weighed this little, compared with 9 percent of those in physician-attended home deliveries and 7 percent attended by “others” at home. Five percent of the babies delivered by midwives in hospitals were of low birth weight.

Age and birth order

Mothers under 15 years of age were more likely to give birth to low-birth-weight infants than mothers of other ages, no matter who attended the birth. The proportion of low-birth-weight babies born to these young girls ranged from 11 percent for midwife-attended hospital deliveries to 39 percent for deliveries at home attended by “other” persons. Older teenagers were also more likely to bear low-birth-weight babies, with the risk of this outcome about the same for midwife-attended hospital and midwife-attended home deliveries (7 and 6 percent, respectively), but rising to 18 percent for home deliveries attended by “others.” The optimum age for childbearing was 25–34 years of age regardless of attendant (table 14).

The risk of low birth weight also differed by the birth order of the child. First and fourth and higher order births were more likely to be of low birth weight for all attendant groups, a reflection of the larger proportions of very young mothers having first births and mothers in the most advanced childbearing years having higher order births (table 15).

As previously noted, a mother’s age and the birth order of the child vary greatly according to place of delivery and attendant. To determine how much of the differences observed in the incidence of low birth weight by attendant was due to these variations, the percent low birth weight was recomputed for each attendant and place of delivery category. It was assumed that for each group the age and birth-order distribution was the same as for all births (see the appendix for a further explanation of this procedure). The results shown in table D indicate that even after adjustment for these dissimilarities, almost all of the originally observed differences in percent low birth weight remain for both black and white births.

Education of mother

In the United States, mothers with the highest levels of schooling are least likely to bear a low-birth-weight baby.⁶ This was also true for midwife-attended hospital and all home deliveries; the percent low birth weight was highest for infants of women with only 9–11 years of schooling and decreased for women with higher levels of educational attainment (table 16 and figure 6). The decrease was most dramatic for home deliveries attended by physicians—from 14 percent for women with 9–11 years of schooling to 4 percent for women who had completed college. The increased risk of low birth weight for babies born to women with 9–11 years of schooling compared with births to women with lesser schooling, regardless of attendant, probably reflects the higher incidence of fetal deaths for women with no more than a grade school education.⁶

Information on educational attainment is lacking for several States with large numbers of home and midwife-in-hospital deliveries. These findings are relevant to the reporting areas only and may not be representative of all births in the United States.

Marital status

Unmarried women were 2 to 3½ times as likely to bear a low-birth-weight baby as were married women, regardless of attendant (table 17). For both married and unmarried mothers, infants delivered by midwives (in a hospital or at home) were

Table D. Observed and adjusted percent of infants of low birth weight by place of delivery, type of attendant, and race of child: United States, 1978-79 average

Race of child	All live births ¹	Midwife in hospital	Not in hospital			
			Midwife	Physician	Other	Not stated
All races ²						
Observed	7.0	4.9	3.8	8.5	7.3	8.9
Adjusted ³	7.0	4.6	3.6	8.6	8.3	9.4
White						
Observed	5.9	3.6	3.1	6.4	5.8	6.6
Adjusted ³	5.9	3.4	3.0	6.9	6.7	7.0
Black						
Observed	12.7	8.0	7.2	16.3	21.0	22.8
Adjusted ³	12.7	7.9	7.1	16.2	21.5	23.0

¹Includes all resident births, regardless of type of attendant or place of delivery.

²Includes races other than white and black.

³Adjusted to reflect the age and birth order distribution of all births in the 1978-79 period.

least likely to weigh less than 5½ pounds. The percent low birth weight for infants born to married women was 4 percent for midwife-attended hospital deliveries, 3 percent for midwife-attended home deliveries, and 6 percent for physician-attended home deliveries. For unmarried mothers, the percent low birth weight was 8 percent for midwife-attended hospital deliveries, 6 percent for midwife-attended home deliveries, and 20 percent for physician-attended home deliveries. It should be noted that these data refer only to areas reporting marital status.

Prenatal care

The provider of prenatal care is not necessarily the attendant at delivery. Women being cared for by midwives who develop complications during pregnancy will most likely be transferred to a physician for the remainder of their prenatal care and for delivery.

There was no consistent pattern among attendant groups in the risk of a low-birth-weight outcome and the timing of the initial prenatal visit (table 18). Starting care early in pregnancy was not always related to a lower incidence of low-birth-weight babies. However, for all attendant groups both black and white mothers who had no prenatal care were far more likely to bear

a low-birth-weight baby than when some prenatal care had been received.

These data should be interpreted cautiously. A woman whose initial visit was in the first trimester of pregnancy may not receive continuous care thereafter. Also, the large differences in the percent low birth weight between births to mothers who had received no care and births where mothers had late care may be due to the larger proportion of births to mothers with no care that are born prematurely.¹⁵ Mothers who have postponed their first prenatal visit until late in pregnancy may deliver early and may not have the opportunity to receive care. They are then included in the "no care" category. Their premature babies are far more likely than full-term babies to be of low birth weight.

The role played by prenatal care in birth weight outcome cannot be judged by these data alone because the content and quality of prenatal care cannot be determined from information entered on birth certificates. Additionally, better educated women are more likely to start care early in pregnancy¹⁵ and such women are less likely to give birth to a low-weight infant. Therefore, the data presented in this report should be used only as a general indicator of the relevance of the timing of prenatal care.

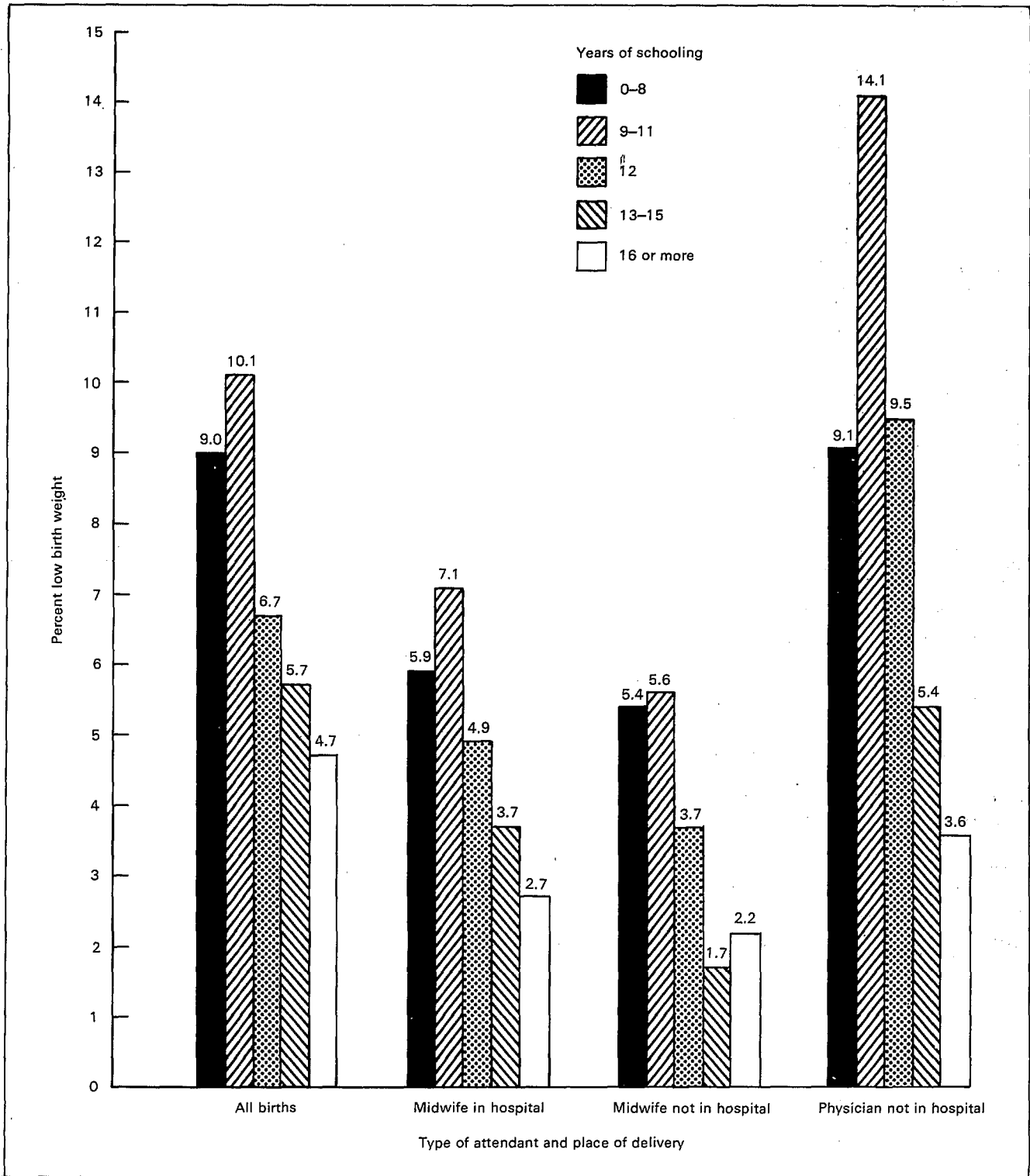


Figure 6. Percent of infants of low birth weight by educational attainment of mother, type of attendant and place of delivery: Total of reporting areas, 1978-79 average

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Table 1. Number of live births and percent distribution by place of delivery and type of attendant, according to race of child: United States, specified years 1935-60 and each year 1965-79

Race and year of birth of child	All live births	In hospital ¹			Not in hospital ²			Total	In hospital ¹			Not in hospital ²			
		Physician	Midwife	Other and unspecified ³	Physician	Midwife	Other and unspecified ³		Physician	Midwife	Other and unspecified ³	Physician	Midwife	Other and unspecified ³	
		Number						Percent distribution							
All races															
1979...	3,494,398	3,393,773	44,496	22,215	11,837	10,363	11,714	99.0	97.1	1.3	0.6	1.0	0.3	0.3	0.3
1978...	3,333,279	3,221,677	36,282	42,700	11,806	9,778	11,036	99.0	96.7	1.1	1.3	1.0	0.4	0.3	0.3
1977...	3,326,632	3,203,242	30,635	59,596	12,766	9,991	10,402	99.0	96.3	0.9	1.8	1.0	0.4	0.3	0.3
1976...	3,167,788	3,055,287	24,656	58,153	11,940	9,574	8,178	99.1	96.4	0.8	1.8	0.9	0.4	0.3	0.3
1975...	3,144,198	3,026,024	19,686	71,191	11,265	9,727	6,305	99.1	96.2	0.6	2.3	0.9	0.4	0.3	0.2
1974...	3,159,958		3,133,797		10,624	10,102	5,435	99.2		99.2		0.8	0.3	0.3	0.2
1973...	3,136,965		3,114,503		6,578	11,443	4,441	99.3		99.3		0.7	0.2	0.4	0.1
1972...	3,258,411		3,233,703		7,177	13,033	4,498	99.2		99.2		0.8	0.2	0.4	0.1
1971...	3,555,970		3,523,860		9,560	17,594	4,956	99.1		99.1		0.9	0.3	0.5	0.1
1970...	3,731,386		3,708,142		5,178	15,306	2,760	99.4		99.4		0.6	0.1	0.4	0.1
1969...	3,600,206		3,566,260		7,520	23,024	3,402	99.1		99.1		0.9	0.2	0.6	0.1
1968...	3,501,564		3,449,250		12,942	33,292	6,080	98.5		98.5		1.5	0.4	1.0	0.2
1967...	3,520,959		3,459,771		13,950	40,210	7,028	98.3		98.3		1.7	0.4	1.1	0.2
1966...	3,606,274		3,534,608		16,798	46,772	8,096	98.0		98.0		2.0	0.5	1.3	0.2
1965...	3,760,358		3,660,712		33,268	55,452	10,926	97.4		97.4		2.6	0.9	1.5	0.3
1960...	4,257,850		4,114,368		49,336	86,076	8,070	96.6		96.6		3.4	1.2	2.0	0.2
1955...	4,047,295		3,818,810		100,756	117,583	10,146	94.4		94.4		5.6	2.5	2.9	0.3
1950...	3,554,149		3,125,975		251,539	161,099	15,536	88.0		88.0		12.0	7.1	4.5	0.4
1945...	2,735,456		2,155,594		402,890	167,805	9,167	78.8		78.8		21.2	14.7	6.1	0.3
1940...	2,360,399		1,316,768		825,271	204,968	13,392	55.8		55.8		44.2	35.0	8.7	0.6
1935...	2,155,105		795,629		1,089,832	269,644		36.9		36.9		63.1	50.6		12.5
White															
1979...	2,808,420	2,733,403	29,086	17,537	9,356	8,879	10,159	99.0	97.3	1.0	0.6	1.0	0.3	0.3	0.4
1978...	2,681,116	2,598,455	22,319	33,929	9,136	7,733	9,544	99.0	96.9	0.8	1.3	1.0	0.3	0.3	0.4
1977...	2,691,070	2,600,011	17,935	47,699	9,389	7,028	9,008	99.1	96.6	0.7	1.8	0.9	0.3	0.3	0.3
1976...	2,567,614	2,486,339	13,733	45,846	8,894	5,824	6,979	99.2	96.8	0.5	1.8	0.8	0.3	0.2	0.3
1975...	2,551,996	2,465,957	10,076	57,734	7,818	5,082	5,329	99.3	96.6	0.4	2.3	0.7	0.3	0.2	0.2
1974...	2,575,792		2,558,707		8,032	4,606	4,447	99.3		99.3		0.7	0.3	0.2	0.2
1973...	2,551,030		2,538,579		4,747	4,386	3,318	99.5		99.5		0.5	0.2	0.2	0.1
1972...	2,655,568		2,643,113		4,795	4,367	3,283	99.5		99.5		0.5	0.2	0.2	0.1
1971...	2,919,746		2,905,798		6,002	4,590	3,356	99.5		99.5		0.5	0.2	0.2	0.1
1970...	3,091,264		3,081,864		3,774	3,674	1,952	99.7		99.7		0.3	0.1	0.1	0.1
1969...	2,993,614		2,982,254		4,300	5,010	2,050	99.6		99.6		0.4	0.1	0.2	0.1
1968...	2,912,224		2,895,014		7,346	6,776	3,088	99.4		99.4		0.6	0.3	0.2	0.1
1967...	2,922,502		2,903,892		7,498	7,616	3,496	99.4		99.4		0.6	0.3	0.3	0.1
1966...	2,993,230		2,973,236		8,450	8,012	3,532	99.3		99.3		0.7	0.3	0.3	0.1
1965...	3,123,860		3,089,442		20,178	8,878	5,362	98.9		98.9		1.1	0.6	0.3	0.2
1960...	3,600,744		3,555,812		26,646	13,556	4,730	98.8		98.8		1.2	0.7	0.4	0.1
1955...	3,458,448		3,371,416		60,738	20,520	5,774	97.5		97.5		2.5	1.8	0.6	0.2
1950...	3,063,627		2,841,930		181,279	33,161	7,257	92.8		92.8		7.2	5.9	1.1	0.2
1945...	2,395,563		2,018,929		329,147	41,128	6,359	84.3		84.3		15.7	13.7	1.7	0.3
1940...	2,067,563		1,238,677		754,746	74,530		59.9		59.9		40.1	36.5		3.6
1935...	1,888,012		746,974		1,019,271	121,767		39.6		39.6		60.4	54.0		6.4

See footnotes and note at end of table.

Table 1. Number of live births and percent distribution by place of delivery and type of attendant, according to race of child: United States, specified years 1935-60 and each year 1965-79—Con.

Race and year of birth of child	All live births	In hospital ¹			Not in hospital ²			In hospital ¹				Not in hospital ²				
		Physician	Midwife	Other and unspecified ³	Physician	Midwife	Other and unspecified ³	Total	Physician	Midwife	Other and unspecified ³	Total	Physician	Midwife	Other and unspecified ³	
All other		Number						Percent distribution								
1979...	685,978	660,370	15,410	4,678	2,481	1,484	1,555	99.2	96.3	2.2	0.7	0.8	0.4	0.2	0.2	
1978...	652,163	623,222	13,963	8,771	2,670	2,045	1,492	99.0	95.6	2.1	1.3	1.0	0.4	0.3	0.2	
1977...	635,562	603,231	12,700	11,897	3,377	2,963	1,394	98.8	94.9	2.0	1.9	1.2	0.5	0.5	0.2	
1976...	600,174	568,948	10,923	12,308	3,046	3,750	1,199	98.7	94.8	1.8	2.1	1.3	0.5	0.6	0.2	
1975...	592,202	560,067	9,610	13,457	3,447	4,645	976	98.5	94.6	1.6	2.3	1.5	0.6	0.8	0.2	
1974...	584,166		575,090		2,592	5,496	988	98.4		98.4		1.6	0.4	0.9	0.2	
1973...	585,935		575,924		1,831	7,057	1,123	98.3		98.3		1.7	0.3	1.2	0.2	
1972...	602,853		590,590		2,382	8,666	1,215	98.0		98.0		2.0	0.4	1.4	0.2	
1971...	636,224		618,062		3,558	13,004	1,600	97.1		97.1		2.9	0.6	2.0	0.3	
1970...	640,122		626,278		1,404	11,632	808	97.8		97.8		2.2	0.2	1.8	0.1	
1969...	606,592		584,006		3,220	18,014	1,352	96.3		96.3		3.7	0.5	3.0	0.2	
1968...	589,340		554,236		5,596	26,516	2,992	94.0		94.0		6.0	0.9	4.5	0.5	
1967...	598,457		555,879		6,452	32,594	3,532	92.9		92.9		7.1	1.1	5.4	0.6	
1966...	613,044		561,372		8,348	38,760	4,564	91.6		91.6		8.4	1.4	6.3	0.7	
1965...	636,498		571,270		13,090	46,574	5,564	89.8		89.8		10.2	2.1	7.3	0.9	
1960...	657,106		558,556		22,690	72,520	3,340	85.0		85.0		15.0	3.5	11.0	0.5	
1955...	588,847		447,394		40,018	97,063	4,372	76.0		76.0		24.0	6.8	16.5	0.7	
1950...	490,522		284,045		70,260	127,938	8,279	57.9		57.9		42.1	14.3	26.1	1.7	
1945...	339,893		136,665		73,743	126,677	2,808	40.2		40.2		59.8	21.7	37.3	0.8	
1940...	292,446		78,091		70,525	143,830		26.7		26.7		73.3	24.1	49.2		
1935...	267,093		48,655		70,561	147,877		18.2		18.2		81.8	26.4	55.4		
Black																
1979...	577,855	557,183	13,001	3,061	2,099	1,356	1,155	99.2	96.4	2.2	0.5	0.8	0.4	0.2	0.2	
1978...	551,540	527,861	11,549	6,781	2,325	1,924	1,100	99.0	95.7	2.1	1.2	1.0	0.4	0.3	0.2	
1977...	544,221	518,069	10,295	8,907	3,044	2,883	1,023	98.7	95.2	1.9	1.6	1.3	0.6	0.5	0.2	
1976...	514,479	488,335	8,954	9,858	2,728	3,675	929	98.6	94.9	1.7	1.9	1.4	0.5	0.7	0.2	
1975...	511,581	484,416	7,707	10,906	3,161	4,602	789	98.3	94.7	1.5	2.1	1.7	0.6	0.9	0.2	
1974...	507,162		498,579		2,325	5,445	813	98.3		98.3		1.7	0.5	1.1	0.2	
1973...	512,597		503,137		1,646	6,872	942	98.2		98.2		1.8	0.3	1.3	0.2	
1972...	531,329		519,408		2,238	8,587	1,096	97.8		97.8		2.2	0.4	1.6	0.2	
1971...	564,960		547,254		3,372	12,920	1,414	96.9		96.9		3.1	0.6	2.3	0.3	
1970...	572,362		558,802		1,328	11,570	662	97.6		97.6		2.4	0.2	2.0	0.1	
1969...	543,132		520,892		3,092	17,902	1,246	95.9		95.9		4.1	0.6	3.3	0.2	

¹Includes births occurring enroute to or on arrival at hospital.

²Includes births with place of delivery not stated.

³For additional detail, see appendix table III.

NOTE: Data by attendant for the years 1975 to 1977 differ from those previously published (see appendix).

Table 2. Number of live births and percent distribution by specified race of child, according to place of delivery and type of attendant: United States, 1978-79 average

Specified race of child	All live births ¹	In hospital		Not in hospital			
		Physician	Midwife	Midwife	Physician	Other	Not stated
				Number ²			
All races	3,413,839	3,307,008	40,389	10,071	11,822	9,600	1,776
White	2,744,768	2,665,499	25,703	8,306	9,246	8,397	1,455
Black	564,698	542,267	12,275	1,640	2,212	890	238
American Indian	33,715	30,959	1,685	72	193	167	30
Chinese	11,478	11,184	69	7	14	11	6
Japanese	8,190	7,954	57	9	21	28	9
Filipino	13,927	13,478	117	7	24	24	13
Hawaiian	6,152	6,058	15	2	32	18	3
Other Asian or Pacific Islander	27,260	26,220	374	21	74	55	17
Other races	3,653	3,390	95	7	7	12	7
				Percent distribution			
All races	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White	80.4	80.6	63.6	82.5	78.2	87.5	81.9
Black	16.5	16.4	30.4	16.3	18.7	9.3	13.4
American Indian	1.0	0.9	4.2	0.7	1.6	1.7	1.7
Chinese	0.3	0.3	0.2	0.1	0.1	0.1	0.3
Japanese	0.2	0.2	0.1	0.1	0.2	0.3	0.5
Filipino	0.4	0.4	0.3	0.1	0.2	0.2	0.7
Hawaiian	0.2	0.2	0.0	0.0	0.3	0.2	0.1
Other Asian or Pacific Islander	0.8	0.8	0.9	0.2	0.6	0.6	0.9
Other races	0.1	0.1	0.2	0.1	0.1	0.1	0.4

¹Includes all resident births, regardless of type of attendant or place of delivery.

²Number of births may not add to totals due to rounding.

Table 3. Number of live births and percent distribution by nativity of mother, according to place of delivery, type of attendant, and race of child: United States, 1978-79 average

Race of child and nativity of mother	All live births ¹	Midwife in hospital	Not in hospital			
			Midwife	Physician	Other	Not stated
All races²						
			Number			
Total.....	3,413,839	40,389	10,071	11,822	9,600	1,776
			Percent distribution			
All nativities.....	100.0	100.0	100.0	100.0	100.0	100.0
Native-born ³	90.5	84.8	71.0	92.4	91.2	82.6
Foreign-born.....	9.5	15.2	29.0	7.6	8.8	17.4
Puerto Rican.....	0.9	2.0	0.1	0.3	0.1	0.1
Cuban.....	0.2	0.2	0.0	0.1	0.1	0.1
Mexican.....	2.8	4.6	25.9	3.3	4.0	11.0
Other.....	5.6	8.3	2.9	3.9	4.6	6.1
White						
			Number			
Total.....	2,744,768	25,703	8,306	9,246	8,397	1,455
			Percent distribution			
All nativities.....	100.0	100.0	100.0	100.0	100.0	100.0
Native-born ³	91.1	83.2	65.5	91.9	91.0	81.4
Foreign-born.....	8.9	16.8	34.5	8.1	9.0	18.6
Puerto Rican.....	1.0	3.1	0.1	0.4	0.1	0.1
Cuban.....	0.3	0.3	0.0	0.1	0.1	0.1
Mexican.....	3.5	7.2	31.3	4.1	4.6	13.3
Other.....	4.2	6.3	3.1	3.5	4.2	5.1
Black						
			Number			
Total.....	564,698	12,275	1,640	2,212	890	238
			Percent distribution			
All nativities.....	100.0	100.0	100.0	100.0	100.0	100.0
Native-born ³	95.0	90.3	98.3	97.1	96.8	96.1
Foreign-born ⁴	5.0	9.7	1.7	2.9	3.2	3.9

¹Includes all resident births, regardless of attendant or place of delivery.

²Includes races other than white and black.

³Born in the United States.

⁴Detailed data for Puerto Rican, Cuban, and Mexican mothers are not shown separately because of the small number of such births.

Table 4. Number of live births and percent distribution by geographic region, according to place of delivery, type of attendant, and race of child: United States, 1978-79 average

[See appendix for composition of geographic regions]

Race of child and geographic region	All live births ¹	Midwife in hospital	Not in hospital			
			Midwife	Physician	Other	Not stated
All races²			Number			
Total.....	3,413,839	40,389	10,071	11,822	9,600	1,776
			Percent distribution			
All areas.....	100.0	100.0	100.0	100.0	100.0	100.0
Northeast.....	18.8	23.2	9.3	15.1	11.1	3.9
North Central.....	26.8	9.2	2.7	26.2	18.4	5.1
South.....	33.8	43.8	72.2	29.0	27.5	16.2
West.....	20.7	23.7	15.8	29.7	43.0	74.8
White			Number			
Total.....	2,744,768	25,703	8,306	9,246	8,397	1,455
			Percent distribution			
All areas.....	100.0	100.0	100.0	100.0	100.0	100.0
Northeast.....	19.3	21.6	10.4	17.1	11.1	4.2
North Central.....	28.4	12.2	2.9	28.8	19.4	5.2
South.....	30.6	38.3	69.0	20.7	24.6	11.2
West.....	21.7	27.9	17.7	33.5	44.9	79.5
Black			Number			
Total.....	564,698	12,275	1,640	2,212	890	238
			Percent distribution			
All areas.....	100.0	100.0	100.0	100.0	100.0	100.0
Northeast.....	17.6	30.5	3.4	8.5	13.4	3.8
North Central.....	20.8	3.2	1.6	17.9	12.1	3.2
South.....	52.7	61.1	92.3	67.2	60.9	50.8
West.....	9.0	5.2	2.8	6.4	13.6	42.2

¹Includes all resident births, regardless of attendant or place of delivery.

²Includes races other than white and black.

Table 5. Number of live births and percent distribution by size of place of mother's residence, according to region, place of delivery, type of attendant, and race of child: United States, 1978-79 average

Race of child, region, and size of place	All live births ¹	Midwife in hospital	Not in hospital			
			Midwife	Physician	Other	Not stated
All races ²						
United States.....	3,413,839	40,389	10,071	11,822	9,600	1,776
Number						
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Percent distribution						
Urban places.....	53.5	59.9	49.4	45.0	44.0	57.6
1,000,000 or more population.....	8.5	15.3	5.5	6.1	3.9	9.9
500,000-1,000,000 population.....	5.9	5.3	4.4	6.5	4.5	3.4
100,000-500,000 population.....	12.7	14.3	9.0	10.1	11.5	14.1
50,000-100,000 population.....	8.6	6.5	13.0	7.4	8.8	9.8
10,000-50,000 population.....	17.9	18.5	17.5	15.0	15.3	20.3
Balance of area.....	46.5	40.1	50.6	55.0	56.0	42.4
Number						
Northeast.....	640,449	9,390	936	1,780	1,063	70
Percent distribution						
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Urban places.....	57.4	80.9	48.4	31.7	38.6	34.5
1,000,000 or more population.....	19.9	56.2	25.0	4.6	6.8	10.8
500,000-1,000,000 population.....	2.1	1.0	0.3	2.5	3.1	-
100,000-500,000 population.....	9.0	9.2	3.4	7.9	8.2	4.3
50,000-100,000 population.....	8.8	5.2	4.5	5.9	6.7	10.1
10,000-50,000 population.....	17.6	9.5	15.3	10.8	13.9	9.4
Balance of area.....	42.6	19.1	51.6	68.3	61.4	65.5
Number						
North Central.....	913,369	3,717	269	3,098	1,765	90
Percent distribution						
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Urban places.....	52.9	60.4	24.7	50.2	45.0	43.9
1,000,000 or more population.....	8.2	0.7	2.0	12.2	3.1	1.1
500,000-1,000,000 population.....	6.4	4.1	3.5	7.6	6.6	4.4
100,000-500,000 population.....	10.5	21.3	5.2	8.6	12.1	12.2
50,000-100,000 population.....	7.9	13.3	1.5	6.4	7.4	6.7
10,000-50,000 population.....	19.9	20.9	12.5	15.3	15.8	19.4
Balance of area.....	47.1	39.6	75.3	49.8	55.0	56.1
Number						
South.....	1,154,492	17,694	7,275	3,434	2,644	288
Percent distribution						
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Urban places.....	44.9	47.8	51.2	36.1	42.2	34.4
1,000,000 or more population.....	2.7	0.0	4.1	0.9	3.3	0.3
500,000-1,000,000 population.....	7.2	3.7	3.9	9.5	5.2	2.1
100,000-500,000 population.....	14.7	16.6	8.9	10.1	12.1	14.6
50,000-100,000 population.....	6.1	4.9	15.5	4.0	8.2	4.2
10,000-50,000 population.....	14.2	22.6	18.7	11.6	13.4	13.2
Balance of area.....	55.1	52.2	48.8	63.9	57.8	65.6
Number						
West.....	705,530	9,589	1,591	3,510	4,128	1,329
Percent distribution						
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Urban places.....	64.9	61.6	46.4	55.7	46.0	64.8
1,000,000 or more population.....	7.7	9.2	1.2	6.3	3.9	12.6
500,000-1,000,000 population.....	6.6	12.8	9.2	4.5	3.7	3.8
100,000-500,000 population.....	15.5	12.6	13.4	12.5	11.8	14.7
50,000-100,000 population.....	13.5	8.2	8.4	12.3	10.2	11.3
10,000-50,000 population.....	21.6	18.7	14.1	20.1	16.5	22.5
Balance of area.....	35.1	38.4	53.6	44.3	54.0	35.2

See footnotes at end of table.

Table 5. Number of live births and percent distribution by size of place of mother's residence, according to region, place of delivery, type of attendant, and race of child: United States, 1978-79 average—Con.

Race of child, region, and size of place	All live births ¹	Midwife in hospital	Not in hospital			
			Midwife	Physician	Other	Not stated
White						
United States.....	2,744,768	25,703	8,306	9,246	8,397	1,455
Number						
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Percent distribution						
Urban places.....	49.0	58.2	53.9	42.3	42.1	56.1
1,000,000 or more population.....	6.0	12.3	5.9	4.9	2.9	8.9
500,000-1,000,000 population.....	4.4	5.0	4.8	4.2	4.1	3.1
100,000-500,000 population.....	10.9	13.6	9.8	8.9	10.7	12.0
50,000-100,000 population.....	8.8	7.9	15.4	8.3	9.0	10.2
10,000-50,000 population.....	18.9	19.3	18.1	16.1	15.4	21.9
Balance of area.....	51.0	41.8	46.1	57.7	57.9	43.9
Number						
Northeast.....	530,058	5,544	867	1,577	932	61
Percent distribution						
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Urban places.....	50.6	68.7	45.3	25.2	31.9	24.8
1,000,000 or more population.....	14.0	42.3	22.3	2.4	4.3	5.0
500,000-1,000,000 population.....	1.5	0.7	0.2	1.8	2.1	-
100,000-500,000 population.....	7.0	6.0	2.8	4.9	5.6	4.1
50,000-100,000 population.....	9.2	6.5	4.4	5.6	6.1	6.6
10,000-50,000 population.....	18.9	13.2	15.6	10.4	13.9	9.1
Balance of area.....	49.4	31.3	54.7	74.8	68.1	75.2
Number						
North Central.....	780,595	3,132	242	2,661	1,628	76
Percent distribution						
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Urban places.....	46.8	59.4	18.2	43.6	42.1	40.1
1,000,000 or more population.....	4.1	0.5	0.8	7.9	1.6	1.3
500,000-1,000,000 population.....	4.6	3.1	2.9	5.7	5.7	2.6
100,000-500,000 population.....	9.3	21.4	4.6	6.6	11.5	8.6
50,000-100,000 population.....	7.8	12.0	1.2	6.8	7.4	5.9
10,000-50,000 population.....	21.2	22.4	8.7	16.5	15.8	21.7
Balance of area.....	53.2	40.6	81.8	56.4	57.9	59.9
Number						
South.....	838,596	9,846	5,729	1,915	2,064	163
Percent distribution						
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Urban places.....	40.1	44.2	58.7	33.2	40.9	31.4
1,000,000 or more population.....	2.5	0.1	4.9	1.0	2.4	0.3
500,000-1,000,000 population.....	5.0	1.8	4.6	4.4	4.9	1.5
100,000-500,000 population.....	12.5	15.3	10.1	9.6	11.7	8.9
50,000-100,000 population.....	6.1	6.0	19.4	5.7	9.1	4.9
10,000-50,000 population.....	14.0	21.0	19.8	12.5	12.8	15.7
Balance of area.....	59.9	55.8	41.3	66.8	59.1	68.6
Number						
West.....	595,520	7,182	1,469	3,093	3,773	1,156
Percent distribution						
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Urban places.....	63.1	68.7	46.2	55.7	45.3	62.2
1,000,000 or more population.....	6.6	11.0	1.0	5.9	3.4	10.8
500,000-1,000,000 population.....	5.8	13.4	8.6	4.0	3.5	3.5
100,000-500,000 population.....	14.4	13.8	13.7	12.5	11.1	13.1
50,000-100,000 population.....	13.7	9.9	8.5	12.5	10.4	11.5
10,000-50,000 population.....	22.6	20.5	14.4	20.8	17.0	23.4
Balance of area.....	36.9	31.3	53.8	44.3	54.7	37.8

See footnotes at end of table.

Table 5. Number of live births and percent distribution by size of place of mother's residence, according to region, place of delivery, type of attendant, and race of child: United States, 1978-79 average—Con.

Race of child, region, and size of place	All live births ¹	Midwife in hospital	Not in hospital			
			Midwife	Physician	Other	Not stated
Black						
United States.....	564,698	12,275	1,640	2,212	890	238
Number						
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Percent distribution						
Urban places.....	74.1	69.3	27.1	56.5	61.3	63.9
1,000,000 or more population.....	19.8	23.8	3.5	11.1	13.3	16.4
500,000-1,000,000 population.....	13.1	6.1	2.0	15.9	8.7	4.8
100,000-500,000 population.....	20.4	17.5	5.0	14.9	17.5	24.8
50,000-100,000 population.....	7.6	4.4	1.5	4.0	7.6	6.9
10,000-50,000 population.....	13.2	17.5	15.0	10.6	14.2	10.9
Balance of area.....	25.9	30.7	72.9	43.5	38.7	36.1
Number						
Northeast.....	99,173	3,745	55	188	119	9
Percent distribution						
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Urban places.....	92.0	98.9	95.5	85.3	87.4	*100.0
1,000,000 or more population.....	49.7	76.4	65.5	22.7	24.4	*50.0
500,000-1,000,000 population.....	4.7	1.0	0.9	8.5	10.1	*-
100,000-500,000 population.....	20.0	14.0	10.9	32.0	29.0	*5.6
50,000-100,000 population.....	7.0	3.3	6.4	8.0	11.8	*33.3
10,000-50,000 population.....	10.6	4.1	11.8	14.1	12.2	*11.1
Balance of area.....	8.0	1.1	4.5	14.7	12.6	*-
Number						
North Central.....	117,315	392	27	397	108	8
Percent distribution						
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Urban places.....	92.5	86.6	81.1	92.3	87.0	*80.0
1,000,000 or more population.....	35.5	2.6	13.2	40.2	24.2	-
500,000-1,000,000 population.....	19.0	13.8	9.4	20.8	20.0	*26.7
100,000-500,000 population.....	18.3	25.5	7.5	21.3	18.6	*20.0
50,000-100,000 population.....	8.5	30.1	3.8	3.8	8.4	*20.0
10,000-50,000 population.....	11.3	14.6	47.2	6.2	15.8	*13.3
Balance of area.....	7.5	13.4	18.9	7.7	13.0	*20.0
Number						
South.....	297,659	7,500	1,513	1,487	542	121
Percent distribution						
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Urban places.....	58.3	52.7	22.6	39.8	46.1	38.4
1,000,000 or more population.....	3.2	0.0	1.1	0.8	6.6	0.4
500,000-1,000,000 population.....	13.4	6.3	1.3	16.0	6.4	2.9
100,000-500,000 population.....	20.6	18.5	4.3	10.7	13.0	22.3
50,000-100,000 population.....	6.1	3.4	1.0	1.8	4.9	3.3
10,000-50,000 population.....	14.9	24.5	14.9	10.5	15.2	9.5
Balance of area.....	41.7	47.3	77.4	60.2	53.9	61.6
Number						
West.....	50,552	640	46	141	121	101
Percent distribution						
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Urban places.....	89.9	80.1	63.7	93.3	80.6	90.0
1,000,000 or more population.....	22.8	8.1	4.4	22.0	22.3	33.8
500,000-1,000,000 population.....	13.3	28.8	23.1	10.6	7.4	6.0
100,000-500,000 population.....	25.2	21.0	20.9	18.8	25.6	29.9
50,000-100,000 population.....	16.0	6.8	9.9	23.0	14.9	8.0
10,000-50,000 population.....	12.6	15.5	5.5	18.8	10.3	12.4
Balance of area.....	10.1	19.9	36.3	6.7	19.4	10.0

¹Includes all resident births, regardless of attendant or place of delivery.

²Includes races other than white and black.

Table 6. Number of live births by place of delivery, type of attendant, and race of child: United States and each State, 1978 and 1979

State and race of child ¹	1979							1978						
	In hospital ²				Not in hospital ³			In hospital ²				Not in hospital ³		
	All live births	Physician	Midwife	Other and unspecified	Physician	Midwife	Other and unspecified	All live births	Physician	Midwife	Other and unspecified	Physician	Midwife	Other and unspecified
United States	3,494,398	3,393,773	44,496	22,215	11,837	10,363	11,714	3,333,279	3,221,677	36,282	42,700	11,806	9,778	11,036
White	2,808,420	2,733,403	29,086	17,537	9,356	8,879	10,159	2,681,116	2,598,455	22,319	33,929	9,136	7,733	9,544
Black	577,855	557,183	13,001	3,061	2,099	1,356	1,155	551,540	527,861	11,549	6,781	2,325	1,924	1,100
Alabama	62,603	61,369	393	54	252	408	127	60,227	58,878	327	58	288	575	101
White	39,893	39,534	155	12	40	87	65	38,753	38,408	131	21	34	107	52
Black	22,418	21,549	236	42	211	320	60	21,223	20,223	195	36	254	467	48
Alaska	9,096	8,170	516	139	27	76	168	8,861	7,895	609	138	33	67	119
White	6,366	5,784	308	72	17	57	128	6,280	5,694	370	70	23	52	71
Black	415	361	40	12	-	-	2	392	346	38	8	-	-	-
Arizona	46,709	42,659	2,714	892	54	196	194	43,112	39,617	2,132	702	114	241	306
White	39,363	36,718	1,726	520	40	188	171	36,021	33,839	1,170	402	98	235	277
Black	2,000	1,712	236	48	-	4	-	1,868	1,686	128	50	-	-	4
Arkansas	36,300	34,722	232	1,115	50	18	163	34,793	33,292	183	970	106	81	161
White	26,691	25,791	114	594	31	12	149	25,682	24,826	88	532	82	29	125
Black	9,272	8,616	116	505	19	6	10	8,843	8,212	93	430	24	52	32
California	379,422	357,723	3,728	13,229	1,913	238	2,591	356,310	331,396	2,485	17,720	1,794	184	2,731
White	311,808	293,360	3,145	11,073	1,735	201	2,294	293,495	272,644	2,079	14,570	1,619	163	2,420
Black	41,535	39,635	348	1,226	116	19	191	37,894	35,493	244	1,875	104	10	168
Colorado	47,213	46,403	292	93	141	9	275	44,107	43,392	152	64	228	16	255
White	43,578	42,844	264	78	124	9	259	40,960	40,294	135	59	210	15	247
Black	2,260	2,234	5	7	4	-	10	2,044	2,019	7	4	12	-	2
Connecticut	38,724	38,297	261	64	41	3	58	37,294	36,881	147	162	38	14	52
White	33,374	32,994	242	54	28	2	54	32,157	31,787	139	136	32	12	51
Black	4,902	4,862	18	6	13	1	2	4,641	4,606	4	24	6	-	1
Delaware	8,928	8,797	14	64	4	36	13	8,685	8,593	26	28	2	18	18
White	6,739	6,635	11	44	2	36	11	6,488	6,408	24	22	-	18	16
Black	2,129	2,102	3	20	2	-	2	2,138	2,126	2	6	2	-	2
District of Columbia	9,512	9,111	300	46	29	20	6	9,383	8,839	397	94	32	15	6
White	1,447	1,386	39	8	-	14	-	1,415	1,346	36	20	2	9	2
Black	7,943	7,608	257	38	28	6	6	7,848	7,383	355	72	30	4	4
Florida	121,146	114,624	4,272	729	406	550	565	113,343	108,748	2,566	780	251	538	460
White	88,023	84,154	2,355	481	251	332	450	81,640	78,541	1,680	608	160	266	385
Black	31,827	29,245	1,875	231	152	217	107	30,374	28,971	817	161	87	268	70
Georgia	88,018	84,665	2,610	333	81	151	178	84,140	81,018	2,469	135	116	236	166
White	55,395	53,942	1,101	197	39	19	97	52,717	51,466	978	83	55	29	106
Black	31,824	29,943	1,499	132	41	132	77	30,458	28,607	1,477	52	61	203	58
Hawaii	17,546	17,243	12	20	95	6	170	16,753	16,617	-	34	20	2	80
White	4,364	4,214	6	7	23	4	110	4,269	4,175	-	26	8	2	58
Black	527	514	-	-	4	-	9	410	410	-	-	-	-	-
Idaho	20,023	19,543	8	6	106	34	326	19,391	18,991	9	7	84	8	292
White	19,435	18,963	8	5	105	34	320	18,853	18,465	9	5	82	7	285
Black	80	79	-	-	-	-	1	81	81	-	-	-	-	-
Illinois	184,210	182,275	353	319	983	12	268	174,509	172,664	289	327	948	12	269
White	140,359	138,800	304	255	775	9	216	133,544	132,026	268	262	749	7	232
Black	40,331	39,997	37	58	190	3	46	37,521	37,230	14	60	181	5	31

Table 6. Number of live births by place of delivery, type of attendant, and race of child: United States and each State, 1978 and 1979—Con.

State and race of child ¹	1979							1978						
	In hospital ²				Not in hospital ³			In hospital ²				Not in hospital ³		
	All live births	Physician	Midwife	Other and unspecified	Physician	Midwife	Other and unspecified	All live births	Physician	Midwife	Other and unspecified	Physician	Midwife	Other and unspecified
Indiana	87,383	86,564	191	17	257	33	321	83,598	82,741	159	66	296	40	296
White	77,234	76,487	184	17	205	33	308	74,088	73,298	154	58	252	38	288
Black	9,567	9,501	6	-	50	-	10	8,930	8,867	4	8	42	2	7
Iowa	46,788	46,546	13	25	89	15	100	44,584	44,368	6	23	83	8	96
White	45,151	44,915	10	25	87	15	99	43,105	42,900	6	23	78	8	90
Black	1,121	1,117	2	-	1	-	1	1,023	1,015	-	-	3	-	5
Kansas	39,006	38,758	1	34	92	4	117	36,735	36,421	1	152	79	2	80
White	34,944	34,725	-	27	83	4	105	33,022	32,758	1	120	67	2	74
Black	3,225	3,207	1	4	7	-	6	2,958	2,922	-	20	10	-	6
Kentucky	58,907	56,307	2,214	24	164	68	130	57,334	54,919	2,067	23	114	100	111
White	52,967	50,810	1,826	15	143	62	111	51,576	49,514	1,773	16	91	84	98
Black	5,522	5,166	304	9	20	5	18	5,336	5,072	206	6	23	16	13
Louisiana	79,263	78,504	442	34	70	70	143	74,928	74,071	469	35	147	55	151
White	47,820	47,315	303	9	40	66	87	45,192	44,655	327	10	80	44	76
Black	30,590	30,345	133	23	30	4	55	28,955	28,652	130	25	64	11	73
Maine	16,365	15,983	101	14	143	72	52	15,847	15,517	30	28	178	48	46
White	16,056	15,678	98	14	142	72	52	15,569	15,245	30	26	178	45	45
Black	85	84	1	-	-	-	-	91	88	-	2	-	-	1
Maryland	58,226	56,717	962	111	159	197	80	55,329	53,817	1,002	80	198	156	76
White	39,146	38,245	493	67	86	188	67	38,071	37,165	500	57	135	149	65
Black	17,600	17,018	460	37	66	7	12	15,998	15,413	493	19	59	5	9
Massachusetts	70,656	69,974	249	25	164	8	236	68,657	68,255	58	35	186	5	118
White	64,339	63,794	152	18	149	8	218	62,844	62,487	44	32	169	3	109
Black	5,231	5,122	75	6	12	-	16	4,823	4,785	11	3	16	1	7
Michigan	144,600	143,877	50	588	28	7	50	139,149	138,433	40	513	100	12	51
White	118,505	117,901	42	487	23	7	45	114,232	113,611	39	446	88	10	38
Black	24,004	23,905	5	87	4	-	3	23,039	22,949	1	62	12	2	13
Minnesota	65,280	63,378	1,591	17	66	15	213	61,993	60,511	1,153	18	75	6	230
White	62,029	60,240	1,508	11	55	15	200	58,980	57,591	1,084	16	70	6	213
Black	1,454	1,397	51	-	4	-	2	1,384	1,330	43	-	2	-	9
Mississippi	45,923	43,454	2,006	43	189	167	64	44,399	41,020	2,254	574	290	161	100
White	23,489	23,121	278	11	16	41	22	22,653	22,063	297	236	18	15	24
Black	22,066	19,972	1,723	30	173	126	42	21,407	18,626	1,951	336	272	146	76
Missouri	76,468	75,823	28	20	359	57	181	72,892	72,253	29	39	359	66	146
White	64,030	63,453	28	17	317	41	174	60,981	60,414	25	32	320	49	141
Black	11,694	11,633	-	3	38	15	5	11,181	11,115	4	4	37	17	4
Montana	14,065	13,696	103	73	72	21	100	13,545	13,247	37	77	49	27	108
White	12,605	12,249	100	67	71	19	99	12,104	11,824	37	64	48	27	104
Black	70	69	-	1	-	-	-	55	53	-	1	-	-	1
Nebraska	26,220	26,016	116	11	33	-	44	25,112	25,019	8	10	26	-	49
White	24,421	24,247	91	11	29	-	43	23,438	23,356	3	10	24	-	45
Black	1,206	1,188	14	-	3	-	1	1,140	1,136	-	2	-	-	2
Nevada	12,365	11,756	178	292	9	3	127	10,990	10,528	264	68	16	-	114
White	10,493	9,986	137	246	8	2	114	9,243	8,863	206	56	11	-	107
Black	1,229	1,155	33	32	1	-	8	1,193	1,134	42	10	3	-	4

New Hampshire	12,845	12,353	309	15	16	101	51	12,429	12,107	189	5	25	55	48
White	12,647	12,163	305	14	16	100	49	12,239	11,919	188	5	24	55	48
Black	91	86	3	-	-	1	1	85	83	1	-	1	-	-
New Jersey	96,501	94,459	1,396	55	212	218	161	93,535	91,284	1,071	722	160	163	135
White	74,951	73,807	647	33	148	208	108	72,617	71,271	470	532	110	145	89
Black	19,642	18,754	745	20	61	9	53	19,236	18,373	595	166	46	10	46
New Mexico	25,558	23,444	1,085	520	357	72	80	23,932	22,175	1,004	165	340	132	116
White	21,362	19,908	646	429	255	59	65	19,569	18,591	463	117	214	96	88
Black	711	670	22	7	8	3	1	860	743	67	6	14	20	10
New York	235,944	228,652	5,459	619	419	370	425	233,954	227,498	4,934	489	425	296	312
White	180,794	176,419	2,806	530	347	319	373	179,877	176,143	2,444	400	365	260	265
Black	48,622	45,829	2,563	76	64	45	45	48,876	46,218	2,446	84	58	31	39
North Carolina	83,849	82,779	467	22	381	57	143	82,442	81,721	25	8	485	88	115
White	56,545	56,002	234	9	169	12	119	55,552	55,224	12	3	211	8	94
Black	25,139	24,680	170	13	211	44	21	24,785	24,401	13	5	270	76	20
North Dakota	11,792	11,067	283	412	2	-	28	11,299	10,479	212	566	18	-	24
White	10,877	10,238	249	362	2	-	26	10,424	9,680	190	514	18	-	22
Black	108	48	26	32	-	-	2	84	48	16	20	-	-	-
Ohio	167,010	164,742	912	28	853	82	393	160,863	158,684	936	46	819	49	329
White	142,158	140,317	625	21	761	78	356	137,024	135,240	688	32	728	48	288
Black	23,355	22,945	278	7	89	4	32	22,420	22,038	244	12	86	1	39
Oklahoma	49,052	48,630	68	31	78	152	93	45,905	45,596	9	19	51	135	95
White	39,179	38,818	59	25	62	138	77	36,757	36,497	7	19	33	126	75
Black	5,037	5,014	1	3	9	9	1	4,643	4,624	1	-	8	4	6
Oregon	41,688	38,900	1,054	115	298	552	769	38,974	36,535	1,086	190	272	306	585
White	39,116	36,455	1,008	107	289	525	732	36,652	34,304	1,045	183	260	296	564
Black	976	941	11	1	-	9	14	946	917	12	1	3	5	8
Pennsylvania	157,865	153,712	2,224	383	1,010	315	221	152,248	133,854	2,117	15,563	467	82	165
White	135,801	132,346	1,715	284	953	309	194	130,892	116,223	1,576	12,443	425	78	147
Black	20,463	19,794	491	94	53	5	26	20,006	16,423	535	2,988	38	4	18
Rhode Island	11,880	11,734	73	2	24	15	32	11,522	11,466	4	3	20	13	16
White	10,878	10,743	71	1	19	13	31	10,560	10,509	4	3	17	11	16
Black	770	761	-	1	5	2	1	738	735	-	-	2	1	-
South Carolina	50,645	48,866	1,184	182	157	65	191	49,671	47,632	1,231	320	129	162	197
White	29,887	29,147	510	81	66	7	76	29,125	28,443	359	181	43	11	88
Black	20,359	19,343	654	98	91	58	115	20,135	18,807	856	129	86	150	107
South Dakota	13,036	12,668	256	55	15	14	28	12,239	11,807	326	62	8	2	34
White	11,254	11,014	146	45	11	14	24	10,631	10,381	158	52	8	2	30
Black	66	56	10	-	-	-	-	60	52	8	-	-	-	-
Tennessee	68,452	66,588	1,072	29	371	267	125	66,607	64,717	1,043	19	414	289	125
White	52,416	51,010	827	24	209	230	116	51,291	49,955	773	13	197	240	113
Black	15,587	15,159	221	5	161	33	8	14,892	14,381	233	5	216	47	10
Texas	254,508	245,287	2,469	819	479	4,695	759	236,952	228,993	1,297	749	465	4,587	861
White	214,236	205,783	2,247	682	407	4,473	644	199,207	192,046	1,080	675	384	4,290	732
Black	37,062	36,386	166	123	68	209	110	35,019	34,308	153	66	77	288	127
Utah	41,098	40,114	478	35	66	159	246	38,808	37,925	370	136	65	47	265
White	39,644	38,754	408	29	59	155	239	37,489	36,702	298	123	62	46	258
Black	230	211	17	-	1	1	-	217	202	11	2	1	-	1
Vermont	7,512	7,225	101	45	18	54	69	7,120	6,933	57	8	14	40	68
White	7,459	7,174	100	45	18	54	68	7,061	6,874	57	8	14	40	68
Black	18	17	1	-	-	-	-	25	25	-	-	-	-	-
Virginia	76,959	75,836	495	95	223	213	97	73,443	72,449	422	60	228	201	83
White	56,218	55,377	372	71	149	166	83	54,485	53,748	332	52	144	132	77
Black	19,070	18,829	99	17	68	45	12	17,473	17,235	76	5	83	68	6
Washington	64,325	62,769	359	81	271	411	434	58,726	57,150	177	82	576	375	366
White	57,707	56,236	333	76	263	387	412	52,810	51,332	161	74	543	358	342
Black	2,552	2,527	6	-	2	13	4	2,364	2,337	5	1	9	7	5

Table 6. Number of live births by place of delivery, type of attendant, and race of child: United States and each State, 1978 and 1979—Con.

State and race of child ¹	1979							1978						
	All live births	In hospital ²			Not in hospital ³			All live births	In hospital ²			Not in hospital ³		
		Physician	Midwife	Other and unspecified	Physician	Midwife	Other and unspecified		Physician	Midwife	Other and unspecified	Physician	Midwife	Other and unspecified
West Virginia	29,831	29,226	291	36	191	8	79	29,280	28,780	110	31	268	10	81
White	28,554	27,981	268	34	188	8	75	27,942	27,460	102	31	263	10	76
Black	1,139	1,107	23	2	3	-	4	1,206	1,188	8	-	5	-	5
Wisconsin	73,302	72,328	315	127	313	49	170	68,669	67,946	165	17	295	53	193
White	67,363	66,436	301	121	294	47	164	63,396	62,707	159	15	278	50	187
Black	4,623	4,587	13	3	16	1	3	4,135	4,106	6	1	16	3	3
Wyoming	9,781	9,440	196	78	7	-	60	8,661	8,005	129	480	12	-	35
White	9,310	8,990	181	72	7	-	60	8,144	7,543	120	436	12	-	33
Black	108	103	3	2	-	-	-	87	67	4	16	-	-	-

¹Total for each area includes races other than white and black.

²Includes births occurring enroute to or on arrival at hospital.

³Includes births with place of delivery not stated.

Table 7. Number of live births and percent distribution by age of mother, according to place of delivery, type of attendant, and race of child: United States, 1978-79 average

Race of child and age of mother	All live births ¹	In hospital		Not in hospital			Not stated
		Physician	Midwife	Midwife	Physician	Other	
All races ²							
Total	3,413,839	3,307,008	40,389	10,071	11,822	9,600	1,776
Percent distribution							
All ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 15 years	0.3	0.3	0.6	0.2	0.5	0.4	0.3
15-19 years.....	16.0	16.0	23.1	13.3	13.3	8.8	9.7
20-24 years.....	34.1	34.1	37.3	33.7	32.5	31.5	31.6
25-29 years.....	30.5	30.6	25.0	29.7	31.4	35.7	33.8
30-34 years.....	14.5	14.6	10.9	16.0	16.3	16.8	17.6
35-39 years.....	3.8	3.8	2.7	5.5	4.9	5.5	5.4
40-49 years.....	0.7	0.7	0.5	1.6	1.3	1.2	1.6
White							
Total	2,744,768	2,665,499	25,703	8,306	9,246	8,397	1,455
Percent distribution							
All ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 15 years	0.2	0.2	0.2	0.2	0.2	0.2	0.1
15-19 years.....	13.9	13.9	19.4	11.0	9.5	7.0	8.2
20-24 years.....	34.0	34.0	37.6	33.1	31.9	31.3	30.8
25-29 years.....	32.1	32.2	27.4	31.7	34.1	37.3	36.0
30-34 years.....	15.2	15.3	12.2	16.9	17.9	17.5	17.9
35-39 years.....	3.8	3.8	2.7	5.5	5.1	5.5	5.4
40-49 years.....	0.7	0.7	0.5	1.7	1.2	1.2	1.6
Black							
Total	564,698	542,267	12,275	1,640	2,212	890	238
Percent distribution							
All ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 15 years	1.1	1.1	1.3	0.5	1.4	2.9	1.5
15-19 years.....	26.9	26.8	31.8	25.1	28.5	24.9	18.5
20-24 years.....	35.7	35.6	37.4	36.8	34.7	32.7	38.4
25-29 years.....	22.3	22.4	19.1	19.8	20.4	22.3	20.0
30-34 years.....	10.0	10.0	7.6	10.9	9.3	10.5	14.7
35-39 years.....	3.3	3.3	2.3	5.5	4.1	5.5	5.5
40-49 years.....	0.8	0.8	0.5	1.3	1.5	1.2	1.5

¹Includes all resident births, regardless of attendant or place of delivery.

²Includes races other than white and black.

Table 8. Number of live births and percent distribution by live-birth order, according to place of delivery, type of attendant, and race of child: United States, 1978-79 average

Race of child and live-birth order	All live births ¹	Midwife in hospital	Not in hospital			
			Midwife	Physician	Other	Not stated
All races ²			Number			
Total ³	3,413,839	40,389	10,071	11,822	9,600	1,776
			Percent distribution			
All live-birth orders	100.0	100.0	100.0	100.0	100.0	100.0
First child	42.5	41.9	26.4	31.6	27.3	28.5
Second child	32.2	31.2	27.7	30.7	30.2	29.4
Third child	15.1	14.9	18.0	17.6	18.7	19.1
Fourth child or more	10.2	12.0	27.9	20.2	23.8	23.0
White			Number			
Total ³	2,744,768	25,703	8,306	9,246	8,397	1,455
			Percent distribution			
All live-birth orders	100.0	100.0	100.0	100.0	100.0	100.0
First child	43.1	43.3	27.2	31.5	27.5	28.2
Second child	32.8	32.5	28.3	31.7	30.6	30.7
Third child	14.9	14.4	17.9	17.5	18.7	19.1
Fourth child or more	9.2	9.8	26.6	19.3	23.3	22.0
Black			Number			
Total ³	564,698	12,275	1,640	2,212	890	238
			Percent distribution			
All live-birth orders	100.0	100.0	100.0	100.0	100.0	100.0
First child	39.8	40.5	21.7	31.7	26.2	28.0
Second child	29.3	28.9	24.7	26.5	27.2	24.2
Third child	16.2	15.5	18.3	17.8	18.5	19.2
Fourth child or more	14.7	15.1	35.3	24.1	28.0	28.6

¹Includes all resident births, regardless of attendant or place of delivery.

²Includes races other than white and black.

³Includes births with birth order not stated, which are excluded from the computation of the percent distributions.

Table 9. Number of live births, percent distribution by educational attainment of mother, and median years of school completed, according to place of delivery, type of attendant, and race of child: Total of reporting areas, 1978-79 average

Race of child and years of school completed by mother	All live births ¹	Midwife in hospital	Not in hospital			
			Midwife	Physician	Other	Not stated
All races²			Number			
Total ³	2,892,127	35,330	4,816	9,621	7,643	1,129
			Percent distribution			
All years of school completed	100.0	100.0	100.0	100.0	100.0	100.0
0-8 years	5.1	8.5	13.6	11.9	7.3	14.5
9-11 years	20.2	28.7	21.5	22.0	15.2	19.3
12 years	43.9	38.6	30.7	34.7	36.0	32.1
13-15 years	17.5	14.3	18.3	18.0	25.9	22.2
16 years or more	13.4	10.0	15.9	13.4	15.6	11.9
			Median			
Years of school completed	12.6	12.3	12.5	12.5	12.8	12.5
White			Number			
Total ³	2,306,419	21,665	3,374	7,346	6,679	884
			Percent distribution			
All years of school completed	100.0	100.0	100.0	100.0	100.0	100.0
0-8 years	4.9	8.7	12.5	12.4	6.5	14.1
9-11 years	17.5	24.0	12.9	17.5	13.1	14.9
12 years	44.7	37.9	30.2	33.7	36.4	33.0
13-15 years	18.1	15.7	23.4	20.2	27.3	24.1
16 years or more	14.8	13.7	21.0	16.1	16.7	14.0
			Median			
Years of school completed	12.6	12.5	12.8	12.6	12.8	12.6
Black			Number			
Total ³	504,646	11,892	1,361	2,065	716	188
			Percent distribution			
All years of school completed	100.0	100.0	100.0	100.0	100.0	100.0
0-8 years	5.2	7.4	16.2	10.1	12.6	16.4
9-11 years	32.9	37.2	42.6	38.1	34.0	37.8
12 years	41.8	40.1	32.3	37.9	32.5	29.4
13-15 years	14.3	11.8	5.7	10.4	13.8	13.5
16 years or more	5.8	3.6	3.1	3.5	7.1	2.9
			Median			
Years of school completed	12.3	12.1	11.4	12.0	12.1	11.7

¹Includes all births to residents of the areas reporting educational attainment of mother, regardless of attendant or place of delivery. See appendix, table 1, for a listing of these areas.

²Includes races other than white and black.

³Includes births with years of schooling not stated, which are excluded from the computation of percent distributions and medians.

Table 10. Percent of live births to unmarried women by age of mother, place of delivery, type of attendant, and race of child: Total of reporting areas, 1978-79 average

Race of child and age of mother	All live births ¹	Midwife in hospital	Not in hospital			
			Midwife	Physician	Other	Not stated
All races²						
All ages	16.8	27.2	15.6	21.5	15.1	25.5
Under 15 years	88.0	92.2	*88.2	96.0	98.0	*100.0
15-19 years	45.1	54.1	44.6	56.3	49.0	57.4
20-24 years	16.9	24.1	15.0	23.1	15.9	27.8
25-29 years	7.0	12.1	10.0	10.5	9.7	11.4
30-34 years	5.7	10.9	8.8	8.9	9.2	15.0
35-39 years	7.6	15.1	11.7	12.4	9.2	*27.1
40-49 years	10.1	11.7	*9.0	13.5	*9.1	*13.3
White						
All ages	8.8	13.4	8.1	10.9	10.8	12.4
Under 15 years	72.2	75.9	*75.0	87.0	95.5	-
15-19 years	28.6	30.7	18.4	36.3	33.9	30.5
20-24 years	8.7	11.9	8.4	11.8	11.3	14.2
25-29 years	3.4	6.3	7.0	6.0	7.9	5.3
30-34 years	2.9	5.6	6.3	5.1	8.2	11.3
35-39 years	4.2	10.7	5.9	6.9	7.1	19.0
40-49 years	5.9	8.3	1.6	6.6	7.0	-
Black						
All ages	54.7	57.7	35.3	55.4	55.4	58.1
Under 15 years	98.1	96.7	91.7	100.0	100.0	*100.0
15-19 years	84.1	83.4	64.9	78.1	83.1	86.4
20-24 years	53.7	50.6	29.9	54.6	59.1	59.8
25-29 years	32.9	31.7	23.3	35.9	37.1	38.5
30-34 years	26.7	29.5	19.0	33.3	24.1	24.1
35-39 years	26.5	27.5	24.1	34.0	25.9	*40.0
40-49 years	26.9	18.4	22.2	32.1	*29.4	*40.0

¹Includes all births to residents of the areas reporting marital status, regardless of attendant or place of delivery. See appendix, table I, for a listing of these areas.

²Includes races other than white and black.

Table 11. Number of live births, percent distribution by trimester of pregnancy prenatal care began, and median number of prenatal visits, according to place of delivery, type of attendant, and race of child: Total of reporting areas, 1978–79 average

Race of child, trimester of pregnancy prenatal care began, and number of prenatal visits	All live births ¹	Midwife in hospital	Not in hospital			
			Midwife	Physician	Other	Not stated
All races²			Number			
Total ³	3,389,094	39,345	9,969	11,473	9,526	1,752
			Percent distribution			
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
First trimester.....	75.4	57.1	50.6	55.4	52.5	55.8
Second trimester.....	19.3	31.8	28.6	29.0	21.9	21.6
Third trimester.....	3.9	8.3	10.6	9.1	6.3	6.4
No prenatal care.....	1.3	2.8	10.3	6.5	19.3	16.2
			Median			
Number of prenatal visits ⁴	11.0	10.4	9.0	8.9	8.1	8.3
White			Number			
Total ³	2,724,303	25,148	8,229	9,012	8,337	1,438
			Percent distribution			
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
First trimester.....	78.6	61.8	51.9	60.0	54.2	58.6
Second trimester.....	17.0	28.7	26.5	26.3	21.2	20.2
Third trimester.....	3.3	7.6	10.6	8.2	5.9	6.0
No prenatal care.....	1.1	1.9	11.0	5.4	18.8	15.2
			Median			
Number of prenatal visits ⁴	11.3	11.0	10.1	9.3	9.3	8.7
Black			Number			
Total ³	563,912	12,231	1,629	2,201	885	237
			Percent distribution			
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
First trimester.....	60.9	47.8	42.9	36.6	38.4	40.4
Second trimester.....	30.0	38.3	40.1	39.9	28.0	28.2
Third trimester.....	6.4	9.4	10.3	12.6	8.8	10.3
No prenatal care.....	2.8	4.5	6.7	10.9	24.8	21.1
			Median			
Number of prenatal visits ⁴	9.7	9.4	6.3	6.8	6.9	6.3

¹For trimester of pregnancy prenatal care began, includes all births to residents of the areas reporting month of pregnancy prenatal care began, regardless of attendant or place of delivery; for median number of visits, includes all births to residents of the areas reporting number of prenatal visits. See appendix, table I, for a listing of these areas.

²Includes races other than white and black.

³Includes births with month prenatal care began not stated, which have been excluded from the computation of the percent distributions.

⁴Excludes births to mothers with no prenatal care.

Table 12. Number of live births for mothers at demographic risk and percent distribution by trimester of pregnancy prenatal care began, according to place of delivery, type of attendant, and race of child: United States, 1978-79 average

Race of child and trimester of pregnancy prenatal care began	All live births ¹	Midwife in hospital	Not in hospital			
			Midwife	Physician	Other	Not stated
All races ²			Number			
Total ³	514,100	7,629	2,892	2,489	2,160	400
			Percent distribution			
Total	100.0	100.0	100.0	100.0	100.0	100.0
First trimester	63.1	46.0	39.2	41.3	39.3	42.6
Second trimester	26.7	36.8	31.8	34.3	23.8	24.3
Third trimester	7.2	12.3	14.1	14.7	8.9	7.8
No care	3.0	4.9	14.9	9.7	28.0	25.2
White			Number			
Total ³	361,740	4,026	2,199	1,738	1,758	300
			Percent distribution			
Total	100.0	100.0	100.0	100.0	100.0	100.0
First trimester	67.7	50.1	39.8	43.0	41.0	45.6
Second trimester	23.5	34.3	28.6	33.6	22.0	23.6
Third trimester	6.3	12.1	14.9	15.4	8.7	7.3
No care	2.5	3.5	16.7	8.0	28.3	23.3
Black			Number			
Total ³	134,478	3,187	676	697	336	82
			Percent distribution			
Total	100.0	100.0	100.0	100.0	100.0	100.0
First trimester	51.1	40.4	37.3	36.4	30.7	30.2
Second trimester	35.3	40.7	42.4	36.5	32.8	28.9
Third trimester	9.2	12.1	11.6	13.4	10.2	11.4
No care	4.4	6.8	8.8	13.7	26.4	29.5

¹Based on a 20-percent sample of all births in the areas reporting month of pregnancy prenatal care began, regardless of attendant or place of delivery. See appendix, table I, for a listing of these areas.

²Includes races other than white and black.

³Includes births with month prenatal care began not stated, which have been excluded from the computation of the percent distributions.

NOTE: Mothers at demographic risk are those who are: very young, in the oldest years of childbearing, or who had a high or low birth-order child relative to their age. See appendix for further details.

Table 13. Number of live births and percent distribution by birth weight, according to place of delivery, type of attendant, and race of child: United States, 1978-79 average

Race of child and birth weight	All live births ¹	Midwife in hospital	Not in hospital			
			Midwife	Physician	Other	Not stated
All races²						
Total ³	3,413,839	40,389	10,071	11,822	9,600	1,776
Number						
Total	100.0	100.0	100.0	100.0	100.0	100.0
Percent distribution						
Less than 1,000 grams	0.5	0.2	0.1	0.1	0.9	0.9
1,000-1,499 grams	0.6	0.2	0.1	1.0	0.8	1.0
1,500-1,999 grams	1.4	0.7	0.6	1.6	1.5	2.0
2,000-2,499 grams	4.5	3.9	2.9	4.8	4.1	5.1
2,500-2,999 grams	16.8	18.8	13.0	16.0	14.1	15.2
3,000-3,499 grams	37.2	41.1	32.7	34.3	32.6	32.3
3,500-3,999 grams	28.6	27.5	32.8	28.9	30.7	29.6
4,000-4,499 grams	8.6	7.3	13.4	9.8	11.9	10.6
4,500 grams or more	1.8	1.3	4.4	2.7	3.4	3.4
Less than 2,500 grams	7.0	4.9	3.8	8.5	7.3	8.9
White						
Total ³	2,744,768	25,703	8,306	9,246	8,397	1,455
Number						
Total	100.0	100.0	100.0	100.0	100.0	100.0
Percent distribution						
Less than 1,000 grams	0.4	0.1	0.1	0.8	0.6	0.8
1,000-1,499 grams	0.5	0.1	0.1	0.8	0.6	0.7
1,500-1,999 grams	1.1	0.5	0.5	1.2	1.2	1.1
2,000-2,499 grams	3.8	2.8	2.4	3.6	3.4	4.0
2,500-2,999 grams	15.0	15.8	11.9	13.5	12.6	12.8
3,000-3,499 grams	36.9	38.9	32.9	34.1	32.8	32.9
3,500-3,999 grams	30.6	31.1	33.8	31.6	32.5	31.7
4,000-4,499 grams	9.6	8.9	13.9	11.3	12.7	12.2
4,500 grams or more	2.0	1.7	4.4	3.2	3.6	3.8
Less than 2,500 grams	5.9	3.6	3.1	6.4	5.8	6.6
Black						
Total ³	564,698	12,275	1,640	2,212	890	238
Number						
Total	100.0	100.0	100.0	100.0	100.0	100.0
Percent distribution						
Less than 1,000 grams	1.2	0.3	0.1	2.0	2.8	1.5
1,000-1,499 grams	1.2	0.4	0.2	1.8	3.0	2.9
1,500-1,999 grams	2.5	1.1	1.2	3.3	4.5	6.9
2,000-2,499 grams	7.8	6.2	5.7	9.3	10.6	11.5
2,500-2,999 grams	24.7	25.3	18.5	25.6	26.3	26.8
3,000-3,499 grams	38.3	42.1	31.5	34.8	30.7	28.5
3,500-3,999 grams	19.4	20.0	27.6	18.3	15.5	15.5
4,000-4,499 grams	4.1	4.0	10.6	4.2	5.0	4.2
4,500 grams or more	0.8	0.6	4.6	0.8	1.6	2.2
Less than 2,500 grams	12.7	8.0	7.2	16.3	21.0	22.8

¹Includes all resident births, regardless of attendant or place of delivery.

²Includes races other than white and black.

³Includes births with birth weight not stated, which are excluded from the computation of the percent distributions.

Table 14. Percent of infants of low birth weight by age of mother, place of delivery, type of attendant, and race of child: United States, 1978-79 average

Race of child and age of mother	All live births ¹	Midwife in hospital	Not in hospital			
			Midwife	Physician	Other	Not stated
All races²						
All ages	7.0	4.9	3.8	8.5	7.3	8.9
Under 15 years	14.4	10.7	13.3	27.9	39.0	*10.0
15-19 years	9.8	7.2	6.2	16.4	18.0	16.9
20-24 years	7.0	4.8	3.8	8.5	7.1	9.7
25-29 years	5.9	3.7	2.8	6.0	5.0	6.4
30-34 years	6.0	3.2	3.1	6.0	5.9	8.7
35-49 years	7.6	4.6	4.2	9.1	8.0	7.8
White						
All ages	5.9	3.6	3.1	6.4	5.8	6.6
Under 15 years	11.4	2.7	18.5	24.4	41.2	-
15-19 years	8.0	5.6	5.1	14.4	14.6	12.3
20-24 years	5.8	3.6	3.0	6.4	5.5	7.2
25-29 years	5.1	2.6	2.3	4.5	4.3	4.7
30-34 years	5.2	2.8	2.8	5.0	5.0	7.2
35-49 years	6.7	3.2	4.0	8.0	7.1	6.4
Black						
All ages	12.7	8.0	7.2	16.3	21.0	22.8
Under 15 years	16.8	13.7	*5.9	31.7	37.5	*14.3
15-19 years	14.4	9.6	8.9	18.8	27.8	27.4
20-24 years	12.6	7.8	7.1	15.2	20.7	23.0
25-29 years	11.3	6.7	6.9	15.1	14.8	23.6
30-34 years	11.3	5.1	5.6	13.9	18.9	17.9
35-49 years	12.5	8.8	4.9	14.9	17.1	19.4

¹Includes all resident births, regardless of attendant or place of delivery.

²Includes races other than white and black.

Table 15. Percent of infants of low birth weight by live-birth order, place of delivery, type of attendant, and race of child: United States, 1978-79 average

Race of child and live-birth order	All live births ¹	Midwife in hospital	Not in hospital			
			Midwife	Physician	Other	Not stated
All races²						
All orders ³	7.0	4.9	3.8	8.5	7.3	8.9
First child	7.3	5.6	4.3	10.8	10.4	10.9
Second child	6.4	4.2	3.1	6.9	6.1	7.0
Third child	6.8	4.5	3.6	7.7	5.4	8.0
Fourth child and over	8.1	5.0	4.1	7.8	6.7	9.8
White						
All orders ³	5.9	3.6	3.1	6.4	5.8	6.6
First child	6.3	4.3	3.4	8.5	8.5	8.6
Second child	5.3	3.0	2.8	5.3	5.0	5.1
Third child	5.6	3.1	2.5	5.6	4.1	4.9
Fourth child and over	6.4	3.3	3.4	5.3	5.0	7.7
Black						
All orders ³	12.7	8.0	7.2	16.3	21.0	22.8
First child	12.7	8.9	9.5	18.7	28.8	24.4
Second child	12.3	7.4	4.7	15.1	17.8	21.7
Third child	12.6	7.6	9.5	14.9	17.0	28.0
Fourth child and over	13.5	8.1	6.7	15.5	19.1	18.3

¹Includes all resident births, regardless of attendant or place of delivery.

²Includes races other than white and black.

³Includes births with birth order not stated.

Table 16. Percent of infants of low birth weight by educational attainment of mother, place of delivery, type of attendant, and race of child: Total of reporting areas, 1978-79 average

Race of child and years of school completed by mother	All live births ¹	Midwife in hospital	Not in hospital			
			Midwife	Physician	Other	Not stated
All races²						
All years of school completed ³	7.1	5.2	3.7	9.1	7.1	9.3
0-8 years.....	9.0	5.9	5.4	9.1	12.1	10.3
9-11 years.....	10.1	7.1	5.6	14.1	13.2	17.6
12 years.....	6.7	4.9	3.7	9.5	6.7	10.3
13-15 years.....	5.7	3.7	1.7	5.4	4.4	5.0
16 years or more.....	4.7	2.7	2.2	3.6	4.5	3.0
White						
All years of school completed ³	5.9	3.7	2.6	6.9	5.6	5.8
0-8 years.....	7.8	4.6	4.6	7.1	8.2	6.4
9-11 years.....	8.3	5.6	4.8	11.1	9.6	12.2
12 years.....	5.6	3.4	2.0	8.0	5.7	5.9
13-15 years.....	4.8	2.5	1.4	4.4	3.7	3.2
16 years or more.....	4.3	2.3	1.9	3.2	4.4	3.2
Black						
All years of school completed ³	12.8	8.1	6.4	16.4	20.6	24.4
0-8 years.....	14.7	9.3	6.3	17.1	28.7	22.2
9-11 years.....	14.8	9.3	6.2	18.9	25.5	27.0
12 years.....	12.0	7.6	7.4	13.9	18.0	28.0
13-15 years.....	10.7	6.5	4.7	12.6	16.2	21.3
16 years or more.....	8.9	5.0	3.6	9.2	6.3	-

¹Includes all births to mothers residing in areas reporting educational attainment of mother, regardless of attendant or place of delivery. See appendix, table 1, for a listing of these areas.

²Includes races other than white and black.

³Includes births with educational attainment of mother not stated.

Table 17. Percent of infants of low birth weight by marital status of mother, place of delivery, type of attendant, and race of child: Total of reporting areas, 1978-79 average

Race of child and marital status of mother	All live births ¹	Midwife in hospital	Not in hospital			
			Midwife	Physician	Other	Not stated
All races²						
Total.....	7.0	4.8	3.5	9.3	7.0	11.6
Married.....	5.9	3.6	3.0	6.4	5.2	6.9
Unmarried.....	12.2	8.0	6.0	20.1	17.1	25.2
White						
Total.....	5.8	3.4	2.3	7.1	5.6	7.0
Married.....	5.5	3.1	2.2	5.6	4.7	5.7
Unmarried.....	9.5	5.6	3.7	19.7	12.6	16.9
Black						
Total.....	12.7	8.4	6.6	15.6	21.1	23.2
Married.....	10.5	6.4	6.1	9.9	15.2	14.1
Unmarried.....	14.5	9.7	7.5	20.2	25.8	29.4

¹Includes all births to residents of areas reporting marital status of mother, regardless of attendant or place of delivery. See appendix, table 1, for a listing of these areas.

²Includes races other than white and black.

Table 18. Percent of infants of low birth weight by trimester of pregnancy prenatal care began, place of delivery, type of attendant, and race of child: Total of reporting areas, 1978-79 average

Race of child and trimester of pregnancy prenatal care began	All live births ¹	Midwife in hospital	Not in hospital			
			Midwife	Physician	Other	Not stated
All races ²						
Total ³	7.0	4.9	3.7	8.4	7.3	8.9
First trimester	6.3	4.1	2.9	6.8	5.8	7.5
Second trimester	8.2	5.4	3.6	7.2	7.0	7.3
Third trimester	7.9	5.3	4.3	6.3	6.7	3.7
No prenatal care	20.3	12.9	6.8	25.6	11.3	18.4
White						
Total ³	5.8	3.6	3.0	6.4	5.8	6.5
First trimester	5.4	3.0	2.4	5.3	4.8	5.0
Second trimester	6.7	3.9	2.7	5.5	4.8	5.7
Third trimester	6.5	4.2	3.2	4.4	5.5	0.7
No prenatal care	16.9	9.0	5.7	21.5	9.3	16.9
Black						
Total ³	12.7	8.0	7.2	16.3	21.0	22.9
First trimester	11.8	7.2	6.1	16.2	18.8	27.3
Second trimester	12.8	8.0	6.5	11.9	22.6	16.1
Third trimester	12.1	7.5	10.1	11.1	15.5	12.8
No prenatal care	27.3	16.7	16.0	33.3	25.1	23.7

¹Includes all births to residents of areas reporting month of pregnancy prenatal care began, regardless of attendant or place of delivery. See appendix, table I, for a listing of these areas.

²Includes races other than white and black.

³Includes births for which the month of pregnancy prenatal care began is not stated.

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Appendix

Technical notes

Sources of data

Data presented in this report were obtained from information reported on birth certificates filed in all 50 States and the District of Columbia. Additional information on births is published annually by the National Center for Health Statistics in Volume I of *Vital Statistics of the United States*. A complete discussion of the sources, classification, and processing of natality data may be found in the Technical appendix of these volumes.

Information on the attendant and place of delivery is derived from three birth certificate items. For all but 11 States and the District of Columbia, the wording of the attendant item is similar to the wording of the 1978 revision of the U.S. Standard Certificate of Live Birth, "Name and title of the attendant at birth if other than the certifier." State certificates that do not use the standard wording generally have check boxes for specifying attendant. However, only a few States distinguish between a certified nurse-midwife and lay midwife. If the attendant item is not completed, the determination of attendant is made from the title of the certifier. The 1978 revision of the U.S. Standard Certificate of Live Birth wording of the question on place of delivery is "Hospital-Name (if not in hospital, give street and number)." This wording, or one with minor variation, is used by all States.

Hospital births include births occurring in hospitals, institutions, clinics, medical centers, maternity homes, and other medical facilities such as infirmaries and dispensaries. Nonhospital births include those occurring in the mother's residence, a doctor's office, a public place, or a named place other than those included in the "inhospital" category. Generally, a birthing center that is a licensed facility will be classified as a hospital. Births occurring enroute to or on arrival at a hospital are considered to be hospital births. There were 1,053 such births in 1978 and 1,310 births in 1979.

Physician deliveries include deliveries attended by an M.D. (Doctor of Medicine), D.O. (Doctor of Osteopathy), resident, intern, or extern. Midwife deliveries include deliveries attended by a nurse-midwife, certified nurse-midwife, midhusband, or lay midwife.

The tabulation of inhospital deliveries has changed in recent years. For the period 1935-74, the "inhospital" category in previous NCHS publications and in table 1 of this report includes births in hospitals or institutions and births in clinics, centers, or maternity homes only when attended by a physician. The "inhospital" category shown in table 1 for 1975-79 includes all clinic, center, and maternity home births, regardless of attendant. Data for 1975-77 differ from previously published NCHS data for these years which conform to the earlier defini-

tion. For 1978 and 1979, data shown in table 1 and other NCHS publications are comparable—all clinic, center, and maternity home births, regardless of attendant, are classified as "inhospital" births.

Reporting areas

The birth certificates of all reporting areas include questions on attendant and place of delivery, race, nativity, age of mother, and birth order. However, not all areas request information on other characteristics discussed in this report. Table I shows the areas that requested information on educational attainment of mother, month of pregnancy prenatal care began, number of prenatal visits, and marital status of mother. The size of the reporting area for any table is dependent on which characteristics are included.

Sampling rates

Trend data shown in table 1 are based on varying sample sizes. Data for 1935, 1940, 1945, 1950, and 1955 are based on the total file of birth records; data for 1960, 1965, 1966, and 1968-71 are derived from 50-percent samples of birth records; data for 1967 are based in part on 20-percent and in part on 50-percent samples. Birth statistics for the years 1972-79 are based on 100 percent of the birth certificates from States participating in the Vital Statistics Cooperative Program (VSCP) and on a 50-percent sample of births from all other States. The size of the VSCP reporting area grew from 6 States in 1972 to 42 States in 1979.

Residence classification

All tables included in this report are by place of residence of the mother and, for 1970-79, exclude births to nonresidents of the United States. Births to U.S. residents occurring outside the country are also excluded. Table 1 includes data for Alaska and Hawaii beginning in 1960.

Geographic region

For the purpose of classifying the population by geographic area, the States are grouped into four regions that correspond to those used by the U.S. Bureau of the Census as follows:

Region	States included
Northeast	Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, and Pennsylvania.
North Central	Ohio, Illinois, Indiana, Michigan, Wisconsin, Minnesota, Iowa, and Missouri.

Table I. States reporting educational attainment of mother, month of pregnancy prenatal care began, number of prenatal visits, and marital status of mother: Each State, 1978-79

[Unless otherwise noted, reporting was for both 1978 and 1979. Items shown are those on the Standard Certificate of Live Birth. "X" denotes presence of item on the State certificate]

State	Educational attainment of mother	Month of pregnancy prenatal care began	Number of prenatal visits	Marital status of mother
Alabama	X	X	X	X
Alaska	X	X	X	X
Arizona	X	X	X	X
Arkansas	X	X	X	X
California	¹ X	X	¹ X	
Colorado	X	X	X	X
Connecticut	X	X	X	
Delaware	X	X	X	X
District of Columbia	X	X	X	X
Florida	X	X	X	X
Georgia	X	X	X	
Hawaii	X	X	X	X
Idaho	X	X	X	X
Illinois	X	X	X	X
Indiana	X	X	X	X
Iowa	X	X	X	X
Kansas	X	X	X	X
Kentucky	X	X	X	X
Louisiana	X	X	X	X
Maine	X	X	X	X
Maryland	X	X	² X	
Massachusetts	X	X	X	X
Michigan	X	X	X	
Minnesota	X	X	X	X
Mississippi	X	X	X	X
Missouri	X	X	X	X
Montana	X	X	X	
Nebraska	X	X	X	X
Nevada	X	X	X	
New Hampshire	X	X	X	X
New Jersey	X	X	X	X
New Mexico				
New York	X	X	X	
North Carolina	X	X	X	X
North Dakota	X	X	X	X
Ohio	X	X	X	
Oklahoma	X	X	X	X
Oregon	X	X	X	X
Pennsylvania	X	X	X	X
Rhode Island	X	X	X	X
South Carolina	X	X	X	X
South Dakota	X	X	X	X
Tennessee	X	X	X	X
Texas		X		
Utah	X	X	X	X
Vermont	X	X	X	X
Virginia	X	X	X	X
Washington		X	X	X
West Virginia	X	X	X	X
Wisconsin	X	X	X	X
Wyoming	X	X	X	X

¹Did not report in 1979.

²Did not report in 1978.

Region—Con.

States included—Con.

South..... Delaware, Maryland, District of Columbia, West Virginia, Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, and Arkansas.

West..... Washington, Oregon, California, Nevada, New Mexico, Arizona, Texas, Oklahoma, Kansas, Nebraska, North Dakota, South Dakota, Idaho, Utah, Colorado, Montana, Wyoming, Alaska, and Hawaii.

Completeness of reporting

The percent of records with information missing for the variables discussed in this report are shown in table II. Age of mother, race of child, and marital status are not included since these are imputed when not reported. When the mother's age is not stated on the birth certificate or reported as less than 10 or greater than 49 years, it is imputed on the basis of a previously processed record. Race of the child is also imputed from a

Table II. Percent of records with information missing for selected characteristics by place of delivery, type of attendant, and race of child: Total of reporting areas, 1978-79 average

Race of child and characteristic	All live births	Midwife in hospital	Not in hospital			Not stated
			Midwife	Physician	Other	
Live-birth order						
All races ¹	0.8	1.6	1.3	2.5	2.4	4.7
White	0.7	1.0	1.0	2.4	2.4	4.7
Black	1.1	2.9	2.2	1.1	1.8	4.6
Total-birth order						
All races ¹	1.1	1.7	2.1	3.1	3.0	5.2
White	1.0	1.1	1.7	3.0	2.9	5.2
Black	1.6	3.1	2.8	1.9	2.1	4.8
Educational attainment of mother						
All races ¹	1.7	1.9	3.1	3.3	5.3	10.3
White	1.6	1.6	3.1	3.1	5.4	10.8
Black	2.1	1.3	2.6	2.7	4.0	7.7
Month of pregnancy prenatal care began						
All races ¹	3.2	3.9	6.2	5.0	8.1	10.5
White	2.9	3.3	5.8	4.8	8.1	9.9
Black	4.5	4.3	7.3	4.4	6.4	11.8
Number of prenatal visits						
All races ¹	4.9	5.5	6.9	6.4	9.5	14.7
White	4.4	4.6	6.6	6.2	9.4	14.7
Black	7.0	6.5	6.7	6.2	8.9	12.8
Birth weight						
All races ¹	0.2	0.2	0.7	1.2	3.0	5.5
White	0.2	0.2	0.7	1.2	2.9	5.7
Black	0.3	0.2	0.8	1.2	3.0	5.0
Nativity of mother						
All races ¹	0.1	0.2	0.2	0.5	0.4	1.9
White	0.1	0.1	0.1	0.5	0.4	1.9
Black	0.3	0.5	0.6	0.7	0.6	1.9

¹Includes races other than white and black.

NOTE: Live-birth order, total-birth order, birth weight, and nativity of mother were reported by all areas; See Table I for a listing of areas reporting educational attainment of mother, month of pregnancy prenatal care began, and number of prenatal visits. Figures represent percent of records in reporting areas with missing information.

previous record when information for both mother's and father's race is missing. In areas reporting marital status, mothers for whom this information is missing are assumed to be married. For each of these three variables—age, race, and marital status—information was imputed for less than one-half of one percent of all records.

The extent of missing information about midwife-in-hospital deliveries is about the same as for all births during this period except for live-birth order and total-birth order. For these two variables, nonreporting is higher for midwife deliveries, but still low overall. The level of missing information is generally higher for midwife and physician home deliveries than for midwife-in-hospital deliveries. The most incomplete reporting is for home deliveries when the attendant was indicated as someone other than a physician or midwife or when the attendant was not stated (table II).

For the years 1975-79 there were substantial numbers of inhospital births with an unspecified attendant. However, dur-

ing this period such nonreporting declined markedly—from 64,069 births in 1975 to 10,994 births in 1979. The number of home births with an unspecified attendant also declined—from 3,345 births in 1975 to 1,682 births in 1979 (table III).

A national test of birth registration completeness for 1964-68 indicated that 99.5 percent of white births and 98.6 percent of all other births delivered in hospitals were registered.¹⁶ A lower proportion of out-of-hospital births were registered—94.4 percent of white births and 93.4 percent of all other births. Several studies indicate that registration of home births in some areas of the country may be substantially lower than these national averages in recent years.¹⁷

Demographic risk categories

Maternal age and total-birth order (the sum of live births and fetal deaths including the present delivery) categories con-

NOTE: A list of references follows the text.

Table III. Number of live births delivered by other and unspecified attendants, by place of delivery and race of child: United States, 1975-79

Race of child and year of birth	In hospital ¹			Not in hospital ²		
	Total other and unspecified	Other	Unspecified	Total other and unspecified	Other	Unspecified
All races³						
1979	22,215	11,221	10,994	11,714	10,032	1,682
1978	42,700	12,721	29,979	11,036	9,167	1,869
1977	59,596	12,531	47,065	10,402	7,449	2,953
1976	58,153	12,871	45,282	8,178	5,914	2,264
1975	71,191	7,122	64,069	6,305	2,960	3,345
White						
1979	17,537	8,380	9,157	10,159	8,734	1,425
1978	33,929	9,952	23,977	9,544	8,059	1,485
1977	47,699	9,643	38,056	9,008	6,605	2,403
1976	45,845	9,642	36,203	6,979	5,148	1,831
1975	57,734	5,342	52,392	5,329	2,585	2,744
Black						
1979	3,061	1,856	1,205	1,155	954	201
1978	6,781	1,875	4,906	1,100	825	275
1977	8,907	2,105	6,802	1,023	578	445
1976	9,858	2,480	7,378	929	550	379
1975	10,906	1,311	9,595	789	281	508

¹Includes births occurring enroute to or on arrival at hospital.

²Includes births with place of delivery not stated.

³Includes races other than white and black.

NOTE: Data by attendant for years 1975 to 1977 differ from those previously published; see "Sources of data."

sidered as indicators of demographic risk in this report are in accordance with those used in a study of New York City infant deaths.¹¹ These were determined by examining the infant mortality experience of the United States 1960 live birth cohort. The age and total-birth order combinations that most clearly indicated an elevated risk of infant mortality were selected. They are:

- All under 15 years of age
- 15-19 years of age and total-birth order 2 or more
- 20-24 years of age and total-birth order 4 or more
- 25-29 years of age and total-birth order 5 or more
- 30-34 years of age and total-birth order 1 or 6 or more
- 35-39 years of age and total-birth order 1 or 5 or more
- All 40 years or more of age

Records where total-birth order could not be determined were excluded from this analysis.

Definition of terms

Low birth weight—Low birth weight was defined as 2,500 grams or less in 1978 and as less than 2,500 grams in 1979. Infants for whom birth weight was not reported are excluded from the computation of percent low birth weight.

Race—Births are classified according to the race or origin of the parents. The categories are "White," "Black," "American Indian," "Chinese," "Japanese," "Hawaiian," "Filipino," "Other Asian or Pacific Islander," and "Other." The category "White" comprises births reported as white, Mexican, Puerto Rican, Cuban, or other Hispanic origin. In all tables, race refers to the child's race. However, since the race of the mother and

child are identical for most births, in text statements the racial designation of the child is also used to identify the mother.

Urban places—Urban places are classified according to the population enumerated in the 1970 Census of Population. They include incorporated cities of 10,000 population or more, and towns in New England, townships in New Jersey and Pennsylvania, and counties in other States that meet certain criteria. The remaining nonurban areas of the country and smaller urban places of less than 10,000 population are included in the category "balance of area."

Standardization of percent low birth weight

The direct method of standardization was used to compare the percent low birth weight of infants delivered by midwives in hospitals and infants delivered at home, without the influence of differences in age of the mother or live-birth order. The standard population was the distribution of all births in the 1978-79 period by age of the mother and live-birth order. Standardization was performed separately for births of all races, for white births and for black births using the following formula:

$$m_1 = \frac{\sum_{a,b} m_{a,b} P_{a,b}}{P} \times 100$$

where m_1 = standardized percent for given race,

$m_{a,b}$ = percent low birth weight for each age and birth-order group for given race

$P_{a,b}$ = average number of births in 1978-79 for each age and birth-order group for given race

P = total standard population (average of 1978-79) for given race

NOTE: A list of references follows the text.

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