

## Changes in Prenatal Care Utilization: United States, 2019–2021

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### Abstract

**Objectives**—This report describes changes in prenatal care use (utilization) in the United States before and during the COVID-19 pandemic by month of birth and the mother’s race and Hispanic origin.

**Methods**—Data are based on all birth certificates registered in the United States from 2019 through 2021. Prenatal care is measured using the Adequacy of Prenatal Care Utilization Index and categorized as no care, inadequate, intermediate, adequate, and adequate plus care. The month care began and the number of prenatal care visits, the two components of the index, are also examined.

**Results**—The percentage of mothers with no prenatal care (1.9%) or inadequate prenatal care (13.0%) was unchanged from 2019 to 2020, but the percentage with intermediate care rose 23% (from 8.4% to 10.3%), and the percentage with adequate plus care declined by 9% (36.6% to 33.4%). From 2020 to 2021, the percentage of mothers with no care rose from 1.9% to 2.1%, but intermediate care declined 4%, and adequate plus care rose 3%. Increases in the percentage of mothers with intermediate care and declines in the percentage with adequate plus care were observed by month of birth for each month during April 2020 through March 2021. The percentage of mothers beginning care in the first 4 months of pregnancy increased in both 2020 and 2021, while the percentage with fewer than the recommended number of visits rose 22% from 2019 to 2020 and declined 4% from 2020 to 2021. Changes in intermediate and adequate plus care from 2019 to 2020 were primarily the result of declines in the number of prenatal visits and not changes in the timing of care. Similar findings were seen across race and Hispanic-origin groups.

**Keywords:** Adequacy of Prenatal Care Utilization Index • race and Hispanic origin • month of birth • National Vital Statistics System

### Introduction

Early and regular prenatal care can improve the likelihood of a healthy pregnancy and baby (1). The COVID-19 pandemic gave rise to concerns that lockdowns and fear of exposure to the virus during in-person visits for prenatal care could lead to delayed care and missed visits (2–6). To better monitor prenatal care during the pandemic, the Centers for Disease Control and Prevention’s National Center for Health Statistics began tracking monthly levels of prenatal care timing and use (utilization) in the United States (7). These data suggested unfavorable changes in one of the primary measures used to assess prenatal care utilization in the United States, the Adequacy of Prenatal Care Utilization (APNCU) Index (7). The APNCU index uses birth certificate data to characterize the adequacy of care received during pregnancy based on the month care began and the number of prenatal care visits, adjusting for the gestational age of the newborn (8).

This report examines changes in the APNCU index in the United States from 2019 to 2020 and from 2020 to 2021 overall, and by month of birth and the race and Hispanic origin of the mother. To better identify APNCU changes, this report also examines changes in the index’s two components—the month prenatal care began and the number of prenatal visits.

### Methods

This report uses data from the National Vital Statistics System’s Natality Data File. The vital statistics natality file is based on information derived from birth certificates and includes information for all births occurring in the United States for 2019–2021. Prenatal care information for birth certificate reporting is recommended to be collected directly from the prenatal care record (9).

The APNCU index is based on the month prenatal care began and the number of prenatal visits adjusted for the newborn’s gestational age (8,10). The index does not assess the quality of the prenatal care, but only its utilization. The APNCU



categories for this report are: no care (subdivided from the more standard inadequate care category), inadequate (excluding no care), intermediate, adequate, and adequate plus care. No care is defined as no visits or examinations by a healthcare professional during the pregnancy. Inadequate care is defined as care that begins after the fourth month of pregnancy or care that includes less than 50% of the recommended number of visits. Intermediate care is defined as care beginning in the first 4 months of pregnancy and including 50%–79% of the recommended number of visits. Adequate prenatal care is care beginning in the first 4 months of pregnancy with at least 80%–109% of the recommended number of visits. Adequate plus care is care beginning in the first 4 months of pregnancy with 110% or more of the recommended visits (8,10).

A prenatal care visit is defined as one in which the physician or other healthcare professional examines or counsels the pregnant woman for the pregnancy; it excludes visits for laboratory or other testing or childbirth classes in which the healthcare professional does not counsel the woman for the pregnancy (9). For detailed definitions of prenatal care and gestational age, see the “Guide to Completing the Facility Worksheets for the Certificate of Live Birth and Report of Fetal Death” (9).

The number of visits is assessed for the APNCU index by comparing the number of reported visits with the number of expected visits for a particular gestational age, based on recommendations from the American College of Obstetricians and Gynecologists (11). The expected number of visits is 8–14 for a term pregnancy (37–40 weeks) for which care began within the first 4 months. The number of prenatal care visits was missing for 2.0%–2.5% of birth records for 2019–2021; percentages of missing data generally declined over the 3 years. By race and Hispanic origin, missing number of visits ranged from 2.2% to 2.8% for Hispanic mothers, 2.4% to 3.2% for non-Hispanic Black (subsequently, Black) mothers, and 1.7% to 2.0% for non-Hispanic White (subsequently, White) mothers.

The month prenatal care began is derived from the “Date of first prenatal visit” entry (the item also includes a checkbox for “No prenatal care”) and the gestational age of the newborn based on the obstetric estimate of gestation (12). The month prenatal care began was missing from 2.0%–2.3% of birth records for 2019 through 2021 (2.3% in 2019, 2.0% in 2020, and 2.1% in 2021). By race and Hispanic origin, percentages of missing month prenatal care began ranged from 1.6% to 1.8% for White mothers, 2.3% to 2.5% for Hispanic mothers, and 2.6% to 3.3% for Black mothers.

To better understand changes in the APNCU index, changes in its two components were examined independently of the index. For consistency with APNCU index categories, prenatal care months were categorized as either beginning within the first 4 months of pregnancy or beginning 5 months or later. The calculations exclude no care.

Changes in the number of prenatal care visits are assessed for mothers beginning care within the first 4 months of pregnancy. Changes for mothers beginning care in the fifth month or later are not examined because the APNCU index automatically categorizes this group as having inadequate care regardless of the number of visits, and changes in the number of visits alone would not affect this APNCU category. For mothers

beginning care within the first 4 months, visits are adjusted for the month prenatal care began and the week of gestation and categorized as fewer than (less than 80%) or more than (110% or more) the recommended number of visits. For example, the recommended number of visits for a mother beginning prenatal care in the 3rd month of pregnancy who gives birth at 38 weeks is 10. A mother with 7 visits or less (less than 80% of the recommended number) would be categorized as having fewer than the recommended number of visits; a mother with 11 visits or more (110% or more) would be categorized as having more than the recommended number. Mothers with no care are excluded from the calculations.

Analysis is limited to the three largest race and Hispanic-origin groups (Black, Hispanic, and White) for which the number of births was sufficient to calculate statistically reliable rates for most categories. References to increases or decreases in rates or percentages indicate that differences are statistically significant at the 0.05 level based on a two-tailed z test. Computations exclude records for which information is unknown.

## Results

### Changes in prenatal care utilization

#### 2019 to 2020

The percentages of mothers with no prenatal care (1.9%) or inadequate care (13.0%) were unchanged from 2019 to 2020 (Table 1, Figure 1). Intermediate care rose 23% from 8.4% to 10.3%. The percentage of mothers with adequate care increased 3%, from 40.1% to 41.3%, while the percentage of mothers with adequate plus care declined 9%, from 36.6% to 33.4%.

#### 2020 to 2021

The percentage of mothers with no care rose to 2.1% in 2021 (Table 1, Figure 1). The percentage of mothers with inadequate or intermediate care declined 4% (to 12.5% and 9.9%, respectively). Adequate care remained essentially unchanged at 41.2%. Adequate plus care rose 3% to 34.4% from 2020 to 2021.

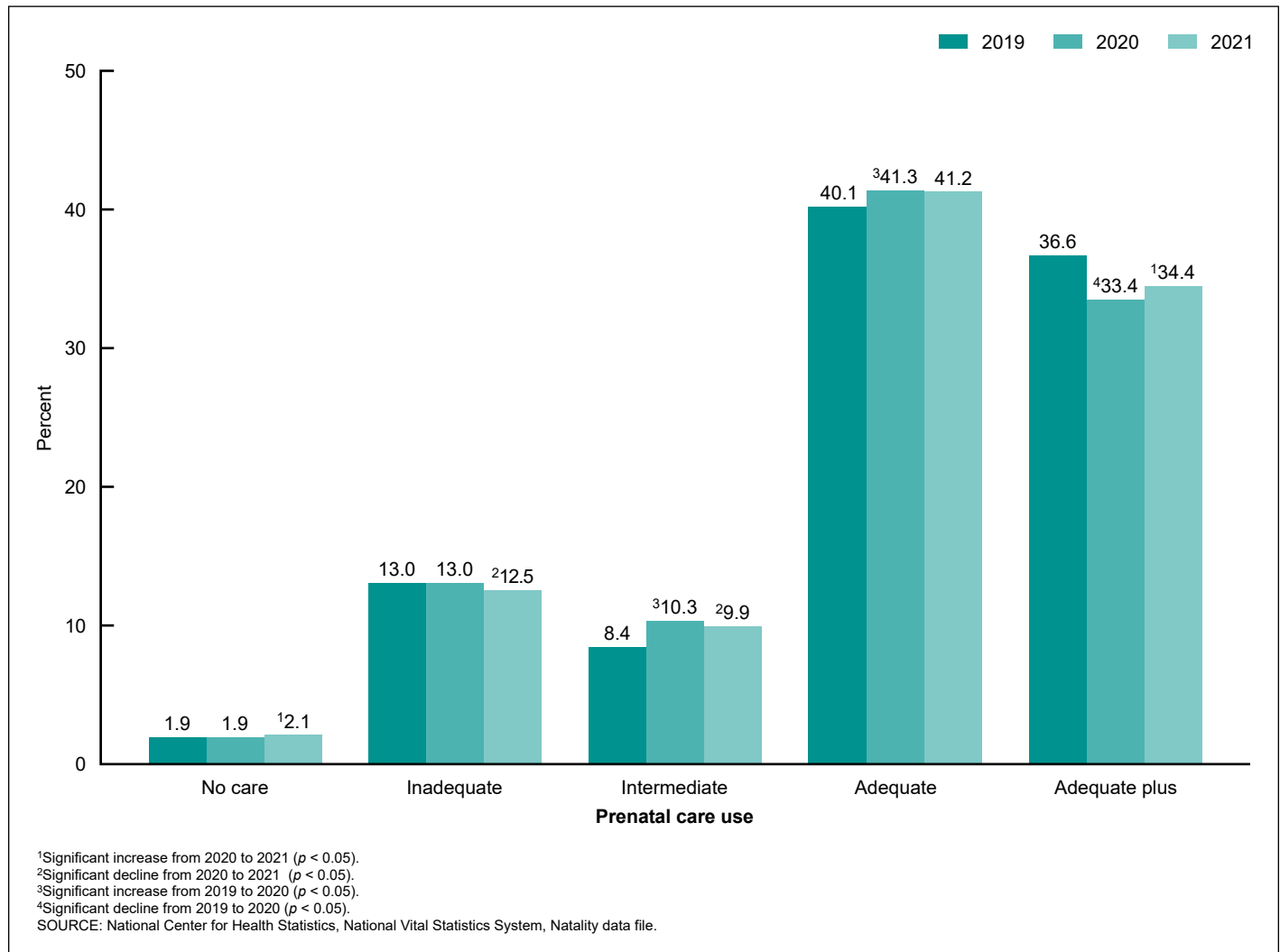
### Changes in prenatal care utilization by month

#### 2019 to 2020

In month-to-month comparisons with 2019, the percentage of mothers with no care declined in 2020 for January through March (down 5% each month), was unchanged in April, rose in May (6%), was unchanged in June, and then increased for each month from July through December with increases varying by 5%–11% (Table 2).

The percentage of mothers with inadequate care declined during this period for January through April by 1% (changes in January, March, and April were not significant); declined for May through August (2%–3%); rose in September (3%), October (7%), and November (6%); and then declined in December (2%).

**Figure 1. Percentage of mothers with prenatal care, based on Adequacy of Prenatal Care Utilization Index: United States, 2019–2021**



The percentage of mothers with intermediate care declined in January and February (3%), was unchanged in March, and then increased for each month from April through December: 13% in April, 29% in May, 34%–41% for June through October, and 26%–27% in November and December (Figure 2).

From 2019 to 2020, the percentage of mothers with adequate care declined 1%–2% in January and February, and then increased by 1%–6% for March through December.

The percentage of mothers with adequate plus care increased in January and February (2%–3%), was unchanged in March, and declined for April through December, with declines of 6% in April, 12%–14% for May through November, and 9% in December (Figure 2).

## 2020 to 2021

In month-to-month comparisons with 2020, the percentage of mothers receiving no prenatal care increased in 2021 for each month except May, with the largest increases reported for January (11%), February (17%), July (11%), and September, October, and December (10% each) (Table 2).

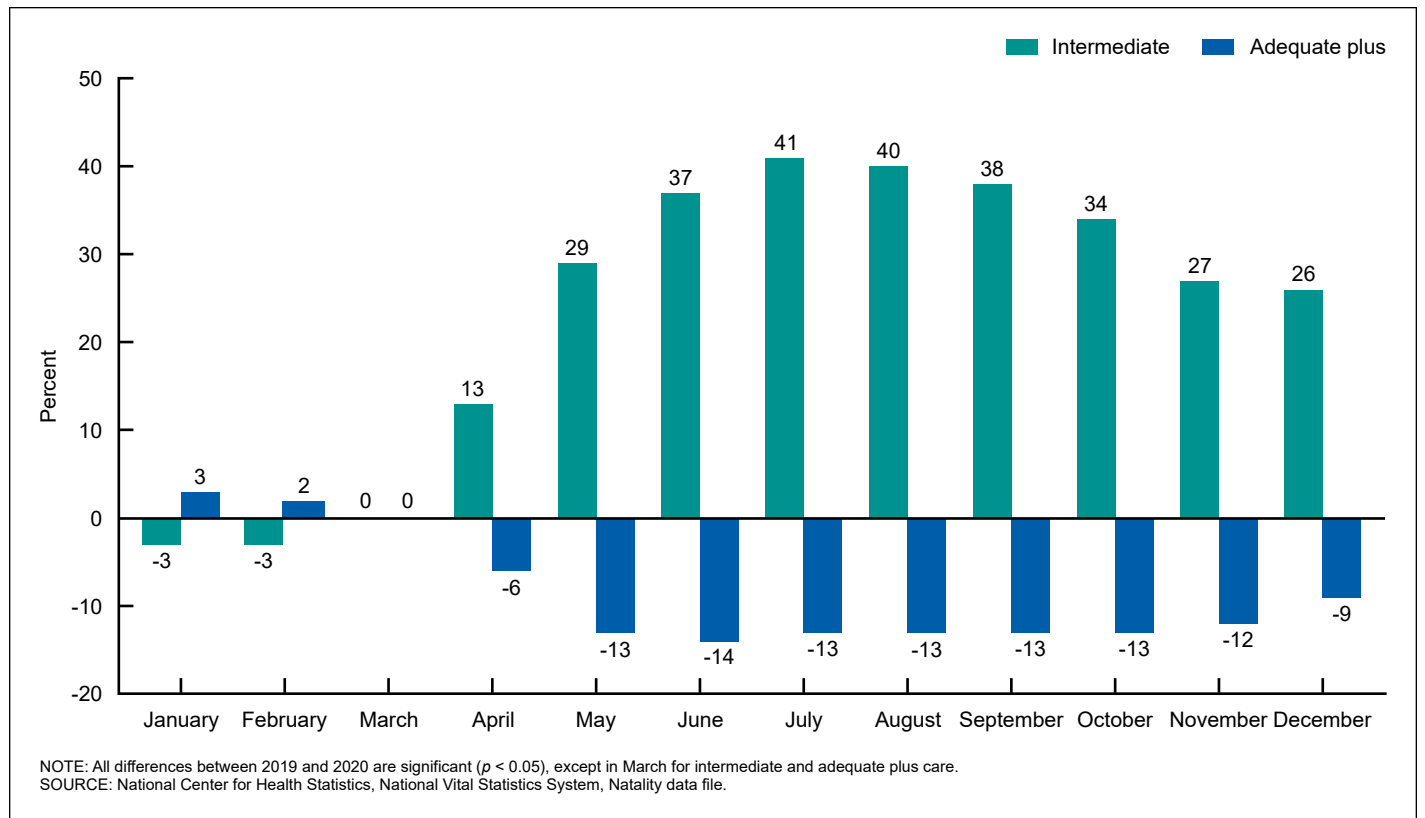
From 2020 to 2021, the percentage of mothers with inadequate care declined from January through July (1%–6%; the change in July was not significant), was unchanged in August, and declined for September through November (5%–10%) and December (the 1% change was not significant).

The percentage of mothers with intermediate care increased for the first 4 months of 2021 (26% in January, 25% in February, 19% in March, and 4% in April) and then decreased for each month from May through December: 9% in May, 12%–17% for June through October, and 7% in November and December (Table 2, Figure 3).

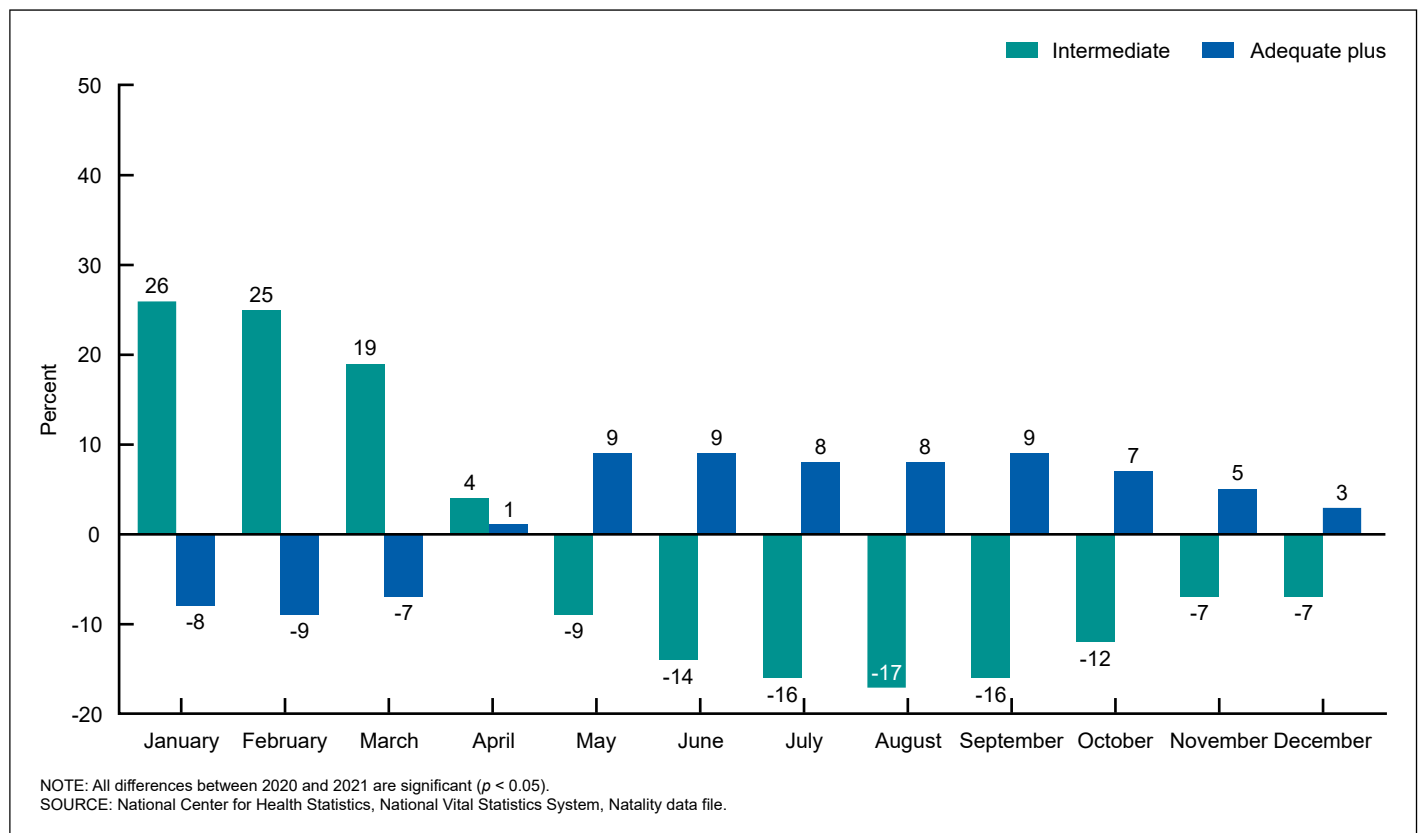
From 2020 to 2021, adequate care rose for the first 3 months and then declined for most months from May through December by 1%–3%.

The percentage of mothers with adequate plus care declined for January through March 2021 (down 7%–9% from 2020) and then increased by 1% for April and by 8%–9% for May through September, 7% for October, 5% for November, and 3% for December (Figure 3).

**Figure 2. Percent change in intermediate and adequate plus prenatal care, by month of birth: United States, 2019–2020**



**Figure 3. Percent change in intermediate and adequate plus prenatal care, by month of birth: United States, 2020–2021**



## Changes in prenatal care utilization by maternal race and Hispanic origin

### 2019 to 2020

The percentage of mothers with no prenatal care was unchanged for Black (3.3%) and Hispanic (2.5%) mothers but rose 8% for White mothers, from 1.2% in 2019 to 1.3% in 2020 (Table 1).

The percentage of mothers with inadequate care increased by 1% for Hispanic mothers (from 16.4% to 16.5%) and White mothers (9.7% to 9.8%) but declined 4% for Black mothers (19.4% to 18.7%).

The percentage of mothers with intermediate care increased for each of the race and Hispanic-origin groups between 2019 and 2020. Percentages rose 26% for White mothers (from 7.4% to 9.3%), 21% for Hispanic mothers (9.5% to 11.5%), and 15% for Black mothers (9.2% to 10.6%) (Table 1, Figure 4).

The percentage of mothers with adequate care also increased for each group from 2019 to 2020: 4% for White mothers (42.8%

to 44.6%), 3% for Black mothers (32.9% to 33.8%), and 1% for Hispanic mothers (38.3% to 38.7%).

The percentage of mothers with adequate plus care declined for each group during the period, by 10% for White mothers (39.0% to 35.1%), 8% for Hispanic mothers (33.3% to 30.8%), and 5% for Black mothers (35.3% to 33.6%) (Figure 4).

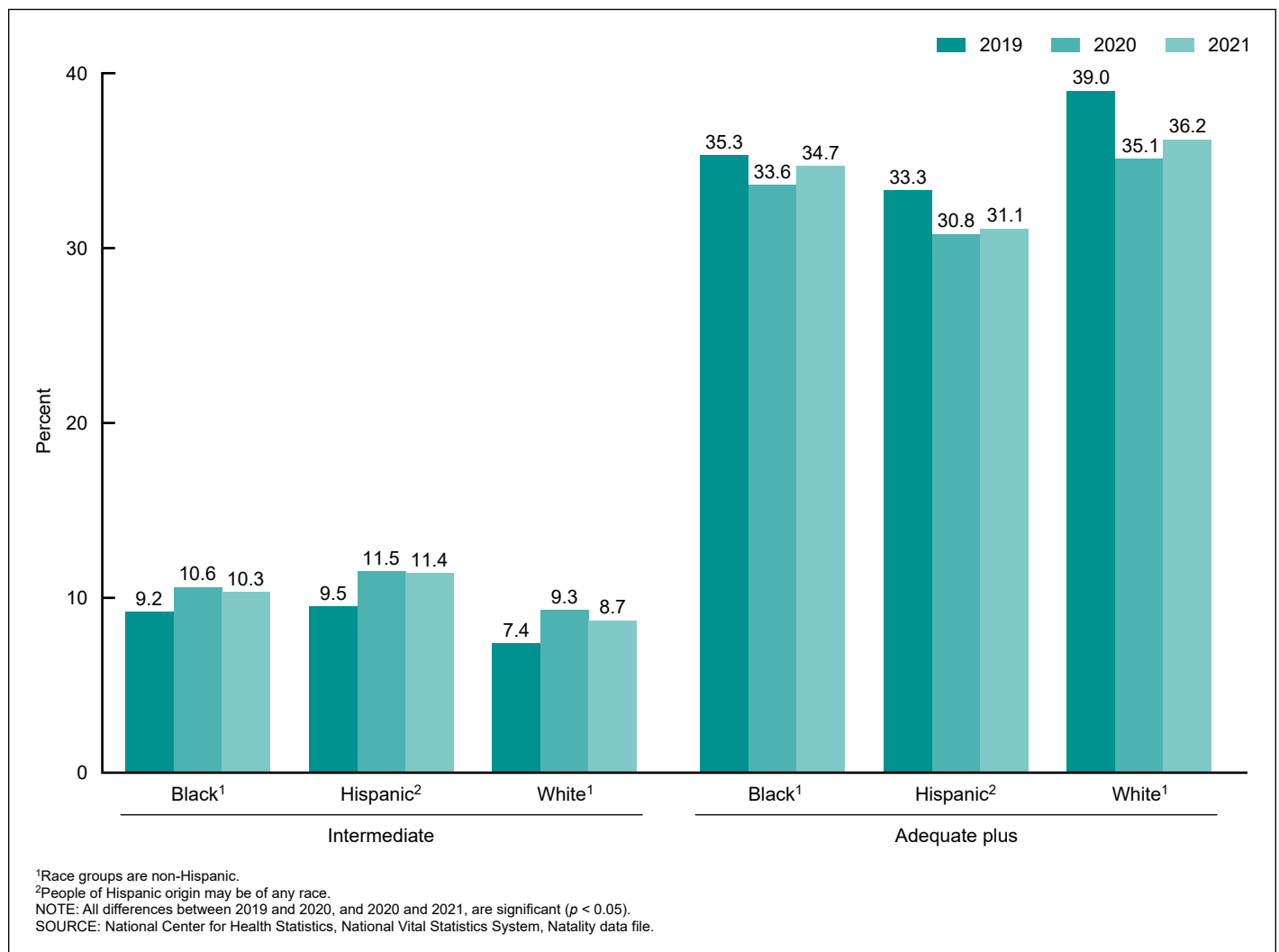
### 2020 to 2021

Percentages of no prenatal care increased for each race and Hispanic-origin group from 2020 to 2021, to 3.5% for Black mothers, 2.7% for Hispanic mothers, and 1.4% for White mothers (Table 1).

Inadequate care declined 6% for Black mothers (17.6%), 4% for White mothers (to 9.4%), and 2% for Hispanic mothers (16.2%).

In contrast to the increases observed in intermediate care between 2019 and 2020, intermediate care declined for all groups in 2021, down 6% for White mothers (to 8.7%), 3% for Black mothers (10.3%), and 1% for Hispanic mothers (11.4%) (Figure 4).

**Figure 4. Percentage of mothers with intermediate and adequate plus prenatal care, by maternal race and Hispanic origin: United States, 2019–2021**



From 2020 to 2021, the percentage of adequate care declined by 1% for White mothers (to 44.3% in 2021) and was unchanged for Black (33.8%) and Hispanic (38.7%) mothers.

In contrast to the declines seen for all groups for 2019–2020, adequate plus care rose for all groups for 2020–2021, increasing 3% for White (36.2%) and Black (34.7%) mothers, and 1% for Hispanic mothers (31.1%) (Figure 4).

## Changes in APNCU components

### Month prenatal care began: 2019 to 2020

The percentage of mothers beginning care within the first 4 months of pregnancy increased by less than 1% (from 88.1% to 88.3%) from 2019 to 2020 (Table 3). A similar pattern was seen for each of the race and Hispanic-origin groups: Percentages for White mothers rose from 91.2% to 91.3%, for Hispanic mothers from 84.7% to 85.0%, and for Black mothers from 82.0% to 83.0%.

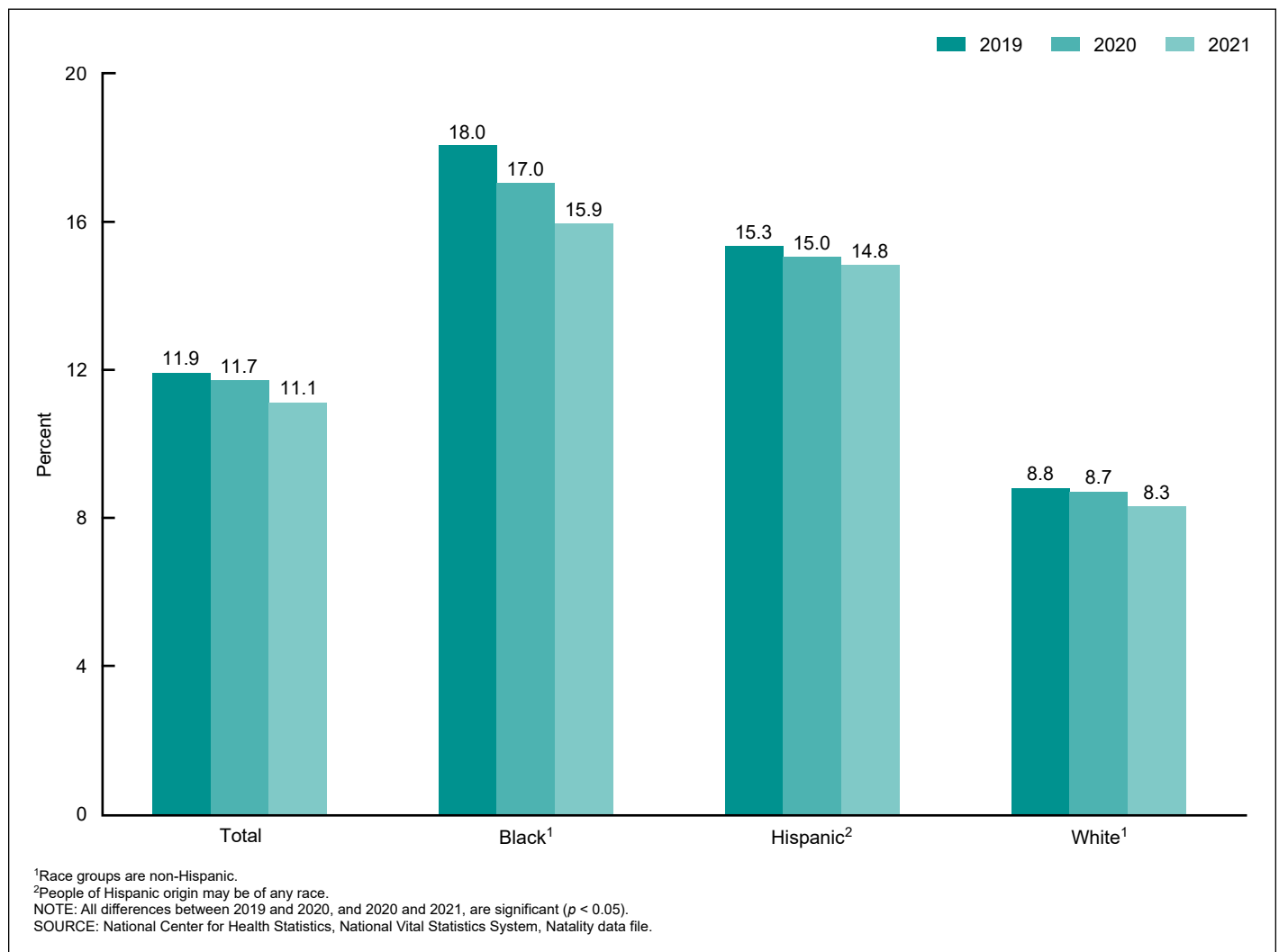
Conversely, the percentage of mothers who did not begin care until the fifth month of pregnancy or later declined by 2% from 2019 to 2020, from 11.9% to 11.7% (Figure 5). Declines were seen for each race and Hispanic-origin group, with the largest decline for Black mothers (down 6%, from 18.0% to 17.0%), followed by Hispanic mothers (2%, 15.3% to 15.0%) and White mothers (1%, 8.8% to 8.7%).

### Month prenatal care began: 2020 to 2021

The percentage of all mothers beginning care in the first 4 months increased again in 2021, by less than 1% to 88.9% (Table 3, Figure 5). Percentages rose to 91.7% for White mothers, 85.2% for Hispanic mothers, and 84.1% for Black mothers.

The percentage of all mothers beginning care in the fifth month of pregnancy or later declined by another 5% from 2020 to 2021, to 11.1% (Figure 5). Declines of 5%–6% were seen for Black (15.9%) and White (8.3%) mothers, and 1% for Hispanic mothers (14.8%).

**Figure 5. Percentage of mothers beginning care in fifth month of pregnancy or later, by maternal race and Hispanic origin: United States, 2019–2021**



### Prenatal care visits: 2019 to 2020

Among mothers beginning care within the first 4 months of pregnancy, the percentage with fewer than the recommended number of visits (adjusted for month care began and gestational age) increased 22% from 2019 to 2020, from 11.2% to 13.7% (Figure 6). Percentages also rose for each race and Hispanic-origin group, by 26% for White mothers (from 9.3% to 11.7%), 21% for Hispanic mothers (13.3% to 16.1%), and 15% for Black mothers (14.0% to 16.1%).

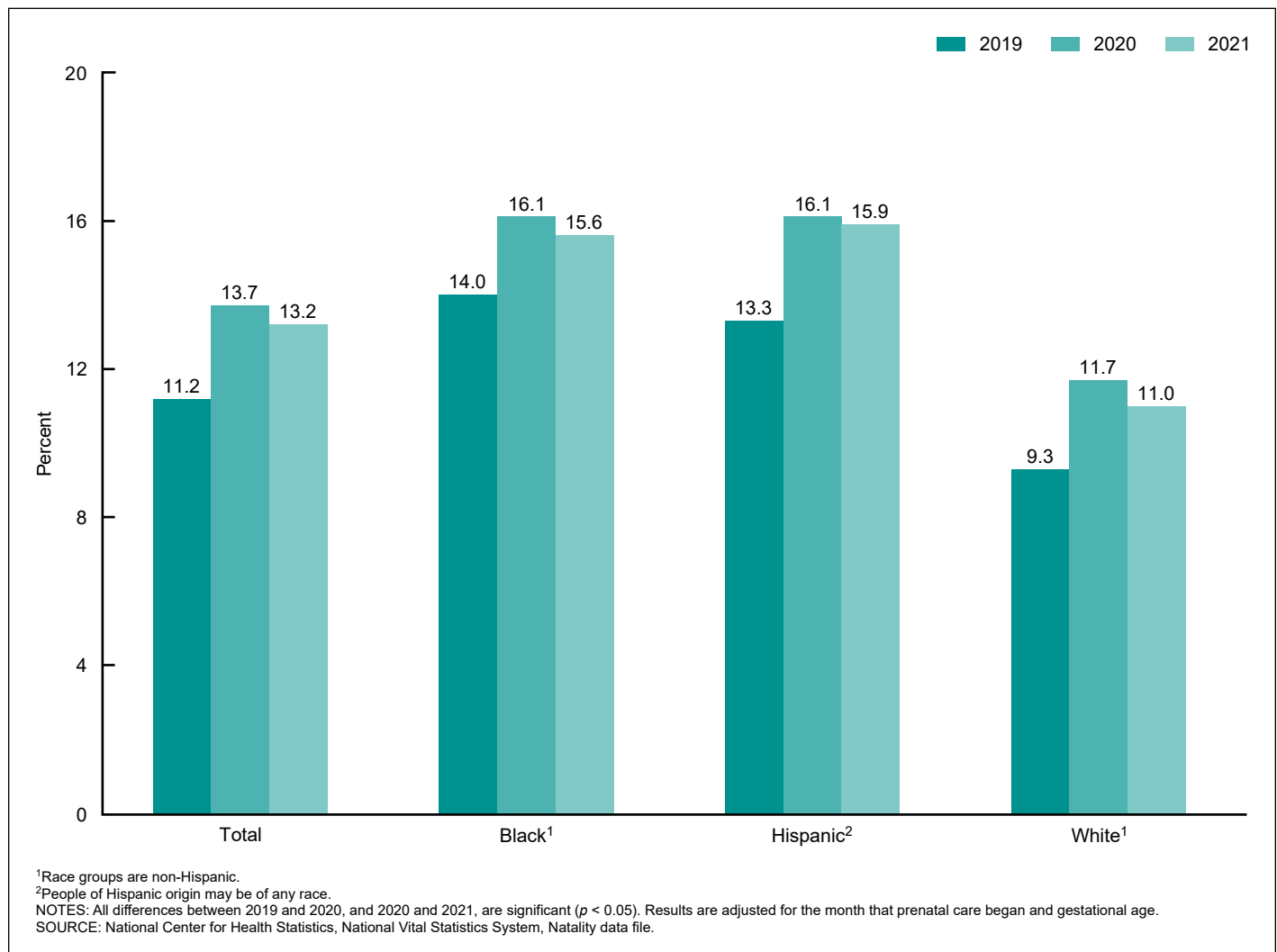
The percentage of mothers beginning care within the first 4 months of pregnancy who had more than the recommended number of visits declined 9%, from 42.4% to 38.6% (Table 4). Declines among mothers with more than the recommended number of visits were seen for White (10%, from 43.2% to 38.9%), Hispanic (8%, from 40.3% to 37.2%), and Black (6%, from 44.5% to 41.8%) mothers.

### Prenatal care visits: 2020 to 2021

Among mothers beginning care within the first 4 months of pregnancy, the percentage with fewer than the recommended number of visits declined 4% from 2020 to 2021, to 13.2% (Table 4). Declines were seen for each of the race and Hispanic-origin groups: White (6%, to 11.0%), Black (3%, to 15.6%), and Hispanic (1%, to 15.9%) mothers.

The percentage of mothers beginning care within the first 4 months of pregnancy who had more than the recommended number of visits increased 2%, to 39.5%; increases were seen for White (3%, to 40.0%), Black (2%, to 42.7%), and Hispanic (1%, to 37.5%) mothers.

**Figure 6. Percentage of mothers with fewer than recommended number of prenatal care visits, by maternal race and Hispanic origin: United States, 2019–2021**





## Discussion

### Summary

This report shows that in 2020, the first year of the COVID-19 pandemic, prenatal care utilization changed in the United States. Among APNCU categories, the largest changes were for intermediate care, which rose by 23%, and for adequate plus care, which decreased by 9%. At the same time, percentages of no care and inadequate care were unchanged, and adequate care increased by 3%. Analysis of changes in the percentage of mothers receiving intermediate care by month revealed that before the onset of the pandemic, in January and February 2020, intermediate care was on the decline but then started to rise in April 2020 and continued to increase through April 2021. The opposite trend was seen for adequate plus care over this period, with percentages generally increasing for the beginning of 2020 but decreasing for each month from April 2020 through March 2021.

A closer examination of the two APNCU components, the month prenatal care began and the number of visits, revealed that mothers began care earlier in pregnancy in 2020 compared with 2019—that is, the percentage of mothers beginning care within 4 months increased slightly (less than 1%), and the percentage beginning care in the fifth month or later declined (down 2%).

In contrast to the improvement in the timing of prenatal care, after adjusting for the month care began and gestational age, the percentage of mothers beginning care within the first 4 months of pregnancy with fewer than the recommended number of visits increased 22%, and the percentage with more than the recommended number of visits decreased 9%. Given that care beginning in the first 4 months of pregnancy increased over the period and is necessary for both intermediate and adequate plus care, the increase in intermediate care and decline in adequate plus care in the first pandemic year can be attributed to declines in the number of visits, and not to changes in the timing of care. Federal and state stay-at-home recommendations, particularly during the earlier stages of the pandemic, along with reduced office visit availability and the desire to minimize the risk of COVID-19 exposure, may have prevented mothers from accessing in-person care during pregnancy and, accordingly, resulted in fewer visits for prenatal care (2–6).

In 2021, the second pandemic year, some improvement was observed in most APNCU categories. That is, percentages of inadequate and intermediate care declined, and adequate plus care increased. Despite these improvements, the percentage of mothers with intermediate care remained higher in 2021 and the percentage with adequate plus care was lower than in 2019. Further, the percentage of mothers with no care at all increased in 2021.

Prenatal care utilization varied somewhat by maternal race and Hispanic origin over the study period among the three groups included in this report but generally followed the patterns for all mothers as previously described. That is, declines or lack of change in utilization from 2019 to 2020 (except for some improvement in adequate care) and improvements from 2020 to 2021 (except for lack of change in adequate care and increases in

no care) were seen for each of the groups. However, the degree of improvement in 2021 in several categories (inadequate, intermediate, and adequate plus care) was somewhat less pronounced for Hispanic mothers than for White or Black mothers. Further, improvements in the recommended number of prenatal visits were somewhat less pronounced for Hispanic mothers than for White or Black mothers.

Among Black mothers, changes in prenatal care utilization were generally less marked than those for White or Hispanic mothers. For example, intermediate care increased to a lesser degree over the study period for Black mothers (12%) compared with White (18%) or Hispanic (20%) mothers, and improvements in the timing of prenatal care (especially in declines for mothers receiving care in the fifth month or later) were greater for Black mothers (12%) compared with White (6%) or Hispanic (3%) mothers. Note, however, that Black mothers were more likely than White or Hispanic mothers to receive no care or inadequate care for each year during 2019–2021.

Differences in changes in prenatal care utilization during the pandemic among the race and Hispanic-origin groups studied may have been influenced by the shift to telemedicine or virtual visits for health care for mothers during pregnancy. Factors such as type of healthcare coverage and English language proficiency may have affected disproportionate access to and use of electronic healthcare technologies, resulting in reduced total visits for some pregnant populations (4,13–15). However, prenatal care data reported as part of the birth certificate do not include mode of visit, so this potential issue could not be examined as part of this report.

### Limitations

Information on prenatal care may be misreported or underreported in birth certificate data. Validity studies conducted in three states in 2010–2011 and 2013 showed that exact agreement between the birth certificate and hospital medical records was substantial (75.0%–89.9%) for the month prenatal care began for three states, and that agreement within two prenatal visits was substantial for two states and moderate (60.0%–74.9%) for one state (16,17). Levels of missing month prenatal care began ranged by state from 1.8% to 22.8%, and missing number of visits from 4.2% to 27.6% (data at times were not available in the hospital medical record) (16,17).

The finding of this report that prenatal care was initiated earlier for the first pandemic year is consistent with other studies (4,18). However, one study that looked at changes in prenatal care utilization in one medical center did not find a difference in the mean number of prenatal visits during the first 5 months of the pandemic (18).

### Conclusions

The change in the utilization of prenatal care in the United States from 2019 to 2020 occurred among all mothers and among mothers of each of the race and Hispanic-origin groups studied. The largest changes in APNCU for the first year of the COVID-19 pandemic occurred in the intermediate and adequate



plus care categories; these changes were primarily the result of declines in the number of prenatal visits and not in changes in the time of starting prenatal care. Changes in intermediate and adequate plus care coincide with the first full 9 months of the COVID-19 pandemic (April–December 2020), implementation of stay-at-home orders in many states, and reports of avoidance of medical care during the pandemic because of concerns with COVID-19 (5,6,19).

Data for 2021 indicate some easing of these shifts—that is, the percentage of mothers with intermediate care declined from 2020, and the percentage with adequate plus care increased. However, the percentage of mothers receiving these levels of care in 2021 did not return to 2019 levels either overall or for any of the race and Hispanic-origin groups studied, and the percentages of mothers receiving no care was higher in 2021 than in 2019 for all groups. Data for the first 9 months of 2022 also indicate that prenatal care utilization in the United States has not yet returned to prepandemic levels (7). New approaches to the delivery of prenatal care prompted by the COVID-19 pandemic, such as incorporating the use of telehealth and fewer prenatal visits for the average-risk pregnancy, may further influence these trends (20,21).

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**Table 1. Adequacy of prenatal care utilization, by maternal race and Hispanic origin: United States, 2019–2021**

Adequacy of care and race and Hispanic origin of mother	Percent			Percent change	
	2019	2020	2021	2019–2020	2020–2021
No prenatal care					
All races and origins <sup>1</sup> .....	1.9	1.9	2.1	†0	11
Black <sup>2</sup> .....	3.3	3.3	3.5	†0	6
Hispanic <sup>3</sup> .....	2.5	2.5	2.7	†0	8
White <sup>2</sup> .....	1.2	1.3	1.4	8	8
Inadequate care <sup>4</sup>					
All races and origins <sup>1</sup> .....	13.0	13.0	12.5	†0	-4
Black <sup>2</sup> .....	19.4	18.7	17.6	-4	-6
Hispanic <sup>3</sup> .....	16.4	16.5	16.2	1	-2
White <sup>2</sup> .....	9.7	9.8	9.4	1	-4
Intermediate care <sup>5</sup>					
All races and origins <sup>1</sup> .....	8.4	10.3	9.9	23	-4
Black <sup>2</sup> .....	9.2	10.6	10.3	15	-3
Hispanic <sup>3</sup> .....	9.5	11.5	11.4	21	-1
White <sup>2</sup> .....	7.4	9.3	8.7	26	-6
Adequate care <sup>6</sup>					
All races and origins <sup>1</sup> .....	40.1	41.3	41.2	3	‡
Black <sup>2</sup> .....	32.9	33.8	33.8	3	†0
Hispanic <sup>3</sup> .....	38.3	38.7	38.7	1	†0
White <sup>2</sup> .....	42.8	44.6	44.3	4	-1
Adequate plus care <sup>7</sup>					
All races and origins <sup>1</sup> .....	36.6	33.4	34.4	-9	3
Black <sup>2</sup> .....	35.3	33.6	34.7	-5	3
Hispanic <sup>3</sup> .....	33.3	30.8	31.1	-8	1
White <sup>2</sup> .....	39.0	35.1	36.2	-10	3

† Not significant at  $p < 0.05$ .

‡ Less than -0.5.

<sup>1</sup>Includes births to race and Hispanic-origin groups not shown separately.<sup>2</sup>Race groups are non-Hispanic. Race and Hispanic origin are reported separately on birth certificates; in this table, non-Hispanic mothers are classified by race. Race categories are consistent with 1997 Office of Management and Budget standards. Single race is defined as only one race reported on the birth certificate.<sup>3</sup>People of Hispanic origin may be of any race.<sup>4</sup>Inadequate prenatal care begins after the 4th month of pregnancy or includes less than 50% of the recommended number of visits; mothers with no care are excluded.<sup>5</sup>Intermediate prenatal care begins in the first 4 months of pregnancy and includes at least 50%–79% of the recommended number of visits.<sup>6</sup>Adequate prenatal care begins in the first 4 months of pregnancy and includes at least 80%–109% of the recommended number of visits.<sup>7</sup>Adequate plus prenatal care begins in the first 4 months of pregnancy and includes 110% or more of the recommended number of visits.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Natality.

**Table 2. Adequacy of prenatal care utilization, by month of birth: United States, 2019–2021**

Birth month	No prenatal care					Inadequate care <sup>1</sup>					Intermediate care <sup>2</sup>				
	Percent			Percent change		Percent			Percent change		Percent			Percent change	
	2019	2020	2021	2019–2020	2020–2021	2019	2020	2021	2019–2020	2020–2021	2019	2020	2021	2019–2020	2020–2021
January	2.0	1.9	2.1	-5	11	13.6	13.5	13.2	†-1	-2	8.9	8.6	10.8	-3	26
February	1.9	1.8	2.1	-5	17	13.4	13.2	12.7	-1	-4	8.7	8.4	10.5	-3	25
March	1.9	1.8	1.9	-5	6	12.9	12.8	12.0	†-1	-6	8.4	8.4	10.0	†0	19
April	1.8	1.8	1.9	†0	6	12.7	12.6	11.9	†-1	-6	8.2	9.3	9.7	13	4
May	1.8	1.9	1.9	6	†0	12.9	12.7	12.1	-2	-5	8.2	10.6	9.6	29	-9
June	1.8	1.8	1.9	†0	6	13.3	13.0	12.6	-2	-3	8.1	11.1	9.6	37	-14
July	1.8	1.9	2.1	6	11	13.0	12.6	12.5	-3	†-1	8.1	11.4	9.6	41	-16
August	1.8	2.0	2.1	11	5	12.8	12.4	12.4	-3	†0	8.2	11.5	9.6	40	-17
September	1.9	2.0	2.2	5	10	12.7	13.1	12.4	3	-5	8.5	11.7	9.8	38	-16
October	1.9	2.0	2.2	5	10	12.7	13.6	12.3	7	-10	8.5	11.4	10.0	34	-12
November	1.9	2.1	2.2	11	5	13.0	13.8	12.5	6	-9	8.4	10.7	10.0	27	-7
December	2.0	2.1	2.3	5	10	13.3	13.1	13.0	-2	†-1	8.5	10.7	10.0	26	-7

Birth month	Adequate care <sup>3</sup>					Adequate plus care <sup>4</sup>				
	Percent			Percent change		Percent			Percent change	
	2019	2020	2021	2019–2020	2020–2021	2019	2020	2021	2019–2020	2020–2021
January	40.6	39.9	40.9	-2	2	34.9	36.0	33.0	3	-8
February	40.2	39.9	41.5	-1	4	35.9	36.6	33.2	2	-9
March	40.1	40.4	41.8	1	4	36.7	36.7	34.3	†0	-7
April	40.3	41.5	41.3	3	†‡	37.0	34.7	35.2	-6	1
May	40.2	42.5	41.3	6	-3	36.9	32.2	35.1	-13	9
June	39.9	42.4	41.3	6	-3	36.9	31.7	34.7	-14	9
July	39.8	41.7	40.9	5	-2	37.3	32.3	34.9	-13	8
August	40.1	42.0	41.1	5	-2	37.0	32.2	34.8	-13	8
September	40.8	41.9	41.3	3	-2	36.1	31.4	34.3	-13	9
October	40.2	41.0	41.4	2	1	36.8	32.1	34.2	-13	7
November	39.6	40.8	41.0	3	†§	37.1	32.6	34.4	-12	5
December	39.6	41.0	40.6	4	-1	36.5	33.1	34.0	-9	3

† Not significant at  $p < 0.05$ .

‡ Less than -0.5.

§ Less than 0.5.

<sup>1</sup>Inadequate prenatal care begins after the 4th month of pregnancy or includes less than 50% of the recommended number of visits; mothers with no care are excluded.<sup>2</sup>Intermediate prenatal care begins in the first 4 months of pregnancy and includes at least 50%–79% of the recommended number of visits.<sup>3</sup>Adequate prenatal care begins in the first 4 months of pregnancy and includes at least 80%–109% of the recommended number of visits.<sup>4</sup>Adequate plus prenatal care begins in the first 4 months of pregnancy and includes 110% or more of the recommended number of visits.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Natality.

**Table 3. Month prenatal care began, by maternal race and Hispanic origin: United States, 2019–2021**

Race and Hispanic origin of mother and month prenatal care began	Percent			Percent change	
	2019	2020	2021	2019–2020	2020–2021
<b>All races and origins<sup>1</sup></b>					
Total .....	100.0	100.0	100.0	...	...
Within first 4 months <sup>2</sup> .....	88.1	88.3	88.9	†	‡
5th month or later <sup>3</sup> .....	11.9	11.7	11.1	-2	-5
<b>Black<sup>4</sup></b>					
Total .....	100.0	100.0	100.0	...	...
Within first 4 months <sup>2</sup> .....	82.0	83.0	84.1	1	1
5th month or later <sup>3</sup> .....	18.0	17.0	15.9	-6	-6
<b>Hispanic<sup>5</sup></b>					
Total .....	100.0	100.0	100.0	...	...
Within first 4 months <sup>2</sup> .....	84.7	85.0	85.2	†	†
5th month or later <sup>3</sup> .....	15.3	15.0	14.8	-2	-1
<b>White<sup>4</sup></b>					
Total .....	100.0	100.0	100.0	...	...
Within first 4 months <sup>2</sup> .....	91.2	91.3	91.7	†	†
5th month or later <sup>3</sup> .....	8.8	8.7	8.3	-1	-5
Race and Hispanic origin of mother and month prenatal care began	Number				
	2019	2020	2021		
<b>All races and origins<sup>1</sup></b>					
Total births .....	3,747,540	3,613,647	3,664,292		
No care .....	67,753	67,751	74,360		
Unknown .....	84,788	73,968	77,416		
<b>Black<sup>4</sup></b>					
Total births .....	548,075	529,811	517,889		
No care .....	17,121	16,804	17,665		
Unknown .....	18,209	14,544	13,434		
<b>Hispanic<sup>5</sup></b>					
Total births .....	886,467	866,713	885,916		
No care .....	21,138	21,080	23,238		
Unknown .....	21,969	19,935	20,034		
<b>White<sup>4</sup></b>					
Total births .....	1,915,912	1,843,432	1,887,656		
No care .....	22,770	23,471	26,237		
Unknown .....	34,392	29,811	33,310		

† Less than 0.5.

‡ Less than 1.0.

... Category not applicable.

<sup>1</sup>Includes births to race and Hispanic-origin groups not shown separately, such as non-Hispanic American Indian or Alaska Native, non-Hispanic Native Hawaiian or Other Pacific Islander, non-Hispanic multiple race, and Hispanic origin not stated.<sup>2</sup>Excludes unknown month care began.<sup>3</sup>Excludes no care.<sup>4</sup>Race groups are non-Hispanic. Race and Hispanic origin are reported separately on birth certificates; in this table, non-Hispanic mothers are classified by race. Race categories are consistent with 1997 Office of Management and Budget standards. Single race is defined as only one race reported on the birth certificate.<sup>5</sup>People of Hispanic origin may be of any race.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Natality.

**Table 4. Percentage of mothers starting prenatal care within first 4 months of pregnancy with fewer or more than recommended visits, by maternal race and Hispanic origin: United States, 2019–2021**

Race and Hispanic origin of mother and prenatal care visits	Percent			Percent change	
	2019	2020	2021	2019–2020	2020–2021
All races and origins <sup>1</sup>					
Fewer than recommended visits <sup>2</sup> . . . . .	11.2	13.7	13.2	22	-4
More than recommended visits <sup>3</sup> . . . . .	42.4	38.6	39.5	-9	2
Black <sup>4</sup>					
Fewer than recommended visits <sup>2</sup> . . . . .	14.0	16.1	15.6	15	-3
More than recommended visits <sup>3</sup> . . . . .	44.5	41.8	42.7	-6	2
Hispanic <sup>5</sup>					
Fewer than recommended visits <sup>2</sup> . . . . .	13.3	16.1	15.9	21	-1
More than recommended visits <sup>3</sup> . . . . .	40.3	37.2	37.5	-8	1
White <sup>4</sup>					
Fewer than recommended visits <sup>2</sup> . . . . .	9.3	11.7	11.0	26	-6
More than recommended visits <sup>3</sup> . . . . .	43.2	38.9	40.0	-10	3
Race and Hispanic origin of mother and month care began	Number				
	2019	2020	2021		
All races and origins <sup>1</sup>					
Total mothers starting care within first 4 months . . . . .	3,165,895	3,067,332	3,121,718		
Unknown visits . . . . .	23,696	23,610	12,507		
Black <sup>4</sup>					
Total mothers starting care within first 4 months . . . . .	420,699	413,691	409,591		
Unknown visits . . . . .	3,313	3,225	1,623		
Hispanic <sup>5</sup>					
Total mothers starting care within first 4 months . . . . .	714,357	702,161	718,140		
Unknown visits . . . . .	6,518	6,998	3,287		
White <sup>4</sup>					
Total mothers starting care within first 4 months . . . . .	1,695,942	1,635,008	1,676,445		
Unknown visits . . . . .	10,974	10,609	6,023		

<sup>1</sup>Includes births to race and Hispanic-origin groups not shown separately, such as non-Hispanic American Indian or Alaska Native, non-Hispanic Native Hawaiian or Other Pacific Islander, non-Hispanic multiple race, and Hispanic origin not stated.

<sup>2</sup>Includes less than 80% of the recommended number of visits based on the month care began and gestational age.

<sup>3</sup>Includes 110% or more of the recommended number of visits based on the month care began and gestational age.

<sup>4</sup>Race groups are non-Hispanic. Race and Hispanic origin are reported separately on birth certificates; in this table, non-Hispanic mothers are classified by race. Race categories are consistent with 1997 Office of Management and Budget standards. Single race is defined as only one race reported on the birth certificate.

<sup>5</sup>People of Hispanic origin may be of any race.

NOTE: All differences between 2019 and 2020, and between 2020 and 2021, are significant ( $p < 0.05$ ).

SOURCE: National Center for Health Statistics, National Vital Statistics System, Natality.

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