

Maternal Characteristics and Infant Outcomes by Hispanic Subgroup and Nativity: United States, 2021

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Abstract

Objective—This report presents comparisons of maternal characteristics and infant outcomes of Hispanic women and their infants by nativity (whether they were born in or outside the United States) for all Hispanic women and for the six largest Hispanic subgroups by nativity.

Methods—Data are from the 2021 birth file from the National Vital Statistics System. Comparisons of selected maternal characteristics and three infant outcomes (gestational age, birthweight, neonatal intensive care unit [NICU] admission) by nativity were examined for all Hispanic women and for the following Hispanic subgroups: Mexican, Puerto Rican, Cuban, Dominican, Central American, and South American.

Results—Among all Hispanic women, those born in the United States were more likely than those born outside the United States to be under age 20, to have at least a bachelor's degree, to have obesity, to have private insurance as the source of payment for the delivery, to obtain prenatal care in the first trimester, and to have gestational hypertension. Non-U.S.-born women were more likely to be aged 30 and over, to use Medicaid, and to have gestational diabetes. Similar patterns were generally found for each of the Hispanic subgroups. Infants of non-U.S.-born Hispanic women overall and generally for each subgroup were less likely to be preterm, to be low birthweight and to be admitted to the NICU than infants of U.S.-born women.

Keywords: national origin • place of birth • National Vital Statistics System

Introduction

The Hispanic population comprises the second largest racial and ethnic group in the United States (1). In 2020, 62.1 million Hispanic people accounted for 18.7% of the U.S. population (1).

Like all populations, this group's size and composition is affected by fertility and migration (2). The growth of this group results from both immigration and natural increase. In the 20th century, immigration was the main contributor to Hispanic population growth in the United States, while in the 21st century, births accounted for more growth than did new immigrants (3).

Among Hispanic women who immigrate to the United States, living standards and experiences differ by country of origin as well as from those of women born in the United States. These differences may have implications for those who give birth in the United States. For example, girls' and women's access to education and employment, which are associated with women's health and the health of their children, vary by country and region in Latin America (4–7). Within Latin America, health measures such as life expectancy, infant mortality, and access to contraception vary by country and differ from those in the United States (8). Maternal characteristics and infant outcomes such as gestational age and birthweight also vary by Latin American region of birth and between Latin American regions and the United States (9).

Although often grouped into a single category, the Hispanic population varies by nativity (born in or outside the United States) and national origin or descent (for example, Mexican, Cuban, or Puerto Rican) (10–16). This report presents comparisons of maternal characteristics of Hispanic women and outcomes of their infants, overall and for individual Hispanic subgroups, by nativity.

Methods

Data for this analysis are from the 2021 birth file. Birth certificate data are based on 100% of births registered in the 50 states and the District of Columbia (17).



Hispanic origin is collected on the birth certificate and reported by the mother (17). Women who self-reported as Hispanic were categorized by whether they were born in or outside the 50 United States and the District of Columbia and by their Hispanic subgroup (Mexican, Puerto Rican, Cuban, Dominican, Central American, or South American). Throughout this report, women born outside the 50 states and the District of Columbia are referred to as “non-U.S.-born.” Women with other or unknown Hispanic origin (10.6% of all Hispanic births) were included in the analyses of all Hispanic women but were not analyzed separately. This report presents data on Hispanic origin based on the 1997 Office of Management and Budget standards. Hispanic people can be of any race, and race was not assessed in conjunction with Hispanic ethnicity for this analysis (17).

The distributions of maternal characteristics and infant outcomes were compared by maternal nativity for all Hispanic women and by Hispanic subgroup. The selected characteristics are associated with maternal health and infant outcomes (18–21). The characteristics compared were maternal age, educational attainment, prepregnancy body mass index (BMI), source of payment for the delivery, trimester prenatal care began, and gestational hypertension and gestational diabetes. Education was divided into four categories: less than a high school diploma, high school graduate, some college or associate’s degree, and bachelor’s degree or higher. Education comparisons were restricted to women aged 25 and over to allow for completion of education.

BMI is based on weight and height and calculated as kg/m². BMI values under 18.5 are classified as underweight, those from 18.5 to 24.9 are classified as normal or healthy weight, values from 25.0 to 29.9 are classified as overweight, and values of 30.0 and over are classified as obesity (22). There are four categories for source of payment: Medicaid, private insurance, self-pay, and other. Gestational diabetes and gestational hypertension, which have been shown to be associated with poor birth outcomes (23), are conditions that were diagnosed during pregnancy and not present before the pregnancy (17,24).

Three infant outcomes were examined: preterm birth, low birthweight, and neonatal intensive care unit (NICU) admission. The preterm birth rate is the percentage of births delivered at less than 37 completed weeks of gestation based on the obstetric estimate of gestation. The low birthweight rate is the percentage of infants born at less than 2,500 grams (5 pounds, 8 ounces). The NICU rate is the percentage of infants admitted to a facility or unit staffed and equipped to provide continuous mechanical ventilatory support for a newborn for any amount of time. Among infants born in 2021 who were admitted to the NICU, 52.6% were preterm and 46.0% were low birthweight.

Results

Almost one-quarter (24.2%) of births in 2021 in the United States were to Hispanic women (25). Among all births to Hispanic women in 2021, 53.4% were to women who were born in the United States. By subgroup, the percentage of U.S.-born women ranged from 19.6% of Central American women to 72.1% of Puerto Rican women (Table 1, Figure 1).

Among Hispanic women born in the United States, almost two-thirds (63.3%) were Mexican, followed by Other Hispanic (14.4%) and Puerto Rican (10.3%) women (Figure 2). Central American women comprised 5.0% and South American women comprised 2.6%, while Dominican and Cuban women each comprised 2.2%.

Among non-U.S.-born Hispanic women with a birth in 2021, Mexican women comprised the largest subgroup (44.0%), followed by Central American (26.0%) and South American (9.9%) women (Figure 2). Dominican (5.8%), Puerto Rican (5.0%), and Other Hispanic (5.8%) women each comprised about 5% of non-U.S.-born Hispanic women; Cuban women (3.5%) made up the smallest segment.

Maternal age

Among all Hispanic women, the percentage of births to females under age 20 was higher for women born in the United States than women born outside the United States (7.9% compared with 4.3%) (Table 1, Figure 3). The percentage of teen births was higher for U.S.-born women than for non-U.S.-born women for all subgroups except Central American women (7.4% compared with 8.4%).

About one-third (34.3%) of all U.S.-born Hispanic women were aged 30 and over compared with about one-half (51.6%) of non-U.S.-born women (Table 1). The percentage of women aged 30 and over was greater for women born outside the United States for all subgroups except Puerto Rican and Cuban women. Among U.S.-born Hispanic women, over one-half of Cuban (56.1%) and South American (51.8%) women were aged 30 and over. In comparison, at least one-half of non-U.S.-born women were aged 30 and over overall and in each subgroup except Puerto Rican (38.8%) and Central American (43.9%) women.

Educational attainment

Among women aged 25 and over, U.S.-born Hispanic women were about one-fourth as likely to have not completed high school than those born outside the United States (7.9% compared with 32.6%) (Table 1). U.S.-born women also had lower rates of not completing high school across all Hispanic subgroups. The difference was greatest for Central American women; women born in the United States were about one-tenth as likely to have not completed high school than non-U.S.-born women (5.2% compared with 54.6%). U.S.-born Mexican and South American women were one-fourth as likely to have not finished high school than their non-U.S.-born counterparts (Mexican: 8.6% compared with 34.6%; South American: 2.0% compared with 8.8%); U.S.-born Cuban and Dominican women were less than one-third as likely to have not finished high school than non-U.S.-born women (Cuban: 2.1% compared with 7.8%; Dominican: 4.3% compared with 13.8%).

The percentage of women with at least a bachelor’s degree was higher for Hispanic women born in the United States, both for all Hispanic women (26.5% compared with 18.6%) and for each subgroup except for Puerto Rican women (Figure 4). U.S.-born Central American women were almost four times

Figure 1. Percentage of women born in the United States, by Hispanic subgroup: United States, 2021

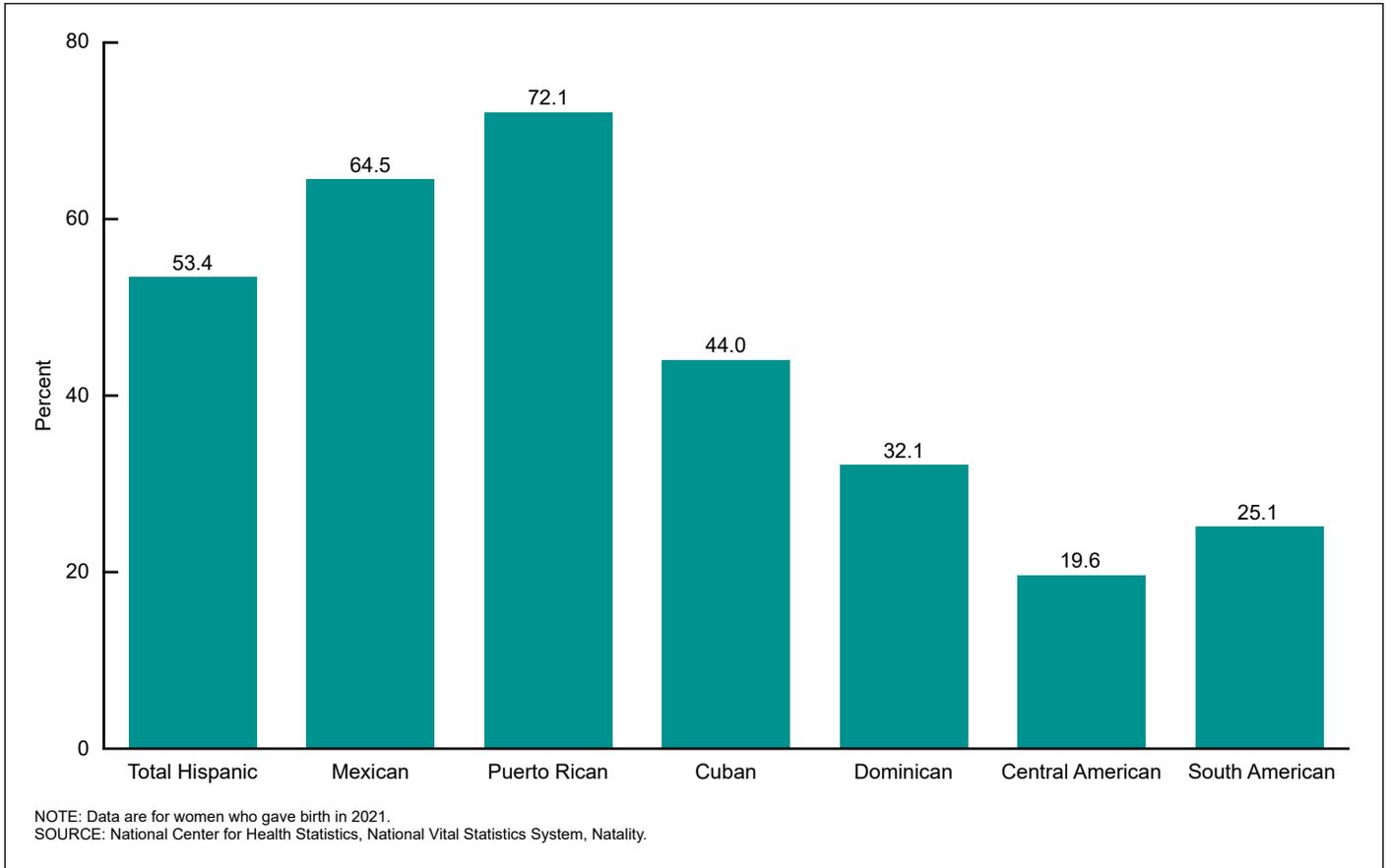


Figure 2. Distribution of Hispanic subgroups of women, by maternal nativity: United States, 2021

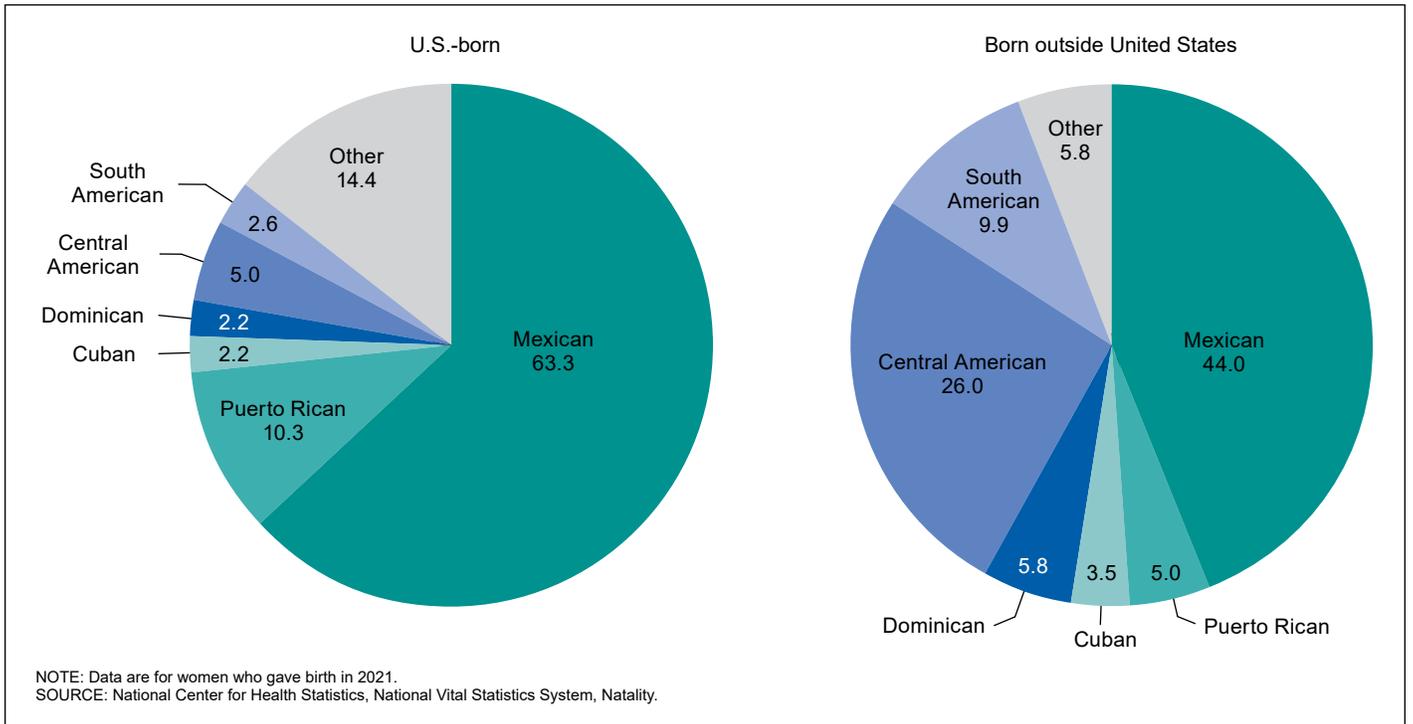
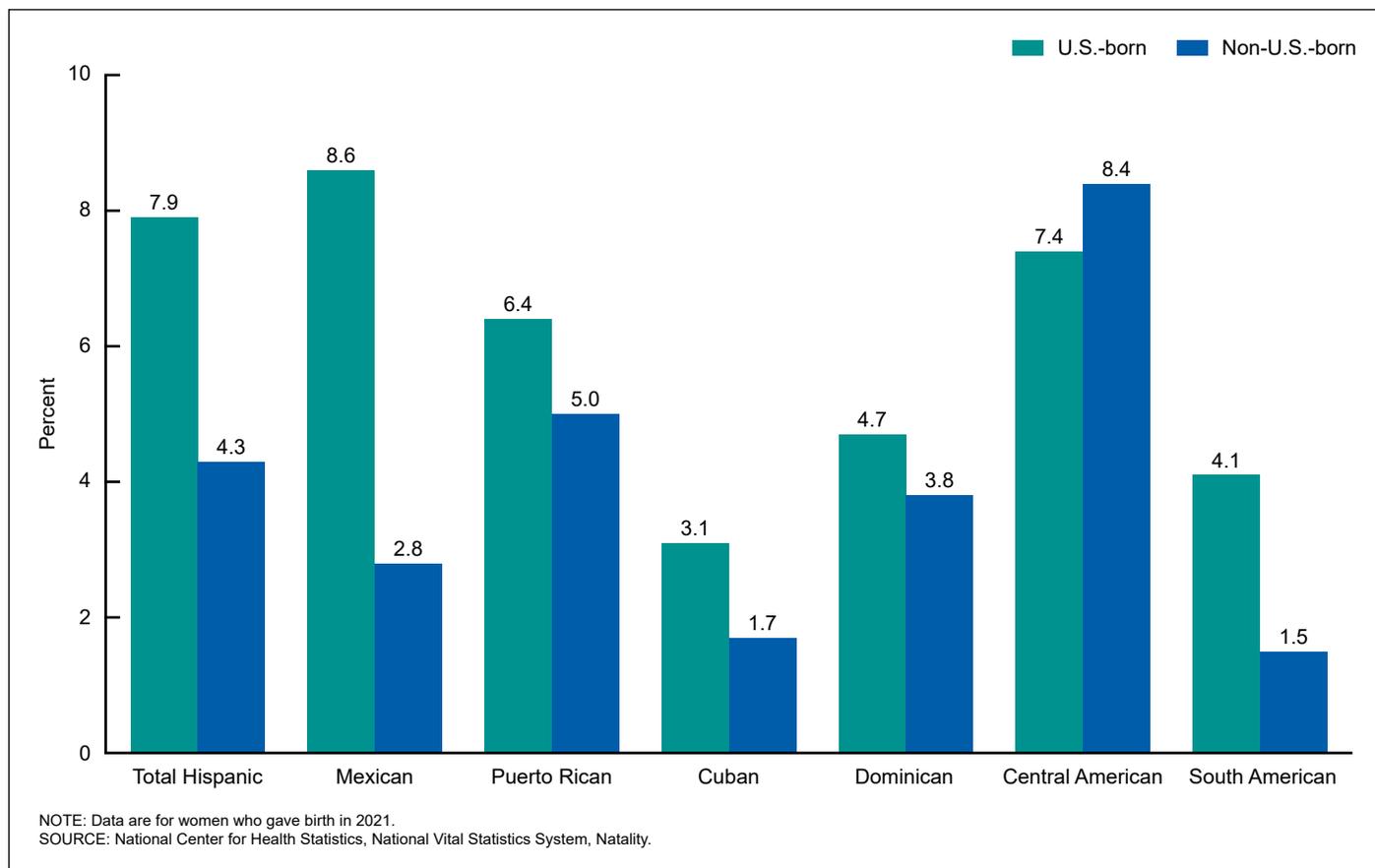


Figure 3. Percentage of women under age 20, by Hispanic subgroup and maternal nativity: United States, 2021

more likely to have a college degree than their non-U.S.-born counterparts (32.4% compared with 8.7%). U.S.-born Mexican and Cuban women were about twice as likely to have a college degree (Mexican: 23.4% compared with 12.9%; Cuban: 52.5% compared with 29.9%).

Source of payment for delivery

U.S.-born Hispanic women were less likely to use Medicaid as the source of payment for the delivery than non-U.S.-born Hispanic women (56.0% compared with 60.7%) (Table 1, Figure 5). The same pattern was found for each subgroup. At least one-half of all U.S.-born women overall, as well as Mexican, Puerto Rican, and Dominican women, used Medicaid. The difference by nativity was greatest for Cuban women; those born in the United States were about one-half as likely to use Medicaid as non-U.S.-born women (32.8% compared with 64.4%). The second largest nativity difference was found for Central American women (48.7% compared with 66.6%).

U.S.-born Hispanic women were more likely to use private health insurance as the source of payment for the delivery than their non-U.S.-born counterparts (38.6% compared with 23.8%). The same pattern was found for each subgroup. Nativity differences were greatest for Central American women; U.S.-born women were almost four times more likely to use private insurance than their non-U.S.-born counterparts (45.8% compared with 12.2%). U.S.-born Cuban women were twice as

likely to use private insurance as non-U.S.-born women (62.6% compared with 31.5%) and U.S.-born Mexican and Dominican women were almost twice as likely to use private insurance as their non-U.S.-born counterparts (Mexican: 37.2% compared with 22.6%; Dominican: 42.5% compared with 24.7%).

With the exception of Puerto Rican women, U.S.-born Hispanic women were less likely to pay for the delivery, without public or private insurance, than non-U.S.-born women. Overall, U.S.-born women were about one-seventh as likely to self-pay (1.8% compared with 12.3%). Differences of similar magnitude were found for Mexican women (2.0% compared with 13.1%), Central American women (1.7% compared with 17.8%) and, to a lesser extent, South American women (2.0% compared with 9.3%).

BMI

U.S.-born Hispanic women were more likely to have prepregnancy obesity than women born outside the United States (38.7% compared with 29.4%) (Table 1, Figure 6). The same pattern was found for each subgroup. Differences by nativity were greatest for Central American and South American women (Central American: 39.6% compared with 27.3%; South American: 31.7% compared with 19.0%).

U.S.-born Hispanic women were less likely to be normal weight prepregnancy than non-U.S.-born women (30.4% compared with 34.4%). The same pattern was found for

Figure 4. Percentage of women with at least a bachelor’s degree, by Hispanic subgroup and maternal nativity: United States, 2021

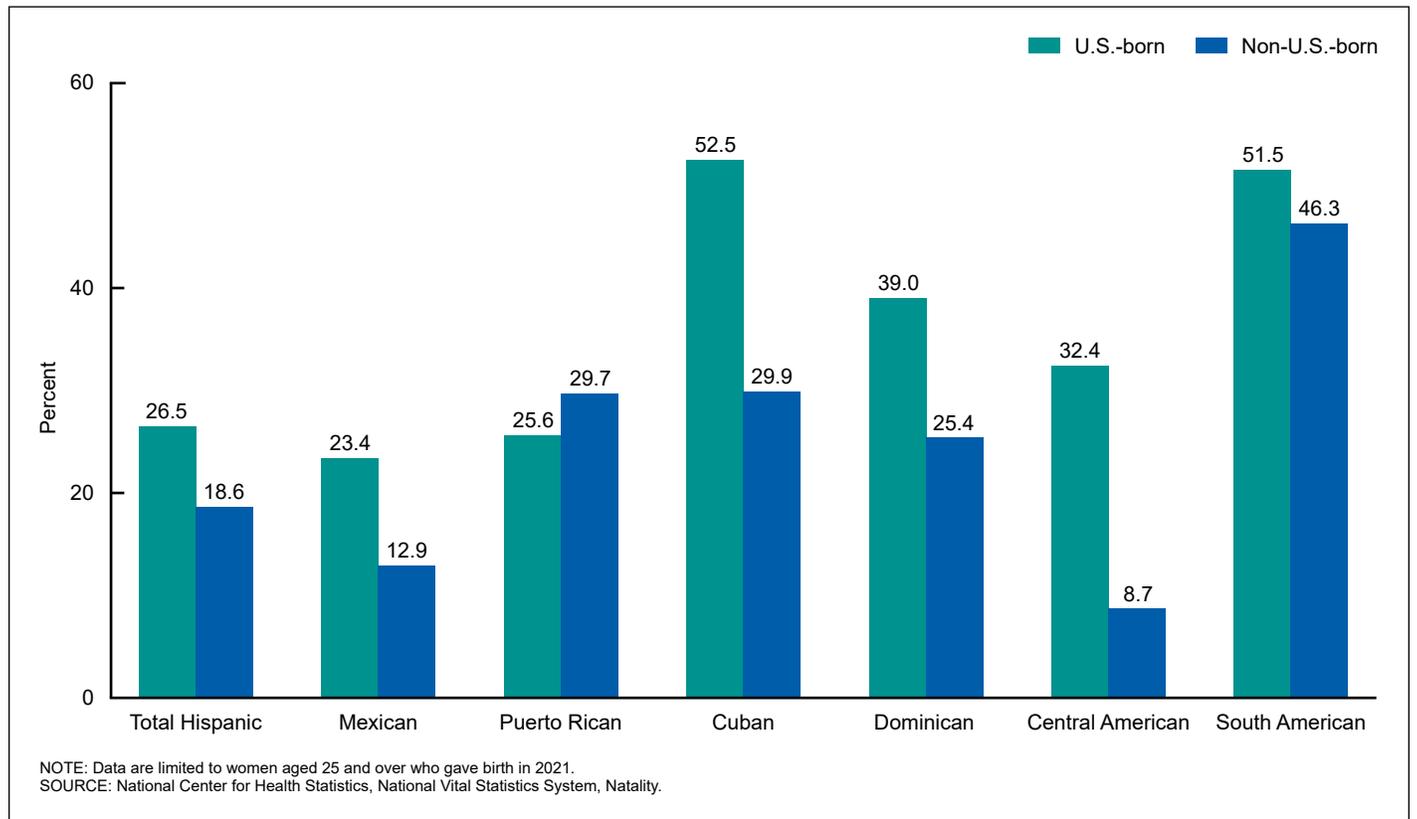


Figure 5. Percentage of women with Medicaid as source of payment, by Hispanic subgroup and maternal nativity: United States, 2021

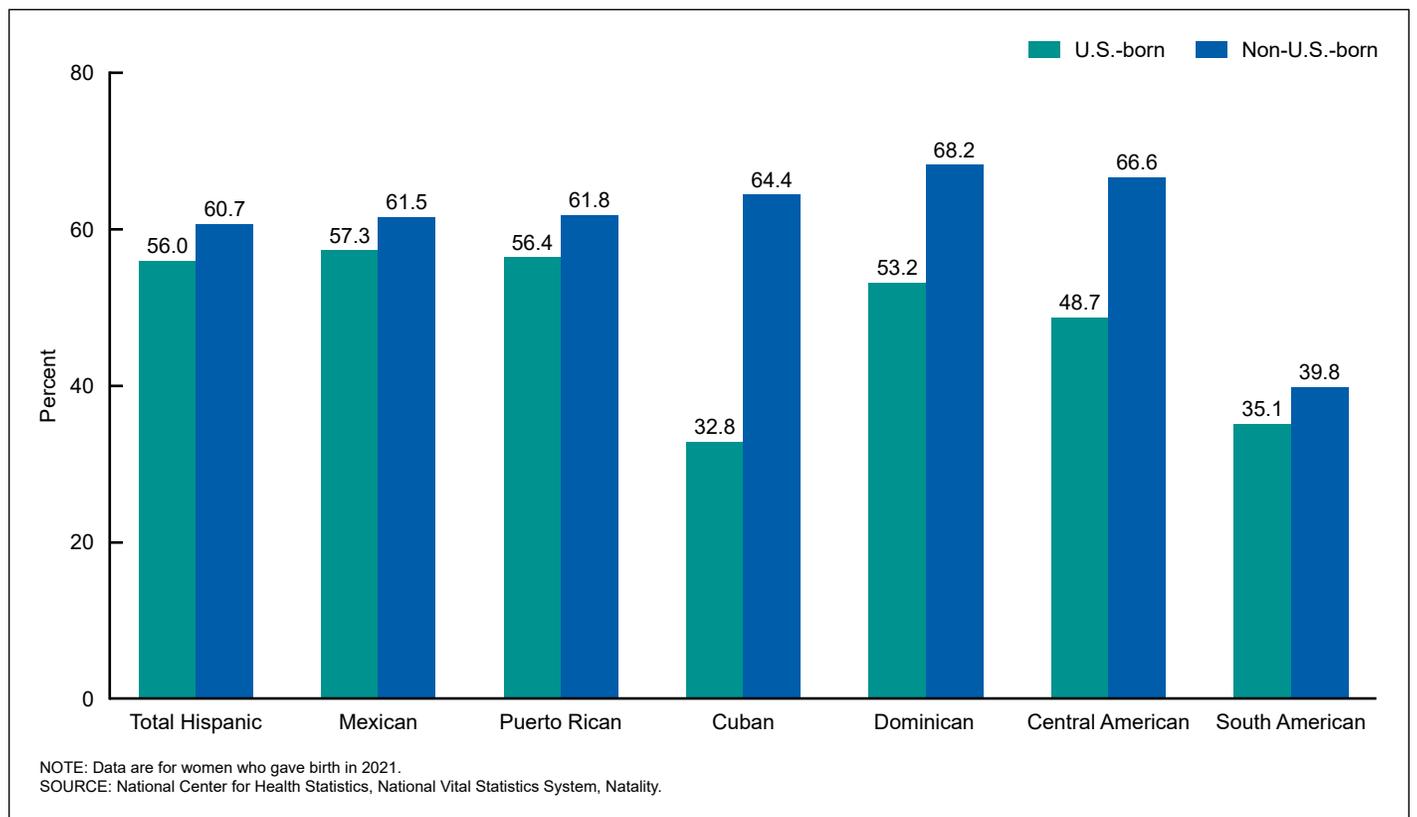
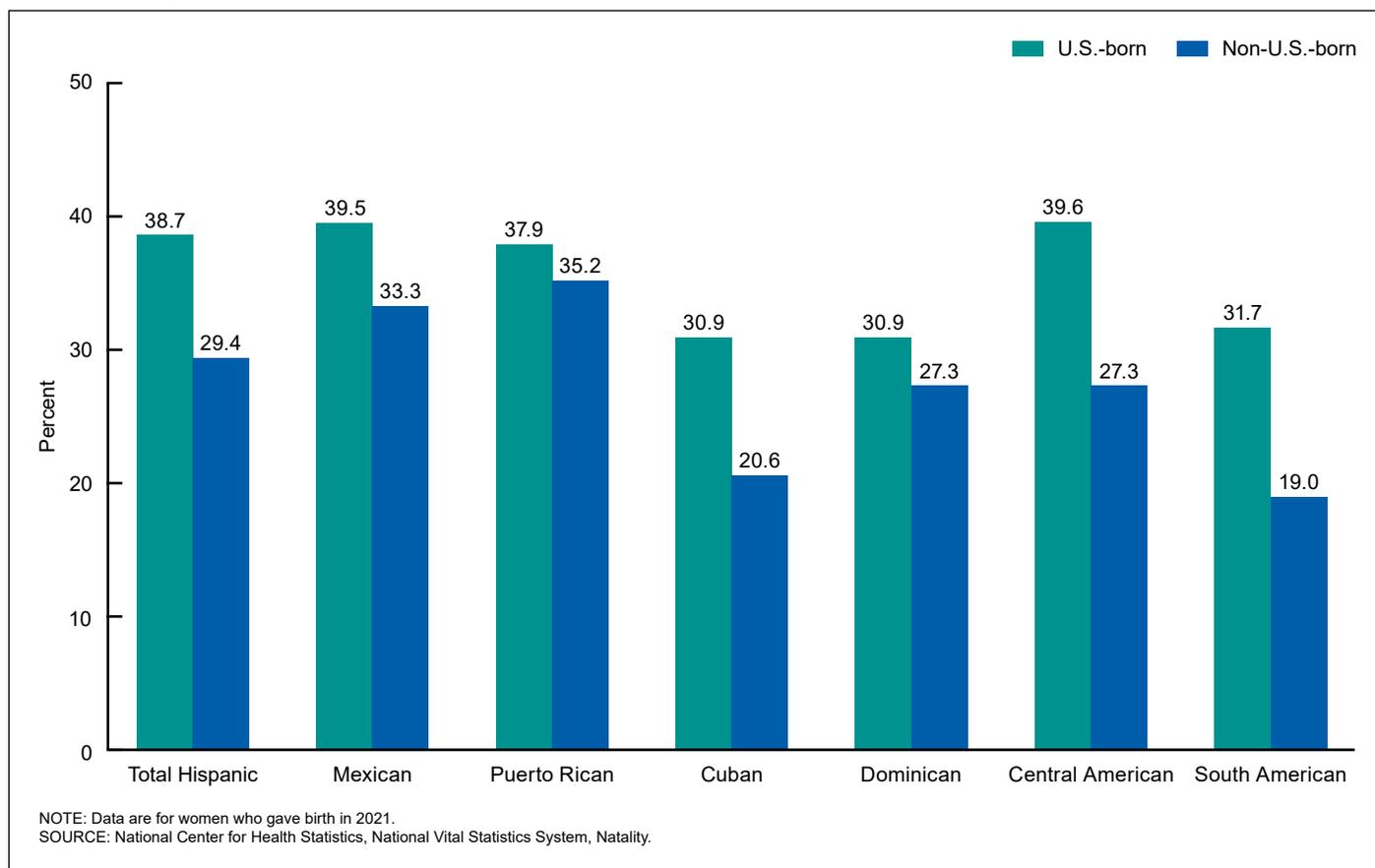


Figure 6. Percentage of women with prepregnancy obesity, by Hispanic subgroup and maternal nativity: United States, 2021

each subgroup. Nativity differences were greatest for Central American and South American women (Central American: 28.8% compared with 35.4%; South American: 37.5% compared with 45.6%). Smaller differences were found for Mexican and Puerto Rican women (Mexican: 29.5% compared with 30.4%; Puerto Rican: 32.0% compared with 33.1%).

Initiation of prenatal care

U.S.-born Hispanic women were more likely to obtain prenatal care in the first trimester than their non-U.S.-born counterparts (77.2% compared with 66.6%) (Table 1). This pattern was also found for each subgroup except Puerto Rican women. The reverse was true for Puerto Rican women (U.S.-born: 76.3% compared with non-U.S.-born: 77.3%). Except for Puerto Rican women (6.7% compared with 5.6%), U.S.-born women were less likely to start prenatal care in the third trimester or not at all than their non-U.S.-born counterparts for all Hispanic subgroups.

Gestational diabetes and gestational hypertension

U.S.-born Hispanic women had lower rates of gestational diabetes than non-U.S.-born women (8.0% compared with 10.2%), as did U.S.-born women in each subgroup except South

American women (Table 1). Contrary to the general pattern found for gestational diabetes, gestational hypertension rates were higher for U.S.-born women overall (8.3% compared with 6.6%) and for all subgroups except Puerto Rican women (8.8% for women born in and outside the United States). South American women had the lowest rates of all Hispanic subgroups for both pregnancy risk factors among women born both in and outside the United States.

Infant outcomes

The infants of U.S.-born Hispanic women had higher rates of preterm births than those of non-U.S.-born women overall (10.43 compared with 9.97), as well as for Cuban (10.45 compared with 9.52) and South American (9.39 compared with 8.76) women (Table 2). However, with one exception (Central American women) the infants of U.S.-born women were more likely to be born at 40 weeks of gestation or more than those of non-U.S.-born women.

The infants of U.S.-born Hispanic women had higher rates of low birthweight (less than 2,500 grams) than those of non-U.S.-born women for all Hispanic women (8.14 compared with 7.41) and for each subgroup.

The infants of U.S.-born Hispanic women had higher rates of NICU admission than those of non-U.S.-born women (9.08% compared with 8.62%). The same pattern was found for

infants of Mexican (8.47% compared with 8.12%), Puerto Rican (11.05% compared with 9.77%), and Central American (9.02% compared with 8.47%) women.

Discussion

This report shows that selected characteristics of Hispanic women and outcomes of their infants differ by maternal nativity, both for Hispanic women as a group and for Hispanic subgroups. Several maternal factors associated with better infant outcomes were higher for U.S.-born women than their non-U.S.-born counterparts. For all women and for each subgroup, U.S.-born women were more likely to have at least a bachelor's degree and less likely to have not finished high school. They were also more likely to have private health insurance and to obtain prenatal care in the first trimester. With the exception of South American women, they were also less likely to have gestational diabetes. However, they were more likely to be in their teens and to have obesity than women born outside the United States and (except for Puerto Rican women) they were also more likely to have gestational hypertension, all of which are risk factors for poor birth outcomes (18,19,23,26).

Despite results showing that some maternal factors associated with better pregnancy and infant outcomes were more common for U.S.-born women, infants of women born outside the United States generally had better birth outcomes than infants of U.S.-born women. Specifically, infants of non-U.S.-born Hispanic women had lower rates of preterm birth, low birthweight, and NICU admission. The results are consistent with some, although not all, previous research that found that infants of non-U.S.-born Hispanic women tend to have better outcomes than those of U.S.-born Hispanic women even though their socioeconomic profiles may predict worse outcomes (7,27,28). Moreover, the infants of recent Hispanic immigrants have been shown to have better outcomes than those of women with longer duration of residence in the United States (28,29). This suggests that higher levels of acculturation, usually measured by length of residence and language use, may be associated with less healthy behaviors and less attachment to the social support of immigrant communities (7,27).

This study has limitations. The Hispanic subgroups of Central American and South American each include multiple countries and, as a result, include a greater degree of heterogeneity than subgroups that consist of one national origin. Furthermore, women of other and unknown Hispanic origin were not analyzed separately due to the high degree of heterogeneity of this group and, therefore, the difficulty in interpreting the results. Overall, this group accounts for 10.6% of all Hispanic women, including 14.4% of U.S.-born women and 5.8% of non-U.S.-born women.

Non-U.S.-born women analyzed here include women who came to the United States as infants or young children and grew up in this country as well as recent arrivals who spent their formative years in their home country. Similarly, the U.S.-born women include those born to non-U.S.-born parents and those whose families have been in the United States for many generations.

Studies fielded in three states in 2010–2011 and 2013 found that the gestational hypertension and gestational diabetes items reported on birth certificates had low validity (30,31). Since then, efforts to improve data quality, including the development of a Facility Guidebook and eLearning training courses, may have led to improvement in reporting of these items (24).

In summary, this report presents evidence that, among Hispanic women, maternal characteristics and infant outcomes vary by both maternal Hispanic subgroup and nativity. The differences by nativity in maternal characteristics and infant outcomes for Hispanic subgroups included in this report highlight the diversity within the Hispanic population of women giving birth and demonstrate the value of analyzing maternal characteristics and birth outcomes of Hispanic women and their infants by subgroup and nativity when possible.

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Table 1. Maternal characteristics among Hispanic women, by Hispanic subgroup and nativity: United States, 2021

Characteristic	Total ¹		Mexican		Puerto Rican		Cuban		Dominican		Central American		South American	
	U.S.-born		U.S.-born		U.S.-born		U.S.-born		U.S.-born		U.S.-born		U.S.-born	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
	Number													
Total	493,747	390,938	312,594	172,082	50,799	19,653	10,758	13,668	10,692	22,599	24,850	101,630	12,866	38,546
	Percent													
Total	53.4	46.7	64.5	35.5	72.1	27.9	44.0	56.0	32.1	67.9	19.6	80.4	25.1	74.9
Maternal age:														
Under 20	7.9	4.3	8.6	2.8	6.4	5.0	3.1	1.7	4.7	3.8	7.4	8.4	4.1	1.5
20–24	26.7	17.5	28.3	15.9	24.8	26.3	² 14.8	15.0	21.3	18.1	23.6	21.7	16.0	9.8
25–29	31.1	26.5	31.6	27.0	² 29.8	29.9	26.0	28.0	32.7	28.1	30.8	26.0	28.1	22.6
30 and over	34.3	51.6	31.5	54.3	² 39.0	38.8	² 56.1	55.2	41.3	50.1	38.2	43.9	51.8	66.1
30–34	22.8	27.5	21.1	28.2	25.0	23.0	² 34.7	34.8	27.7	28.8	26.2	23.7	² 33.0	33.4
35–39	9.5	18.5	8.6	19.9	11.3	12.3	18.4	16.9	11.1	16.5	10.2	15.4	15.6	24.7
40 and over	2.0	5.6	1.8	6.2	2.7	3.5	3.0	3.5	2.5	4.9	1.8	4.7	3.2	8.0
Maternal education ³ :														
Less than high school	7.9	32.6	8.6	34.6	8.2	9.8	2.1	7.8	4.3	13.8	5.2	54.6	2.0	8.8
High school	28.2	29.8	30.1	34.6	² 28.6	28.1	14.6	37.2	17.9	27.8	23.2	25.6	14.2	19.3
Some college or associate's degree	37.5	19.0	37.9	17.9	37.6	32.5	30.8	25.0	38.9	33.0	39.2	11.2	32.3	25.6
Bachelor's degree or higher	26.5	18.6	23.4	12.9	25.6	29.7	52.5	29.9	39.0	25.4	32.4	8.7	51.5	46.3
Source of payment:														
Medicaid	56.0	60.7	57.3	61.5	56.4	61.8	32.8	64.4	53.2	68.2	48.7	66.6	35.1	39.8
Private health insurance	38.6	23.8	37.2	22.6	38.0	31.5	62.6	31.5	42.5	24.7	45.8	12.2	59.5	47.7
Self-pay	1.8	12.3	2.0	13.1	² 1.3	1.3	1.6	2.3	1.1	3.7	1.7	17.8	2.0	9.3
Other	3.5	3.2	3.5	2.7	4.3	5.5	3.0	1.7	² 3.2	3.4	3.8	3.4	² 3.5	3.2
Body mass index (BMI):														
Underweight	2.2	1.9	2.1	1.6	2.7	3.4	² 2.1	2.3	² 2.1	2.1	1.7	2.0	1.6	2.1
Normal weight	30.4	34.4	29.5	30.4	32.0	33.1	37.8	42.1	32.4	35.9	28.8	35.4	37.5	45.6
Overweight	28.7	34.3	28.8	34.8	27.4	28.3	29.2	34.9	29.9	34.7	29.9	35.3	29.2	33.2
Obese	38.7	29.4	39.5	33.3	37.9	35.2	30.9	20.6	35.5	27.3	39.6	27.3	31.7	19.0
Initiation of prenatal care:														
1st trimester	77.2	66.6	76.9	68.4	76.3	77.3	84.4	79.3	77.4	70.7	80.3	55.9	82.8	73.5
2nd trimester	16.2	22.8	16.4	22.1	² 17.0	17.1	11.6	14.3	16.4	20.8	14.7	28.7	13.2	17.6
3rd trimester or none	6.6	10.6	6.7	9.6	6.7	5.6	4.0	6.4	6.2	8.4	5.1	15.5	4.0	8.9
Pregnancy risk factors:														
Gestational diabetes	8.0	10.2	8.1	11.9	8.6	9.7	6.9	8.8	7.6	10.1	6.9	8.8	² 6.3	6.6
Gestational hypertension	8.3	6.6	8.1	6.6	² 8.8	8.8	8.8	8.0	8.9	7.9	8.2	6.1	6.8	5.4

¹Includes births to other and unknown Hispanic-origin groups.²Not significantly different from women born outside the United States ($p < 0.05$).³Limited to women aged 25 and over.

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

Table 2. Outcomes of infants of Hispanic women, by Hispanic subgroup and maternal nativity: United States, 2021

Characteristic	Total ¹		Mexican		Puerto Rican		Cuban		Dominican		Central American		South American	
	U.S.-born		U.S.-born		U.S.-born		U.S.-born		U.S.-born		U.S.-born		U.S.-born	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
	Number													
Total	493,747	390,938	312,594	172,082	50,799	19,653	10,758	13,668	10,692	22,599	24,850	101,630	12,866	38,546
	Percent													
Gestational age:														
Less than 37 weeks	10.43	9.97	² 10.09	10.02	² 11.56	11.53	10.45	9.52	² 10.67	10.11	² 10.06	10.15	9.39	8.76
Less than 34 weeks	2.73	2.58	² 2.61	2.61	3.26	3.51	² 2.76	2.73	² 3.12	2.83	² 2.61	2.44	² 2.39	2.18
34–36 weeks	7.70	7.39	² 7.48	7.41	² 8.30	8.02	7.69	6.79	² 7.54	7.28	² 7.44	7.70	² 7.00	6.58
37–38 weeks	29.97	29.66	² 29.87	30.00	² 29.86	30.54	² 28.19	27.43	² 29.12	28.11	29.17	30.32	27.27	28.29
39–40 weeks	55.22	56.12	² 55.69	55.84	² 54.06	54.11	56.85	60.24	55.25	57.51	56.09	54.90	² 57.89	58.82
40 weeks or more	4.37	4.25	4.35	4.15	4.52	3.82	4.52	2.81	4.96	4.28	² 4.68	4.63	5.45	4.12
Birthweight (grams):														
Under 2,500	8.14	7.41	7.70	7.24	9.93	9.45	8.06	6.91	9.37	8.24	7.94	7.55	7.03	6.52
Under 1,500	1.31	1.24	² 1.23	1.23	² 1.72	1.89	1.26	1.53	1.69	1.43	1.28	1.12	² 1.06	0.98
1,500–2,499	6.83	6.17	6.47	6.01	8.22	7.56	6.80	5.38	7.68	6.81	² 6.66	6.43	² 5.97	5.54
2,500 and higher	91.86	92.59	92.30	92.75	90.07	90.55	91.95	93.09	90.64	91.75	92.06	92.46	92.98	93.48
NICU admission	9.08	8.62	8.47	8.12	11.05	9.77	² 10.04	9.81	² 11.38	11.80	9.02	8.47	² 9.06	8.57

¹Includes births to other and unknown Hispanic-origin groups.
²Not significantly different from women born outside the United States ($p < 0.05$).

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

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