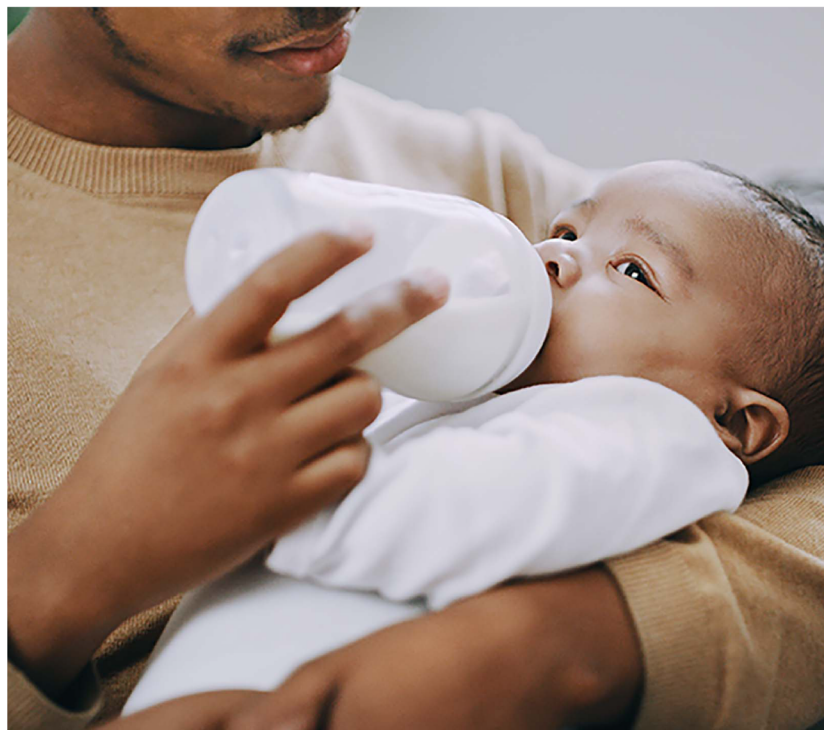




U.S. DEPARTMENT OF AGRICULTURE

WIC Participant and Program Characteristics 2020 Final Report



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Final Report



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Abbreviations and Acronyms

ACS	American Community Survey
BMI	body mass index
CDC	Centers for Disease Control and Prevention
CPS-ASEC	Current Population Survey—Annual Social and Economic Supplement
DGA	Dietary Guidelines for Americans
EBT	electronic benefit transfer
FDPIR	Food Distribution Program on Indian Reservations
FFCRA	Family First Coronavirus Response Act
FNS	Food and Nutrition Service
FY	fiscal year
HHS	U.S. Department of Health and Human Services
IOM	Institute of Medicine
ITO	Indian Tribal Organization
LAD	Local Agency Directory
MDS	Minimum Data Set
MIS	management information system
NCHS	National Center for Health Statistics
NHANES	National Health and Nutrition Examination Survey
NHLBI	National Heart, Lung, and Blood Institute
NIS	National Immunization Survey
OMB	Office of Management and Budget
PC	participant and program characteristics
RISC	Risk Identification and Selection Collaborative
SDS	Supplemental Data Set

SNAP	Supplemental Nutrition Assistance Program
TANF	Temporary Assistance for Needy Families
USDA	U.S. Department of Agriculture
WHO	World Health Organization
WIC	Special Supplemental Nutrition Program for Women, Infants, and Children

Executive Summary

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) is administered by the U.S. Department of Agriculture's Food and Nutrition Service (FNS).¹ WIC benefits include nutritious supplemental foods; nutrition education and counseling, including breastfeeding promotion and support; and referrals to healthcare, social services, and other community providers for pregnant, breastfeeding, and postpartum women² and infants and children up to age 5 who have been deemed to be at nutritional risk and who are deemed income-eligible for the program. WIC delivers benefits to participants through food instruments in the form of paper vouchers and checks or via electronic benefit transfer cards. Participants may redeem these benefits from authorized retail vendors.

WIC was initially launched as a pilot program in 1972 and permanently established in 1974 by an amendment to the Child Nutrition Act of 1966 (Pub. L. 89–642, as amended in 2010 through Pub. L. 111–296). A total of 7 million women, infants, and children participated in WIC in April 2020. For fiscal year 2020, Congress appropriated \$6 billion for the program. Since 1988, FNS has produced biennial reports on WIC participant and program characteristics (PC) for use in program monitoring and managing WIC information needs, such as estimating budgets, submitting civil rights reports,³ identifying research needs, and reviewing current and proposed WIC policies and procedures. Federal regulations require that the biennial reports include information on participants' income and nutritional risk characteristics, breastfeeding initiation rates and duration estimates, and migrant farmworker characteristics.⁴

WIC provides services through 89 State agencies: the 50 States; the District of Columbia; 5 U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands); and 33 Indian Tribal Organizations (see table 1.1). These 89 State agencies operated 1,801 local agencies nationwide in April 2020.⁵

A. PC Data and Reporting

This publication is the 17th report in the WIC PC study series. Similar to all WIC PC reports issued since 1992, the 2020 report (PC2020) is based on participant data submitted to FNS by State agencies. Each of these reports has presented information on a census of WIC participants conducted in the sample month of April of the reference year.⁶

For each PC report, WIC participants are defined as individuals who were certified to receive WIC benefits in April of the reference year, including individuals who did not claim a food instrument in

¹ See 7 C.F.R. 246 (Special Supplemental Nutrition Program for Women, Infants and Children, 1985).

² Current WIC regulations allow food packages to be prescribed to women up to 6 months postpartum who are nonbreastfeeding or minimally breastfeeding; these women are included in the definition of postpartum women in this report. See 7 C.F.R. 246 (Special Supplemental Nutrition Program for Women, Infants and Children, 1985).

³ Federally required reports on the race and ethnicity of WIC participants

⁴ Federal regulations define a migrant farmworker as an individual whose principal employment is in agriculture on a seasonal basis, who has been so employed within the last 24 months, and who has established a temporary abode for the purposes of such employment.

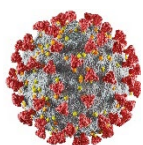
⁵ There were 90 State agencies included in the PC2008–PC2018 reports, but Seneca Nation (New York) ceased WIC operations in June 2019.

⁶ Because of State agency management information system constraints, California provided data for July 2020 rather than April 2020.

April.⁷ In contrast, for administrative purposes, FNS measures monthly WIC participation based on the number of certified individuals who claimed their food instruments each month. As a result of the differences in the definition of participation for PC reports versus FNS administrative data, participation, as measured for PC2020, was 12.5 percent greater than participation as measured for program reports based on FNS administrative data for April 2020.

The current system for reporting PC data is based on the automated transfer of a set of 20 data items, known as the Minimum Data Set (MDS), by State agencies to FNS. The data items represent information State and local WIC staff collect to confirm applicant eligibility for WIC benefits and issue food instruments. In 1992, FNS developed the MDS in collaboration with the Information Committee of the National WIC Association and the Centers for Disease Control and Prevention (CDC).

For PC data reporting, all 89 State agencies are asked to submit the MDS data on a census of participants.⁸ The State agency-maintained information systems that served as the data sources for PC2020 did not always contain complete information on every WIC participant; this was also the case for prior PC reports.



In March 2020, in response to the COVID-19 pandemic, FNS approved waivers for all requesting State agencies allowing them to safely certify participants (physical presence waiver) and distribute benefits (remote benefits issuance waiver) without participants being physically present for appointments in the WIC clinic. The physical presence waiver also allowed State agencies to defer the collection of anthropometric and hematological test data needed to determine certain nutritional risks. As a result, State agencies either did not collect some MDS data elements or collected the data using practices that differed from standard operating procedures (e.g., old data from previous certifications, or self-reported data). It was also unclear whether dates of entry corresponded to dates of measurement or hematological test. Therefore, anthropometric and hematological data are reported only for participants certified to receive benefits through February 2020 (see chapters 6 and 7, respectively).

The study team collected PC data using the reference month of November 2020 from nine State agencies to investigate trends in WIC participation and participant characteristics between April 2020 and November 2020. Notable findings from this analysis are incorporated throughout this report, designated by the COVID-19 icon shown here; detailed tabulations are provided in appendix D.

B. Participant Characteristics in 2020

This report describes findings in seven main topic areas: enrollment and demographic characteristics (see chapter 3), participation in other benefit programs and income (see chapter 4), assigned nutritional risks (see chapter 5), anthropometric status (see chapter 6), anemia status (see chapter 7),

⁷ In accordance with Federal regulations, this definition includes fully breastfed infants who were certified to receive benefits but were not prescribed a food package and partially breastfeeding women more than 6 months postpartum who were not prescribed a food package but whose infants were prescribed a food package.

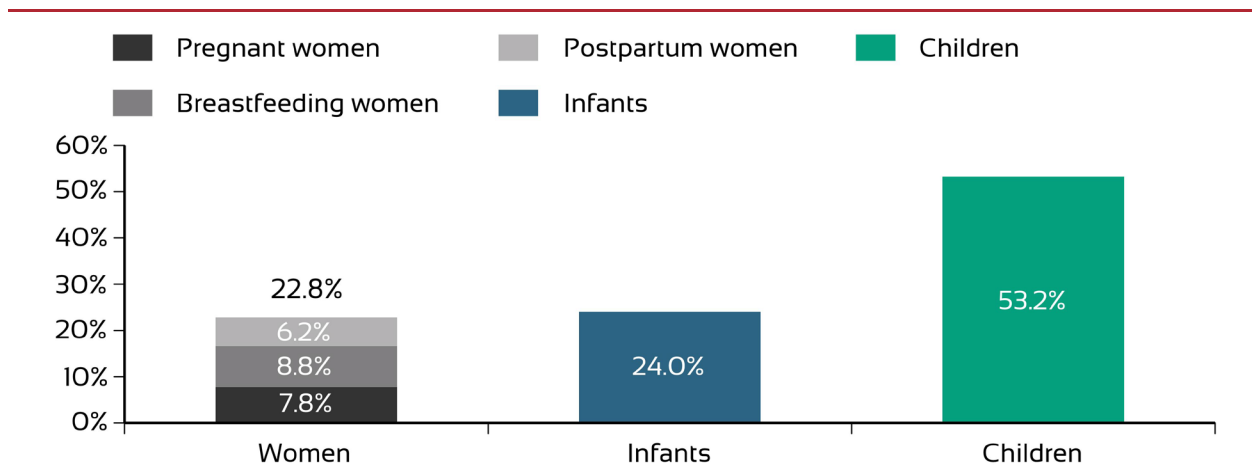
⁸ All but three State agencies submitted an accurate census of participants for PC2020. Colorado, Iowa, and Montana submitted data with duplicate identifiers. The study team weighted data from these State agencies (see chapter 2 for additional details).

breastfeeding initiation and duration (see chapter 8), and comparisons of participants with the overall U.S. population (see chapter 9). This section describes key findings for 2020 for each topic area; trends over time are noted where they exist.

1. Enrollment and Demographic Characteristics

A total of 7,036,902 women, infants, and children participated in WIC in April 2020. More than half (53.2 percent) of participants in 2020 were children (i.e., 1- to 4-years old, see figure ES.1).

Figure ES.1. Distribution of Participants by Participant Category



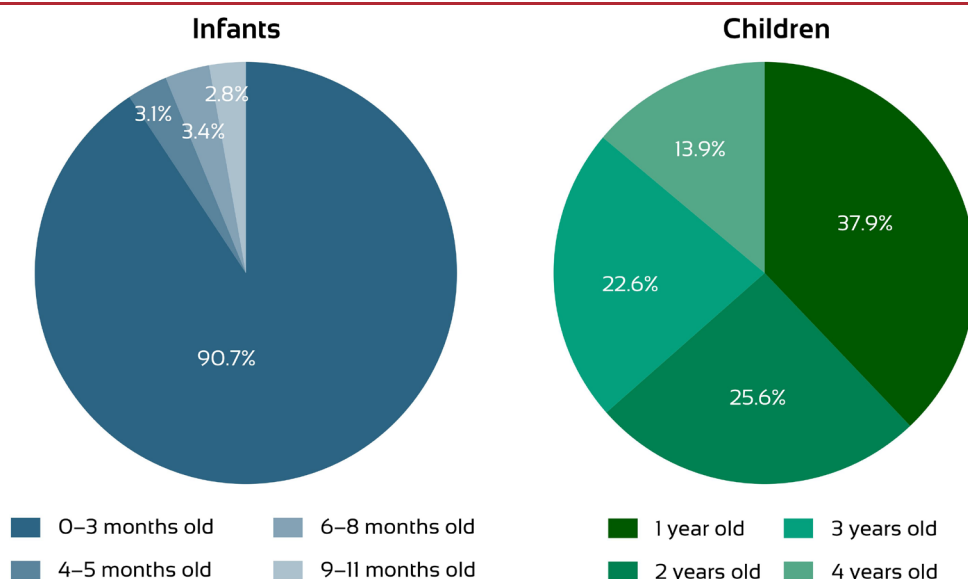
Note
The data for this figure are also presented in tables 3.1 and appendix table A.1.

Infants accounted for 24.0 percent of participants, and women accounted for 22.8 percent. Since 1992, the proportion of infants has decreased, whereas the proportion of children has increased. In 2020, pregnant women made up 7.8 percent of participants overall, followed by breastfeeding women at 8.8 percent and postpartum women at 6.2 percent. In 2012, the proportion of breastfeeding women was higher than that of postpartum women for the first time in the history of WIC; this trend continued through 2020. This shift toward higher rates of breastfeeding among women enrolled in WIC is consistent with increasing rates of breastfeeding initiation for infants enrolled in WIC.

Age at certification

Most infants (90.7 percent) were initially certified for WIC benefits during their first 3 months of life (see figure ES.2). Across children's age groups, the percentage of participants decreased as age increased; at the time of most recent certification, 37.9 percent of children were 1 year old, whereas 13.9 percent were 4 years old. The proportion of children aged 1 has increased since 2012, whereas the proportion aged 4 has decreased.

Figure ES.2. Distribution of Infants and Children by Age at Certification



Notes

Less than 0.1 percent of infants and children were missing reporting for age.

The data for this figure are also presented in tables 3.2b–c and appendix tables A.3 and A.4.

A majority of women (84.1 percent) were aged 18 to 34 in April 2020; 2.3 percent of women were 17 or younger. The proportion of women aged 35 and older was 13.5 percent in 2020, a substantial increase from the 5.2 percent of women in this age category in 1992.

Trimester of enrollment

In 2020, half of pregnant women (50.8 percent) enrolled in the program during the first trimester of pregnancy, 38.1 percent enrolled during the second trimester, and 11 percent enrolled during the third trimester. The proportion of pregnant women who enrolled during the first trimester has decreased steadily from a high of 56.9 percent in 2012.

Risk priority

When a local agency reaches its maximum caseload—which FNS determines based on the agency’s funding level and predicted case turnover—it uses a ranking system, in accordance with the State agency’s policy, with seven federally defined risk priority levels⁹ to prioritize eligible applicants according to their relative levels of nutritional risk (see text box). In April 2020, no State agency was required to use risk priority levels to determine which applicants would receive benefits.

Risk Priorities

Risk Priority	Type	Participant Categories
I	Medically based	Pregnant women, breastfeeding women, and infants
II		Infants up to 6 months old
III		Children
IV	Dietary based	Pregnant women, breastfeeding women, and infants
V		Children
VI		Postpartum women
VII	Other	All categories

This information is also presented in table 3.4.

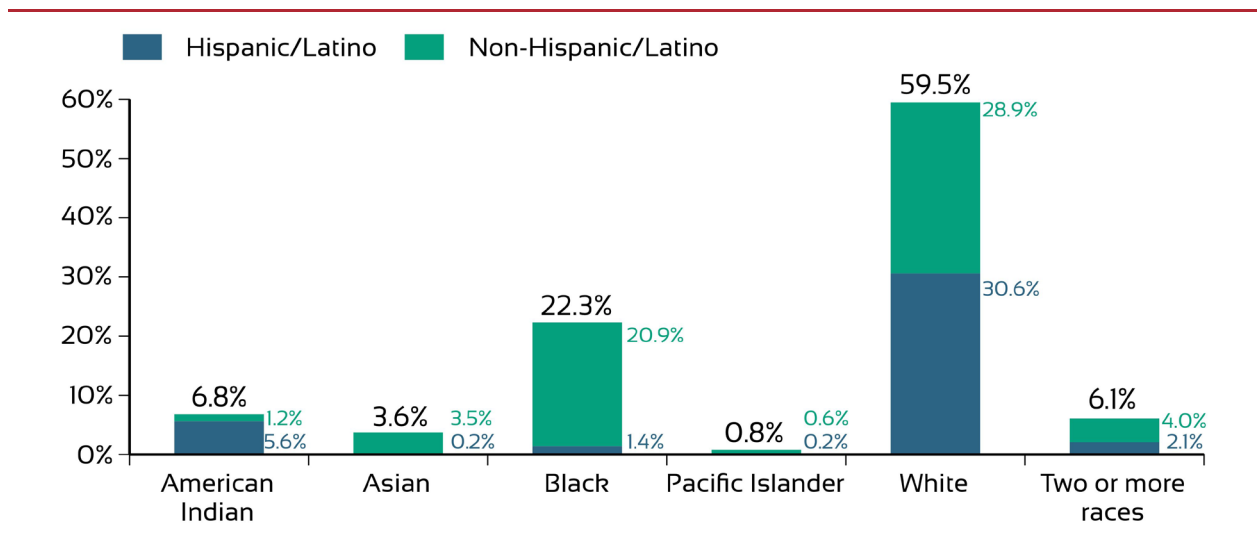
⁹ See 7 C.F.R. 246.7(e)(4) (Special Supplemental Nutrition Program for Women, Infants and Children, 1985).

Almost 60 percent of all participants were assigned Priority Level I (30.6 percent) or Priority Level III (28.5 percent) in 2020. A majority of pregnant and breastfeeding women (81.2 and 84.0 percent, respectively) were assigned Priority Level I; over half of postpartum women (59.3 percent) were assigned Priority Level VI. Two-thirds of infants (66.6 percent) were assigned Priority Level I, and half of children were assigned Priority Level III (50.0 percent).

Race and ethnicity

More than half of participants (59.5 percent) were reported as White in 2020, 22.3 percent as Black, 6.8 percent as American Indian, 3.6 percent as Asian, and 0.8 percent as Pacific Islander (see figure ES.3).¹⁰ Two or more races were reported for 6.1 percent of participants, and 40.7 percent of participants were reported as Hispanic/Latino.

Figure ES.3. Distribution of Participants by Race and Ethnicity



Notes
Percents may not add to 100.0, and subtotals may not add to totals, because of rounding.
The data for this figure are also presented in table 3.6 and appendix tables A.8 and A.9.

Migrant farmworker status

Federal regulations define a migrant farmworker as an individual whose principal employment is in agriculture on a seasonal basis, who has been so employed within the last 24 months, and who has established a temporary abode for the purposes of such employment (The Migrant and Seasonal Agricultural Worker Protection Act, 1983). In total, 19,353 WIC participants were identified as migrant farmworkers in 2020. Migrant farmworker participants made up less than half of 1 percent of the Nation's total WIC population. More than two-thirds (68.2 percent) of these participants were located in California or Florida.

¹⁰ Reporting categories based on the Office of Management and Budget (OMB, 1997) definitions and reporting requirements were first used in the PC2006 report. Some of the reporting category names were modified for 2018 to help streamline table and figure text in the report (see table 2.3 for additional details). The shortened category names are used across this report.

2. Participation in Other Benefit Programs and Income

WIC legislation allows applicants to meet income eligibility requirements through participation in qualifying means-tested benefit programs such as Temporary Assistance for Needy Families (TANF), the Supplemental Nutrition Assistance Program (SNAP), and Medicaid. A majority of WIC participants (77.2 percent) reported receiving benefits from at least one of these three national public assistance programs in 2020; 3.8 percent received TANF benefits, 28.0 percent received SNAP benefits, and 74.2 percent received Medicaid benefits.¹¹ Only 3.2 percent of participants reported receiving benefits from all three programs.

The average annualized income of households participating in WIC during 2020 was \$20,398. Across participant categories, household income was highest for breastfeeding women (\$21,403) and lowest for postpartum women (\$17,803).

State agencies must set income eligibility restrictions of between 100 and 185 percent of the Federal Poverty Guidelines established by the U.S. Department of Health and Human Services (HHS);¹² all State agencies set this threshold at 185 percent of the Federal Poverty Guidelines in April 2020. These income guidelines for poverty vary based on household size and residency,¹³ but in most areas served by WIC, the poverty guideline for a household of four was \$25,750 per year (HHS, 2019a). Based on this guideline, an income of \$47,638 per year for a household of four would represent 185 percent of the Federal Poverty Guidelines. In April 2020, the mean household size for participants was 4.1 individuals. In 2020, a majority of participants (88.9 percent) reported income equal to or less than 185 percent of the Federal Poverty Guidelines, almost two-thirds (64.3 percent) reported income at or below the guidelines, and about one-third (34.5 percent) reported income equal to or less than 50 percent of the guidelines (see figure ES.4).^{14, 15}

¹¹ These findings likely underestimate participation in these programs. See chapter 2 for additional details on study considerations.

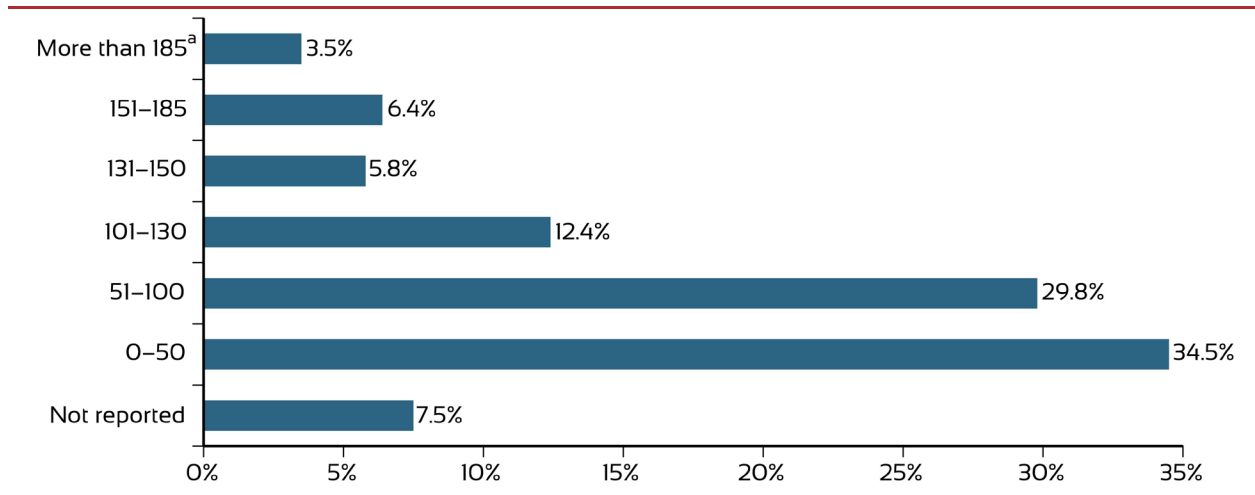
¹² The Federal Poverty Guidelines established in January 2019 were used by WIC to establish eligibility from July 2019 through June 2020, so these guidelines covered most of the period for which WIC participants active in April 2020 were certified.

¹³ The Federal Poverty Guidelines are the same for the 48 contiguous States, the District of Columbia, and the 5 U.S. territories served by WIC; they are different for Alaska and Hawaii.

¹⁴ Participants may be adjunctively eligible for WIC through Medicaid. In some State agencies, the income threshold for Medicaid is greater than 185 percent of the Federal Poverty Guidelines.

¹⁵ Income data were missing for an additional 7.4 percent of participants.

Figure ES.4. Participants With Reported Income as a Percentage of the Federal Poverty Guidelines



Notes

The data for this figure are also presented in table 4.6 and appendix table A.15.

"Not reported" refers to missing income data (see chapter 2 for additional details)

^a Participants may be adjunctively eligible for WIC through Medicaid. In some State agencies, the income threshold for Medicaid is greater than 185 percent of the Federal Poverty Guidelines.

3. Assigned Nutritional Risks

For PC2020, State agencies could report up to 10 nutritional risk criteria for each participant. The greatest percentage of participants, 48.2 percent, were assigned one nutritional risk; 27.3 percent were assigned two nutritional risks; and 23.4 percent were assigned three or more nutritional risks.

Women, across all categories, were most commonly assigned the nutritional risk of *high weight-for-height/length* (50.0 percent), which includes nutritional risk criteria for overweight and obesity. About two-thirds of infants (68.1 percent) were reported to be at nutritional risk because their mothers participated in WIC during pregnancy. Children were most frequently assigned the nutritional risks of *inappropriate nutrition practices* (56.7 percent) and *high weight-for-height/length* (25.2 percent).

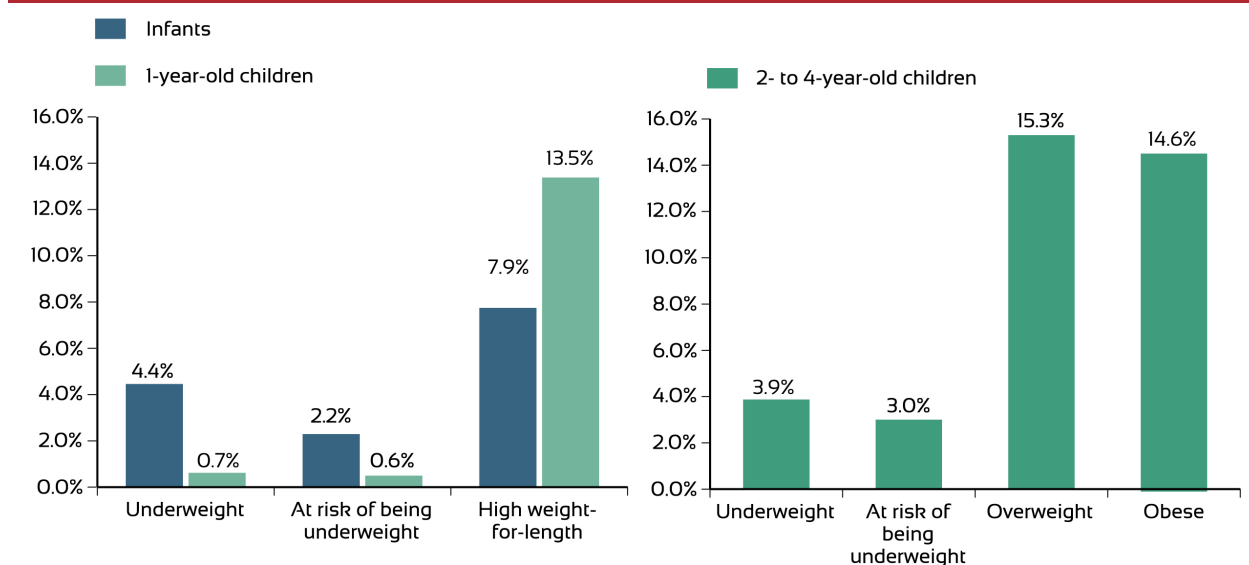
4. Anthropometric Status

During "typical" WIC operations (i.e., prior to the COVID-19 pandemic), a participant's weight and height (or length) are measured and recorded during the eligibility determination process and used to determine anthropometric nutritional risks. In PC2020, anthropometric data are only reported for participants certified through February 2020 because COVID-19 waivers deferred requirements to collect these data.

FNS first implemented national standards to categorize anthropometric status in 1999. World Health Organization (WHO) growth standards are used to assess weight and length for infants and 1-year-old children (WHO, 2006); CDC growth charts are used to assess weight, height, and body mass index for 2- to 4-year-old children (Kuczmarski et al., 2002); and body mass index calculations are used for women.

Fewer than 5 percent of infants and children were *underweight* (see figure ES.5). About 8 percent of infants and 14 percent of 1-year-old children had *high weight-for-length*, whereas about 30 percent of 2- to 4-year-olds were *overweight or obese*.

Figure ES.5. Percentage of Anthropometric Status Among Infants and Children



Notes

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, anthropometric data are reported only for participants certified through February 2020.

Percentages are provided for participants with reported anthropometric data (see table 6.1).

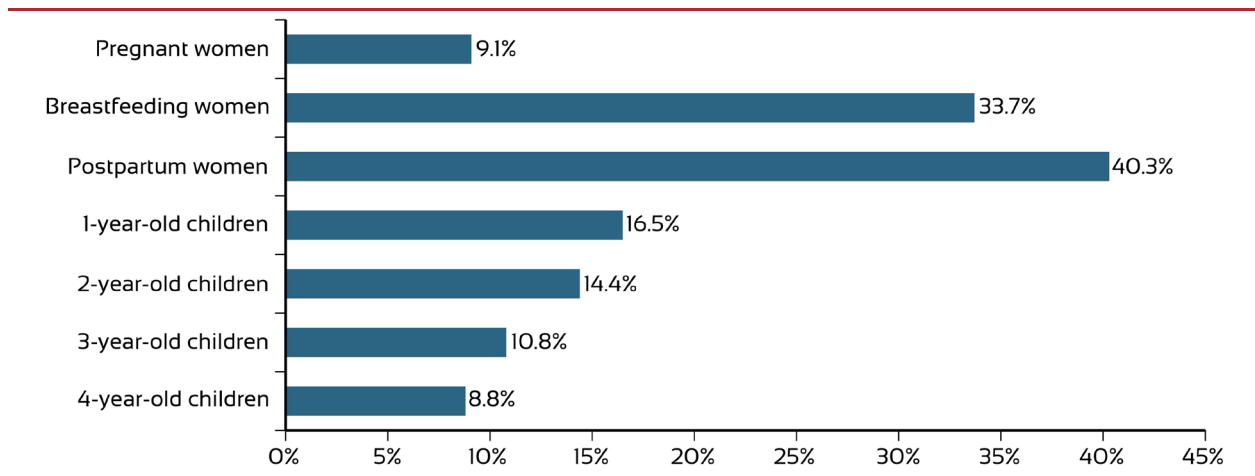
The data for this figure are also presented in tables 6.3, 6.6, and 6.9 and appendix tables A.18, A.21, and A.24.

5. Anemia Status

State agencies test (or collect through referral data) the hemoglobin and/or hematocrit levels of participants aged 9 months or older to screen for anemia. FNS established standard criteria in 1999 to screen for anemia using these test results based on CDC recommendations (CDC, 1998). In PC2020, hematological data are only reported for participants certified through February 2020 because COVID-19 waivers deferred requirements to collect these data.

Anemia rates were higher after pregnancy, with 33.7 percent of breastfeeding women and 40.3 percent of postpartum women categorized as anemic compared with 9.1 percent of pregnant women (see figure ES.6). Among children, rates of anemia decreased with age; 16.5 percent of 1-year-old children's hematological tests indicated anemia, whereas 8.8 percent of 4-year-old children were determined to be anemic.

Figure ES.6. Percentage of Women and Children With Anemia



Notes

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, hematological data are reported only for participants certified through February 2020.

Percentages are provided for participants with reported hematological data (see table 7.2).

The data for this figure are also presented in tables 7.4, 7.5a–e, 7.6a–d, and appendix tables A.29 and A.30.

6. Breastfeeding Initiation and Duration

The 2020 estimated rate of breastfeeding initiation was based on data from 82 State agencies.¹⁶ Overall, 71.6 percent of these infants and children were reported to initiate breastfeeding.

Breastfeeding rates at 3 and 6 months were calculated using data for 9- to 13-month-old infants and children from 81 State agencies.¹⁷ Among these infants and children, 32.6 percent were breastfeeding at 3 months, and 22.1 percent were breastfeeding at 6 months. Approximately 13 percent of 12- to 13-month-old children were breastfeeding at 12 months. This estimate was also calculated using data from 81 State agencies.¹⁸

7. Comparison of WIC Population With Overall U.S. Population

Nationally representative surveys provided data on the overall U.S. population compared with the WIC population for several key measures:

- ▶ **Race and ethnicity.** Smaller percentages of WIC participants were identified as White or Asian, and greater percentages of WIC participants were identified as Black, American Indian, and Hispanic/Latino compared with the overall U.S. population (U.S. Census Bureau, n.d.a).
- ▶ **Women's age and childbirth.** Compared with the U.S. general population, women participating in WIC were more likely to give birth between the ages of 15 and 24 and less likely to give birth between the ages of 30 to 39 (Martin et al., 2019).

¹⁶ National breastfeeding initiation rates include data for State agencies that reported breastfeeding initiation data for at least 75.0 percent of all infants and children aged 6–13 months. Data were excluded for the following State agencies: Eastern Band of Cherokee Indians (NC), Louisiana, New Mexico, North Carolina, Rhode Island, Texas, and West Virginia.

¹⁷ National breastfeeding rates at ages 3 and 6 months include data for State agencies that reported breastfeeding duration data for at least 75.0 percent of all 9- to 13-month-old infants and children. Data were excluded for the following State agencies: Louisiana, New Mexico, North Carolina, Puerto Rico, Rhode Island, Texas, Washington, and West Virginia.

¹⁸ National breastfeeding rates at 12 months included data for State agencies that reported breastfeeding duration data for at least 75.0 percent of all 12- to 13-month-old children. Data were excluded for the following State agencies: Eastern Band of Cherokee (NC), Louisiana, New Mexico, North Carolina, Puerto Rico, Santee Sioux Nation (NE), Texas, and Washington.

- ▶ **Income.** More than six times as many WIC participants lived in poverty compared with the general U.S. population (U.S. Census Bureau, n.d.b).
- ▶ **Overweight and obesity.** Among all U.S. children, the rate of overweight was higher than the rate of overweight among children enrolled in WIC, but the rate of obesity among WIC participants was higher than the rate of obesity among all U.S. children. However, the percentage of 2- to 4-year-old child WIC participants who were overweight was within the margin of error of estimates of overweight and obesity for children aged 2–4 in the overall U.S. population; the rate of obesity among WIC participants was above the margin of error of the estimate for the U.S. population (CDC, National Center for Health Statistics [NCES], n.d.).
- ▶ **Anemia.** Child WIC participants were more likely to be anemic than children in the general U.S. population, although both groups of children were less likely to be anemic at age 3–4 than at age 1–2 (CDC NCES, n.d.).
- ▶ **Breastfeeding.** Breastfeeding initiation rates were lower among infant WIC participants than infants in the overall U.S. population. Fewer than half as many infant WIC participants as infants in the general U.S. population were breastfed at 6 months (CDC, n.d.).

C. Food Package Data

Among the MDS items, State agencies were required to provide were food prescription data and food package type. These data are described in a separate report on PC2020 food packages (expected to be released in Spring 2022).

D. PC2020 Data Products

In conjunction with the biennial PC reports and the companion PC food package reports, FNS produces several data products to enable further research on WIC. A national sample data set is available for use by researchers upon request.¹⁹ PC data are often used in other research studies conducted by FNS. Other organizations—such as CDC and the Health and Medicine Division of the National Academies of Sciences, Engineering, and Medicine—use PC data in their research efforts related to WIC participants and low-income women and children in general.

¹⁹ Data is made available on the USDA Ag Data Commons Website at <https://data.nal.usda.gov/> by searching on WIC Participant and Program Characteristics.

Chapter 1. Introduction

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) is administered by the U.S. Department of Agriculture's (USDA) Food and Nutrition Service (FNS).²⁰ WIC provides benefits such as nutritious supplemental foods; nutrition education and counseling, including breastfeeding promotion and support; and referrals to healthcare, social services, and other community providers for pregnant, breastfeeding, and postpartum²¹ women, and infants and children up to age 5 who have been deemed to be at nutritional risk and who are deemed income-eligible for the program. By intervening during the prenatal period, WIC seeks to improve fetal development and reduce the incidence of low birth weight, short gestation, and maternal anemia. WIC benefits help maintain and improve the health and development of infants and children who are at nutritional risk. For breastfeeding and postpartum women, WIC seeks to improve dietary intake and promotes breastfeeding as the best source of infant nutrition. WIC was established in 1972 by an amendment to the Child Nutrition Act of 1966 (Pub. L. 89–642, as amended) to counteract the negative effects of poverty on prenatal and pediatric health. A total of 7 million women, infants, and children participated in WIC in April 2020. For fiscal year (FY) 2020, Congress appropriated \$6 billion for WIC.

Since 1988, FNS has produced biennial reports on WIC participant and program characteristics (PC). FNS uses this regularly updated information for program monitoring and managing WIC information needs such as estimating budgets, submitting civil rights reports,²² identifying research needs, and reviewing current and proposed WIC policies and procedures. Federal regulations require that the biennial reports include information on participants' income and nutritional risk characteristics, breastfeeding initiation rates and duration estimates, and migrant farmworker characteristics.²³

For each PC report since 1992, WIC participants are defined as individuals who were certified to receive WIC benefits in April of the reference year, including individuals who did not claim a food instrument that month. The reference period for PC2020 is April 2020.²⁴ In accordance with WIC guidelines, this definition includes fully breastfed infants who were certified for WIC benefits, but were not prescribed a food package during the first 6 months after their birth.

This introduction provides a brief overview of the WIC program. Section A describes the program operations, section B discusses the effects of the COVID-19 pandemic on WIC operations, section C outlines the benefits, and section D describes the eligibility requirements. Section E outlines the organization of the report's chapters.

A. Program Operations

WIC provides services through 89 State agencies: the 50 States; the District of Columbia; 5 U.S. territories (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands); and 33 Indian tribal organizations (ITOs). There were 89 State agencies and 1,801 local agencies

²⁰ See 7 C.F.R. 246 (Special Supplemental Nutrition Program for Women, Infants and Children, 1985).

²¹ Current WIC regulations allow food packages to be prescribed to women up to 6 months postpartum who are nonbreastfeeding or minimally breastfeeding; these women are included in the definition of postpartum women in this report. See 7 C.F.R. 246 (Special Supplemental Nutrition Program for Women, Infants and Children, 1985).

²² Federally required reports on the race and ethnicity of WIC participants

²³ Federal regulations define a migrant farmworker as an individual whose principal employment is in agriculture on a seasonal basis, who has been so employed within the last 24 months, and who has established a temporary abode for the purposes of such employment.

²⁴ Because of State agency management information system constraints, California provided data for July 2020 rather than April 2020.

nationwide in April 2020.²⁵ Participants receive services at local agencies or clinics. Table 1.1 presents information on the number of local agencies operated by State agencies. Eight State agencies served about half of all participants (51 percent).²⁶ Two State agencies—California and Texas—provided services to one-quarter of all participants (25.4 percent).

At the Federal level, FNS—through its seven administrative Regional Offices—provides cash grants to State agencies to support nutrition services and program administration, sets nutritional risk eligibility standards, issues regulations and monitors compliance with these regulations, offers technical assistance, and conducts studies of program operation and performance. State agencies allocate funds to local agencies, monitor compliance with Federal and State agency regulations, and supply technical assistance to local agency staff.

Table 1.1. Distribution of Participants and Local Agencies by State Agency

State Agency	Participants		Local Agencies	
	Number	Percent	Number	Percent
Total Participants	7,036,902	100.0	1,801	100.0
Alabama	123,107	1.7	8	0.4
Alaska	16,953	0.2	13	0.7
Arizona	148,998	2.1	20	1.1
Arkansas	65,832	0.9	1	< 0.1
California	1,001,418	14.2	83	4.6
Colorado	86,119	1.2	37	2.1
Connecticut	50,217	0.7	11	0.6
Delaware	19,166	0.3	2	0.1
District of Columbia	14,953	0.2	4	0.2
Florida	490,582	7.0	44	2.4
Georgia	212,493	3.0	19	1.1
Hawaii	29,208	0.4	16	0.9
Idaho	33,985	0.5	9	0.5
Illinois	192,766	2.7	96	5.3
Indiana	165,958	2.4	39	2.2
Iowa	64,368	0.9	20	1.1
Kansas	56,558	0.8	65	3.6
Kentucky	98,976	1.4	63	3.5
Louisiana	109,114	1.6	79	4.4
Maine	17,881	0.3	8	0.4
Maryland	128,907	1.8	18	1.0
Massachusetts	110,031	1.6	31	1.7
Michigan	226,716	3.2	47	2.6
Minnesota	110,537	1.6	84	4.7
Mississippi	85,171	1.2	22	1.2
Missouri	107,566	1.5	118	6.6
Montana	15,644	0.2	29	1.6
Nebraska	35,369	0.5	13	0.7

²⁵ There were 90 State agencies included in the 2008–2018 PC reports, but Seneca Nation (New York) ceased WIC operations in June 2019.

²⁶ California, Florida, Georgia, Michigan, New York, North Carolina, Pennsylvania, and Texas

State Agency	Participants		Local Agencies	
	Number	Percent	Number	Percent
Nevada	67,687	1.0	15	0.8
New Hampshire	13,955	0.2	4	0.2
New Jersey	151,329	2.2	16	0.9
New Mexico	43,283	0.6	3	0.2
New York	400,821	5.7	88	4.9
North Carolina	248,931	3.5	85	4.7
North Dakota	11,310	0.2	20	1.1
Ohio	187,865	2.7	74	4.1
Oklahoma	85,718	1.2	12	0.7
Oregon	80,917	1.1	33	1.8
Pennsylvania	225,576	3.2	24	1.3
Rhode Island	18,638	0.3	12	0.7
South Carolina	91,615	1.3	6	0.3
South Dakota	15,704	0.2	60	3.3
Tennessee	146,412	2.1	14	0.8
Texas	785,604	11.2	65	3.6
Utah	44,860	0.6	13	0.7
Vermont	12,114	0.2	12	0.7
Virginia	125,393	1.8	35	1.9
Washington	149,411	2.1	58	3.2
West Virginia	37,104	0.5	8	0.4
Wisconsin	93,571	1.3	69	3.8
Wyoming	8,077	0.1	19	1.1
U.S. Territories				
American Samoa	4,943	< 0.1	1	< 0.1
Guam	7,578	0.1	1	< 0.1
Northern Mariana Islands	3,363	< 0.1	1	< 0.1
Puerto Rico	100,017	1.4	8	0.4
U.S. Virgin Islands	3,150	< 0.1	2	0.1
Indian Tribal Organizations				
Acoma, Canoncito, Laguna (NM)	365	< 0.1	1	< 0.1
Cherokee Nation (OK)	6,845	< 0.1	1	< 0.1
Cheyenne River Sioux Tribe (SD)	662	< 0.1	1	< 0.1
Chickasaw Nation (OK)	3,983	< 0.1	1	< 0.1
Choctaw Nation (OK)	4,749	< 0.1	1	< 0.1
Citizen Potawatomi Nation (OK)	1,637	< 0.1	1	< 0.1
Eastern Band of Cherokee Indians (NC)	624	< 0.1	1	< 0.1
Eastern Shoshone Tribe (WY)	110	< 0.1	1	< 0.1
Eight Northern Indian Pueblos Council (NM)	236	< 0.1	1	< 0.1
Five Sandoval Indian Pueblos (NM)	259	< 0.1	1	< 0.1
Indian Township Passamaquoddy Reservation (ME)	61	< 0.1	1	< 0.1
Inter Tribal Council of Arizona	8,708	0.1	12	0.7
Inter-Tribal Council of Nevada	1,277	< 0.1	1	< 0.1
Inter-Tribal Council of Oklahoma	760	< 0.1	1	< 0.1
Mississippi Band of Choctaw Indians	668	< 0.1	1	< 0.1
Muscogee Creek Nation (OK)	2,418	< 0.1	1	< 0.1

State Agency	Participants		Local Agencies	
	Number	Percent	Number	Percent
Navajo Nation (AZ)	7,716	0.1	1	< 0.1
Northern Arapaho Tribe (WY)	199	< 0.1	1	< 0.1
Omaha Nation (NE)	201	< 0.1	1	< 0.1
Osage Nation (OK)	3,400	< 0.1	1	< 0.1
Otoe-Missouria Tribe (OK)	389	< 0.1	1	< 0.1
Pleasant Point Passamaquoddy Reservation (ME)	62	< 0.1	1	< 0.1
Pueblo of Isleta (NM)	1,089	< 0.1	1	< 0.1
Pueblo of San Felipe (NM)	246	< 0.1	1	< 0.1
Pueblo of Zuni (NM)	597	< 0.1	1	< 0.1
Rosebud Sioux Tribe (SD)	999	< 0.1	1	< 0.1
Santee Sioux Nation (NE)	83	< 0.1	1	< 0.1
Santo Domingo Pueblo (NM)	179	< 0.1	1	< 0.1
Standing Rock Sioux Tribe (ND)	426	< 0.1	1	< 0.1
Three Affiliated Tribes (ND)	195	< 0.1	1	< 0.1
Ute Mountain Ute Tribe (CO)	180	< 0.1	1	< 0.1
Wichita, Caddo, Delaware (OK)	3,893	< 0.1	1	< 0.1
Winnebago Tribe (NE)	147	< 0.1	1	< 0.1

Note

Percents may not add to 100.0 because of rounding.

B. Effects of the COVID-19 Pandemic on WIC Operations

In March 2020, Congress passed the Family First Coronavirus Response Act (FFCRA). The legislation, as amended by the Continuing Appropriations Act 2021 and Other Extensions Act (P.L. 116–159), provided FNS the authority to grant programmatic waivers to WIC State agencies to facilitate social distancing (USDA FNS, 2020).

Under the legislation, FNS was authorized to grant waivers to State agencies to conduct certification and recertification appointments without participants' physical presence at a WIC clinic and defer the anthropometric (i.e., height, length, weight) and hematological test requirements necessary to determine certain nutritional risks.²⁷ FNS also received authority to waive select administrative requirements, such as allowing certain food package substitutions, waiving medical documentation for existing participants, or allowing remote benefit issuance.²⁸ In total, FNS granted 16 types of WIC waivers (detailed information on State-by-State implementation of the waivers can be found on the USDA FNS Website²⁹).

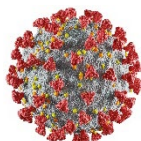
In general, PC data collection procedures remained unchanged during the COVID-19 pandemic (e.g., the reference month was April), but State agencies were given additional time to provide submissions. State agencies provided most data elements with the same high quality as in previous years, except anthropometric and hematological measurement data for certifications during the pandemic months. For participants certified in March and April, anthropometric and hematological measurement data were largely unreliable because of large amounts of missing data and varied practices State agencies

²⁷ See Families First Coronavirus Response Act, Section 2203. H.R. 6201, 116th Congress (2019–2020).

²⁸ Ibid.

²⁹ <https://www.fns.usda.gov/disaster/pandemic/covid-19/wic-waivers-flexibilities> and <https://www.fns.usda.gov/programs/fns-disaster-assistance/fns-responds-covid-19/wic-covid-19-waivers>

used to collect and report these data (e.g., old data from previous certifications or self-reported data). It was also unclear whether dates of entry corresponded to dates of measurement. Therefore, findings on anthropometric and hematological data are only provided for participants certified through February 2020 (see chapters 2, 6, and 7 for additional details).



The study team collected PC data using the reference month of November 2020 from nine State agencies to investigate trends in WIC participation and participant characteristics between April and November 2020. Notable findings from this analysis are incorporated throughout this report, designated by the COVID-19 icon shown here; detailed tabulations are provided in appendix D.

C. Participant Benefits

WIC seeks to improve the health of program participants by providing supplemental nutritious food; nutrition education and counseling, including breastfeeding promotion and support; and referrals to healthcare and other social services. This section describes the benefits WIC provides.

1. Food Packages

State agencies issue a prescribed set of supplemental foods to participants, who purchase the foods from authorized retail vendors. The set of prescribed supplemental foods, referred to as a food package, is designed to provide nutrients known to be lacking in the diets of target populations. Infant food packages reflect the developmental needs of infants and the infant feeding practice guidelines of the American Academy of Pediatrics.³⁰ Other food packages align with the recommendations provided in the Dietary Guidelines for Americans (DGA; U.S. Department of Health and Human Services [HHS] & USDA, 2015).³¹ Federal regulations specify different food packages for different categories of participants.

FNS implemented final regulations³² for WIC food packages in March 2014, completing the first comprehensive revisions to the WIC food packages since 1980. At the time PC2020 data were collected, food packages for women and children included milk and milk substitutes (cheese, soy-based beverage, tofu, and yogurt); eggs; legumes (dry beans, canned beans, and peanut butter); whole grains (whole-grain bread, brown rice, oatmeal, soft corn and whole-wheat tortillas, bulgur, barley, and whole-wheat pasta); hot and cold breakfast cereals; juice; and a cash-value benefit to be used for the purchase of fruits and vegetables. Fully breastfeeding women (up to 1 year postpartum) were also allowed canned fish. Food packages for infants provided infant formula (if the infant was fed formula), cereal, fruits and vegetables, and meats appropriate for infants. Non-contract-brand infant formulas³³ and WIC-eligible nutritionals were allowed for participants with qualifying conditions.³⁴

³⁰ See 79 Fed. Reg. 12274 (Special Supplemental Nutrition Program for Women, Infants and Children, 2014) and National Academies of Science, Engineering, and Medicine (2017) for additional details.

³¹ These guidelines, developed jointly and updated every 5 years by HHS and USDA, provide recommendations on how to attain and maintain a healthy weight, reduce risks of chronic disease, and promote overall health.

³² See 79 Fed. Reg. 12274 (Special Supplemental Nutrition Program for Women, Infants and Children, 2014).

³³ Since 1987, State agencies have negotiated rebates provided by manufacturers of WIC-eligible foods to reduce food costs; since 1989, State agencies have been Federally required to obtain manufacturer rebates on infant formula (Oliveira et al., 2004).

³⁴ The 2020 food package data will be described in a separate report (expected to be released in October 2021).

WIC issues food benefits to participants through food instruments in the form of vouchers, checks, or electronic benefit transfer (EBT) cards. Fifty-seven State agencies delivered benefits statewide through EBT as of April 2020 (USDA FNS, 2021).

2. Nutrition Education and Counseling

Nutrition education, including breastfeeding promotion and support, plays a crucial role in WIC as an essential benefit intended to achieve positive changes in participant knowledge, attitudes, and behaviors about feeding practices and food consumption. FNS regulations require State and local agencies to offer participants (or their mothers or other care providers) at least four nutrition education sessions per year. Participants receive nutrition education and counseling through a variety of methods, including one-on-one or online classes on a variety of topics related to health and nutrition. State agencies promote breastfeeding as the best source of infant nutrition to pregnant women and new mothers and provide breastfeeding information and support through anticipatory guidance, counseling, and breastfeeding educational materials.

3. Access to Healthcare and Social Services

State and local agencies refer participants to other social and healthcare services. Through the provision of onsite health services or referrals to other social service agencies, WIC serves as a link between participants and healthcare providers or systems. Coordination between such programs and WIC increased after 1989 with the passage of the Child Nutrition and WIC Reauthorization Act (Pub. L. 101–147). This act requires local agencies to refer clients to a variety of social service programs that provide income support, child support, childcare services, and substance abuse counseling; it also established adjunctive and automatic income eligibility for WIC benefits. Applicants are adjunctively income-eligible if they or certain family members can document participation in or certification as fully eligible to participate in Temporary Assistance for Needy Families (TANF), the Supplemental Nutrition Assistance Program (SNAP), or Medicaid. Federal regulations also allow State agencies to extend automatic WIC income eligibility to applicants participating in other qualifying means-tested benefit programs, provided those programs have income eligibility guidelines at or below the State agency’s WIC income guidelines.

D. Eligibility for WIC Benefits

Eligibility for receipt of WIC benefits is based on four factors:

1. **Categorical eligibility.** A participant must be a member of one of the following groups: women during pregnancy and up to the first 6 weeks after pregnancy; women up to 1 year postpartum if breastfeeding or up to 6 months postpartum if not breastfeeding; infants up to age 1 (the first birthday); and children up to age 5 (the fifth birthday).
2. **Residency.** An applicant must apply for and receive benefits from the State agency in the State or U.S. territory of residence. For example, a Kansas resident cannot be certified to receive WIC benefits in Nebraska. An individual applying for benefits through an ITO must meet the residency requirements established by that ITO.
3. **Income eligibility.** Participants must meet the income eligibility standards set by the State agency in the State or U.S. territory of residence. These agencies must set income restrictions of between 100 and 185 percent of the Federal Poverty Guidelines issued annually by HHS. These

income guidelines for poverty are based on household size and residency (HHS, 2019a).³⁵ As of April 2020, the income eligibility threshold set by all State agencies was 185 percent of the Federal Poverty Guidelines. In most areas served by WIC in 2020, a household of four with an annual income of \$47,638 or less was income-eligible for WIC at the 185-percent threshold (USDA FNS, 2019b).^{36,37}

Applicants who participate in TANF, SNAP, or Medicaid are adjunctively eligible for WIC. An applicant who participates in other means-tested benefit programs with income-eligibility thresholds at or below those for WIC can be considered automatically income-eligible for WIC if the applicant's State agency has approved those programs for eligibility determinations. Since the passage of the William F. Goodling Child Nutrition Reauthorization Act of 1998 (Pub. L. 105–336), applicants not certified under adjunctive or automatic eligibility provisions have been required to provide proof of household income.³⁸

4. **Nutritional risk.** An applicant must be determined to be at nutritional risk based on a medical and/or nutritional assessment by a competent professional authority such as a physician, nutritionist, nurse, or other health professional or paraprofessional. To assess an applicant's level of nutritional risk, at a minimum, height (or length) and weight are recorded; moreover, with the exception of infants younger than 9 months, a hematological test is administered to screen for anemia.³⁹ State and local agencies must use criteria that meet or exceed the national nutritional risk criteria first implemented in April 1999. FNS and the National WIC Association developed this set of approximately 100 detailed criteria with applicable thresholds for determining eligibility based on nutritional risk in response to recommendations issued by the Institute of Medicine⁴⁰ (IOM, 1996). FNS annually issues updated criteria for a small number of nutrition risks to ensure the national risk criteria remain consistent with the latest nutritional and medical science.

WIC must operate within annual funding levels established by appropriations law. The number of participants WIC is able to serve each year depends on the funding available and FNS's allocation of these funds to individual State agencies. Changes in the cost of food may also affect the number of participants WIC is able to serve. To help State and local agencies prioritize WIC applicants according to need, FNS defined seven risk priority levels based on applicant categorical status and type of nutritional risk. The general purpose of the existing priority system is to give preference to participants with medically based nutritional risks over those with risks based only on inadequate diet. In 2020, WIC served all eligible individuals who sought benefits, regardless of assigned priority level.

E. Organization of the Report

This report presents the results of the 2020 data collection efforts. The chapters, tables, and appendices are presented in the same order as the 2018 report for consistency.

³⁵ The Federal Poverty Guidelines are the same for the 48 contiguous States, the District of Columbia, and the 5 U.S. territories served by WIC; they are different for Alaska and Hawaii.

³⁶ The Federal Poverty Guidelines established in February 2019 were used by WIC to establish eligibility from July 2019 through June 2020, so these guidelines covered most of the period for which WIC participants active in April 2020 were certified.

³⁷ In April 2020, the WIC income eligibility threshold for a household of four based on annual household income was \$59,552 in Alaska and \$54,797 in Hawaii.

³⁸ Although Federal regulations distinguish means-tested programs that qualify applicants for adjunctive income eligibility from programs that qualify applicants for automatic income eligibility, the two mechanisms work similarly with respect to income eligibility.

³⁹ As a result of the implementation of the physical presence waiver in March 2020, State agencies were granted the authority to defer anthropometric and hematological test requirements used to determine nutritional risk.

⁴⁰ Now the National Academies of Science, Engineering, and Medicine

Chapter 2 details the methods used to collect and analyze PC data and limitations to the data. Chapters 3 through 8 present data on different aspects of participants and the program:

- ▶ Chapter 3 provides information on overall participation and demographic data.
- ▶ Chapter 4 describes the economic status of WIC households.
- ▶ Chapter 5 provides information on assigned nutritional risks.
- ▶ Chapter 6 describes anthropometric characteristics.
- ▶ Chapter 7 provides information on anemia status.
- ▶ Chapter 8 presents information on breastfeeding initiation and duration.
- ▶ Chapter 9 provides comparisons between WIC participants and the U.S. population.

Chapters 3 through 8 include discussions of variation across State agencies. The study team focused on the 50 States and the District of Columbia for most of these discussions because the small number of participants in many ITOs and territories resulted in volatile percentages. Where trends over time exist, they are noted in these chapters. Some tables in these chapters present results by selected characteristics (e.g., participant category, race, and ethnicity).

Appendix A provides historical data tables from 1992 through 2020, and appendix B provides 2020 State agency-level data tables corresponding to most tables included in the report. Appendix C presents tables of 2020 SDS data (see chapter 2 for additional details about the SDS). Appendix D presents detailed tabulations from the additional COVID-19 analysis using April and November 2020 data from nine study State agencies.

Chapter 2. Methodology

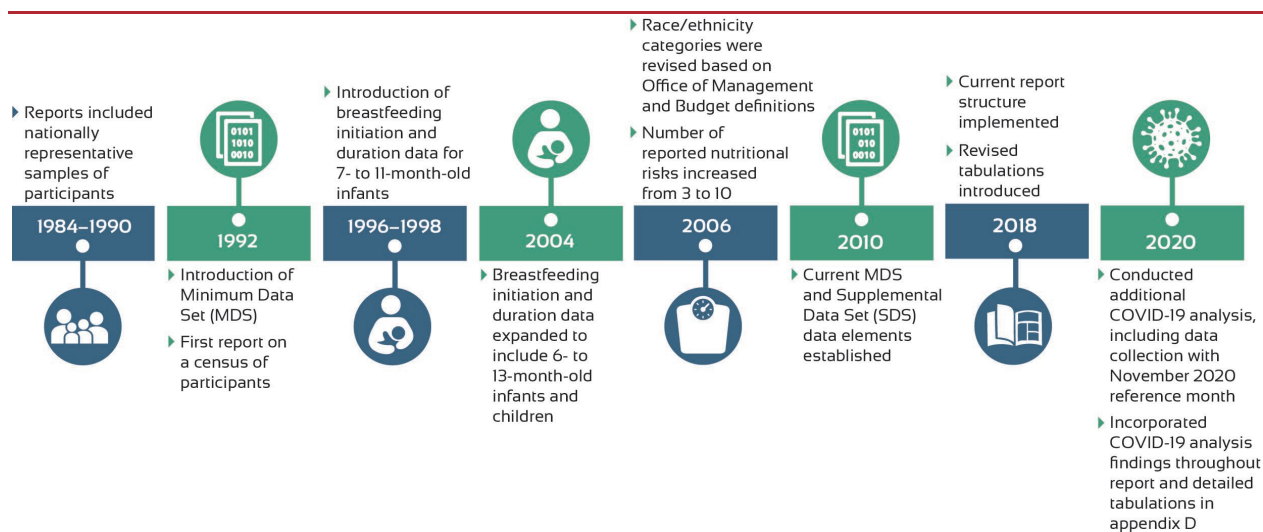
The PC2020 report provides the results of a census of WIC participants FNS conducts every 2 years to monitor WIC and manage its information needs. This chapter describes the previous WIC PC reports and provides an overview of the methods the study team used to collect and prepare PC2020 data for analysis and produce the report.

Section A describes the previous reports, section B details the data elements, and section C describes the study universe. Section D provides an overview of the data collection and processing procedures, and section E outlines several study considerations and limitations. Additional details on the methods used for reporting participation in other benefit programs and income, nutritional risks, anthropometric status, anemia status, and breastfeeding data are provided in chapters 4 through 8, respectively.

A. Previous Reports on WIC Participant and Program Characteristics

The first several PC reports used a nationally representative sample of participants; for example, PC1984 used data from 28 State agencies, 204 local agencies, 356 service sites, and 6,444 participant records. A goal for PC1990 and all subsequent studies of WIC participant characteristics has been to limit burden on State agencies to encourage them to continue biennial participation in the WIC reporting system. Therefore, PC1990 served as a transitional study; it was based on the PC1984 and PC1988 research designs, but it minimized sample size to conserve research expenditures. For PC1990, field researchers abstracted data from 2,343 participant records and surveyed all State agencies to obtain information on WIC program operations. Figure 2.1 illustrates key changes in the PC report since 1984.

Figure 2.1. PC Report Timeline



The methodology Insight Policy Research (Insight) used for the PC2020 report is based on the methodology originally developed in 1992 and revised in 2018 (Kline et al., 2020).⁴¹ The PC1992 report differed substantially from earlier reports with respect to collecting WIC participation data because FNS began routinely collecting a set of data elements known as the Minimum Data Set (MDS) for a census of

⁴¹ Insight implemented several changes for the PC2018 report, including how missing data are handled, breastfeeding data are presented, age is calculated, and the methodology for cleaning income data.

participants. FNS developed the MDS in collaboration with the Information Committee of the National WIC Association and the Centers for Disease Control and Prevention (CDC). In addition to the MDS, State agencies are encouraged to submit the Supplemental Data Set (SDS) when it is available. State agency staff collect data in the MDS and SDS to certify applicants for WIC benefits, guide nutrition education, and issue food instruments. Elements in the MDS and SDS have been consistent since 2010.

B. PC2020 Data Elements

State agencies are required to submit all MDS elements (see table 2.1) and encouraged to submit the SDS elements (see table 2.2) when they are available. For this report, 85 of the 89 State agencies submitted some or all the 11 SDS data items (see appendix table C.1).

Table 2.1. MDS Items

Item Number	Item Name	Item Description
1	State Agency ID	A unique number that permits linkage to the State agency where the participant was certified; it is the first 7 digits of the 10-digit Local Agency Code maintained by FNS in the WIC Local Agency Directory (WIC LAD).
2a	Local Agency ID	A unique number that permits linkage to the local agency where the participant was certified as eligible for WIC benefits; it is the last 3 digits of the 10-digit Local Agency Code maintained by FNS in the WIC LAD.
2b	Service Site ID	A unique number that permits linkage to the service site where the participant was certified; for State agencies that submitted service site-level or clinic-level data for the WIC LAD, service site IDs appear in the WIC LAD as the three-digit codes under Administering Agency. <i>For PC2020, State agencies were asked not to substitute Service Site ID for Local Agency ID (item 2a).</i>
3	Case ID	A unique record number assigned to each participant to maintain individual privacy at the national level <i>For each participant, State agencies were asked to construct a Case ID for their PC2020 data submissions; they were asked not to use the case number of the participant as listed in State agency-held files.</i>
4	Date of Birth	The date of the participant's birth (MMDDYYYY format)
5	Race and Ethnicity	Requires classification of participants based on one ethnicity category (Hispanic/Latino or Non-Hispanic/Latino) and five racial categories, which consist of (1) American Indian or Alaska Native; (2) Asian; (3) Black or African American; (4) Native Hawaiian or Other Pacific Islander; and (5) White ^a These categories are required by the Office of Management and Budget; one or more racial categories may be selected. State agencies may report race and ethnicity using one of two formats: ■ Yes/No for each of the categories, generating a six-digit code (1 = Yes; 2 = No) ■ Three digits to represent key combinations of racial selections, with the first digit representing ethnicity and the last two representing race combinations
6a	Certification Category	One of five possible categories under which a person is certified as eligible for WIC benefits: (1) pregnant woman, (2) breastfeeding woman, (3) postpartum woman, (4) infant (up to the first birthday), and (5) child (up to the fifth birthday)

Item Number	Item Name	Item Description
6b–c	Expected Date of Delivery or Number of Weeks Gestation	For pregnant women, the projected date of delivery (MMDDYYYY format) or the number of weeks since the last menstrual period as determined at WIC certification
7	Date of Certification	The date the person was declared eligible for the most recent WIC certification as of April 2020 (MMDDYYYY format)
8	Sex	For infants and children, male or female
9	Risk Priority Code	The participant's priority level for WIC certification at the time of the most recent WIC certification as of April 2020
10a–c	Participation in SNAP, TANF, Medicaid	The participant's reported participation in each of these programs at the time of the most recent WIC certification as of April 2020
11	Migrant Status	The participant's migrant status according to the definition of a migrant farmworker in Federal regulations ^b
12	Number in Family or Economic Unit	The number of individuals in the family or economic unit upon which WIC income eligibility was based State agencies may report a self-declared number in the family or economic unit for a participant whose income was not required as part of the WIC certification process. These participants consist of— ▪ Adjunctively income-eligible participants (eligible because of TANF, SNAP, or Medicaid participation) ▪ Participants deemed income-eligible under optional procedures available to the State agency in <i>section 7 C.F.R. § 246.7</i>.^b These optional procedures are means-tested programs identified by the State agency to determine automatic WIC income eligibility, income eligibility of pregnant women, and income eligibility of American Indian and migrant farmworker applicants.
13a–c	Family or Economic Unit Income	▪ For individuals whose income was determined during the certification process, the income amount determined to qualify the participant for WIC at the time of the most recent WIC certification as of April 2020. Income expressed in nonannual measures (weekly, monthly, etc.) are converted to annual amounts. ▪ <i>(For descriptive purposes only)</i> For participants whose income was not required to be determined as part of the WIC certification process, the self-reported income at the time of certification. These participants include adjunctively income-eligible participants and those individuals deemed eligible under optional procedures available to the State agency in <i>section 7 C.F.R. § 246.7</i>.^b State agencies should not use zero to indicate income values that are missing or not available; zero should indicate only an actual value of zero. <i>Because a large proportion of WIC participants are adjunctively income-eligible, their income information is essential to describe income among the overall WIC population. State agencies are required to provide income information on those adjunctively eligible for WIC according to Federal regulations.</i>^b
14a–j	Nutritional Risks Present at Certification	Highest priority nutritional risks assigned for the most recent WIC certification as of April 2020, up to a maximum of 10; uniform coding is required in submissions from all State agencies according to WIC Policy Memorandum 2011-5.

Item Number	Item Name	Item Description
15a–b	Hemoglobin or Hematocrit	Value for the measure of hemoglobin or hematocrit to assess anemia status that applies for the most current WIC certification period as of April 2020
15c	Date of Hemoglobin or Hematocrit Test	Date that hemoglobin or hematocrit measure was collected and reported (MMDDYYYY format); State agencies must submit these data for all participants reporting a hematologic measure.
16a–b	Weight	The participant's weight measured to nearest one-quarter pound. State agencies may report weight in grams if weight is not measured in pounds and quarter pounds.
17a–b	Height	The participant's height (or length) measured to nearest one-eighth inch; State agencies may report height in centimeters if height is not measured in inches and eighth inches.
18	Date of Height and Weight Measure	Date of the height and weight measures used during the most recent WIC certification period as of April 2020 (MMDDYYYY format)
19a	Currently Breastfed	For infants and children aged 6 through 13 months in April 2020, whether the participant was being breastfed at that time
19b	Ever Breastfed	For infants and children aged 6 through 13 months in April 2020, whether the participant ever breastfed
19c	Length of Time Breastfed	For infants and children aged 6 through 13 months in April 2020, the number of weeks the participant breastfed
19d	Date Breastfeeding Data Collected	For infants and children aged 6 through 13 months in April 2020, the date on which breastfeeding status was reported (MMDDYYYY format)
20a–n	Food Codes	State agencies have the option of providing food data in an item-quantity format or a food package format; agencies were asked to provide the food package codes or item codes and quantities for all foods prescribed for the participant during the month of April 2020.
20o	Food Package Type	A code representing the FNS food package number (I through VII), participant type, breastfeeding status, and (for infants and children only) age associated with the reported food code(s) for that participant

MDS = Minimum Data Set

^a Reporting categories based on the Office of Management and Budget (OMB, 1997) definitions and reporting requirements were first used in the PC2006 report. Some of the reporting category names were modified beginning in 2018 to help streamline table and figure text in the report (see table 2.3 for additional details). The updated category names are used across this report.

^b See 7 C.F.R. 246.7(d)(2)(vi–viii) (Special Supplemental Nutrition Program for Women, Infants and Children, 1985).

Table 2.2. SDS Items

Item Number	Item Name	Item Description
21	Date of First WIC Certification	Date the participant was first certified for WIC (MMDDYYYY format); for pregnant, breastfeeding, and postpartum women, this applies to the current/most recent pregnancy and not to prior pregnancies.
22	Education Level	For pregnant, breastfeeding, and postpartum women, the highest grade or year of school completed; for infants and children, the highest grade or year of school completed by the mother or primary caretaker
23	Number in Household in WIC	The number of people in the participant's household receiving WIC benefits
24	Date Previous Pregnancy Ended	For pregnant women, the date the participant's previous pregnancy ended (MMDDYYYY format)
25	Total Number of Pregnancies	For pregnant women, the total number of times the participant has been pregnant, including the current pregnancy; all live births; and any pregnancies resulting in miscarriage, abortion, or stillbirth
26	Total Number of Live Births	For pregnant women, the total number of babies born alive to the participant, including babies who may have died shortly after birth

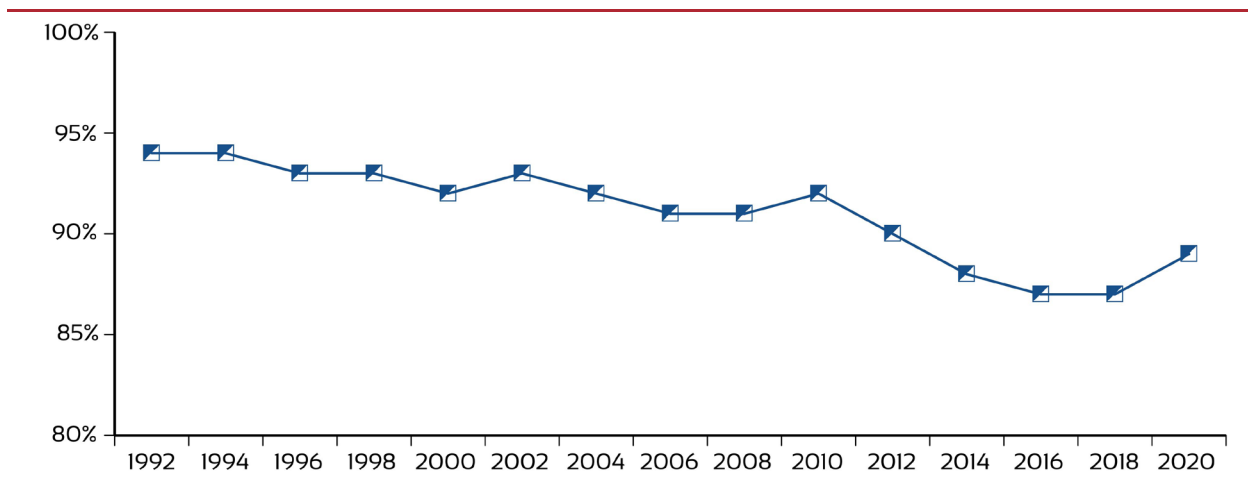
Item Number	Item Name	Item Description
27a–b	Prepregnancy Weight	For pregnant women, the participant's weight immediately prior to pregnancy; weight may be reported in pounds and ounces or in grams.
28a–b	Weight Gain During Pregnancy	For breastfeeding and postpartum women, the participant's weight gain during pregnancy immediately at or prior to delivery; weight gain during pregnancy may be reported in pounds and quarter pounds or in grams.
29a–b	Birth Weight	For infants and children, the participant's weight at birth measured in pounds and ounces or in grams.
30a–b	Birth Length	For infants and children, the participant's length at birth measured to nearest one-eighth inch; birth length may be reported in inches and eighth inches or in centimeters.
31	Participation in the Food Distribution Program on Indian Reservations (FDPIR)	The participant's reported participation in FDPIR at the time of the most recent WIC certification as of April 2020

SDS = Supplemental Data Set

C. PC2020 Study Universe

For 2020, as was done for previous reports, the study team requested MDS data on a census of individuals who were certified to receive WIC in April of the study year (2020) from each State agency.⁴² The census included those who did not claim a food instrument and those who were not prescribed a food package, as was the case with certain partially breastfeeding women and fully breastfed infants. Measures of participation using PC data therefore differ from measures using FNS administrative data, which is based on the number of certified individuals who claimed their food instruments from State agencies. A comparison of FNS administrative data (6,277,465 food instruments claimed) with PC data (7,063,902 certified enrollees) from April 2020 found 88.9 percent of WIC participants claimed their monthly benefits. Although there was a steady decrease between 2010 and 2016, the percentage of WIC participants who claimed their monthly benefits in 2020 was about the same as in 2016 and 2018 (see figure 2.2).

Figure 2.2. Percentage of Participants Who Claimed Their Monthly Benefits: 1992–2020



Source: USDA FNS, n.d.

⁴² Because of State agency management information system constraints, California provided data for July 2020 rather than April 2020.

D. Data Collection, Processing, and Analysis

The PC2020 data collection and processing phase consisted of (1) receipt of data and documentation from State agencies, (2) diagnostic tests, (3) data cleaning, and (4) data analysis. At each stage, several project team members reviewed the data for quality assurance and the consistent treatment of data across State agencies. Descriptions of these four stages follow:

1. **Receipt of documentation and data from State agencies.** State agencies submitted a single data file and three pieces of supporting documentation to Insight via a secure file transfer protocol (SFTP) site:
 - a. **Transmittal worksheet.** All State agencies provided additional information about the data, including the format of race and ethnicity data, State agency procedures for the collection of breastfeeding data, and other details necessary for data processing.
 - b. **Food package documentation.** All State agencies submitted documentation of the foods, items, and quantities of the contents of all the food packages issued in that State agency.
 - c. **Nutritional risk worksheet.** State agencies that used their own nutritional risk codes submitted a crosswalk between State agency codes and Federal codes.
2. **Diagnostic review.** The study team analysts conducted diagnostic reviews of the data to confirm all variables were within valid ranges and internally consistent, frequency distributions did not differ substantially from 2018 data, and no systematic errors were present.
3. **Data cleaning.** Once all diagnostic issues were noted and/or resolved through discussions with State agencies, analysts cleaned the data. The following types of data cleaning occurred:
 - a. **State-specific cleaning** included recoding data State agencies submitted in nonstandard formats and resolving systematic errors discovered during the diagnostic phase.
 - b. **Universal cleaning** included consistency edits and setting outliers to missing.
 - c. **Creation of analytic variables** for ease of analysis included the use of software programs from CDC to calculate anthropometric percentiles for infants and children based on height and weight measurements.⁴³
4. **Data analysis and development of final files.** After the analysts completed all cleaning procedures and final data checks, the data were considered approved, and each data file was finalized. The final data files created at the conclusion of data cleaning were used for analysis. The analyses culminated in the development of report tabulations, maps, and figures.

During previous PC data collections, some State agencies were unable to submit a full census of WIC participants, so those agencies' data files were weighted to best represent a full census. All but three State agencies submitted an accurate census of participants for PC2020. Colorado, Iowa, and Montana submitted data with duplicate identifiers. The study team differentiated between complete duplicates (i.e., records with shared values for all data items) and incomplete duplicates (i.e., records with different values for at least one data item), retained one instance of each complete duplicate, removed all incomplete duplicates, and uniformly weighted the remaining records to the total number of unique identifiers originally present in the submission.

⁴³ Analysts used the January 2017 versions of the World Health Organization (2006) and CDC (2016b) SAS programs.

E. Study Considerations/Limitations

“Reported” findings in this report refer to nonmissing participant PC2020 data received from the State agency’s MIS that met data cleaning criteria. The findings are descriptive and do not allow for causal claims. Some findings from the PC2020 data should be interpreted with caution. Most data quality challenges resulted from inconsistent variable definitions and limitations within State agency management information systems (MIS) or from State agency responses to the COVID-19 pandemic. This section details these challenges.

1. Effects of the COVID-19 Pandemic on PC2020 Data Collection

In response to the COVID-19 pandemic, FNS approved State-requested waivers of the physical presence requirement to all State agencies in March 2020. This waiver allowed State agencies to safely certify participants without participants’ physical presence at appointments in the WIC clinic. This same waiver also allowed State agencies to defer the collection of anthropometric and hematological test data needed to determine nutritional risk. As a result, State agencies either did not collect some MDS data elements or collected the data using practices that differed from standard operating procedures (e.g., old data from previous certifications, or self-reported data).

While many of the other waivers did not affect PC2020 data collection, State agency implementation of the physical presence waiver resulted in a greater proportion of missing anthropometric and hematological data for participants certified in March and April 2020 compared with other months. Therefore, findings on these measures are reported only for participants certified to receive benefits through February 2020 (see chapters 6 and 7, respectively). Throughout this report, the study team noted where the percentage of missing data was higher in PC2020 than in previous PC reports, likely as a result of State agency policies during the COVID-19 pandemic.

Additional COVID-19 data collection and analysis

The study team collected additional PC data using the reference month of November 2020 from nine State agencies to investigate trends in WIC participation and participant characteristics between April and November 2020. The team examined the distribution of certifications in April and November 2020 by participant category and State agency and new certifications as a percentage of total certifications. The team also analyzed descriptive statistics between the April and November 2020 data on several participant characteristics (see appendix D for detailed tabulations). All differences between the April and November data files were statistically significant by chi-square test at an alpha level of less than 0.05. Because PC data do not include participant identifiers that can be linked across submissions, the additional analyses were cross-sectional comparisons; no longitudinal data analyses were possible.

2. Race and Ethnicity

Beginning in PC2018, to help streamline table and figure text, the study team modified some reporting category names for race and ethnicity that have been in use since 2006, based on Office of Management and Budget (OMB) definitions for race and ethnicity (OMB, 1997; see table 2.3). For example, “Black or African American” was modified to “Black.”

Table 2.3. Race and Ethnicity Definitions

OMB Reporting Category	OMB Definition	PC2020 Reporting Category
American Indian or Alaska Native	A person having origins in any of the original peoples of North America who maintain cultural identification through tribal affiliation or community recognition (includes Aleuts and Eskimos)	American Indian
Asian	A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent. This area includes Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam	Asian
Black or African American	A person having origins in any of the Black racial classification groups of Africa	Black
Native Hawaiian or Other Pacific Islander	A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands	Pacific Islander
White	A person having origins in any of the original peoples of Europe, North Africa, or the Middle East	White
Two or more races	A person with two or more races reported	Two or more races
Hispanic/Latino	A person having origin, culture, or descent from Mexico, Puerto Rico, Cuba, Central or South America, or other Spanish culture regardless of race	Hispanic/Latino
Non-Hispanic/Latino	A person who does not have origin, culture, or descent from Mexico, Puerto Rico, Cuba, Central or South America, or other Spanish culture regardless of race	Non-Hispanic/Latino

OMB = Office of Management and Budget

For PC2006, the guidelines for reporting race were revised to be consistent with the updated OMB (1997) definitions. The new guidelines require WIC participants to indicate both ethnicity (Hispanic/Latino or non-Hispanic/Latino) and race, choosing from one or more of five racial categories. The proportion of participants for whom a race of American Indian was reported increased substantially around the time of the introduction of the revised OMB race and ethnicity reporting in 2006, likely as a result of the new guidelines and requirements.

If a participant did not indicate race during the application process, at the time of this data collection, WIC staff were required to do so based on observation. Some WIC staff may record a race of American Indian for participants who have reported Hispanic/Latino ethnicity when race must be designated based on observation. The proportion of Hispanic/Latino WIC participants who were also identified as American Indian varied widely across State agencies. Caution should be used in the analysis of the race and ethnicity of WIC participants, particularly for American Indians.

3. Participation in Other Programs

Individuals who can document participation in TANF, SNAP, or Medicaid, or other qualifying means-tested benefit programs, are adjunctively eligible for WIC. Participation in other programs is often underreported for the WIC population for several reasons. First, staff at WIC local agencies may refer participants to other programs; therefore, participant enrollment in other programs subsequent to WIC certification may not be captured in the estimates presented in this report. Second, some State agencies reported an applicant's participation in a program only when the applicant verified enrollment and did not accept a client's self-report of participation in these programs. Third, some State agency systems prompt users to collect information for only one program, so WIC staff were unlikely to enter

information on other programs. For these reasons, caution should be used in analyzing data on participation in other programs by WIC participants.

4. Breastfeeding Initiation and Duration Rates

For data to be included in national calculations of breastfeeding initiation and duration, State agencies must provide sufficient data for at least 75 percent of infants and children in the appropriate age range (see chapter 8 for additional details). To be included in State agency-level calculations, State agencies must provide the data for at least 85 percent of infants and children in the appropriate age range. For initiation, rates were calculated for 6- to 13-month-old infants and children; for duration, rates at 3 and 6 months were calculated for 9- to 13-month-old infants and children, and rates at 12 months were calculated for 12- to 13-month-old children.

For breastfeeding initiation rates in 2020, data for 82 State were included for national estimates, and data for 81 State agencies were included for State agency-level estimates. For breastfeeding duration rates at 3, 6, and 12 months, the national estimates included data for 81 State. For breastfeeding duration rates at 3 and 6 months, the State agency-level estimates included data for 80 State agencies, and for breastfeeding duration rates at 12 months, the estimates included data for 77 State agencies.

5. Old Data

State agencies submit the most recent data available for their caseloads as of April of the reference year. Often, these data were collected at the time of certification, which may be up to 12 months prior to the reference month. In some cases, data might predate the most recent certification date if new data were not collected at that time; this is particularly common for anthropometric data, hematological data, and breastfeeding data. For this reason, analyses of these measures incorporate the participants' age at the time of data collection.

6. SDS Variables

Table 2.4 shows the five most frequently reported SDS items. California, the largest State agency with 14.2 percent of participants, did not report any SDS data in 2020.

Table 2.4. Five Most Frequently Reported SDS Items

Data Element	State Agencies That Reported Data	Percent of Participants
Prepregnancy weight	84	71.0 percent of pregnant women
Weight gain during pregnancy	83	68.2 percent of breastfeeding and postpartum women
Birth weight	82	66.9 percent of infants and children
Date of first WIC certification	80	68.8 percent of all participants
Number in household on WIC	80	68.2 percent of all participants

SDS = Supplemental Data Set

7. Small Cell Sizes

To protect the identities of participants whose data are provided in this report, all tables that show results by State agency (appendices B and C) have small cell sizes ($n \leq 5$) suppressed. To prevent the suppressed information from being derived from other information, if the table includes row totals, the study team also suppressed the next smallest value. Suppressed cells are noted with an asterisk.

Chapter 3. WIC Participation and Demographic Characteristics

For the purposes of this report, WIC participants are individuals who were certified to receive WIC benefits in April 2020, including those who did not claim a food instrument in April.

This chapter presents data on WIC participation and the demographic characteristics of participants. Section A describes the overall participation levels and the distribution of participants across participant categories (i.e., pregnant, breastfeeding, or postpartum women; infants; and children). Sections B through F present data on participant age, trimester of enrollment during pregnancy for pregnant women, risk priority level, race and ethnicity, and migrant farmworker status. Table 3.1 provides an overview of the distribution of participants by each of these demographic characteristics.

Table 3.1. Distribution of Participants by Demographic Characteristics

Characteristic	Number	Percent
Total Participants	7,036,902	100.0
Participant Category		
Pregnant women	551,721	7.8
Breastfeeding women	616,022	8.8
Postpartum women	437,814	6.2
Total women	1,605,556	22.8
Infants	1,689,474	24.0
Children	3,741,872	53.2
Age at Certification		
Women	—	—
Younger than 15	1,682	0.1
15–17 years	35,588	2.2
18–34 years	1,350,897	84.1
35 years or older	216,866	13.5
Age not reported	523	< 0.1
Infants	—	—
0–3 months	1,531,912	90.7
4–5 months	52,068	3.1
6–8 months	58,183	3.4
9–11 months	46,884	2.8
Age not reported	427	< 0.1
Children	—	—
1 year	1,418,890	37.9
2 years	956,202	25.6
3 years	846,988	22.6
4 years	518,759	13.9
Not reported	1,033	< 0.1

Characteristic	Number	Percent
Trimester of Enrollment		
First trimester	280,105	50.8
Second trimester	210,161	38.1
Third trimester	59,031	10.7
Trimester not reported	2,423	0.4
Risk Priority Level		
Priority I	2,156,662	30.6
Priority II	316,951	4.5
Priority III	2,007,577	28.5
Priority IV	424,509	6.0
Priority V	1,772,561	25.2
Priority VI	262,597	3.7
Priority VII	3,349	< 0.1
Priority not reported	92,694	1.3
Race		
American Indian	476,182	6.8
Asian	255,601	3.6
Black	1,569,454	22.3
Pacific Islander	56,910	0.8
White	4,189,068	59.5
Two or more races	430,927	6.1
Race not reported	58,760	0.8
Ethnicity		
Hispanic/Latino	2,867,163	40.7
Non-Hispanic/Latino	4,167,128	59.2
Ethnicity not reported	2,611	< 0.1
Migrant Farmworker Status		
Migrant farmworker	19,353	0.3
Not migrant farmworker	6,993,651	99.4
Not reported	23,898	0.3

Note

Percents may not add to 100.0, and subtotals may not add to totals, because of rounding.

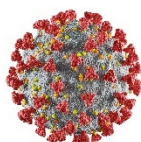
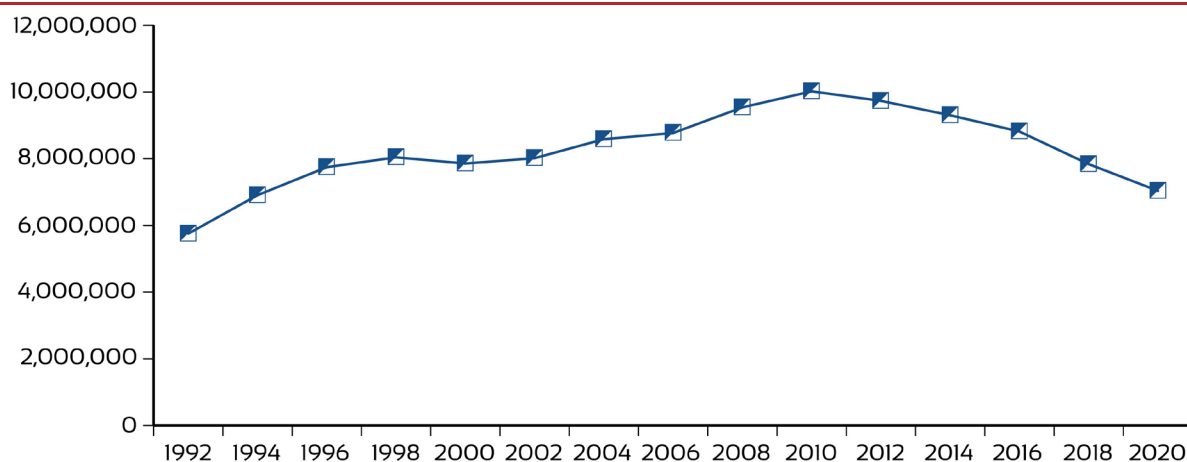
A. WIC Participation

For approximately the last two decades, Congress has funded WIC at the level needed for the program to serve all eligible women, infants, and children. Therefore, changes in participation during this timeframe reflect changes in participant eligibility and participation rates among the eligible population, not changes in available funding. About 7 million women, infants, and children were certified to receive WIC in April 2020.

Historically, the number of participants increased from 1992 through 2010 (see figure 3.1 and appendix table A.1) and has steadily decreased since then. Participation declined by 12.0 percent from 2010 to 2016 and 20.2 percent from 2016 to 2020. Improved economic conditions, falling birth rates, barriers related to transportation, stigma, and eligibility confusion have been cited as reasons for continued declining participation (Oliveira, 2017). Due to the COVID-19 pandemic, not all WIC clinics were able to

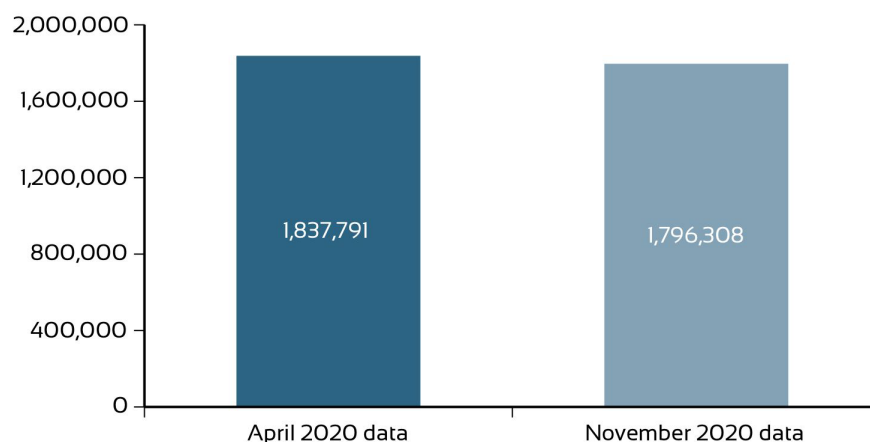
hold in-person appointments for participants starting in March 2020; it is unknown if this change also impacted benefit access for newly eligible individuals and families (Badaracco, 2020).

Figure 3.1. Number of Participants: 1992–2020



Total participation in the nine study State agencies declined slightly by 2.3 percent between April and November 2020 (see figure COVID19-3.1). However, this trend was not consistent across the study State agencies; participation decreased in seven State agencies and increased in two State agencies (see appendix table D.1).

Figure COVID19-3.1. Total Participation in April and November 2020

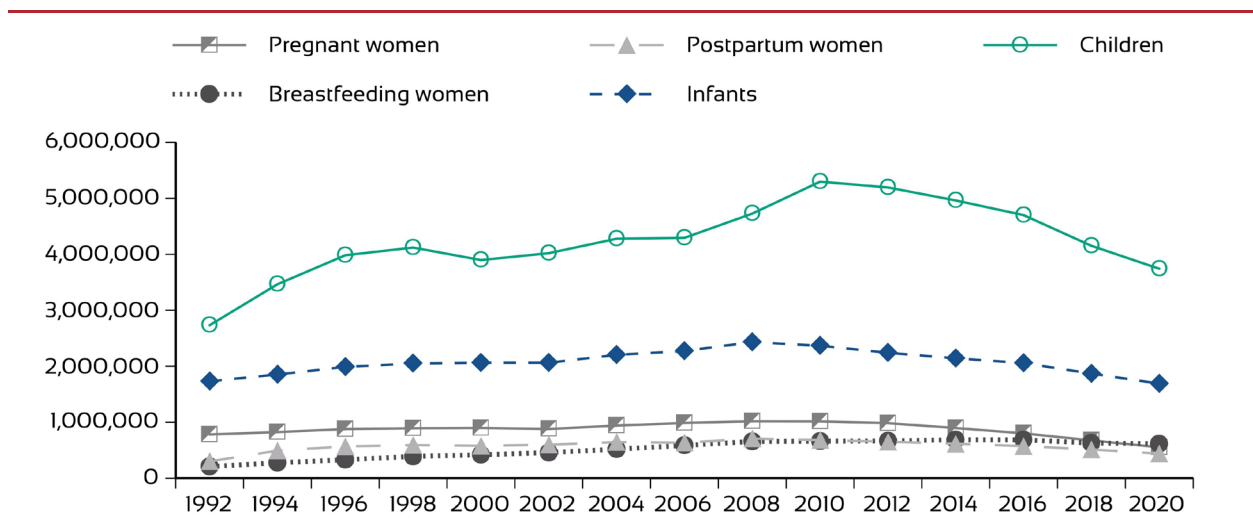


Notes

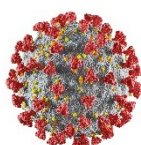
Nine study State agencies provided the November 2020 data for this analysis (i.e., PC-style data using the reference month of November 2020); the April 2020 data reflect PC2020 data provided by the nine Study State agencies.

Women accounted for 22.8 percent of the total WIC population in 2020, infants for 24.0 percent, and children for 53.2 percent (see table 3.1). Following the same trend as the overall WIC population, the number of participants in each participant category declined from 2018 to 2020 (see figure 3.2 and appendix table A.1). The greatest decrease was among pregnant women (18.3 percent), and the smallest decrease was among breastfeeding women (1.9 percent). Participation among postpartum women, infants, and children declined by 14.8, 9.6, and 9.9 percent, respectively.

Figure 3.2. Number of Participants by Participant Category: 1992–2020

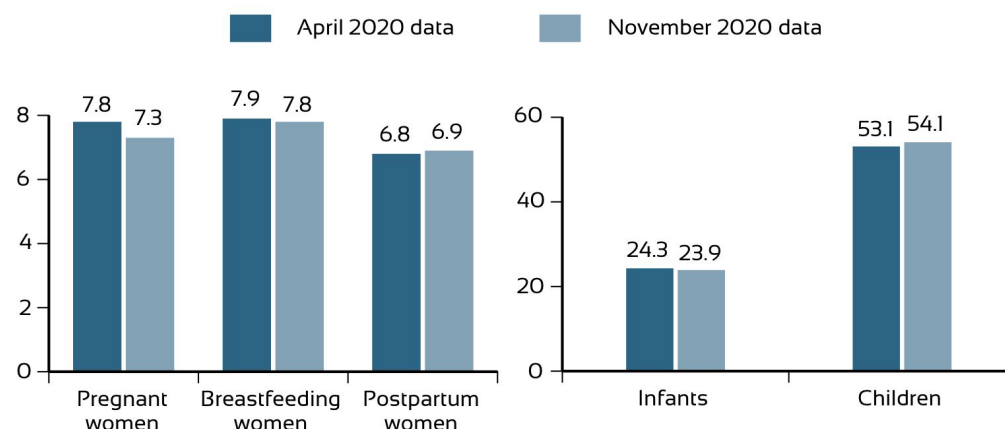


Continuing a trend that began in 2012, the proportion of breastfeeding women remained greater than the proportion of postpartum women in 2020 (8.8 and 6.2 percent, respectively; see figure 3.2 and appendix table A.1). However, among the 50 States and the District of Columbia, the proportion of postpartum women was greater than the proportion of breastfeeding women in 18 State agencies (see appendix tables B.1a and B.1b). This difference was greatest in Alabama, Arkansas, and Louisiana, where the proportion of postpartum women was more than 7.0 percentage points greater than the proportion of breastfeeding women.



Overall, the proportion of postpartum women and children as a percentage of all participants in the nine study State agencies increased slightly from April to November 2020, while the proportion of pregnant and breastfeeding women and infants decreased (see figure COVID19-3.2). Across the nine study State agencies, the percentage of children out of all participants increased (by 0.6–3.7 percentage points) in all State agencies except two (see appendix table D.1).

Figure COVID19-3.2. Percentage of Participants by Participant Category in April and November 2020



Notes

Nine study State agencies provided the November 2020 data for this analysis (i.e., PC-style data using the reference month of November 2020); the April 2020 data reflect PC2020 data provided by the nine Study State agencies.

B. Age at Certification

The following section presents data for age of women, infants, and children participating in WIC at certification.

1. Women

A majority of women, regardless of race, ethnicity, or participant category, were between the ages of 18 and 34 at the time of WIC certification in 2020 (at least 78 percent across groups; see table 3.2a). A greater percentage of breastfeeding women (16.0 percent) than pregnant or postpartum women (12.4 and 11.5 percent, respectively) were 35 or older. Compared with participants in other race categories, Asian women represented the greatest percentage of women aged 35 or older (20.9 percent), followed by American Indian women (16.4 percent).

At least 80 percent of women across the 50 States and the District of Columbia were between the ages of 18 and 34 at the time of certification, which has been the case since 1992 (see appendix tables A.2 and B.2). By contrast, the percentage of women aged 17 or younger at certification has decreased by 8.3 percentage points since 1992 (from 10.6 percent in 1992 to 2.3 percent in 2020), and the percentage of women aged 35 or older at certification increased by 8.2 percentage points during the same time period (from 5.2 percent in 1992 to 13.5 percent in 2020).

Table 3.2a. Distribution of Women by Age at Certification

Characteristic	Younger Than 15 Years	15–17 Years	18–34 Years	35 Years or Older	Age Not Reported	Total Women Participants
Number of Women Participants						
Total Women Participants	1,682	35,588	1,350,897	216,866	523	1,605,556
Participant Category						
Pregnant women	832	15,859	466,639	68,192	198	551,721
Breastfeeding women	349	8,934	508,267	98,315	156	616,022
Postpartum women	501	10,795	375,991	50,358	169	437,814
Race						
American Indian	97	2,171	82,326	16,595	183	101,372
Asian	8	206	45,133	12,007	23	57,377
Black	454	8,157	310,931	50,244	91	369,877
Pacific Islander	8	202	11,036	2,088	6	13,340
White	1,006	23,009	846,879	128,070	199	999,162
Two or more races	98	1,596	44,624	5,822	17	52,157
Race not reported	11	247	9,968	2,040	4	12,270
Ethnicity						
Hispanic/Latino	771	15,575	508,555	95,296	251	620,448
Non-Hispanic/Latino	910	20,002	841,945	121,512	271	984,640
Ethnicity not reported	1	11	397	58	1	468

Characteristic	Younger Than 15 Years	15–17 Years	18–34 Years	35 Years or Older	Age Not Reported	Total Women Participants
Percent of Women Participants						
Total Women Participants	0.1	2.2	84.1	13.5	< 0.1	100.0
Participant Category						
Pregnant women	0.2	2.9	84.6	12.4	< 0.1	100.0
Breastfeeding women	< 0.1	1.5	82.5	16.0	< 0.1	100.0
Postpartum women	0.1	2.5	85.9	11.5	< 0.1	100.0
Race						
American Indian	< 0.1	2.1	81.2	16.4	0.2	100.0
Asian	< 0.1	0.4	78.7	20.9	< 0.1	100.0
Black	0.1	2.2	84.1	13.6	< 0.1	100.0
Pacific Islander	< 0.1	1.5	82.7	15.7	< 0.1	100.0
White	0.1	2.3	84.8	12.8	< 0.1	100.0
Two or more races	0.2	3.1	85.6	11.2	< 0.1	100.0
Race not reported	< 0.1	2.0	81.2	16.6	< 0.1	100.0
Ethnicity						
Hispanic/Latino	0.1	2.5	82.0	15.4	< 0.1	100.0
Non-Hispanic/Latino	< 0.1	2.0	85.5	12.3	< 0.1	100.0
Ethnicity not reported	0.2	2.4	84.8	12.4	0.2	100.0

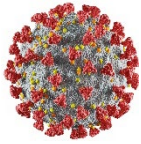
Note

Percents may not add to 100.0 because of rounding.

2. Infants

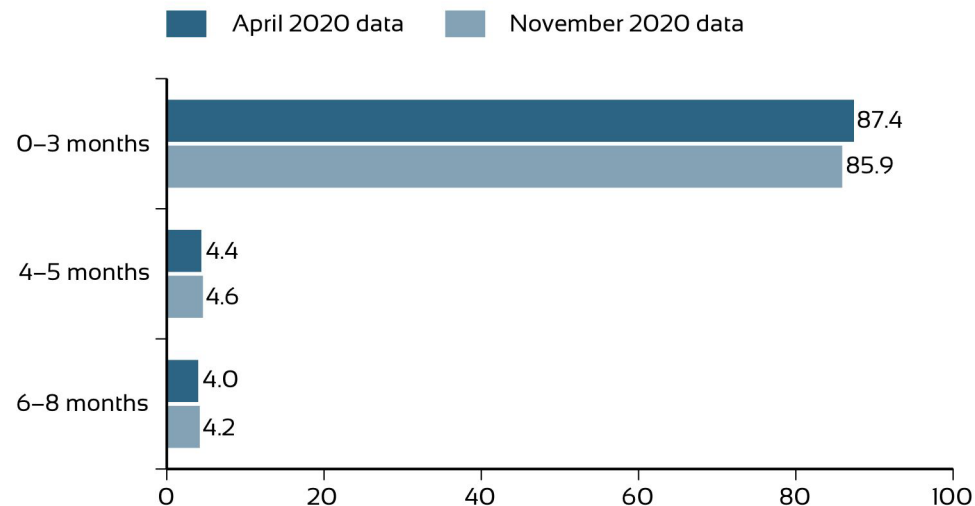
Federal regulations define an infant as a participant who is younger than 1 year of age at certification. For infants, the age at certification generally represents the age of initial receipt of WIC benefits because WIC does not require an infant to be recertified until the first birthday. Most infants were certified between the ages of 0 and 3 months regardless of race or ethnicity (at least 89 percent across groups; see table 3.2b). The remainder of infants were split among the other three age categories (4–5 months, 6–8 months, and 9–11 months).

For 42 States and the District of Columbia, more than 80 percent of infants were between the ages of 0 and 3 months at certification; in 6 State agencies, fewer than 60 percent of infants were certified at 0–3 months (Alaska, Maine, Mississippi, Missouri, Montana, and Ohio; see appendix table B.3). Since 2002, about 90 percent of infants were certified between the ages of 0 and 3 months (see appendix table A.3).



Overall, the percentage of infants certified between 0 and 3 months of age decreased by only 1.4 percentage points between April and November 2020 in the nine study State agencies (see figure COVID19-3.3). The percentage of infants certified between 4 and 5 months of age and 6 and 8 months of age remained about the same.

Figure COVID19-3.3. Percentage of Infants by Age in April and November 2020



Notes

Nine study State agencies provided the November 2020 data for this analysis (i.e., PC-style data using the reference month of November 2020); the April 2020 data reflect PC2020 data provided by the nine Study State agencies. All differences between April and November 2020 data were statistically significant at $\alpha < 0.05$.

Overall, the percentage of infants certified between 0 and 3 months of age decreased by 1.4 percentage points between April and November 2020 in the nine study State agencies (see figure COVID19-3.3). The percentage of infants certified between 4 and 5 months of age and 6 and 8 months of age remained about the same.

Table 3.2b. Distribution of Infants by Age at Certification

Characteristic	0-3 Months	4-5 Months	6-8 Months	9-11 Months	Age Not Reported	Total Infant Participants
Number of Infant Participants						
Total Infant Participants	1,531,912	52,068	58,183	46,884	427	1,689,474
Race						
American Indian	85,717	2,036	2,171	2,284	128	92,336
Asian	49,168	1,518	1,362	2,044	17	54,109
Black	377,251	12,137	14,648	11,215	65	415,316
Pacific Islander	11,575	586	582	297	1	13,041
White	883,626	30,917	34,155	26,858	178	975,734
Two or more races	106,992	4,118	4,558	3,845	33	119,547
Race not reported	17,582	756	706	341	5	19,390

Characteristic	0-3 Months	4-5 Months	6-8 Months	9-11 Months	Age Not Reported	Total Infant Participants
Ethnicity						
Hispanic/Latino	610,768	14,224	11,569	13,779	300	650,640
Non-Hispanic/Latino	920,538	37,679	46,395	32,997	126	1,037,734
Ethnicity not reported	606	165	219	108	1	1,099
Percent of Infant Participants						
Total Infant Participants	90.7	3.1	3.4	2.8	< 0.1	100.0
Race						
American Indian	92.8	2.2	2.4	2.5	0.1	100.0
Asian	90.9	2.8	2.5	3.8	< 0.1	100.0
Black	90.8	2.9	3.5	2.7	< 0.1	100.0
Pacific Islander	88.8	4.5	4.5	2.3	< 0.1	100.0
White	90.6	3.2	3.5	2.8	< 0.1	100.0
Two or more races	89.5	3.4	3.8	3.2	< 0.1	100.0
Race not reported	90.7	3.9	3.6	1.8	< 0.1	100.0
Ethnicity						
Hispanic/Latino	93.9	2.2	1.8	2.1	< 0.1	100.0
Non-Hispanic/Latino	88.7	3.6	4.5	3.2	< 0.1	100.0
Ethnicity not reported	55.1	15.0	19.9	9.8	< 0.1	100.0

Note

Percents may not add to 100.0 because of rounding.

3. Children

Participants are classified as children at the age of 366 days (the first birthday).⁴⁴ Because children can be recertified annually in most State agencies for up to 4 years, the distribution of children's age at last certification corresponds closely to their distribution of current age. Similar to previous years, in 2020, there were fewer older children than younger children (see table 3.2c and appendix table A.4). Overall, 1-year-old children were the largest group (37.9 percent), and 4-year-old children were the smallest group (13.9 percent). Children aged 2 to 3 made up 25.6 and 22.6 percent of children, respectively. This trend has been consistent across race, ethnicity, and the 50 States and the District of Columbia (see appendix table B.4).

The percentage of 4-year-olds as a proportion of all children decreased from 16.5 percent in 2012 to 13.9 percent in 2020, whereas the percentage of 1-year-olds increased from 34.8 percent in 2012 to 37.9 percent in 2020 (see appendix table A.4). This followed a 16-year period when the percentage of 4-year-old children remained steady at around 16 percent from 1996 through 2012. The percentage of 2-year-olds as a proportion of all children has remained consistent since 1992, and the percentage of 3-year-olds as a proportion of all children has remained consistent since 1996.

⁴⁴ Almost 5 percent of participants (4.8 percent) who were classified as 1-year-old children in 2020 were 11-month-old infants. These infants were typically recertified as children within 2 weeks of their first birthday.

Table 3.2c. Distribution of Children by Age at Certification

Characteristic	1 Year	2 Years	3 Years	4 Years	Age Not Reported	Total Child Participants
Number of Child Participants						
Total Child Participants	1,418,890	956,202	846,988	518,759	1,033	3,741,872
Race						
American Indian	92,376	71,542	69,472	48,776	307	282,473
Asian	49,931	37,471	34,609	22,063	41	144,115
Black	313,701	200,670	171,140	98,571	177	784,260
Pacific Islander	10,797	8,157	7,251	4,313	11	30,529
White	842,110	564,091	501,087	306,452	431	2,214,171
Two or more races	99,966	67,160	57,668	34,367	61	259,223
Race not reported	10,008	7,110	5,760	4,217	5	27,100
Ethnicity						
Hispanic/Latino	581,470	404,559	371,155	238,217	673	1,596,074
Non-Hispanic/Latino	836,928	551,354	475,668	280,443	360	2,144,754
Ethnicity not reported	492	289	165	98	0	1,044
Percent of Child Participants						
Total Child Participants	37.9	25.6	22.6	13.9	< 0.1	100.0
Race						
American Indian	32.7	25.3	24.6	17.3	0.1	100.0
Asian	34.6	26.0	24.0	15.3	< 0.1	100.0
Black	40.0	25.6	21.8	12.6	< 0.1	100.0
Pacific Islander	35.4	26.7	23.8	14.1	< 0.1	100.0
White	38.0	25.5	22.6	13.8	< 0.1	100.0
Two or more races	38.6	25.9	22.2	13.3	< 0.1	100.0
Race not reported	36.9	26.2	21.3	15.6	< 0.1	100.0
Ethnicity						
Hispanic/Latino	36.4	25.3	23.3	14.9	< 0.1	100.0
Non-Hispanic/Latino	39.0	25.7	22.2	13.1	< 0.1	100.0
Ethnicity not reported	47.1	27.7	15.8	9.4	0.0	100.0

Note

Percents may not add to 100.0 because of rounding.

C. Trimester of Enrollment

Approximately half of all pregnant women (50.8 percent) enrolled in WIC during the first trimester of pregnancy, and many of the remainder enrolled during the second trimester (38.1 percent; see table 3.3). Compared with women of other races, American Indian women were most likely to enroll in the first trimester (53.0 percent), and Pacific Islander women were least likely to do so (39.8 percent). A greater percentage of Pacific Islander women enrolled in the second trimester (45.9 percent) than in the first trimester.

Trimester of enrollment varied by State agency (see appendix table B.5). Among the 50 States and the District of Columbia, a greater percentage of participants in 11 State agencies enrolled during the second trimester of pregnancy than the first trimester. This difference was greatest in Maine, Nevada, and Pennsylvania, where the proportion of women enrolled during the second trimester was more than 9.0 percentage points greater than the proportion of women enrolled during the first trimester.

Since 1996, more pregnant women enrolled in WIC during the first trimester of pregnancy than in the second or third trimester (see appendix table A.5). However, since 2012, enrollment during the first trimester decreased by 6.1 percentage points, from 56.9 percent to 50.8 percent in 2020. During the same time, the percentage of women enrolling during the second and third trimester increased by 3.4 and 2.9 percentage points, respectively.

Table 3.3. Distribution of Pregnant Women by Trimester at Certification

Characteristic	First Trimester	Second Trimester	Third Trimester	Trimester Not Reported	Total Pregnant Women Participants
Number of Pregnant Women Participants					
Total Pregnant Women Participants	280,105	210,161	59,031	2,423	551,721
Race					
American Indian	19,192	13,577	3,307	139	36,215
Asian	8,033	7,408	2,026	30	17,497
Black	56,917	49,038	14,207	496	120,658
Pacific Islander	1,648	1,901	569	23	4,141
White	182,842	129,340	36,339	1,633	350,154
Two or more races	8,966	7,023	1,913	99	18,001
Race not reported	2,507	1,874	670	3	5,054
Ethnicity					
Hispanic/Latino	107,929	81,048	21,280	1,028	211,285
Non-Hispanic/Latino	172,129	129,042	37,716	1,393	340,280
Ethnicity not reported	47	71	35	2	155
Percent of Pregnant Women Participants					
Total Pregnant Women Participants	50.8	38.1	10.7	0.4	100.0
Race					
American Indian	53.0	37.5	9.1	0.4	100.0
Asian	45.9	42.3	11.6	0.2	100.0
Black	47.2	40.6	11.8	0.4	100.0
Pacific Islander	39.8	45.9	13.7	0.6	100.0
White	52.2	36.9	10.4	0.5	100.0
Two or more races	49.8	39.0	10.6	0.5	100.0
Race not reported	49.6	37.1	13.3	< 0.1	100.0
Ethnicity					
Hispanic/Latino	51.1	38.4	10.1	0.5	100.0
Non-Hispanic/Latino	50.6	37.9	11.1	0.4	100.0
Ethnicity not reported	30.3	45.8	22.6	1.3	100.0

Note

Percents may not add to 100.0 because of rounding.

D. Risk Priority Level

FNS determines each local agency's maximum caseload, or the number of participants the agency can serve at one time. This number is based on the local agency's funding level and predicted caseload turnover. If Congress does not fully fund the WIC program, and a State agency reaches its maximum caseload, the State agency must then prioritize eligible applicants according to their relative levels of risk, known as risk priority levels. In the reference month of April 2020, no State agency was required to use risk priority levels to determine which applicants would receive benefits.

Federal regulations define seven risk priority levels based on participant categories and nutritional risk (see table 3.4). Priority Levels I through III are assigned based on anthropometric or biochemical measurements or medical conditions, and Priority Levels IV through VI are assigned based primarily on dietary patterns or other nutritional risks. Priority Levels I and II are assigned to infants, pregnant women, and breastfeeding women. Priority Level III is assigned to children. State agencies may create sublevels for any priority level using factors such as income or age, and they may expand Priority Levels III, IV, and V to include high-risk postpartum women. State agencies also have the option to assign Priority Levels IV, V, and VI solely based on an applicant's homelessness or migrant farmworker status. Homelessness or migrant farmworker participants with no other risks may be assigned Priority Level VII regardless of their participant categories.

Table 3.4. Risk Priority Levels

Priority Level	Description
I	Pregnant women, breastfeeding women, and infants at nutritional risk as shown by hematological or anthropometric measurements or other documented, nutritionally related medical conditions that demonstrate the need for supplemental foods
II	Infants up to 6 months old born to women who were WIC participants during pregnancy and infants up to 6 months old born to women who were not WIC participants during pregnancy but whose medical records documented they were at nutritional risk during pregnancy because of nutritional conditions detectable by biochemical or anthropometric measurements, or other documented nutritionally related medical conditions, that demonstrated the woman's need for supplemental foods. Excludes infants who qualify for Priority Level I
III	Children at nutritional risk as shown by hematological or anthropometric measurements or other documented medical conditions that demonstrate the child's need for supplemental foods
IV	Pregnant women, breastfeeding women, and infants at nutritional risk because of an inadequate dietary pattern
V	Children at nutritional risk because of an inadequate dietary pattern
VI	Postpartum women at nutritional risk
VII	Individuals certified for WIC solely because of homelessness or migrant farmworker status, and—at the discretion of the State agency and in accordance with the provisions of section 246(e)(1)(vi) of Federal regulations—previously certified participants who might regress in nutritional status without the continued provision of supplemental foods ^a

^aSource: 7 C.F.R. 246.7(e)(4) (Special Supplemental Nutrition Program for Women, Infants and Children, 1985)

A majority of participants (63.6 percent) were assigned a medically based priority level (Priority Levels I–III; see table 3.5). Across all races and ethnicities, the most commonly assigned priority levels were I, III, and V. Priority Levels I and III were each assigned to almost one-third of all participants (30.6 and 28.5 percent, respectively). A quarter of participants were classified as Priority V (25.2 percent). The smallest percentage of participants were assigned Priority VII (less than 0.1 percent).

The majority of pregnant and breastfeeding women (81.2 and 84.0 percent, respectively) and two-thirds of infants (66.6 percent) were classified as Priority I. Postpartum women were most frequently assigned Priority VI (59.3 percent), and children were most frequently assigned Priority III (50.0 percent).

Although Priority Level I should be assigned only to pregnant and breastfeeding women and infants, this priority level was applied to 6.6 percent of postpartum women and 1.0 percent of children. These individuals may not have had their certification records updated in State agency-maintained MIS when they were recertified into different participant categories.

Priority Levels I, III, and V were most frequently assigned across the 50 States and the District of Columbia in 2020, except in California, where Priority Level IV was more frequently assigned than Priority Levels I and III (see appendix table B.6). Because of COVID-19-related waivers and policies, priority Level IV assignments in California increased by 20.1 percentage points in 2020 from 2018. Many of California's participants were missing hemoglobin and hematocrit metrics used for assigning medically based risk priorities (i.e., Priorities I–III); therefore, assignment of Priority Levels IV and V increased.

Since 1994, Priority Levels I, III, and V have been the most commonly assigned priorities, and Priority Level II assignments have steadily decreased from 14.2 percent in 1992 to 4.5 percent in 2020 (see appendix table A.6). Prior to 2020, assignments of Priority Levels I, III, and IV remained relatively consistent. In 2020, assignments of Priority Levels I and III decreased by about 3 percentage points (2.1 and 4.1 percent, respectively), while Priority Level IV assignments increased by 3.2 percentage points. This increase in Priority Level IV was largely driven by the increase in these assignments in California (California's WIC population accounts for 14.2 percent of all participants).

Table 3.5. Distribution of Participants by Risk Priority Level

Characteristic	I	II	III	IV	V	VI	VII	Not Reported	Total Participants
Number of Participants									
Total Participants	2,156,662	316,951	2,007,577	424,509	1,772,561	262,597	3,349	92,694	7,036,902
Participant Category									
Pregnant women	448,143	51	83	99,638	451	745	55	2,554	551,721
Breastfeeding women	517,386	6,975	120	85,669	619	702	371	4,179	616,022
Postpartum women	28,725	367	131,988	5,524	8,094	259,792	182	3,141	437,814
Total women	994,255	7,393	132,191	190,831	9,164	261,240	608	9,874	1,605,556
Infants	1,125,323	307,725	5,135	216,919	11,664	622	1,025	21,060	1,689,474
Children	37,084	1,833	1,870,251	16,758	1,751,733	736	1,716	61,760	3,741,872
Race									
American Indian	103,483	16,053	114,081	53,771	169,428	13,859	370	5,136	476,182
Asian	67,242	12,281	61,397	21,575	80,912	8,604	83	3,507	255,601
Black	525,511	79,816	481,139	68,986	321,103	68,540	551	23,806	1,569,454
Pacific Islander	17,695	2,617	16,433	2,622	13,761	1,847	12	1,923	56,910
White	1,317,791	178,810	1,199,359	241,041	1,038,070	159,510	1,819	52,668	4,189,068
Two or more races	110,874	22,620	127,135	27,339	129,049	8,305	151	5,455	430,927
Race not reported	14,066	4,754	8,033	9,175	20,238	1,932	363	199	58,760

Characteristic	I	II	III	IV	V	VI	VII	Not Reported	Total Participants
Ethnicity									
Hispanic/Latino	796,525	117,695	749,782	233,697	852,567	88,997	1,478	26,421	2,867,163
Non-Hispanic/Latino	1,359,168	199,101	1,257,285	190,479	919,490	173,484	1,868	66,254	4,167,128
Ethnicity not reported	970	155	511	333	504	116	3	19	2,611
Percent of Participants									
Total Participants	30.6	4.5	28.5	6.0	25.2	3.7	< 0.1	1.3	100.0
Participant Category									
Pregnant women	81.2	< 0.1	< 0.1	18.1	< 0.1	0.1	< 0.1	0.5	100.0
Breastfeeding women	84.0	1.1	< 0.1	13.9	0.1	0.1	< 0.1	0.7	100.0
Postpartum women	6.6	< 0.1	30.1	1.3	1.8	59.3	< 0.1	0.7	100.0
Total women	61.9	0.5	8.2	11.9	0.6	16.3	< 0.1	0.6	100.0
Infants	66.6	18.2	0.3	12.8	0.7	< 0.1	< 0.1	1.2	100.0
Children	1.0	< 0.1	50.0	0.4	46.8	< 0.1	< 0.1	1.7	100.0
Race									
American Indian	21.7	3.4	24.0	11.3	35.6	2.9	< 0.1	1.1	100.0
Asian	26.3	4.8	24.0	8.4	31.7	3.4	< 0.1	1.4	100.0
Black	33.5	5.1	30.7	4.4	20.5	4.4	< 0.1	1.5	100.0
Pacific Islander	31.1	4.6	28.9	4.6	24.2	3.2	< 0.1	3.4	100.0
White	31.5	4.3	28.6	5.8	24.8	3.8	< 0.1	1.3	100.0
Two or more races	25.7	5.2	29.5	6.3	29.9	1.9	< 0.1	1.3	100.0
Race not reported	23.9	8.1	13.7	15.6	34.4	3.3	0.6	0.3	100.0
Ethnicity									
Hispanic/Latino	27.8	4.1	26.2	8.2	29.7	3.1	< 0.1	0.9	100.0
Non-Hispanic/Latino	32.6	4.8	30.2	4.6	22.1	4.2	< 0.1	1.6	100.0
Ethnicity not reported	37.2	5.9	19.6	12.8	19.3	4.4	0.1	0.7	100.0

Note

Percents may not add to 100.0 because of rounding.

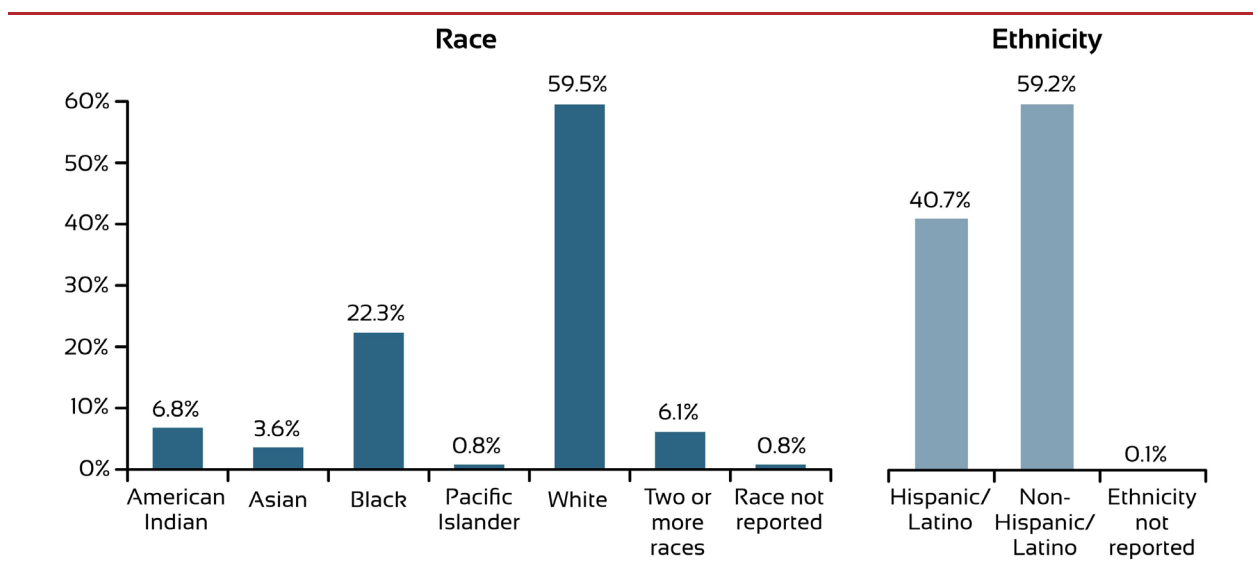
E. Race and Ethnicity

WIC participants can self-identify using one or more of the following five racial categories: (1) American Indian; (2) Asian; (3) Black; (4) Pacific Islander; and (5) White.⁴⁵ Participants are also asked to report ethnicity by indicating whether they are Hispanic/Latino. If a participant does not report race or ethnicity, WIC staff are instructed to record the information on behalf of the participant; in 2020, race was not reported for 0.8 percent of the WIC population, and ethnicity was not reported for less than 0.1 percent.

Only one race was reported for most participants in 2020. The most commonly reported race across women, infants, and children was White (59.5 percent), followed by Black (22.3 percent; see figure 3.3 and table 3.6). Two or more races were reported for 6.1 percent of participants. About 41 percent of participants reported Hispanic/Latino ethnicity.

⁴⁵ These categories are based on the OMB (1997) definitions and were first used in the PC2006 report. Some of the reporting category names were shortened beginning in 2018 to help streamline table and figure text in the report (see table 2.3 for additional details).

Figure 3.3. Percentage of Participants by Race and Ethnicity



The distribution of race across participant categories generally mirrored that of the overall WIC population, with some exceptions (see table 3.7). The proportion of breastfeeding women was greater than the proportion of postpartum women across all races.

Of the 2.9 million Hispanic/Latino participants, 75.2 percent were reported as White, and 13.8 percent were reported as American Indian (see table 3.8). In contrast to other participant categories, a greater proportion of children and breastfeeding women were Hispanic/Latino than non-Hispanic/Latino (55.7 versus 51.5 percent and 9.6 versus 8.1 percent, respectively).

The distribution of participants by race varied across all State agencies (see appendix table B.7). In more than 75 percent of States and the District of Columbia, a majority of participants were reported as White. In six State agencies (Georgia, Louisiana, Maryland, Mississippi, New York, and South Carolina), a majority of participants were reported as Black. ITOs reported a greater percentage of American Indian participants than other State agencies, ranging from 10.7 to 100.0 percent of participants, compared with an overall rate of 6.8 percent.⁴⁶ In Hawaii, American Samoa, Guam, and the Northern Mariana Islands, a greater-than-average percentage of participants were reported as Pacific Islander, ranging from 22.9 to 98.5 percent, compared with an overall rate of 0.8 percent.

The percentage of Hispanic/Latino participants varied among the 50 States and the District of Columbia, with a low of 3.1 percent in West Virginia to a high of 75.2 percent in California (see appendix table B.8). Since 2006, approximately 40 percent of participants were reported as Hispanic/Latino and 60 percent as non-Hispanic/Latino (see appendix table A.9).

Since 1992, the percentages of White non-Hispanic participants and Black non-Hispanic participants have decreased, and the percentage of Hispanic participants has increased (see appendix table A.7). Since 2006,⁴⁷ the primary changes have been a decrease in the proportion of participants reported as

⁴⁶ The proportion of Hispanic/Latino WIC participants who were also identified as American Indian varied across State agencies because some State agencies identify Hispanic/Latino participants as American Indian in the absence of a race selection by the participant. Caution should be used in the analysis of the race and ethnicity of WIC participants, particularly for American Indians (see chapter 2 for additional details).

⁴⁷ The race and ethnicity categories were first used for the PC2006 report.

American Indian (from 15.3 percent to 6.8 percent)⁴⁸ and an increase in the proportion of participants reported as being of two or more races (from 2.9 percent to 6.1 percent; see appendix table A.8).

Table 3.6. Distribution of Participants by Race and Ethnicity Characteristics and Participant Category

Characteristic	Pregnant Women	Breastfeeding Women	Postpartum Women	Total Women Participants	Infants	Children	Total Participants
Number of Participants							
Total Participants	551,721	616,022	437,814	1,605,556	1,689,474	3,741,872	7,036,902
Race							
American Indian	36,215	44,018	21,138	101,372	92,336	282,473	476,182
Asian	17,497	27,739	12,141	57,377	54,109	144,115	255,601
Black	120,658	128,213	121,006	369,877	415,316	784,260	1,569,454
Pacific Islander	4,141	5,643	3,556	13,340	13,041	30,529	56,910
White	350,154	384,821	264,187	999,162	975,734	2,214,171	4,189,068
Two or more races	18,001	20,778	13,378	52,157	119,547	259,223	430,927
Race not reported	5,054	4,809	2,407	12,270	19,390	27,100	58,760
Ethnicity							
Hispanic/Latino	211,285	276,302	132,860	620,448	650,640	1,596,074	2,867,163
Non-Hispanic/Latino	340,280	339,577	304,783	984,640	1,037,734	2,144,754	4,167,128
Ethnicity not reported	155	142	171	468	1,099	1,044	2,611
Percent of Participants							
Total Participants	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Race							
American Indian	6.6	7.1	4.8	6.3	5.5	7.5	6.8
Asian	3.2	4.5	2.8	3.6	3.2	3.9	3.6
Black	21.9	20.8	27.6	23.0	24.6	21.0	22.3
Pacific Islander	0.8	0.9	0.8	0.8	0.8	0.8	0.8
White	63.5	62.5	60.3	62.2	57.8	59.2	59.5
Two or more races	3.3	3.4	3.1	3.2	7.1	6.9	6.1
Race not reported	0.9	0.8	0.5	0.8	1.1	0.7	0.8
Ethnicity							
Hispanic/Latino	38.3	44.9	30.3	38.6	38.5	42.7	40.7
Non-Hispanic/Latino	61.7	55.1	69.6	61.3	61.4	57.3	59.2
Ethnicity not reported	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

Note

Percents may not add to 100.0 because of rounding.

⁴⁸ The proportion of Hispanic/Latino WIC participants who were also identified as American Indian varied widely across State agencies because some State agencies identify Hispanic/Latino participants as American Indian in the absence of a race selection by the participant. Caution should be used in the analysis of the race and ethnicity of WIC participants, particularly for American Indians (see chapter 2 for additional details).

Table 3.7. Distribution of Participants With Selected Characteristics by Race

Characteristic	American Indian Only	Asian Only	Black Only	Pacific Islander Only	White Only	Two or More Races	Race Not Reported	Total Participants
Number of Participants								
Total Participants	476,182	255,601	1,569,454	56,910	4,189,068	430,927	58,760	7,036,902
Participant Category								
Pregnant women	36,215	17,497	120,658	4,141	350,154	18,001	5,054	551,721
Breastfeeding women	44,018	27,739	128,213	5,643	384,821	20,778	4,809	616,022
Postpartum women	21,138	12,141	121,006	3,556	264,187	13,378	2,407	437,814
Total women	101,372	57,377	369,877	13,340	999,162	52,157	12,270	1,605,556
Infants	92,336	54,109	415,316	13,041	975,734	119,547	19,390	1,689,474
Children	282,473	144,115	784,260	30,529	2,214,171	259,223	27,100	3,741,872
Ethnicity								
Hispanic/Latino	394,520	11,232	99,857	16,136	2,155,082	149,960	40,376	2,867,163
Non-Hispanic/ Latino	81,618	244,354	1,469,439	40,771	2,033,573	280,887	16,486	4,167,128
Ethnicity not reported	44	15	157	3	413	81	1,898	2,611
Percent of Participants								
Total Participants	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Participant Category								
Pregnant women	7.6	6.8	7.7	7.3	8.4	4.2	8.6	7.8
Breastfeeding women	9.2	10.9	8.2	9.9	9.2	4.8	8.2	8.8
Postpartum women	4.4	4.7	7.7	6.2	6.3	3.1	4.1	6.2
Total women	21.3	22.4	23.6	23.4	23.9	12.1	20.9	22.8
Infants	19.4	21.2	26.5	22.9	23.3	27.7	33.0	24.0
Children	59.3	56.4	50.0	53.6	52.9	60.2	46.1	53.2
Ethnicity								
Hispanic/Latino	82.9	4.4	6.4	28.4	51.4	34.8	68.7	40.7
Non-Hispanic/ Latino	17.1	95.6	93.6	71.6	48.5	65.2	28.1	59.2
Ethnicity not reported	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	3.2	< 0.1

Note

Percents may not add to 100.0, and subtotals may not add to totals, because of rounding.

Table 3.8. Distribution of Participants With Selected Characteristics by Ethnicity

Characteristic	Hispanic/ Latino	Non-Hispanic/ Latino	Ethnicity Not Reported	Total Participants
Number of Participants				
Total Participants	2,867,163	4,167,128	2,611	7,036,902
Participant Category				
Pregnant women	211,285	340,280	155	551,721
Breastfeeding women	276,302	339,577	142	616,022
Postpartum women	132,860	304,783	171	437,814
Total women	620,448	984,640	468	1,605,556
Infants	650,640	1,037,734	1,099	1,689,474
Children	1,596,074	2,144,754	1,044	3,741,872
Race				
American Indian	394,520	81,618	44	476,182
Asian	11,232	244,354	15	255,601

Characteristic	Hispanic/ Latino	Non-Hispanic/ Latino	Ethnicity Not Reported	Total Participants
Black	99,857	1,469,439	157	1,569,454
Pacific Islander	16,136	40,771	3	56,910
White	2,155,082	2,033,573	413	4,189,068
Two or more races	149,960	280,887	81	430,927
Race not reported	40,376	16,486	1,898	58,760
Percent of Participants				
Total Participants	100.0	100.0	100.0	100.0
Participant Category				
Pregnant women	7.4	8.2	5.9	7.8
Breastfeeding women	9.6	8.1	5.4	8.8
Postpartum women	4.6	7.3	6.5	6.2
Total women	21.6	23.6	17.9	22.8
Infants	22.7	24.9	42.1	24.0
Children	55.7	51.5	40.0	53.2
Race				
American Indian	13.8	2.0	1.7	6.8
Asian	0.4	5.9	0.6	3.6
Black	3.5	35.3	6.0	22.3
Pacific Islander	0.6	1.0	0.1	0.8
White	75.2	48.8	15.8	59.5
Two or more races	5.2	6.7	3.1	6.1
Race not reported	1.4	0.4	72.7	0.8

Note

Percents may not add to 100.0, and subtotals may not add to totals, because of rounding.

F. Migrant Farmworker Status

State agencies are required to report migrant farmworker status for all individuals enrolled in WIC as part of the MDS. Migrant farmworkers made up 0.3 percent of all participants in 2020 (see table 3.1), a proportion consistent with migrant farmworker status records since 1992 (see appendix table A.10). Migrant farmworkers were concentrated in a small number of State agencies. More than 90 percent of these participants resided in nine States: Arizona, California, Florida, Kentucky, Maryland, Michigan, North Carolina, Tennessee, and Texas (see appendix table B.9a).

Migrant Farmworker

An individual whose principal employment is in agriculture on a seasonal basis, who has been so employed within the last 24 months, and who has established a temporary abode for the purposes of such employment.

The percentage of infants and children differed within the migrant farmworker population compared with participants who were not migrant farmworkers. A greater percentage of participants with a migrant farmworker status were children (57.3 percent versus 53.1 percent who were not migrant farmworkers; see table 3.9), whereas a smaller proportion were infants (20.7 percent versus 24.0 percent). The percentage of women in the migrant farmworker population was similar to the percentage of women who were not in the migrant farmworker population (22.0 percent and 22.8 percent, respectively).

Approximately 73 percent of migrant farmworkers were reported as White compared with 59.5 percent of who were not migrant farmworkers. Nearly 80 percent of migrant farmworkers were reported as Hispanic/Latino compared with 40.7 percent who were not migrant farmworkers.

Table 3.9. Distribution of Participants With Selected Characteristics by Migrant Farmworker Status

Characteristic	Migrant Farmworker	Not Migrant Farmworker	Not Reported	Total Participants
Number of Participants				
Total Participants	19,353	6,993,651	23,898	7,036,902
Participant Category				
Pregnant women	1,498	548,741	1,482	551,721
Breastfeeding women	1,896	611,153	2,973	616,022
Postpartum women	866	436,454	494	437,814
Total women	4,260	1,596,347	4,949	1,605,556
Infants	4,007	1,680,949	4,518	1,689,474
Children	11,086	3,716,355	14,431	3,741,872
Race				
American Indian	2,097	472,762	1,323	476,182
Asian	249	254,318	1,034	255,601
Black	1,819	1,565,478	2,157	1,569,454
Pacific Islander	75	55,941	894	56,910
White	14,111	4,159,413	15,544	4,189,068
Two or more races	662	427,328	2,937	430,927
Race not reported	340	58,411	9	58,760
Ethnicity				
Hispanic/Latino	15,447	2,843,624	8,092	2,867,163
Non-Hispanic/Latino	3,906	4,147,416	15,806	4,167,128
Ethnicity not reported	0	2,611	0	2,611
Percent of Participants				
Total Participants	100.0	100.0	100.0	100.0
Participant Category				
Pregnant women	7.7	7.8	6.2	7.8
Breastfeeding women	9.8	8.7	12.4	8.8
Postpartum women	4.5	6.2	2.1	6.2
Total women	22.0	22.8	20.7	22.8
Infants	20.7	24.0	18.9	24.0
Children	57.3	53.1	60.4	53.2
Race				
American Indian	10.8	6.8	5.5	6.8
Asian	1.3	3.6	4.3	3.6
Black	9.4	22.4	9.0	22.3
Pacific Islander	0.4	0.8	3.7	0.8
White	72.9	59.5	65.0	59.5
Two or more races	3.4	6.1	12.3	6.1
Race not reported	1.8	0.8	< 0.1	0.8
Ethnicity				
Hispanic/Latino	79.8	40.7	33.9	40.7
Non-Hispanic/Latino	20.2	59.3	66.1	59.2
Ethnicity not reported	0.0	< 0.1	0.0	< 0.1

Note

Percents may not add to 100.0, and subtotals may not add to totals, because of rounding.

Chapter 4. Participation in Other Benefit Programs and Income of WIC Participants

Federal regulations require categorically eligible WIC applicants to meet income eligibility standards set by State agencies. State agencies must set income restrictions between 100 and 185 percent of the Federal Poverty Guidelines established by HHS. These income guidelines for poverty are based on household size and vary by residency (HHS, 2019a).⁴⁹ The income eligibility threshold set by all State agencies as of April 2020 was 185 percent of the Federal Poverty Guidelines. In most areas served by WIC in 2020, a household of four with an annual income of \$47,638 or less was eligible for WIC (USDA FNS, 2019b).

Annual Income ≤ 185 Percent of Federal Poverty Guidelines in 2020 by Household Size (number of members)

1	\$23,107
2	\$31,284
3	\$39,461
4	\$47,638
5	\$55,815
6	\$63,992

Under Federal regulations, applicants are adjunctively income-eligible for WIC benefits if they or certain family members can document participation in at least one of three means-tested benefit programs: TANF, SNAP, or Medicaid.⁵⁰ All State agencies use a combination of TANF, SNAP, and/or Medicaid participation to determine adjunctive WIC income eligibility.⁵¹ State agencies may also accept documentation of applicants' participation in other State-administered programs. Acceptable programs must routinely require documentation of income, provided those programs have income eligibility guidelines at or below the State agency's WIC income guidelines and are specified in the State agency's policies. Results presented in this report include data only for TANF, SNAP, and Medicaid participation.⁵²

This chapter presents data on the income of WIC participants and related measures. Section A describes the participation of WIC participants in TANF, SNAP, and Medicaid. Section B discusses household size and income, and section C describes the poverty status of WIC participant households. Table 4.1 provides an overview of the distribution of WIC participants by these measures.

Table 4.1. Distribution of Participants With Income-Related Characteristics

Characteristic	Number	Percent
Total Participants	7,036,902	100.0
Reported Participation in Other Benefit Programs		
Participation in TANF, SNAP, or Medicaid	5,431,384	77.2
TANF	268,221	3.8
SNAP	1,966,972	28.0
Medicaid	5,218,449	74.2
No other programs	1,443,844	20.5
Not reported	161,674	2.3

⁴⁹ Income thresholds for the Federal Poverty Guidelines are higher for Alaska and Hawaii than for all other State agencies.

⁵⁰ Because Medicaid permits recipients to have income equal to or greater than 185 percent of the Federal Poverty Guidelines, it is possible some WIC participant household incomes exceed this threshold.

⁵¹ American Samoa, the Northern Mariana Islands, and Puerto Rico do not participate in SNAP, but participants in their respective nutrition assistance programs are automatically income-eligible for WIC. Medicaid recipients in American Samoa and the Northern Mariana Islands and TANF and Medicaid recipients in Puerto Rico are adjunctively income-eligible for WIC.

⁵² Although Federal regulations distinguish means-tested programs used for adjunctive income eligibility from programs used to establish automatic income eligibility, the two mechanisms work similarly with respect to income eligibility.

Characteristic	Number	Percent
TANF, SNAP, and Medicaid	222,877	3.2
TANF and SNAP	11,885	0.2
TANF and Medicaid	25,382	0.4
SNAP and Medicaid	1,539,237	21.9
TANF only	8,077	0.1
SNAP only	192,973	2.7
Medicaid only	3,430,953	48.8
Size of Family or Economic Unit (number of members)		
1	115,138	1.6
2	847,356	12.0
3	1,712,319	24.3
4	1,842,566	26.2
5	1,289,363	18.3
6+	1,184,098	16.8
Not reported	46,061	0.7
Annual Income (\$)		
Average (Mean)	20,398	—
Median	18,000	—
Percent of Federal Poverty Guidelines		
0–50	2,428,443	34.5
51–100	2,100,018	29.8
101–130	874,173	12.4
131–150	405,561	5.8
151–185	451,799	6.4
More than 185	248,852	3.5
Not reported	528,057	7.5

Notes

Percents may not add to 100.0 because of rounding.

Alaska was unable to provide sufficient data on participation in TANF, SNAP, and Medicaid.

A. Participation in TANF, SNAP, and Medicaid

In total, 77.2 percent of participants reported participation in TANF, SNAP, or Medicaid in 2020 (see table 4.1).⁵³ Since 2018, WIC participant enrollment in other benefit programs (i.e., SNAP, TANF, and/or Medicaid) declined by 2.9 percent (from 80.1 percent in 2018 to 77.2 percent in 2020).

The distribution of participants with reported participation in other benefit programs varied across participant categories (see table 4.2). Participation in any of the three benefit programs was reported for a smaller percentage of infants and a greater percentage of children compared with the overall WIC population. The rate of participation in other benefit programs was similar for pregnant and breastfeeding women and higher for postpartum women.

⁵³ Members of most ITOs can participate in the Food Distribution Program on Indian Reservations (FDPIR) as an alternative to SNAP. For PC2020, the SDS included data on FDPIR participation. Of the 33 ITOs, 20 chose to report FDPIR participation, resulting in data for 86.7 percent of all ITO WIC participants. Of the 46,269 participants with reported data on FDPIR participation, only 0.5 percent participated in the program.

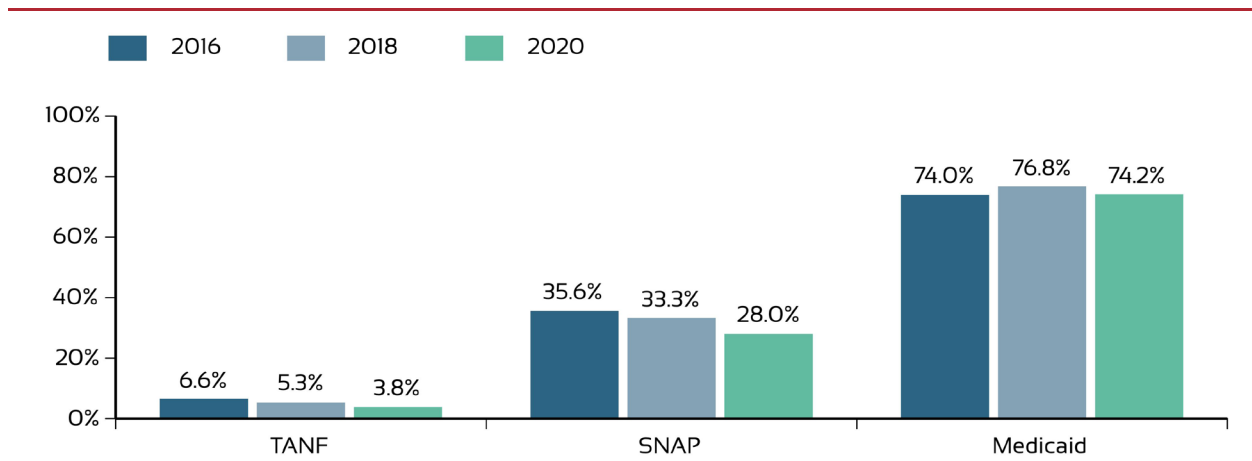
Reported participation in TANF, SNAP, or Medicaid also varied by race. Compared with the overall WIC population, fewer Asian and White participants reported participating in all three benefit programs (see table 4.2), and fewer Pacific Islander and American Indian participants reported participating in either SNAP or Medicaid.⁵⁴ Participation in TANF did not vary by ethnicity. Participation in either SNAP or Medicaid was about 5 percentage points higher among Hispanic/Latino participants than non-Hispanic/Latino participants.

In 2020, 48.8 percent of WIC participants reported participation in Medicaid only, and 21.9 percent of participants reported participation in both SNAP and Medicaid (see table 4.3). The number of WIC participants with reported participation in Medicaid only was highest across all participant categories, races, and ethnicities.

Reported participation in other benefit programs varied by State agency (see appendix tables A.11 and B.10). Of the three benefit programs, WIC participants most frequently reported participation in Medicaid across all 50 States and the District of Columbia (see appendix table B.10). In 15 State agencies, reported participation in both SNAP and Medicaid was higher compared with Medicaid only (see appendix table B.11). This may, however, reflect how State agencies gather data on participation in other programs rather than actual differences in participation across State agencies. For example, some State agencies do not record data for participation in programs other than the one used to establish adjunctive eligibility (see chapter 2 for additional details).

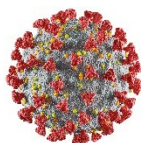
Since 2014, the proportion of WIC participants that reported also participating in TANF and SNAP decreased by 3.8 and 9.0 percentage points, respectively (see figure 4.1 and appendix table A.11). Between 2014 and 2018, reported participation in Medicaid among WIC participants increased by 5.4 percentage points but then decreased 2.6 percentage points by 2020. Prior to the COVID-19 pandemic, State Medicaid directors attributed decreases in Medicaid participation during FYs 2019 and 2020 to the strength of the national economy and improvements to program renewal, eligibility, and verification procedures (Rudowitz et al., 2019). Participation in at least one of the three benefit programs decreased by 2.9 percentage points, from 80.1 percent in 2018 to 77.2 percent in 2020.

Figure 4.1. Percentage of Participants by Reported Participation in TANF, SNAP, and Medicaid: 2016, 2018, 2020



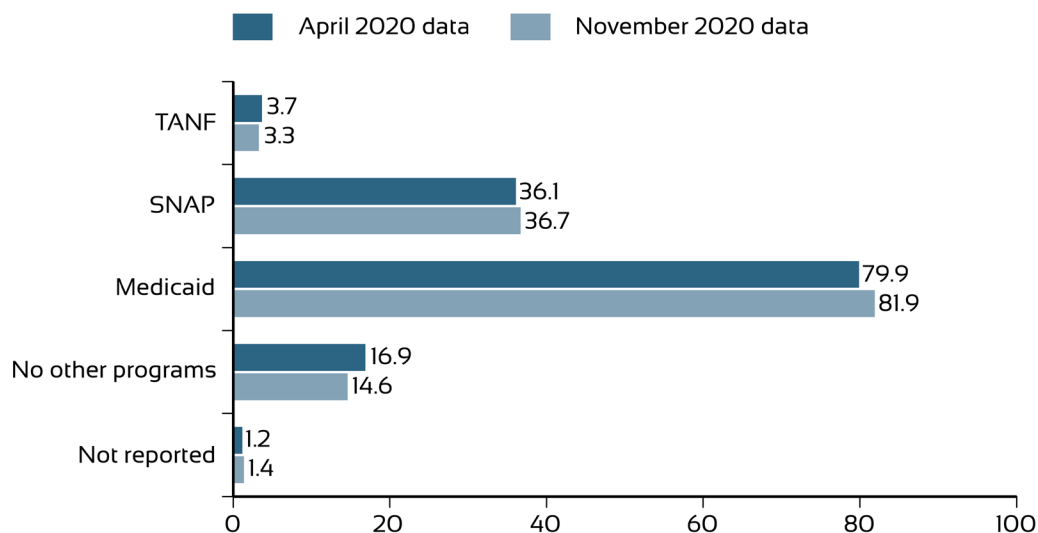
⁵⁴ More than 10 percent of Pacific Islanders resided in Guam, which does not provide Medicaid benefits.

In every year of PC data collection since 2000 (except for 2014), more than half of all WIC participants reported participation in Medicaid only, and since 2010, about a third have reported participation in both SNAP and Medicaid (see appendix table A.12). The proportion of participants reporting receipt of Medicaid only has increased among WIC participants over time. Since 2014, reported receipt of both SNAP and Medicaid declined by 8.1 percent. Reported participation in all three programs (SNAP, TANF, and Medicaid) decreased from a peak of 39.4 percent in 1992 to 4.1 percent in 2020.⁵⁵



Between April and November 2020, the most substantial changes in other benefit program participation among WIC participants in the nine study State agencies were a 2.0 percentage-point increase in Medicaid participation and a 2.2 percentage-point decrease in WIC participants with no reported participation in TANF, SNAP, or Medicaid (see figure COVID19-4.1). SNAP participation increased by only 0.6 percentage points.

Figure COVID19-4.1. Percentage of Participants by Reported Participation in TANF, SNAP, and Medicaid in April and November 2020



Notes

Nine study State agencies provided the November 2020 data for this analysis (i.e., PC-style data using the reference month of November 2020); the April 2020 data reflect PC2020 data provided by the nine Study State agencies.

Participation in other programs is often underreported for the WIC population; caution should be used in analyzing these data.

Percentages add to more than 100 because WIC participants may also participate in more than one benefit program.

All differences between April and November 2020 data were statistically significant at $\alpha < 0.05$.

⁵⁵ TANF went into effect on July 1, 1997. Prior to PC1998, reported participation was for Aid to Families with Dependent Children (AFDC) (USDA FNS, 1994).

Table 4.2. Distribution of Participants With Reported Participation in Other Benefit Programs

Characteristic	TANF	SNAP	Medicaid	No Other Programs	Not Reported	Total Participants
Number of Participants						
Total Participants	268,221	1,966,972	5,218,449	1,443,844	161,674	7,036,902
Participant Category						
Pregnant women	16,110	136,918	390,727	132,331	10,795	551,721
Breastfeeding women	18,996	132,431	428,752	151,467	18,279	616,022
Postpartum women	20,871	137,692	336,252	80,553	7,575	437,814
Total women	55,977	407,042	1,155,731	364,351	36,649	1,605,556
Infants	38,949	336,303	1,173,386	432,856	35,856	1,689,474
Children	173,295	1,223,628	2,889,333	646,637	89,168	3,741,872
Race						
American Indian	23,112	129,699	324,830	120,194	20,316	476,182
Asian	5,797	46,406	185,914	55,719	10,280	255,601
Black	82,242	555,591	1,206,809	272,449	23,891	1,569,454
Pacific Islander	2,189	15,552	34,581	17,904	2,785	56,910
White	129,271	1,077,806	3,105,705	873,359	92,636	4,189,068
Two or more races	22,800	132,039	323,912	84,924	9,613	430,927
Race not reported	2,810	9,879	36,697	19,295	2,152	58,760
thnicity						
Hispanic/Latino	111,858	724,264	2,041,341	684,265	54,985	2,867,163
Non-Hispanic/Latino	156,354	1,242,428	3,176,313	759,130	105,379	4,167,128
Ethnicity not reported	9	280	796	448	1,310	2,611
Percent of Participants						
Total Participants	3.8	28.0	74.2	20.5	2.3	100.0
Participant Category						
Pregnant women	2.9	24.8	70.8	24.0	2.0	100.0
Breastfeeding women	3.1	21.5	69.6	24.6	3.0	100.0
Postpartum women	4.8	31.4	76.8	18.4	1.7	100.0
Total women	3.5	25.4	72.0	22.7	2.3	100.0
Infants	2.3	19.9	69.5	25.6	2.1	100.0
Children	4.6	32.7	77.2	17.3	2.4	100.0
Race						
American Indian	4.9	27.2	68.2	25.2	4.3	100.0
Asian	2.3	18.2	72.7	21.8	4.0	100.0
Black	5.2	35.4	76.9	17.4	1.5	100.0
Pacific Islander	3.8	27.3	60.8	31.5	4.9	100.0
White	3.1	25.7	74.1	20.8	2.2	100.0
Two or more races	5.3	30.6	75.2	19.7	2.2	100.0
Race not reported	4.8	16.8	62.5	32.8	3.7	100.0
Ethnicity						
Hispanic/Latino	3.9	25.3	71.2	23.9	1.9	100.0
Non-Hispanic/Latino	3.8	29.8	76.2	18.2	2.5	100.0
Ethnicity not reported	0.3	10.7	30.5	17.2	50.2	100.0

Notes

Participants may participate in more than one benefit program.

Percents may not add to 100.0 because of rounding.

Alaska was unable to provide sufficient data on participation in TANF, SNAP, and Medicaid.

Table 4.3. Distribution of Participants With Reported Participation in Combinations of Other Benefit Programs

Characteristic	TANF, SNAP, and Medicaid	TANF and SNAP	TANF and Medicaid	SNAP and Medicaid	TANF Only	SNAP Only	Medicaid Only	Total Participants
Number of Participants								
Total Participants	222,877	11,885	25,382	1,539,237	8,077	192,973	3,430,953	7,036,902
Participant Category								
Pregnant women	12,968	1,149	1,211	106,864	782	15,937	269,684	551,721
Breastfeeding women	15,571	1,124	1,603	100,034	698	15,702	311,544	616,022
Postpartum women	17,096	1,483	1,739	107,716	553	11,397	209,701	437,814
Total women	45,635	3,756	4,553	314,614	2,033	43,036	790,928	1,605,556
Infants	31,532	2,696	3,174	258,942	1,547	43,132	879,738	1,689,474
Children	145,710	5,433	17,655	965,681	4,497	106,804	1,760,287	3,741,872
Race								
American Indian	20,173	503	1,884	99,236	552	9,787	203,537	476,182
Asian	4,571	304	684	38,385	238	3,146	142,274	255,601
Black	68,276	5,255	5,978	423,744	2,733	58,316	708,811	1,569,454
Pacific Islander	1,856	143	142	12,104	48	1,449	20,479	56,910
White	106,404	4,784	14,155	857,963	3,928	108,655	2,127,183	4,189,068
Two or more races	19,014	883	2,337	101,113	566	11,029	201,448	430,927
Race not reported	2,583	13	202	6,692	12	591	27,220	58,760
Ethnicity								
Hispanic/Latino	97,089	3,184	9,011	543,177	2,574	80,814	1,392,063	2,867,163
Non-Hispanic/Latino	125,784	8,699	16,368	995,841	5,503	112,104	2,038,320	4,167,128
Ethnicity not reported	4	2	3	219	0	55	570	2,611
Percent of Participants								
Total Participants	3.2	0.2	0.4	21.9	0.1	2.7	48.8	100.0
Participant Category								
Pregnant women	2.4	0.2	0.2	19.4	0.1	2.9	48.9	100.0
Breastfeeding women	2.5	0.2	0.3	16.2	0.1	2.5	50.6	100.0
Postpartum women	3.9	0.3	0.4	24.6	0.1	2.6	47.9	100.0
Total women	2.8	0.2	0.3	19.6	0.1	2.7	49.3	100.0
Infants	1.9	0.2	0.2	15.3	< 0.1	2.6	52.1	100.0
Children	3.9	0.1	0.5	25.8	0.1	2.9	47.0	100.0
Race								
American Indian	4.2	0.1	0.4	20.8	0.1	2.1	42.7	100.0
Asian	1.8	0.1	0.3	15.0	< 0.1	1.2	55.7	100.0
Black	4.4	0.3	0.4	27.0	0.2	3.7	45.2	100.0
Pacific Islander	3.3	0.3	0.2	21.3	< 0.1	2.5	36.0	100.0
White	2.5	0.1	0.3	20.5	< 0.1	2.6	50.8	100.0
Two or more races	4.4	0.2	0.5	23.5	0.1	2.6	46.7	100.0
Race not reported	4.4	< 0.1	0.3	11.4	< 0.1	1.0	46.3	100.0

Characteristic	TANF, SNAP, and Medicaid	TANF and SNAP	TANF and Medicaid	SNAP and Medicaid	TANF Only	SNAP Only	Medicaid Only	Total Participants
Ethnicity								
Hispanic/Latino	3.4	0.1	0.3	18.9	< 0.1	2.8	48.6	100.0
Non-Hispanic/ Latino	3.0	0.2	0.4	23.9	0.1	2.7	48.9	100.0
Ethnicity not reported	0.2	< 0.1	0.1	8.4	0.0	2.1	21.8	100.0

Notes

Percents may not add to 100.0 because of rounding.

Alaska was unable to provide sufficient data on participation in TANF, SNAP, and Medicaid.

B. Household Size and Income

State agencies were asked to provide information on household or economic unit size and income for participants during April 2020.⁵⁶ Similar to previous years, in 2020 household size was reported for 99.3 percent of participants (see table 4.4), and income data were reported for 92.6 percent of participants (see table 4.5). Fifteen State agencies were missing income data for at least 30 percent of their participants in 2020 (see appendix table B.14). Verification of household income is not required for participants who are adjunctively or automatically income-eligible for WIC benefits and, therefore, may contribute to missing income data; caution should be used in analyzing data on income for these State agencies.

For some participants, State agencies reported actual income amounts (i.e., the dollar amounts reported by WIC applicants). For many participants who were adjunctively eligible, State agencies reported income ranges rather than specific dollar amounts. For analytic purposes, the midpoints of the ranges were assigned as household income.⁵⁷ Both types of data were combined to compute the average annualized income and poverty status of participants.

Approximately half of all participants—regardless of participant category, ethnicity, or State agency—resided in a household or economic unit with three or four members (see table 4.4 and appendix table B.12). This pattern was also true of all race categories except for Pacific Islanders; in this category, more than half of participants lived in households with at least five members. The distribution of three- and four-person households has remained steady since 1992 (see appendix table A.13). Small percentages of infants, children, and postpartum women (1.4, 1.8, and 0.6 percent, respectively) were classified as residing in one-person households for the purposes of WIC income eligibility determination in 2020. Women who miscarried, mothers of infants placed in foster care, and infants and children placed in foster care may be reported as one-person economic units.

Among those with reported income, the mean annualized household income across all participant categories was \$20,398 in April 2020; the median income was \$18,000 (see table 4.5).⁵⁸ Among women participants, breastfeeding women reported the highest mean and median incomes (\$21,403 and \$19,200, respectively), and postpartum women reported the lowest mean and median incomes (\$17,803 and \$14,400, respectively). Across racial and ethnic groups, Asian participants reported the highest mean and median incomes (\$25,120 and \$24,000, respectively), and Black participants reported

⁵⁶ The term “household or economic unit” refers to the group of people whose incomes are evaluated for WIC eligibility purposes.

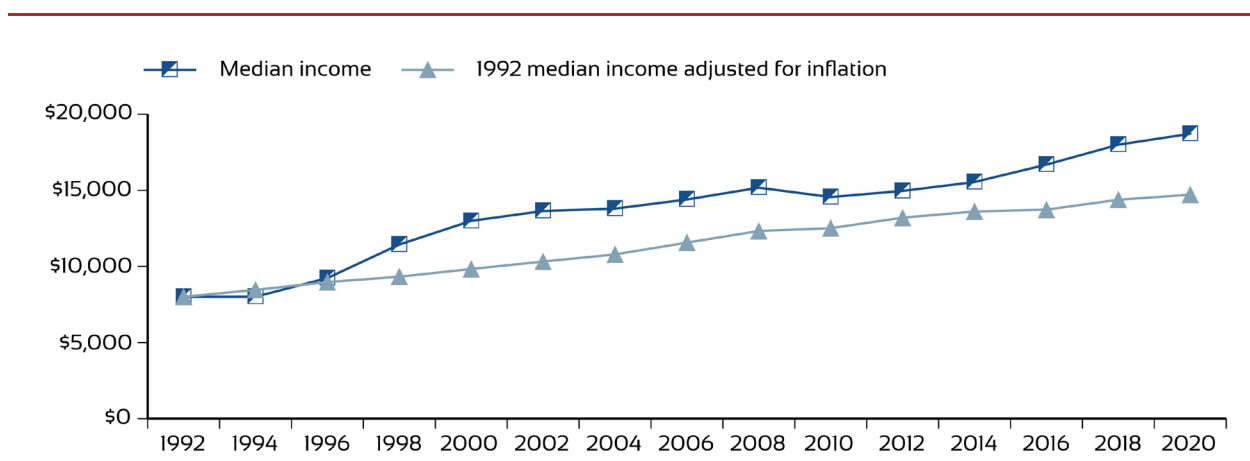
⁵⁷ State agencies reported income ranges in increments of \$1,200 per year. Incomes of \$77,004 per year were imputed for households reported to have incomes equal to or greater than \$74,400 per year.

⁵⁸ In table 4.5, reporting on income as a percentage of the Federal Poverty Guidelines includes \$0 income. In appendix table A.15, \$0 income is not included in reporting on income as a percentage of the Federal Poverty Guidelines.

the lowest mean and median incomes (\$16,098 and \$12,818, respectively). Hispanic/Latino participants reported higher mean and median incomes (\$21,407 and \$19,200, respectively) than non-Hispanic/Latino participants (\$19,661 and \$16,800, respectively).

Both mean and median incomes varied considerably among the 50 States and the District of Columbia. West Virginia had the lowest mean income (\$10,238), and South Dakota had the lowest median income (\$6,000);⁵⁹ Minnesota had the highest mean and median incomes (\$31,462 and \$30,600, respectively; see appendix table B.13). In general, without adjusting for inflation, mean and median incomes have increased over time (see appendix table A.14). Figure 4.2 shows median income as reported by participants between 1992 and 2020, with 1992 median income adjusted for inflation through 2020. Growth in participant median income has outpaced inflation since 1992, suggesting participants in 2020 were earning higher incomes than participants in 1992. However, prior to 1997, WIC was not fully funded; therefore, not all eligible individuals were able to participate.

Figure 4.2. Median Income Adjusted for Inflation: 1992–2020



Source: DOL BLS, n.d.a

Table 4.4. Distribution of Participants by Size of Family or Economic Unit

Characteristic	1	2	3	4	5	6+	Not Reported	Total Participants
Number of Participants								
Total Participants	115,138	847,356	1,712,319	1,842,566	1,289,363	1,184,098	46,061	7,036,902
Participant Category								
Pregnant women	19,986	104,761	142,741	125,739	81,553	75,044	1,896	551,721
Breastfeeding women	0	83,688	169,537	156,873	105,743	96,175	4,005	616,022
Postpartum women	2,765	66,344	123,512	109,619	71,477	61,862	2,234	437,814
Total women	22,751	254,793	435,789	392,232	258,774	233,082	8,135	1,605,556
Infants	23,731	243,212	464,404	421,317	277,832	245,078	13,899	1,689,474
Children	68,656	349,351	812,126	1,029,017	752,757	705,938	24,027	3,741,872

⁵⁹ Forty percent of participants in South Dakota reported \$0 income.

Characteristic	1	2	3	4	5	6+	Not Reported	Total Participants
Race								
American Indian	7,067	51,204	113,712	128,004	92,609	80,966	2,619	476,182
Asian	909	15,143	58,686	82,704	52,947	44,485	727	255,601
Black	25,741	250,001	413,030	384,308	250,941	235,602	9,829	1,569,454
Pacific Islander	533	4,072	10,272	12,661	10,952	18,093	327	56,910
White	70,367	459,391	991,581	1,110,297	798,620	733,536	25,276	4,189,068
Two or more races	9,839	59,330	111,534	110,128	72,987	63,360	3,749	430,927
Race not reported	682	8,215	13,504	14,464	10,306	8,055	3,534	58,760
Ethnicity								
Hispanic/Latino	30,785	304,133	665,191	769,422	573,909	510,872	12,851	2,867,163
Non-Hispanic/Latino	84,293	543,082	1,046,855	1,072,820	715,216	673,033	31,828	4,167,128
Ethnicity not reported	60	141	273	324	238	193	1,382	2,611
Percent of Participants								
Total Participants	1.6	12.0	24.3	26.2	18.3	16.8	0.7	100.0
Participant Category								
Pregnant women	3.6	19.0	25.9	22.8	14.8	13.6	0.3	100.0
Breastfeeding women	0.0	13.6	27.5	25.5	17.2	15.6	0.7	100.0
Postpartum women	0.6	15.2	28.2	25.0	16.3	14.1	0.5	100.0
Total women	1.4	15.9	27.1	24.4	16.1	14.5	0.5	100.0
Infants	1.4	14.4	27.5	24.9	16.4	14.5	0.8	100.0
Children	1.8	9.3	21.7	27.5	20.1	18.9	0.6	100.0
Race								
American Indian	1.5	10.8	23.9	26.9	19.4	17.0	0.6	100.0
Asian	0.4	5.9	23.0	32.4	20.7	17.4	0.3	100.0
Black	1.6	15.9	26.3	24.5	16.0	15.0	0.6	100.0
Pacific Islander	0.9	7.2	18.0	22.2	19.2	31.8	0.6	100.0
White	1.7	11.0	23.7	26.5	19.1	17.5	0.6	100.0
Two or more races	2.3	13.8	25.9	25.6	16.9	14.7	0.9	100.0
Race not reported	1.2	14.0	23.0	24.6	17.5	13.7	6.0	100.0
Ethnicity								
Hispanic/Latino	1.1	10.6	23.2	26.8	20.0	17.8	0.4	100.0
Non-Hispanic/Latino	2.0	13.0	25.1	25.7	17.2	16.2	0.8	100.0
Ethnicity not reported	2.3	5.4	10.5	12.4	9.1	7.4	52.9	100.0

Notes

Percents may not add to 100.0 because of rounding.

Women who miscarried, mothers of infants placed in foster care, and infants and children placed in foster care may be reported as one-person economic units.

Table 4.5. Distribution of Participants by Annualized Income of Family or Economic Unit

Characteristic	Mean Income	Median Income	Income Present	Income Not Reported	Total Participants
Income Values and Number of Participants					
Total Participants	\$20,398	\$18,000	6,519,350	517,552	7,036,902
Participant Category					
Pregnant women	\$19,114	\$16,800	514,201	37,519	551,721
Breastfeeding women	\$21,403	\$19,200	574,260	41,762	616,022
Postpartum women	\$17,803	\$14,400	401,457	36,357	437,814
Total women	\$19,643	\$17,040	1,489,918	115,638	1,605,556
Infants	\$19,041	\$16,068	1,546,297	143,177	1,689,474
Children	\$21,325	\$19,200	3,483,135	258,737	3,741,872
Race					
American Indian	\$19,192	\$18,000	463,126	13,056	476,182
Asian	\$25,120	\$24,000	238,232	17,369	255,601
Black	\$16,098	\$12,818	1,432,678	136,775	1,569,454
Pacific Islander	\$20,937	\$19,084	54,795	2,115	56,910
White	\$21,942	\$19,240	3,874,139	314,929	4,189,068
Two or more races	\$19,582	\$16,800	401,103	29,824	430,927
Race not reported	\$18,812	\$16,800	55,276	3,484	58,760
Ethnicity					
Hispanic/Latino	\$21,407	\$19,200	2,753,829	113,334	2,867,163
Non-Hispanic/Latino	\$19,661	\$16,800	3,764,409	402,719	4,167,128
Ethnicity not reported	\$17,923	\$14,400	1,112	1,499	2,611
Percent of Participants					
Total Participants	—	—	92.6	7.4	100.0
Participant Category					
Pregnant women	—	—	93.2	6.8	100.0
Breastfeeding women	—	—	93.2	6.8	100.0
Postpartum women	—	—	91.7	8.3	100.0
Total women	—	—	92.8	7.2	100.0
Infants	—	—	91.5	8.5	100.0
Children	—	—	93.1	6.9	100.0
Race					
American Indian	—	—	97.3	2.7	100.0
Asian	—	—	93.2	6.8	100.0
Black	—	—	91.3	8.7	100.0
Pacific Islander	—	—	96.3	3.7	100.0
White	—	—	92.5	7.5	100.0
Two or more races	—	—	93.1	6.9	100.0
Race not reported	—	—	94.1	5.9	100.0
Ethnicity					
Hispanic/Latino	—	—	96.0	4.0	100.0
Non-Hispanic/Latino	—	—	90.3	9.7	100.0
Ethnicity not reported	—	—	42.6	57.4	100.0

Notes

Percents may not add to 100.0 because of rounding.

Income calculations used data for only those participants for whom State agencies reported data on income. State agencies could report actual income and a reporting period or an income range for participants. Calculations of mean and median incomes used a computed annualized income for both types of data.

C. Poverty Status

A majority of WIC participants come from households with income at or below the 100 percent of the Federal Poverty Guidelines issued each year by HHS. These guidelines are income thresholds for poverty and vary by household size and residency. In most areas served by WIC, the poverty guideline for a household of four in 2020 was \$25,750 per year (HHS, 2019a).⁶⁰ Income eligibility guidelines for the WIC program are set by all State agencies at 185 percent of the Federal Poverty Guidelines (\$47,638 per year in 2020 for a family of four).⁶¹ The study team used participant household income, household size, and residency to calculate participant income as a percentage of the Federal Poverty Guidelines. Table 4.6 presents poverty status data by participant category, race, and ethnicity.

Slightly less than two-thirds (64.3 percent) of all WIC participants reported income at or below 100 percent of the Federal Poverty Guidelines, and approximately one-third (34.5 percent) reported income less than or equal to 50 percent of the guidelines. Income less than or equal to 50 percent of the guidelines was most frequently reported for postpartum women (41.2 percent) and infants (37.5 percent). Conversely, 32.6 percent of breastfeeding women and children reported income at this level. American Indian, Black, Pacific Islander, and White participants were most likely to report income less than or equal to 50 percent of the guidelines, whereas Asian participants were most likely to report income between 51 and 100 percent of the guidelines (33.6 percent). Nearly one-third (32.1 percent) of Hispanic/Latino participants reported income less than or equal to 50 percent of the guidelines versus more than a third (36.2 percent) of non-Hispanic/Latino participants.

Among the 50 States and the District of Columbia, 14 State agencies had a greater proportion of participants with income between 51 and 100 percent of the guidelines versus participants with income equal to or less than 50 percent of the guidelines (see appendix table B.14). Since 2006, approximately two-thirds of participants reported income equal to or less than 100 percent of the Federal Poverty Guidelines (see appendix table A.15). Comparisons of data from years prior to 2006 should be made with caution because between 13 and 22 percent of participants did not report income data for any given year. Because of the revised data-cleaning rules on missing income implemented for PC2018, comparisons of 2018 and 2020 data with previous income data should be made with caution.

Table 4.6. Distribution of Participants by Income as a Percentage of Federal Poverty Guidelines

Characteristic	Percent of Federal Poverty Guidelines						
	0-50	51-100	101-130	131-150	151-185	More Than 185	Not Reported
Number of Participants							
Total Participants	2,428,443	2,100,018	874,173	405,561	451,799	248,852	528,057
Participant Category							
Pregnant women	193,035	160,817	68,329	32,925	38,954	19,977	37,683
Breastfeeding women	200,758	180,281	81,758	39,070	43,984	26,909	43,261
Postpartum women	180,588	118,150	45,379	20,834	22,967	13,325	36,571
Total women	574,381	459,247	195,467	92,830	105,906	60,211	117,515
Infants	633,428	466,705	194,075	90,695	101,021	57,043	146,507
Children	1,220,634	1,174,065	484,631	222,037	244,872	131,597	264,035

⁶⁰ The Federal Poverty Guidelines are the same for the 48 contiguous States, the District of Columbia, and the 5 U.S. territories; they are different for Alaska and Hawaii. In April 2020, the poverty guideline for a household of four was \$32,190 for Alaska and \$29,620 for Hawaii (HHS, 2019a).

⁶¹ State agencies must set income restrictions between 100 and 185 percent of the Federal Poverty Guidelines established by HHS.

Characteristic	Percent of Federal Poverty Guidelines						
	0-50	51-100	101-130	131-150	151-185	More Than 185	Not Reported
Race							
American Indian	178,786	156,028	62,322	26,286	27,316	11,945	13,499
Asian	53,394	85,773	44,622	20,333	22,422	11,529	17,528
Black	701,837	408,063	146,271	66,896	74,073	33,675	138,638
Pacific Islander	21,636	18,514	7,157	3,047	3,193	1,200	2,163
White	1,296,807	1,288,605	553,835	261,070	293,736	174,539	320,477
Two or more races	156,956	123,791	52,441	24,749	27,845	14,514	30,631
Race not reported	19,027	19,244	7,525	3,180	3,213	1,450	5,121
Ethnicity							
Hispanic/Latino	919,325	979,673	392,285	170,098	179,180	110,651	115,950
Non-Hispanic/Latino	1,508,640	1,120,027	481,752	235,392	272,560	138,181	410,577
Ethnicity not reported	478	318	136	71	58	20	1,530
Percent of Participants							
Total Participants	34.5	29.8	12.4	5.8	6.4	3.5	7.5
Participant Category							
Pregnant women	35.0	29.1	12.4	6.0	7.1	3.6	6.8
Breastfeeding women	32.6	29.3	13.3	6.3	7.1	4.4	7.0
Postpartum women	41.2	27.0	10.4	4.8	5.2	3.0	8.4
Total women	35.8	28.6	12.2	5.8	6.6	3.8	7.3
Infants	37.5	27.6	11.5	5.4	6.0	3.4	8.7
Children	32.6	31.4	13.0	5.9	6.5	3.5	7.1
Race							
American Indian	37.5	32.8	13.1	5.5	5.7	2.5	2.8
Asian	20.9	33.6	17.5	8.0	8.8	4.5	6.9
Black	44.7	26.0	9.3	4.3	4.7	2.1	8.8
Pacific Islander	38.0	32.5	12.6	5.4	5.6	2.1	3.8
White	31.0	30.8	13.2	6.2	7.0	4.2	7.7
Two or more races	36.4	28.7	12.2	5.7	6.5	3.4	7.1
Race not reported	32.4	32.8	12.8	5.4	5.5	2.5	8.7
Ethnicity							
Hispanic/Latino	32.1	34.2	13.7	5.9	6.2	3.9	4.0
Non-Hispanic/Latino	36.2	26.9	11.6	5.6	6.5	3.3	9.9
Ethnicity not reported	18.3	12.2	5.2	2.7	2.2	0.8	58.6

Notes

Percents may not add to 100.0 because of rounding.

Poverty guideline calculations were based on computed annualized income and size of family or economic unit, as compared with the Federal Poverty Guidelines issued by HHS for FY 2020.

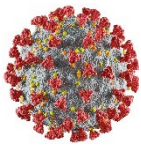
Households missing the number of people in the household or economic unit were included in the "Race not reported" or "Ethnicity not reported" categories because income as a percentage of the Federal Poverty Guidelines could not be calculated without that information.

Chapter 5. Assigned Nutritional Risks

During the eligibility determination and certification processes, WIC staff collect anthropometric, biochemical, medical history, and dietary information from applicants and participants to determine whether they have at least one qualifying nutritional risk criterion for WIC eligibility.

This chapter presents data on the nutritional risks assigned to participants.⁶² For reporting purposes, throughout this chapter the nutritional risk criteria are collapsed into groups of nutritional risks (hereafter referred to as nutritional risks), and these risks are further collapsed into broad nutritional risk categories as defined by FNS: anthropometric, biochemical, clinical/health/medical, dietary, and other risks. Table 5.1 provides an overview of the nutritional risks, broad nutritional risk categories, and the number of risks assigned to participants.

Results presented in this chapter should be interpreted with caution and an understanding of how nutritional risks are documented and analyzed. Participants are deemed to be at nutritional risk if they meet at least one risk criterion; Federal regulations do not require WIC staff to document every nutritional risk criterion a participant meets. Thus, the nutritional risks documented in the MIS do not necessarily reflect all the risks a participant may have. A participant may meet criteria for a higher priority nutritional risk even if it is not captured during the nutrition assessment.



Because of the physical presence waivers implemented by State agencies during the COVID-19 pandemic, most State agencies did not collect anthropometric or hematological data during March and April 2020 Assignment of many nutritional risks depends on these data being collected during an in-person visit or from referral data. For example, the risk hematocrit/hemoglobin below FNS criteria may have been underreported because many participants were unable to provide bloodwork as a result of social distancing requirements. Because the nutritional risks reported in this chapter include data collected during March and April 2020, when physical presence waivers were in effect, nutritional risk reporting may differ from previous years. Therefore, caution should be used when examining nutritional risk reporting trends over time.

Section A of this chapter describes the nutritional risks and their changes over time. Section B examines the number of nutritional risks per participant. Section C discusses the distribution of participants within each broad category of nutritional risk. Section D describes the differences in nutritional risks across participant category, age at certification, race, ethnicity, and migrant farmworker status.⁶³

Table 5.1. Distribution of Participants by Nutritional Risks and Number of Nutritional Risks

Characteristic	Number	Percent
Total Participants	7,036,902	100.0
Anthropometric Risks	3,490,784	49.6
Low weight-for-height/length	378,613	5.4
High weight-for-height/length	2,044,132	29.0
Short stature	538,461	7.7

⁶² For information on actual anthropometric data, see chapter 6; for hematological data, see chapter 7.

⁶³ This chapter includes analyses by migrant farmworker status because some nutritional risks apply only to migrant farmworkers.

Characteristic	Number	Percent
Inappropriate growth/weight gain pattern	628,692	8.9
Low birth weight/premature birth	853,511	12.1
Other anthropometric risks	106,542	1.5
Biochemical Risks	791,309	11.2
Hematocrit/hemoglobin below FNS criteria	786,685	11.2
Other biochemical risks	5,574	< 0.1
Clinical/Health/Medical Risks	1,395,158	19.8
Pregnancy-induced conditions	157,815	2.2
Delivery of low birth weight/premature infant	305,526	4.3
Prior stillbirth/fetal/neonatal death	60,569	0.9
General obstetrical risks	374,118	5.3
Nutrition-related risk conditions	778,794	11.1
Substance abuse	128,715	1.8
Other health risks	123,052	1.7
Dietary Risks	3,789,532	53.9
Failure to meet DGA	883,697	12.6
Inappropriate nutrition practices	2,998,474	42.6
Other Risks	1,930,975	27.4
Regression/transfer/presumptive eligibility	83,440	1.2
Breastfeeding mother and infant dyad	466,232	6.6
Infant of a WIC-eligible mother/mother at risk during pregnancy	1,196,558	17.0
Homelessness/migrancy	36,397	0.5
Other nutritional risks	288,844	4.1
No Risk Reported	82,090	1.2
Number of Nutritional Risks		
1	3,391,157	48.2
2	1,917,590	27.3
3	964,098	13.7
4	425,653	6.0
5	168,796	2.4
6	60,834	0.9
7	20,308	0.3
8	5,377	< 0.1
9	939	< 0.1
10	59	< 0.1

Notes

DGA = Dietary Guidelines for Americans

Because of State agency variation in reporting, national-level statistics could not be produced at the nutritional risk criteria level. Criteria were grouped into nutritional risks, and these risks were categorized into broad nutritional risk categories that align with the risk categories specified by FNS.

A. Nutritional Risk Criteria and Definitions

Prior to 1999, Federal policy permitted each State agency to develop nutritional risk criteria within the broad Federal parameters spelled out in the Child Nutrition Act of 1966 (Pub. L. 89–642, as amended). Each State agency accordingly developed its own set of nutritional risk criteria to determine eligibility. WIC PC reports from 1988 through 1998 reflected these differences in criteria. In 1992, FNS asked IOM (now known as the Health and Medicine Division of the National Academies of Sciences, Engineering,

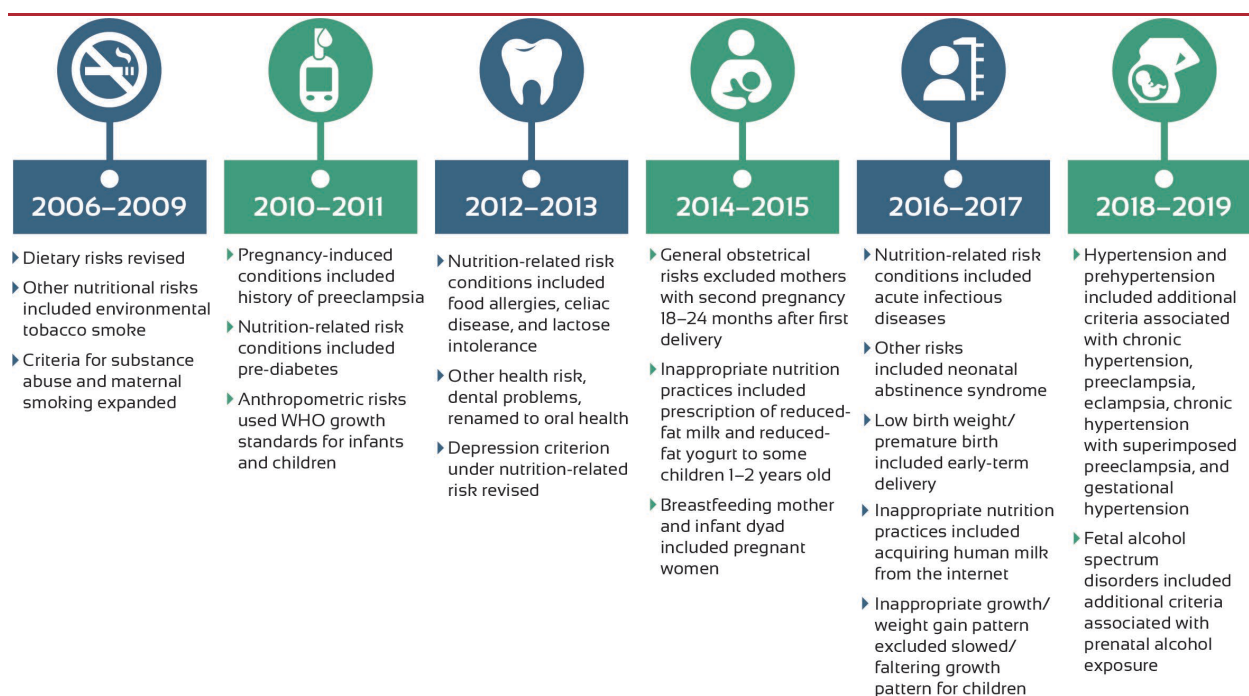
and Medicine) to review the scientific basis for these criteria and recommend definitions and thresholds. IOM then issued a report (1996) with a series of recommendations that were the basis for a policy change that took effect April 1, 1999. State agencies are required to use those criteria and definitions that have been reviewed by the Risk Identification and Selection Collaborative (RISC; a joint National WIC Association/FNS working group) and approved by FNS, although State agencies have the option to implement more stringent thresholds than those specified by FNS. Caution should be exercised when comparing 2020 nutritional risk data with findings from years prior to 2000, before such data were reported using uniform criteria and definitions.

Since 1999, FNS has continued to revise the nutritional risk criteria by issuing WIC policy memoranda that reflect RISC's decisions based on its analysis of the current science. Figure 5.1 provides a timeline that highlights revisions to nutritional risk criteria that affected PC nutritional risk data from 2006 through 2019. One new policy memorandum was issued between PC2018 and PC2020. The changes in nutritional risk criteria in this memorandum may affect comparison between these two sets of data.

A memorandum published in May 2019 (USDA FNS, 2019a) allowed State agencies until October 1, 2020, to implement the changes outlined in the document. This memorandum—

- ▶ Revised hypertension and prehypertension to include chronic hypertension during pregnancy, preeclampsia, eclampsia, chronic hypertension with superimposed preeclampsia, and gestational hypertension
- ▶ Revised criteria for fetal alcohol spectrum disorders to include fetal alcohol syndrome, partial fetal alcohol syndrome, alcohol-related birth defects, alcohol-related neurodevelopmental disorder, and neurobehavioral disorder associated with prenatal alcohol exposure

Figure 5.1. Historical Changes to Nutritional Risk Data Based on WIC Policy Memoranda: 2006–2019



Sources:
 2006–2009: USDA FNS, 2005, 2007; 2010–2011: USDA FNS, 2009, 2011; 2012–2013: USDA FNS, 2013; 2014–2015: USDA FNS, 2015;
 2016–2017: USDA FNS, 2016, 2017; 2018–2020: USDA FNS, 2019a

To be eligible to receive WIC benefits, an applicant must meet at least one nutritional risk criterion. For this report, criteria are grouped into nutritional risks, and these risks are categorized into broad nutritional risk categories that align with the five risk categories specified by FNS regulations (see table 5.2). That is, each nutritional risk (as shown in the table) has at least one more specific criterion that makes up the risk. For example, an infant whose weight-for-length percentile is below the 2.3rd percentile on the CDC growth charts⁶⁴ is assigned the *underweight* or *at risk of being underweight (infants and children)* criterion (not provided in this report), which is included in the *low weight-for-height* nutritional risk and is further grouped in the anthropometric risk category.

Table 5.2. Nutritional Risks by Broad Nutritional Risk Category

Broad Nutritional Risk Category	Nutritional Risks
Anthropometric	- Low weight-for-height/length - High weight-for-height/length (e.g., overweight women, obese children 2–4 years old) - Short stature - Inappropriate growth/weight gain pattern - Low birth weight/Premature birth - Other anthropometric risk (e.g., small or large for gestational age, low head circumference)
Biochemical	- Hematocrit or hemoglobin below FNS criteria - Other biochemical test results that indicate nutritional abnormality (e.g., elevated blood lead levels)
Clinical/Health/Medical	- Pregnancy-induced conditions (e.g., hyperemesis gravidarum, gestational diabetes, history of gestational diabetes, history of preeclampsia) - Delivery of low birth weight or premature infant (e.g., history of preterm or early-term delivery, history of low birth weight) - Prior stillbirth, fetal, or neonatal death - General obstetrical risks (e.g., multiple-fetus births, high parity and young age, short interpregnancy interval, lack of adequate prenatal care, pregnant woman currently breastfeeding) - Nutrition-related risk conditions (e.g., any nutrition-related chronic disease, genetic disorder, infectious disease, gastrointestinal disorders, drug nutrient interactions) - Substance abuse (e.g., drugs, alcohol, tobacco) - Other health risks (e.g., fetal alcohol syndrome, oral health, neonatal abstinence syndrome)
Dietary	- Failure to meet DGA - Inappropriate nutrition practices (e.g., routinely diluting formula, diet very low in calories and/or essential nutrients, lack of sanitary practices in handling breastmilk and/or bottles)
Other risks	- Regression/transfer (nutritional risk unknown)/presumptive eligibility - Breastfeeding mother and infant dyad - Infant of a WIC-eligible mother or mother at risk during pregnancy - Homelessness/migrancy - Other nutritional risks (e.g., recipient of abuse, foster care, exposure to environmental tobacco smoke, woman or infant/child of caregiver with limited ability to make feeding decisions or prepare food)

Notes

DGA = Dietary Guidelines for Americans

Examples of nutritional risk criteria grouped within the nutritional risk are provided in parentheses.

Nutritional risks are sorted by the corresponding FNS nutritional risk number. In tables 5.3–5.9e, the nutritional risks are sorted the same way.

⁶⁴ These CDC growth charts are based on the WHO growth standards for infancy through age 2.

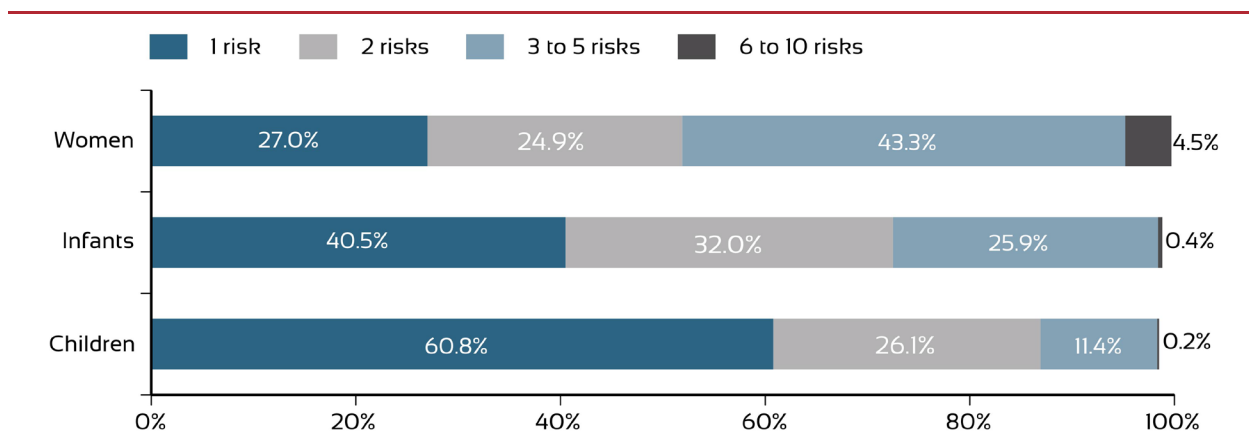
B. Number of Nutritional Risks Reported

To determine nutritional risk, a competent professional authority conducts a nutrition assessment during the WIC certification process. Federal regulations require that at least one nutritional risk criterion is documented at the time of certification; however, certified professional authorities may document multiple nutritional risk criteria per participant. Prior to 2006, State agencies could report only the three highest priority nutritional risks assigned. Beginning in 2006, State agencies could report the 10 highest priority nutritional risks assigned during eligibility determination/recertification.

In tabulating nutritional risks, the study team removed multiple risk criteria within the same nutritional risk. For example, participants were counted as having only one *inappropriate nutrition practices* nutritional risk even if several criteria under that specific risk had been assigned to the participant. Therefore, these results may underestimate the number of nutritional risks participants were assigned.

A majority of participants were assigned one (48.2 percent) or two (27.3 percent) nutritional risks in 2020 (see table 5.3). The percentage of participants assigned one nutritional risk in 2020 was higher than in 2018 (44.2 percent), and the percentage of participants assigned two nutritional risks was slightly lower than in 2018 (30.9 percent).⁶⁵ These findings were consistent across races and ethnicities but not across participant categories. A majority of children and infants (86.9 and 72.5 percent, respectively), versus 51.9 percent of all women, were assigned one or two nutritional risks (see figure 5.2).

Figure 5.2. Percentage of Participants With Nutritional Risks



Note

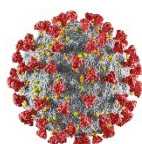
At most, data for 1.5 percent of participants in each category were not reported.

For participants with multiple reported risk criteria within one nutritional risk, only one nutritional risk was coded.

Across the 50 States and the District of Columbia, the percentage of participants with one nutritional risk ranged from 12.2 percent in South Carolina to 65.8 percent in California, and the percentage of participants with two nutritional risks ranged from 18.1 percent in Pennsylvania to 35.5 percent in Maryland. In all but four State agencies (Kansas, Illinois, South Carolina, and Tennessee), the percentage of participants with one nutritional risk was greater than the percentage with two nutritional risks. The percentage of participants for whom one nutritional risk was reported consistently decreased from 2010 through 2018 and increased in 2020 (see appendix table A.16).

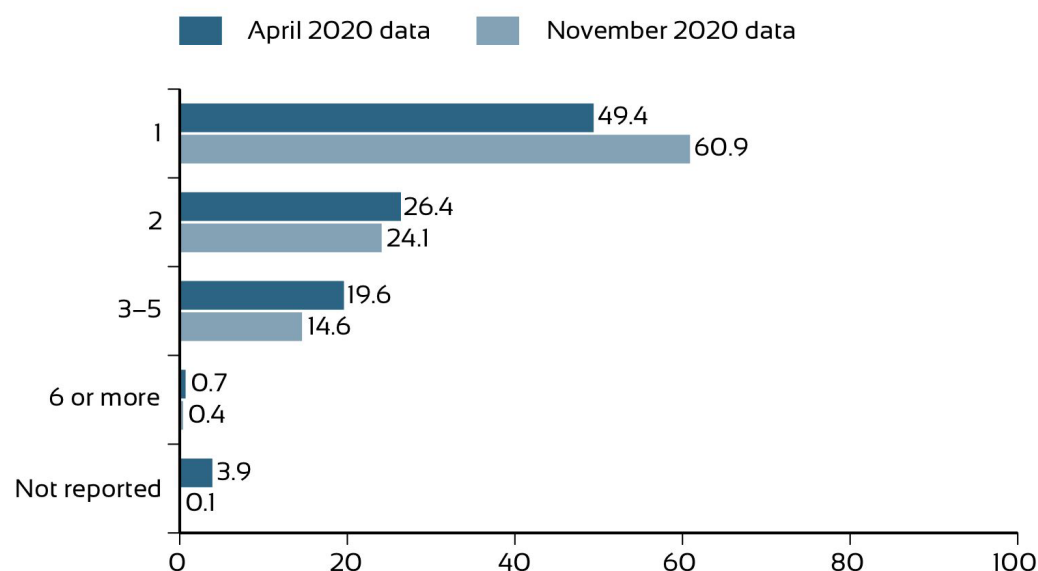
⁶⁵ More participants certified in March and April 2020 were assigned only one nutritional risk than those certified through February 2020; the increase in the total percentage of participants assigned only one nutritional risk may have been the result of policies in place during the COVID-19 pandemic.

Less than half of pregnant women (39.8 percent) had three or more nutritional risks, compared with a greater percentage of breastfeeding and postpartum women (53.7 and 49.3 percent, respectively). Over twice as many infants were assigned three or more nutritional risks than children (26.4 and 11.6 percent, respectively).



The distribution of assigned nutritional risks decreased substantially from April to November 2020 in the nine study State agencies. The number of participants assigned one nutritional risk increased by 11.5 percentage points, and the number of participants assigned three to five risks decreased by 5.0 percentage points between April and November 2020 (see figure COVID19-5.1). The number of participants without a reported nutritional risk assignment decreased by 3.8 percentage points between April and November 2020.

Figure COVID19-5.1. Percentage of Participants with Nutritional Risks in April and November 2020



Notes

Nine study State agencies provided the November 2020 data for this analysis (i.e., PC-style data using the reference month of November 2020); the April 2020 data reflect PC2020 data provided by the nine Study State agencies. Participants may be assigned up to 10 nutritional risks. All differences between April and November 2020 data were statistically significant at $\alpha < 0.05$.

Table 5.3. Distribution of Participants by Number of Nutritional Risks

Characteristic	1	2	3	4	5	6	7	8-10	No Risk Reported	Total Participants
Number of Participants										
Total Participants	3,391,157	1,917,590	964,098	425,653	168,796	60,834	20,308	6,375	82,090	7,036,902
Participant Category										
Pregnant women	180,102	151,242	114,793	62,495	26,941	10,391	3,598	1,251	908	551,721
Breastfeeding women	137,227	144,409	140,539	100,478	53,716	23,726	9,336	3,311	3,280	616,022
Postpartum women	115,542	104,918	97,253	65,816	33,770	13,448	4,458	1,317	1,290	437,814
Total women	432,871	400,569	352,585	228,790	114,427	47,565	17,392	5,879	5,478	1,605,556
Infants	684,844	541,075	292,055	112,465	31,905	6,782	1,181	129	19,038	1,689,474
Children	2,273,442	975,947	319,458	84,398	22,463	6,487	1,735	367	57,574	3,741,872

Characteristic	1	2	3	4	5	6	7	8-10	No Risk Reported	Total Participants
Race										
American Indian	251,573	133,899	57,492	21,635	7,042	2,000	551	147	1,842	476,182
Asian	145,987	66,654	26,638	9,286	2,977	759	177	40	3,083	255,601
Black	704,145	429,599	231,536	108,436	45,253	17,534	6,155	1,982	24,813	1,569,454
Pacific Islander	26,621	17,480	7,899	3,006	954	249	54	14	633	56,910
White	2,004,985	1,135,966	581,138	260,415	104,774	37,750	12,630	3,980	47,428	4,189,068
Two or more races	220,662	120,452	54,208	20,929	7,195	2,362	694	195	4,230	430,927
Race not reported	37,184	13,540	5,186	1,945	600	180	47	17	61	58,760
Ethnicity										
Hispanic/Latino	1,470,527	778,947	364,317	149,805	54,889	18,257	5,970	1,939	22,511	2,867,163
Non-Hispanic/Latino	1,919,236	1,137,974	599,444	275,726	113,881	42,563	14,336	4,436	59,532	4,167,128
Ethnicity not reported	1,394	669	337	122	26	14	2	0	47	2,611
Percent of Participants										
Total Participants	48.2	27.3	13.7	6.0	2.4	0.9	0.3	< 0.1	1.2	100.0
Participant Category										
Pregnant women	32.6	27.4	20.8	11.3	4.9	1.9	0.7	0.2	0.2	100.0
Breastfeeding women	22.3	23.4	22.8	16.3	8.7	3.9	1.5	0.5	0.5	100.0
Postpartum women	26.4	24.0	22.2	15.0	7.7	3.1	1.0	0.3	0.3	100.0
Total women	27.0	24.9	22.0	14.2	7.1	3.0	1.1	0.4	0.3	100.0
Infants	40.5	32.0	17.3	6.7	1.9	0.4	< 0.1	< 0.1	1.1	100.0
Children	60.8	26.1	8.5	2.3	0.6	0.2	< 0.1	< 0.1	1.5	100.0
Race										
American Indian	52.8	28.1	12.1	4.5	1.5	0.4	0.1	< 0.1	0.4	100.0
Asian	57.1	26.1	10.4	3.6	1.2	0.3	< 0.1	< 0.1	1.2	100.0
Black	44.9	27.4	14.8	6.9	2.9	1.1	0.4	0.1	1.6	100.0
Pacific Islander	46.8	30.7	13.9	5.3	1.7	0.4	< 0.1	< 0.1	1.1	100.0
White	47.9	27.1	13.9	6.2	2.5	0.9	0.3	< 0.1	1.1	100.0
Two or more races	51.2	28.0	12.6	4.9	1.7	0.5	0.2	< 0.1	1.0	100.0
Race not reported	63.3	23.0	8.8	3.3	1.0	0.3	< 0.1	< 0.1	0.1	100.0
Ethnicity										
Hispanic/Latino	51.3	27.2	12.7	5.2	1.9	0.6	0.2	< 0.1	0.8	100.0
Non-Hispanic/Latino	46.1	27.3	14.4	6.6	2.7	1.0	0.3	0.1	1.4	100.0
Ethnicity not reported	53.4	25.6	12.9	4.7	1.0	0.5	< 0.1	0.0	1.8	100.0

Note

Percents may not add to 100.0 because of rounding.

C. Broad Nutritional Risk Categories

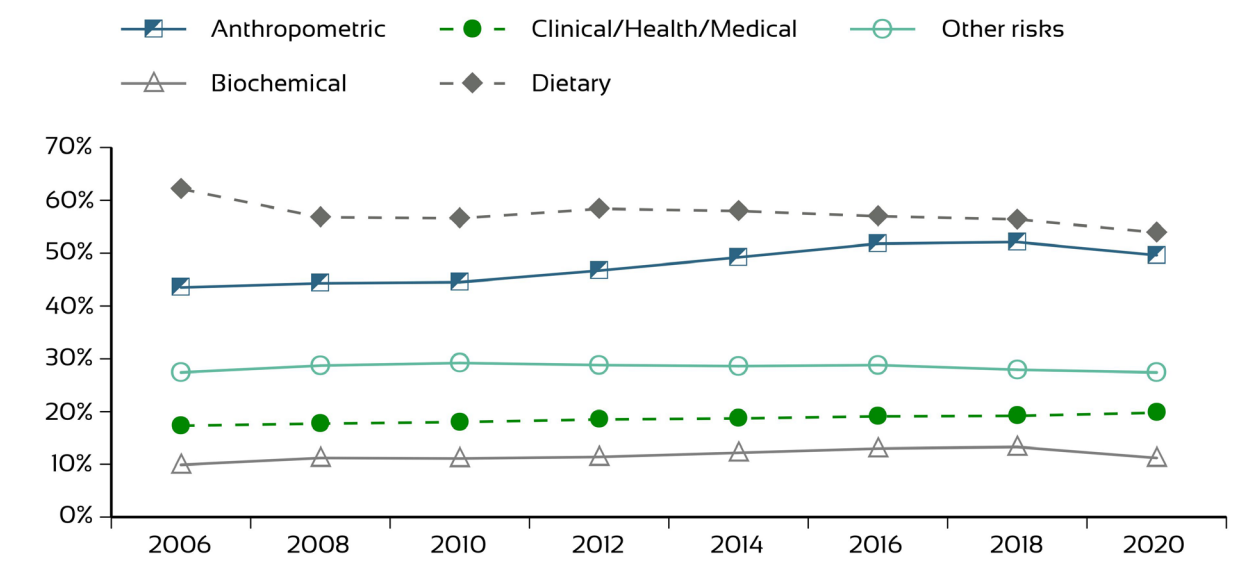
Similar to previous years, in 2020, the most commonly assigned broad nutritional risk categories reported were dietary risks and anthropometric risks, which were assigned to 53.9 and 49.6 percent of participants, respectively (see table 5.4).

Since 2006, when State agencies began reporting up to 10 nutritional risk criteria per participant, risk categories have been assigned at similar rates (see figure 5.3 and appendix table A.17). The greatest

change has been for anthropometric risks, which increased from 43.5 percent of participants in 2006 to 51.8 percent of participants in 2016 and decreased to 49.6 percent of participants in 2020.

In 2020, 1.2 percent of participants did not have a nutritional risk assignment compared with less than 0.5 percent of participants with no nutritional risk reported from 2008 through 2018. In 2020, more participants were assigned dietary and other risks (53.9 and 27.4 percent, respectively) than in 2018 (56.4 and 25.5 percent, respectively). Since 2006, the percentage of participants assigned biochemical risks increased from 9.9 percent to a peak of 13.3 percent in 2018 and decreased to 11.2 percent in 2020.

Figure 5.3. Percentage of Participants by Broad Nutritional Risk Categories Reported: 2006–2020



Notes

For consistency, this figure includes data only from 2006 to 2018. Prior to 2006, State agencies could report only the three highest priority nutritional risks assigned.

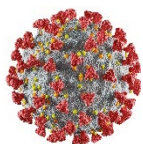
At most, data for 1.9 percent of participants each year were not reported.

Among women, anthropometric risks and clinical/health/medical risks were most commonly assigned (63.7 and 57.8 percent, respectively; see table 5.4). Dietary risks were most commonly reported for children (72.3 percent), and other risks were most commonly reported for infants (73.2 percent).⁶⁶

Across racial and ethnic groups, nutritional risk assignments varied for all categories except other risks. Anthropometric risk reporting was lowest among Asian participants (40.2 percent) and ranged from 43.5 to 53.3 percent among other races. Biochemical risk reporting was highest among Black participants (16.8 percent) and ranged from 8.0 to 10.0 percent among other races. Dietary risk reporting was highest among American Indian participants (64.1 percent) and ranged from 49.1 to 61.3 percent among other races.

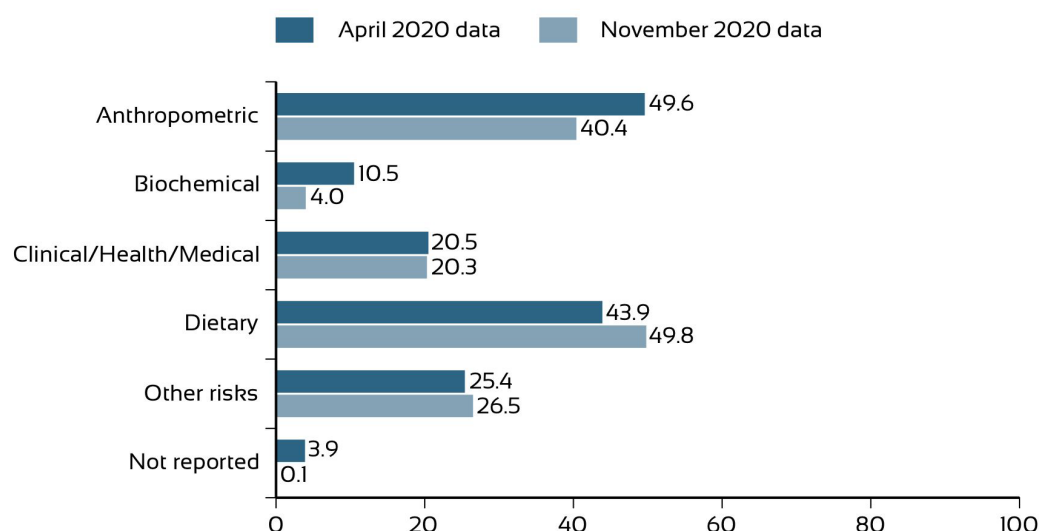
Non-Hispanic/Latino participants had lower prevalence of all nutritional risks than Hispanic/Latino participants, except dietary risks. Dietary risks were reported for 58.7 percent of Hispanic/Latino participants compared with 50.5 percent of non-Hispanic/Latino participants.

⁶⁶ Other risks include infant of a WIC-eligible mother/mother at risk during pregnancy.



Compared with April, in November 2020, fewer participants in the nine study State agencies were assigned anthropometric and biochemical nutritional risks (9.2 and 6.5 percentage points, respectively; see figure COVID19-5.2). The proportion of participants receiving dietary and other risk assignments increased from April to November 2020 (5.9 and 1.2 percentage points, respectively). Given the difficulty of obtaining anthropometric and hematological measurements during the pandemic, and that these measurements were deferred as part of the physical presence waiver, the differences are expected.

Figure COVID19-5.2. Percentage of Participants by Broad Nutritional Risk Category in April and November 2020



Notes

Nine study State agencies provided the November 2020 data for this analysis (i.e., PC-style data using the reference month of November 2020); the April 2020 data reflect PC2020 data provided by the nine Study State agencies.

Participants may be assigned up to 10 nutritional risks.

All differences between April and November 2020 data were statistically significant at $\alpha < 0.05$.

Table 5.4. Distribution of Participants With Broad Nutritional Risk Category Reported

Characteristic	Anthropometric	Biochemical	Clinical/ Health/ Medical	Dietary	Other Risks	No Risk Reported	Total Participants
Number of Participants							
Total Participants	3,490,784	791,309	1,395,158	3,789,532	1,930,975	82,090	7,036,902
Participant Category							
Pregnant women	372,586	44,000	300,832	202,741	54,129	908	551,721
Breastfeeding women	375,885	168,240	348,172	185,694	337,879	3,280	616,022
Postpartum women	274,267	134,641	279,670	146,909	50,085	1,290	437,814
Total women	1,022,738	346,882	928,674	535,345	442,094	5,478	1,605,556
Infants	900,342	8,710	98,168	548,668	1,236,421	19,038	1,689,474
Children	1,567,704	435,717	368,316	2,705,519	252,460	57,574	3,741,872

Characteristic	Anthropometric	Biochemical	Clinical/ Health/ Medical	Dietary	Other Risks	No Risk Reported	Total Participants
Race							
American Indian	207,314	38,171	83,657	305,362	110,574	1,842	476,182
Asian	102,685	24,037	39,660	156,751	54,221	3,083	255,601
Black	836,070	263,976	310,184	770,311	443,936	24,813	1,569,454
Pacific Islander	29,634	5,225	9,176	32,273	15,167	633	56,910
White	2,097,152	420,017	881,025	2,233,798	1,167,707	47,428	4,189,068
Two or more races	201,637	37,998	64,184	249,591	121,764	4,230	430,927
Race not reported	16,292	1,885	7,271	41,446	17,606	61	58,760
Ethnicity							
Hispanic/Latino	1,335,409	288,781	505,622	1,683,285	727,743	22,511	2,867,163
Non-Hispanic/Latino	2,154,643	502,403	889,318	2,105,380	1,201,248	59,532	4,167,128
Ethnicity not reported	732	125	218	867	1,984	47	2,611
Percent of Participants							
Total Participants	49.6	11.2	19.8	53.9	27.4	1.2	100.0
Participant Category							
Pregnant women	67.5	8.0	54.5	36.7	9.8	0.2	100.0
Breastfeeding women	61.0	27.3	56.5	30.1	54.8	0.5	100.0
Postpartum women	62.6	30.8	63.9	33.6	11.4	0.3	100.0
Total women	63.7	21.6	57.8	33.3	27.5	0.3	100.0
Infants	53.3	0.5	5.8	32.5	73.2	1.1	100.0
Children	41.9	11.6	9.8	72.3	6.7	1.5	100.0
Race							
American Indian	43.5	8.0	17.6	64.1	23.2	0.4	100.0
Asian	40.2	9.4	15.5	61.3	21.2	1.2	100.0
Black	53.3	16.8	19.8	49.1	28.3	1.6	100.0
Pacific Islander	52.1	9.2	16.1	56.7	26.7	1.1	100.0
White	50.1	10.0	21.0	53.3	27.9	1.1	100.0
Two or more races	46.8	8.8	14.9	57.9	28.3	1.0	100.0
Race not reported	27.7	3.2	12.4	70.5	30.0	0.1	100.0
Ethnicity							
Hispanic/Latino	46.6	10.1	17.6	58.7	25.4	0.8	100.0
Non-Hispanic/Latino	51.7	12.1	21.3	50.5	28.8	1.4	100.0
Ethnicity not reported	28.0	4.8	8.3	33.2	76.0	1.8	100.0

Notes

State agencies could report up to 10 nutritional risk criteria for each participant. This table examines all risk criteria reported for every participant. When multiple risk criteria within the same nutritional risk were reported for one person, these criteria were combined and counted one time to accurately calculate the number and percentage of participants assigned a nutritional risk or broad risk category. Because multiple risks are reported, rows total more than 100.0 percent.

D. Nutritional Risks by Demographic Characteristics

Some nutritional risks were more commonly assigned to specific participant categories. For example, the biochemical nutritional risk *hematocrit/hemoglobin below FNS criteria* was assigned predominantly to women (21.6 percent) versus infants and children (0.5 and 11.5 percent, respectively; see table 5.5).

Very few infants have this nutritional risk because hematological tests are not required for infants younger than 9 months (see chapter 7 for additional detail on hematological data).

High weight-for-height/length was more commonly reported for children than infants (25.2 and 17.7 percent, respectively). Chapter 6 of this report discusses weight-for-height as calculated by height and weight data provided in the PC data. The number of participants calculated as having *high weight-for-height/length* may be smaller than the number assigned that nutritional risk because this risk may be assigned to infants with obese biological parents (i.e., those with a body mass index [BMI] of more than 30.0) and others who are deemed to be at risk for that condition.

Inappropriate nutrition practices were more commonly reported for children (56.7 percent) than infants (42.6 percent) and women (20.5 percent). Many of the criteria included in this risk (see table 5.2) relate to the handling of breastmilk and infant formula, which could explain the large number of infants assigned this risk.

Key findings for women by age (see table 5.6a), race (see tables 5.7a–c), and ethnicity (see tables 5.8a–c) follow:

- ▶ The percentage of women assigned *high weight-for-height* was greater for older women; 25.4 percent of women younger than 15 were assigned this risk compared with 57.4 percent of women 35 and older. The opposite trend occurred for assignment of *low weight-for-height/length* (7.9 percent of women younger than 15 and 1.1 percent of women 35 and older). Similarly, *general obstetrical risks* was assigned to 93.9 percent of women 15 and younger compared with about one-fifth of women 18 and older. The risk of *general obstetrical risks* includes the criterion “pregnancy at a young age,” which applies only to women 17 and younger.
- ▶ Four nutritional risk categories had the most notable differences by race.
 - *High weight-for-height* was assigned less often for Asian women in all participant categories (30–32 percent across categories) compared with women of other races.
 - *Inappropriate growth/weight gain pattern* was assigned less often for American Indian and Asian pregnant women (35.3 and 35.7 percent, respectively), breastfeeding women (20.0 and 20.6 percent, respectively), and postpartum women (19.9 and 19.6 percent, respectively) than women of other races.
 - *Substance abuse* was assigned most often for White women (4.8–14.3 percent across categories). Breastfeeding women of all races had lower rates of *substance abuse* than pregnant or postpartum women.
 - *Hematocrit/hemoglobin below FNS criteria* was assigned more often for Black women (15.8–43.7 percent across categories) than women of other races in each category.
- ▶ Non-Hispanic/Latino women were assigned the risks of *inappropriate growth/weight gain pattern* and *substance abuse* more often and the risk of *failure to meet DGA (Dietary Guidelines for Americans)* less often than Hispanic/Latino women.

Key findings for infants by age (see table 5.6b), race (see table 5.7d), and ethnicity (see table 5.8d) follow:

- ▶ Older infants were less likely than younger infants to be assigned *low weight-for-height/length* (1.7 percent of infants aged 9 to 11 months versus 9.9 percent of infants aged 0 to 3 months). The risks of *low birth weight/premature* and being an *infant of a WIC-eligible mother/mother at risk during pregnancy* were also less likely among older infants. About 70 percent of infants aged 0 to 3 months were assigned the risk of *infant of a WIC-eligible mother/mother at risk during pregnancy*, and the proportion decreased approximately 10–20 percentage points for each successive infant age category.
- ▶ *High weight-for-height/length* was assigned to 17.7 percent of infants overall, ranging from 9.4 percent of Asian infants to 25.5 percent of Pacific Islander infants. *Low birth weight/premature birth* was assigned to 29.8 percent of all infants and ranged from 22.8 percent of American Indian infants to 34.0 percent of Black infants. The risk of *inappropriate nutrition practices* was assigned to 32.5 percent of infants overall but 41.2 percent of American Indian infants—a difference of about 9 percentage points.
- ▶ Nutritional risk assignments did not vary by more than about 4 percentage points between Hispanic/Latino infants and non-Hispanic/Latino infants, except for the risk of *inappropriate nutrition practices*. Nearly 37 percent of Hispanic/Latino infants were assigned this risk compared with 29.7 percent of non-Hispanic/Latino infants.

Key findings for children by age (see table 5.6c), race (see table 5.7e), and ethnicity (see table 5.8e) follow:

- ▶ *High weight-for height/length* was assigned to 17.9 percent of 1-year-old children and more than 28 percent of 2-, 3-, and 4-year-old children. Conversely, *hematocrit/hemoglobin below FNS criteria* was assigned less frequently among older child participants compared to 1-year-old children (13.8 percent of children aged 1 versus 6.7 percent of children aged 4). The risk of *inappropriate nutrition practices* was also assigned less frequently with age among children (69.1 percent of 1-year-old children versus 43.9 percent of 4-year-old children).
- ▶ *Low weight-for-height/length* was assigned to 4.7 percent of all children; this risk was assigned at the highest rate to Asian children (7.4 percent). *Hematocrit/hemoglobin below FNS criteria* was assigned to 17.7 percent of Black children compared with 7.2 percent of American Indian children. *Inappropriate nutrition practices* was assigned to 56.7 percent of all children and ranged from 52.6 percent of Black children to 66.2 percent of American Indian children.
- ▶ Nutritional risk assignments did not vary widely between Hispanic/Latino children and non-Hispanic/Latino children.

Across participant categories, migrant farmworkers were approximately 80 percent more likely than participants who were not migrant farmworkers to be assigned the risk of *homelessness/migrancy* (see tables 5.9a–e). However, because migrant farmworkers constitute such a small percentage of the overall WIC population, a greater percentage of participants who were not migrant farmworkers were assigned this risk in each category.

Table 5.5. Distribution of Participants With Nutritional Risks by Participant Category

Characteristic	Pregnant Women	Breastfeeding Women	Postpartum Women	Total Women Participants	Infants	Children	Total Participants
Number of Participants							
Anthropometric	372,586	375,885	274,267	1,022,738	900,342	1,567,704	3,490,784
Low weight-for-height/length	15,645	16,216	13,544	45,405	157,595	175,613	378,613
High weight-for-height/length	276,854	306,688	218,809	802,351	298,312	943,469	2,044,132
Short stature	0	5	2	7	208,772	329,682	538,461
Inappropriate growth/weight gain pattern	250,666	188,511	146,233	585,410	27,201	16,081	628,692
Low birth weight/premature birth	0	0	0	0	503,762	349,749	853,511
Other anthropometric risks	0	2	0	2	94,072	12,468	106,542
Biochemical	44,000	168,240	134,641	346,882	8,710	435,717	791,309
Hematocrit/hemoglobin below FNS criteria	43,976	168,209	134,621	346,807	8,671	431,207	786,685
Other biochemical risks	28	52	34	114	44	5,416	5,574
Clinical/Health/Medical	300,832	348,172	279,670	928,674	98,168	368,316	1,395,158
Pregnancy-induced conditions	44,155	65,754	47,905	157,815	0	0	157,815
Delivery of low birth weight/premature infant	67,091	131,761	106,673	305,526	0	0	305,526
Prior stillbirth/fetal/neonatal death	35,037	8,999	16,533	60,569	0	0	60,569
General obstetrical risks	152,949	124,470	96,699	374,118	0	0	374,118
Nutrition-related risk conditions	89,980	161,901	129,715	381,596	92,570	304,629	778,794
Substance abuse	53,382	25,339	49,777	128,499	216	0	128,715
Other health risks	18,573	14,588	11,522	44,683	6,369	72,000	123,052
Dietary	202,741	185,694	146,909	535,345	548,668	2,705,519	3,789,532
Failure to meet DGA	84,528	82,939	51,260	218,727	454	664,515	883,697
Inappropriate nutrition practices	121,061	110,255	97,329	328,646	548,355	2,121,473	2,998,474
Other Risks	54,129	337,879	50,085	442,094	1,236,421	252,460	1,930,975
Regression/transfer/presumptive eligibility	5,708	4,729	4,428	14,865	21,501	47,074	83,440
Breastfeeding mother and infant dyad	7,921	327,182	21,653	356,756	106,368	3,107	466,232
Infant of a WIC-eligible mother/ mother at risk during pregnancy	0	0	0	0	1,150,206	46,352	1,196,558
Homelessness/migrancy	3,686	3,040	2,362	9,088	8,202	19,107	36,397
Other nutritional risks	38,171	12,303	22,783	73,257	69,872	145,714	288,844
No Risk Reported	908	3,280	1,290	5,478	19,038	57,574	82,090
Percent of Participants							
Anthropometric	67.5	61.0	62.6	63.7	53.3	41.9	49.6
Low weight-for-height/length	2.8	2.6	3.1	2.8	9.3	4.7	5.4
High weight-for-height/length	50.2	49.8	50.0	50.0	17.7	25.2	29.0
Short stature	0.0	< 0.1	< 0.1	< 0.1	12.4	8.8	7.7
Inappropriate growth/weight gain pattern	45.4	30.6	33.4	36.5	1.6	0.4	8.9
Low birth weight/premature birth	0.0	0.0	0.0	0.0	29.8	9.3	12.1
Other anthropometric risks	0.0	< 0.1	0.0	< 0.1	5.6	0.3	1.5

Characteristic	Pregnant Women	Breastfeeding Women	Postpartum Women	Total Women Participants	Infants	Children	Total Participants
Biochemical	8.0	27.3	30.8	21.6	0.5	11.6	11.2
Hematocrit/hemoglobin below FNS criteria	8.0	27.3	30.7	21.6	0.5	11.5	11.2
Other biochemical risks	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1
Clinical/Health/Medical	54.5	56.5	63.9	57.8	5.8	9.8	19.8
Pregnancy-induced conditions	8.0	10.7	10.9	9.8	0.0	0.0	2.2
Delivery of low birth weight/premature infant	12.2	21.4	24.4	19.0	0.0	0.0	4.3
Prior stillbirth/fetal/neonatal death	6.4	1.5	3.8	3.8	0.0	0.0	0.9
General obstetrical risks	27.7	20.2	22.1	23.3	0.0	0.0	5.3
Nutrition-related risk conditions	16.3	26.3	29.6	23.8	5.5	8.1	11.1
Substance abuse	9.7	4.1	11.4	8.0	< 0.1	0.0	1.8
Other health risks	3.4	2.4	2.6	2.8	0.4	1.9	1.7
Dietary	36.7	30.1	33.6	33.3	32.5	72.3	53.9
Failure to meet DGA	15.3	13.5	11.7	13.6	< 0.1	17.8	12.6
Inappropriate nutrition practices	21.9	17.9	22.2	20.5	32.5	56.7	42.6
Other Risks	9.8	54.8	11.4	27.5	73.2	6.7	27.4
Regression/transfer/presumptive eligibility	1.0	0.8	1.0	0.9	1.3	1.3	1.2
Breastfeeding mother and infant dyad	1.4	53.1	4.9	22.2	6.3	< 0.1	6.6
Infant of a WIC-eligible mother/ mother at risk during pregnancy	0.0	0.0	0.0	0.0	68.1	1.2	17.0
Homelessness/migrancy	0.7	0.5	0.5	0.6	0.5	0.5	0.5
Other nutritional risks	6.9	2.0	5.2	4.6	4.1	3.9	4.1
No Risk Reported	0.2	0.5	0.3	0.3	1.1	1.5	1.2

Notes

DGA = Dietary Guidelines for Americans

State agencies could report up to 10 nutritional risk criteria for each participant.

Table 5.6a. Distribution of Women With Nutritional Risks by Age at Certification

Characteristic	Younger Than 15	15–17 Years	18–34 Years	35 Years or Older	Age Not Reported	Total Women Participants
Number of Women Participants						
Anthropometric	898	19,988	859,849	141,673	330	1,022,738
Low weight-for-height/length	133	2,395	40,437	2,420	20	45,405
High weight-for-height/length	428	10,773	666,504	124,389	257	802,351
Short stature	1	3	3	0	0	7
Inappropriate growth/weight gain pattern	627	13,727	498,820	72,085	151	585,410
Other anthropometric risks	0	0	2	0	0	2
Biochemical	404	8,254	291,836	46,266	122	346,882
Hematocrit/hemoglobin below FNS criteria	404	8,252	291,785	46,244	122	346,807
Other biochemical risks	0	2	84	28	0	114

Characteristic	Younger Than 15	15-17 Years	18-34 Years	35 Years or Older	Age Not Reported	Total Women Participants
Clinical/Health/Medical	1,601	31,756	760,370	134,637	310	928,674
Pregnancy-induced conditions	40	1,238	122,168	34,315	54	157,815
Delivery of low birth weight/premature infant	211	4,490	252,696	48,062	67	305,526
Prior stillbirth/fetal/neonatal death	7	302	47,228	12,986	46	60,569
General obstetrical risks	1,579	30,318	297,618	44,494	109	374,118
Nutrition-related risk conditions	243	5,464	312,432	63,302	154	381,596
Substance abuse	44	1,493	111,072	15,851	39	128,499
Other health risks	20	630	37,179	6,847	7	44,683
Dietary	470	10,751	456,272	67,684	168	535,345
Failure to meet DGA	98	2,852	186,940	28,729	108	218,727
Inappropriate nutrition practices	386	8,123	279,756	40,309	72	328,646
Other Risks	627	12,867	366,870	61,465	264	442,094
Regression/transfer/presumptive eligibility	11	302	12,963	1,420	169	14,865
Breastfeeding mother and infant dyad	231	5,894	296,579	53,957	95	356,756
Homelessness/migrancy	8	153	7,537	1,387	3	9,088
Other nutritional risks	410	7,204	59,619	5,999	25	73,257
No Risk Reported	5	94	4,615	754	10	5,478
Percent of Women Participants						
Anthropometric	53.4	56.2	63.7	65.3	63.1	63.7
Low weight-for-height/length	7.9	6.7	3.0	1.1	3.8	2.8
High weight-for-height/length	25.4	30.3	49.3	57.4	49.1	50.0
Short stature	< 0.1	< 0.1	< 0.1	0.0	0.0	< 0.1
Inappropriate growth/weight gain pattern	37.3	38.6	36.9	33.2	28.9	36.5
Other anthropometric risks	0.0	0.0	< 0.1	0.0	0.0	< 0.1
Biochemical	24.0	23.2	21.6	21.3	23.3	21.6
Hematocrit/hemoglobin below FNS criteria	24.0	23.2	21.6	21.3	23.3	21.6
Other biochemical risks	0.0	< 0.1	< 0.1	< 0.1	0.0	< 0.1
Clinical/Health/Medical	95.2	89.2	56.3	62.1	59.3	57.8
Pregnancy-induced conditions	2.4	3.5	9.0	15.8	10.3	9.8
Delivery of low birth weight/premature infant	12.5	12.6	18.7	22.2	12.8	19.0
Prior stillbirth/fetal/neonatal death	0.4	0.8	3.5	6.0	8.8	3.8
General obstetrical risks	93.9	85.2	22.0	20.5	20.8	23.3
Nutrition-related risk conditions	14.4	15.4	23.1	29.2	29.4	23.8
Substance abuse	2.6	4.2	8.2	7.3	7.5	8.0
Other health risks	1.2	1.8	2.8	3.2	1.3	2.8
Dietary	27.9	30.2	33.8	31.2	32.1	33.3
Failure to meet DGA	5.8	8.0	13.8	13.2	20.7	13.6
Inappropriate nutrition practices	22.9	22.8	20.7	18.6	13.8	20.5

Characteristic	Younger Than 15	15-17 Years	18-34 Years	35 Years or Older	Age Not Reported	Total Women Participants
Other Risks	37.3	36.2	27.2	28.3	50.5	27.5
Regression/transfer/presumptive eligibility	0.7	0.8	1.0	0.7	32.3	0.9
Breastfeeding mother and infant dyad	13.7	16.6	22.0	24.9	18.2	22.2
Homelessness/migrancy	0.5	0.4	0.6	0.6	0.6	0.6
Other nutritional risks	24.4	20.2	4.4	2.8	4.8	4.6
No Risk Reported	0.3	0.3	0.3	0.3	1.9	0.3

Notes

DGA = Dietary Guidelines for Americans

State agencies could report up to 10 nutritional risk criteria for each participant.

Table 5.6b. Distribution of Infants With Nutritional Risks by Age at Certification

Characteristic	0-3 Months	4-5 Months	6-8 Months	9-11 Months	Age Not Reported	Total Infant Participants
Number of Infant Participants						
Anthropometric	819,764	27,034	31,222	22,139	183	900,342
Low weight-for-height/length	151,835	2,801	2,137	786	35	157,595
High weight-for-height/length	263,726	10,386	14,234	9,899	67	298,312
Short stature	191,881	6,513	6,244	4,072	62	208,772
Inappropriate growth/weight gain pattern	26,425	325	311	126	14	27,201
Low birth weight/premature birth	460,426	15,277	16,661	11,332	66	503,762
Other anthropometric risks	85,647	2,858	3,251	2,300	16	94,072
Biochemical	1,872	64	1,814	4,938	22	8,710
Hematocrit/hemoglobin below FNS criteria	1,853	63	1,813	4,920	22	8,671
Other biochemical risks	19	1	1	23	0	44
Clinical/Health/Medical	84,362	5,006	5,072	3,668	59	98,168
Nutrition-related risk conditions	79,198	4,868	4,876	3,574	53	92,570
Substance abuse	216	0	0	0	0	216
Other health risks	5,821	185	240	116	7	6,369
Dietary	467,290	21,201	31,803	28,167	207	548,668
Failure to meet DGA	119	0	0	324	11	454
Inappropriate nutrition practices	467,263	21,201	31,803	27,883	205	548,355
Other Risks	1,155,787	35,286	32,729	12,219	400	1,236,421
Regression/transfer/presumptive eligibility	14,095	2,801	2,983	1,466	156	21,501
Breastfeeding mother and infant dyad	103,490	1,264	1,244	348	22	106,368
Infant of a WIC-eligible mother/ mother at risk during pregnancy	1,083,121	30,765	26,926	9,027	367	1,150,206
Homelessness/migrancy	7,484	263	229	225	1	8,202
Other nutritional risks	59,504	3,337	4,877	2,141	12	69,872
No Risk Reported	18,385	188	269	192	4	19,038

Characteristic	0-3 Months	4-5 Months	6-8 Months	9-11 Months	Age Not Reported	Total Infant Participants
Percent of Infant Participants						
Anthropometric	53.5	51.9	53.7	47.2	42.9	53.3
Low weight-for-height/length	9.9	5.4	3.7	1.7	8.2	9.3
High weight-for-height/length	17.2	19.9	24.5	21.1	15.7	17.7
Short stature	12.5	12.5	10.7	8.7	14.5	12.4
Inappropriate growth/weight gain pattern	1.7	0.6	0.5	0.3	3.3	1.6
Low birth weight/premature birth	30.1	29.3	28.6	24.2	15.5	29.8
Other anthropometric risks	5.6	5.5	5.6	4.9	3.7	5.6
Biochemical	0.1	0.1	3.1	10.5	5.2	0.5
Hematocrit/hemoglobin below FNS criteria	0.1	0.1	3.1	10.5	5.2	0.5
Other biochemical risks	< 0.1	< 0.1	< 0.1	< 0.1	0.0	< 0.1
Clinical/Health/Medical	5.5	9.6	8.7	7.8	13.8	5.8
Nutrition-related risk conditions	5.2	9.3	8.4	7.6	12.4	5.5
Substance abuse	< 0.1	0.0	0.0	0.0	0.0	< 0.1
Other health risks	0.4	0.4	0.4	0.2	1.6	0.4
Dietary	30.5	40.7	54.7	60.1	48.5	32.5
Failure to meet DGA	< 0.1	0.0	0.0	0.7	2.6	< 0.1
Inappropriate nutrition practices	30.5	40.7	54.7	59.5	48.0	32.5
Other Risks	75.4	67.8	56.3	26.1	93.7	73.2
Regression/transfer/presumptive eligibility	0.9	5.4	5.1	3.1	36.5	1.3
Breastfeeding mother and infant dyad	6.8	2.4	2.1	0.7	5.2	6.3
Infant of a WIC-eligible mother/mother at risk during pregnancy	70.7	59.1	46.3	19.3	85.9	68.1
Homelessness/migrancy	0.5	0.5	0.4	0.5	0.2	0.5
Other nutritional risks	3.9	6.4	8.4	4.6	2.8	4.1
No Risk Reported	1.2	0.4	0.5	0.4	0.9	1.1

Notes

DGA = Dietary Guidelines for Americans

State agencies could report up to 10 nutritional risk criteria for each participant.

Table 5.6c. Distribution of Children With Nutritional Risks by Age at Certification

Characteristic	1 Year	2 Years	3 Years	4 Years	Age Not Reported	Total Child Participants
Number of Child Participants						
Anthropometric	619,339	384,930	354,472	208,473	490	1,567,704
Low weight-for-height/length	26,121	61,329	56,654	31,419	89	175,613
High weight-for-height/length	253,852	268,435	262,123	158,772	287	943,469
Short stature	145,448	85,696	65,233	33,166	138	329,682
Inappropriate growth/weight gain pattern	5,318	4,559	4,016	2,175	13	16,081
Low birth weight/premature birth	324,603	17,703	5,914	1,482	47	349,749
Other anthropometric risks	10,853	788	570	251	6	12,468

Characteristic	1 Year	2 Years	3 Years	4 Years	Age Not Reported	Total Child Participants
Biochemical	197,244	118,580	84,549	35,224	120	435,717
Hematocrit/hemoglobin below FNS criteria	195,771	116,983	83,555	34,778	120	431,207
Other biochemical risks	1,840	1,927	1,165	484	0	5,416
Clinical/Health/Medical	117,290	93,251	96,109	61,529	138	368,316
Nutrition-related risk conditions	111,031	79,013	72,182	42,289	113	304,629
Substance abuse	0	0	0	0	0	0
Other health risks	7,099	16,147	27,046	21,680	27	72,000
Dietary	1,014,408	709,128	612,139	369,142	702	2,705,519
Failure to meet DGA	40,374	236,340	234,918	152,762	121	664,515
Inappropriate nutrition practices	980,612	505,489	406,763	227,961	648	2,121,473
Other Risks	106,422	61,651	53,659	30,357	370	252,460
Regression/transfer/presumptive eligibility	15,991	12,656	11,332	6,749	346	47,074
Breastfeeding mother and infant dyad	1,800	567	499	240	1	3,107
Infant of a WIC-eligible mother/mother at risk during pregnancy	28,911	8,042	6,369	3,015	15	46,352
Homelessness/migrancy	6,925	4,953	4,489	2,737	3	19,107
Other nutritional risks	56,953	37,424	32,794	18,513	30	145,714
No Risk Reported	28,408	12,792	11,664	4,633	77	57,574
Percent of Child Participants						
Anthropometric	43.6	40.3	41.9	40.2	47.4	41.9
Low weight-for-height/length	1.8	6.4	6.7	6.1	8.6	4.7
High weight-for-height/length	17.9	28.1	30.9	30.6	27.8	25.2
Short stature	10.3	9.0	7.7	6.4	13.4	8.8
Inappropriate growth/weight gain pattern	0.4	0.5	0.5	0.4	1.3	0.4
Low birth weight/premature birth	22.9	1.9	0.7	0.3	4.5	9.3
Other anthropometric risks	0.8	< 0.1	< 0.1	< 0.1	0.6	0.3
Biochemical	13.9	12.4	10.0	6.8	11.6	11.6
Hematocrit/hemoglobin below FNS criteria	13.8	12.2	9.9	6.7	11.6	11.5
Other biochemical risks	0.1	0.2	0.1	< 0.1	0.0	0.1
Clinical/Health/Medical	8.3	9.8	11.3	11.9	13.4	9.8
Nutrition-related risk conditions	7.8	8.3	8.5	8.2	10.9	8.1
Substance abuse	0.0	0.0	0.0	0.0	0.0	0.0
Other health risks	0.5	1.7	3.2	4.2	2.6	1.9
Dietary	71.5	74.2	72.3	71.2	68.0	72.3
Failure to meet DGA	2.8	24.7	27.7	29.4	11.7	17.8
Inappropriate nutrition practices	69.1	52.9	48.0	43.9	62.7	56.7

Characteristic	1 Year	2 Years	3 Years	4 Years	Age Not Reported	Total Child Participants
Other Risks	7.5	6.4	6.3	5.9	35.8	6.7
Regression/transfer/presumptive eligibility	1.1	1.3	1.3	1.3	33.5	1.3
Breastfeeding mother and infant dyad	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Infant of a WIC-eligible mother/mother at risk during pregnancy	2.0	0.8	0.8	0.6	1.5	1.2
Homelessness/migrancy	0.5	0.5	0.5	0.5	0.3	0.5
Other nutritional risks	4.0	3.9	3.9	3.6	2.9	3.9
No Risk Reported	2.0	1.3	1.4	0.9	7.5	1.5

Notes

DGA = Dietary Guidelines for Americans

State agencies could report up to 10 nutritional risk criteria for each participant.

Table 5.7a. Distribution of Pregnant Women With Nutritional Risks by Race

Characteristic	American Indian	Asian	Black	Pacific Islander	White	Two or More Races	Race Not Reported	Total Pregnant Women Participants
Number of Pregnant Women Participants								
Anthropometric	21,457	9,322	86,746	3,049	238,515	12,082	1,415	372,586
Low weight-for-height/length	745	800	3,262	95	10,201	498	44	15,645
High weight-for-height/length	16,903	5,384	65,564	2,383	176,457	8,970	1,192	276,854
Short stature	0	0	0	0	0	0	0	0
Inappropriate growth/weight gain pattern	12,777	6,248	59,062	1,990	161,652	8,221	716	250,666
Other anthropometric risks	0	0	0	0	0	0	0	0
Biochemical	1,945	993	19,107	271	20,359	1,190	135	44,000
Hematocrit/hemoglobin below FNS criteria	1,943	990	19,105	270	20,343	1,190	135	43,976
Other biochemical risks	2	3	2	1	20	0	0	28
Clinical/Health/Medical	17,930	7,513	63,453	2,177	197,508	10,324	1,926	300,832
Pregnancy-induced conditions	3,125	1,288	8,894	355	28,708	1,488	297	44,155
Delivery of low birth weight/premature infant	2,278	1,232	17,021	315	44,155	1,938	152	67,091
Prior stillbirth/fetal/neonatal death	2,069	661	8,028	249	22,658	1,224	148	35,037
General obstetrical risks	9,404	4,259	32,179	1,414	99,221	5,574	897	152,949
Nutrition-related risk conditions	4,982	1,757	19,348	459	59,815	3,138	481	89,980
Substance abuse	2,634	346	7,493	137	40,233	2,157	382	53,382
Other health risks	1,290	468	2,868	94	12,871	643	339	18,573
Dietary	18,968	8,469	40,410	1,603	122,536	7,013	3,742	202,741
Failure to meet DGA	7,901	4,265	15,466	521	52,044	2,616	1,715	84,528
Inappropriate nutrition practices	11,605	4,280	25,347	1,102	72,076	4,497	2,154	121,061

Characteristic	American Indian	Asian	Black	Pacific Islander	White	Two or More Races	Race Not Reported	Total Pregnant Women Participants
Other Risks	3,566	767	11,856	353	35,275	1,943	369	54,129
Regression/transfer/presumptive eligibility	1,689	139	806	83	2,553	194	244	5,708
Breastfeeding mother and infant dyad	216	224	2,245	32	4,916	266	22	7,921
Homelessness/migrancy	256	28	729	30	2,435	171	37	3,686
Other nutritional risks	1,568	389	8,384	218	26,164	1,374	74	38,171
No Risk Reported	44	36	277	13	500	31	7	908
Percent of Pregnant Women Participants								
Anthropometric	59.2	53.3	71.9	73.6	68.1	67.1	28.0	67.5
Low weight-for-height/length	2.1	4.6	2.7	2.3	2.9	2.8	0.9	2.8
High weight-for-height/length	46.7	30.8	54.3	57.5	50.4	49.8	23.6	50.2
Short stature	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Inappropriate growth/weight gain pattern	35.3	35.7	48.9	48.1	46.2	45.7	14.2	45.4
Other anthropometric risks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biochemical	5.4	5.7	15.8	6.5	5.8	6.6	2.7	8.0
Hematocrit/hemoglobin below FNS criteria	5.4	5.7	15.8	6.5	5.8	6.6	2.7	8.0
Other biochemical risks	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.0	0.0	< 0.1
Clinical/Health/Medical	49.5	42.9	52.6	52.6	56.4	57.4	38.1	54.5
Pregnancy-induced conditions	8.6	7.4	7.4	8.6	8.2	8.3	5.9	8.0
Delivery of low birth weight/premature infant	6.3	7.0	14.1	7.6	12.6	10.8	3.0	12.2
Prior stillbirth/fetal/neonatal death	5.7	3.8	6.7	6.0	6.5	6.8	2.9	6.4
General obstetrical risks	26.0	24.3	26.7	34.1	28.3	31.0	17.7	27.7
Nutrition-related risk conditions	13.8	10.0	16.0	11.1	17.1	17.4	9.5	16.3
Substance abuse	7.3	2.0	6.2	3.3	11.5	12.0	7.6	9.7
Other health risks	3.6	2.7	2.4	2.3	3.7	3.6	6.7	3.4
Dietary	52.4	48.4	33.5	38.7	35.0	39.0	74.0	36.7
Failure to meet DGA	21.8	24.4	12.8	12.6	14.9	14.5	33.9	15.3
Inappropriate nutrition practices	32.0	24.5	21.0	26.6	20.6	25.0	42.6	21.9
Other Risks	9.8	4.4	9.8	8.5	10.1	10.8	7.3	9.8
Regression/transfer/presumptive eligibility	4.7	0.8	0.7	2.0	0.7	1.1	4.8	1.0
Breastfeeding mother and infant dyad	0.6	1.3	1.9	0.8	1.4	1.5	0.4	1.4
Homelessness/migrancy	0.7	0.2	0.6	0.7	0.7	0.9	0.7	0.7
Other nutritional risks	4.3	2.2	6.9	5.3	7.5	7.6	1.5	6.9
No Risk Reported	0.1	0.2	0.2	0.3	0.1	0.2	0.1	0.2

Notes

DGA = Dietary Guidelines for Americans

State agencies could report up to 10 nutritional risk criteria for each participant.

Table 5.7b. Distribution of Breastfeeding Women With Nutritional Risks by Race

Characteristic	American Indian	Asian	Black	Pacific Islander	White	Two or More Races	Race Not Reported	Total Breastfeeding Women Participants
Number of Breastfeeding Women Participants								
Anthropometric	23,591	12,598	85,492	3,778	236,392	12,643	1,390	375,885
Low weight-for-height/length	776	1,336	3,484	106	9,980	495	39	16,216
High weight-for-height/length	20,851	8,889	69,945	3,243	192,236	10,245	1,279	306,688
Short stature	0	0	0	0	5	0	0	5
Inappropriate growth/weight gain pattern	8,788	5,718	46,191	2,015	118,802	6,673	324	188,511
Other anthropometric risks	1	0	0	0	1	0	0	2
Biochemical	10,443	7,714	49,358	1,392	93,838	4,930	565	168,240
Hematocrit/hemoglobin below FNS criteria	10,442	7,712	49,353	1,392	93,818	4,927	565	168,209
Other biochemical risks	2	4	8	0	34	4	0	52
Clinical/Health/Medical	19,698	12,808	74,815	2,503	225,404	11,163	1,780	348,172
Pregnancy-induced conditions	4,157	3,160	13,614	527	41,729	2,152	415	65,754
Delivery of low birth weight/premature infant	4,138	3,916	31,920	820	87,263	3,445	259	131,761
Prior stillbirth/fetal/neonatal death	1,069	360	1,678	82	5,271	345	194	8,999
General obstetrical risks	7,146	4,244	25,372	991	81,828	4,328	561	124,470
Nutrition-related risk conditions	7,477	5,157	38,064	1,022	104,961	4,816	404	161,901
Substance abuse	1,920	350	3,089	88	18,304	1,231	357	25,339
Other health risks	1,014	674	2,552	91	9,413	583	261	14,588
Dietary	17,752	10,503	35,465	1,791	111,370	6,752	2,061	185,694
Failure to meet DGA	7,938	4,337	12,937	554	53,107	2,753	1,313	82,939
Inappropriate nutrition practices	10,200	6,363	23,714	1,255	63,791	4,170	762	110,255
Other Risks	21,381	12,087	68,847	2,922	220,780	10,553	1,309	337,879
Regression/transfer/presumptive eligibility	670	145	899	40	2,379	154	442	4,729
Breastfeeding mother and infant dyad	20,404	11,751	66,686	2,834	214,495	10,138	874	327,182
Homelessness/migrancy	297	51	650	24	1,857	128	33	3,040
Other nutritional risks	673	376	2,560	133	8,033	499	29	12,303
No Risk Reported	108	160	935	62	1,927	85	3	3,280
Percent of Breastfeeding Women Participants								
Anthropometric	53.6	45.4	66.7	67.0	61.4	60.8	28.9	61.0
Low weight-for-height/length	1.8	4.8	2.7	1.9	2.6	2.4	0.8	2.6
High weight-for-height/length	47.4	32.0	54.6	57.5	50.0	49.3	26.6	49.8
Short stature	0.0	0.0	0.0	0.0	< 0.1	0.0	0.0	< 0.1
Inappropriate growth/weight gain pattern	20.0	20.6	36.0	35.7	30.9	32.1	6.7	30.6
Other anthropometric risks	< 0.1	0.0	0.0	0.0	< 0.1	0.0	0.0	< 0.1
Biochemical	23.7	27.8	38.5	24.7	24.4	23.7	11.7	27.3
Hematocrit/hemoglobin below FNS criteria	23.7	27.8	38.5	24.7	24.4	23.7	11.7	27.3
Other biochemical risks	< 0.1	< 0.1	< 0.1	0.0	< 0.1	< 0.1	0.0	< 0.1

Characteristic	American Indian	Asian	Black	Pacific Islander	White	Two or More Races	Race Not Reported	Total Breastfeeding Women Participants
Clinical/Health/Medical	44.8	46.2	58.4	44.4	58.6	53.7	37.0	56.5
Pregnancy-induced conditions	9.4	11.4	10.6	9.3	10.8	10.4	8.6	10.7
Delivery of low birth weight/premature infant	9.4	14.1	24.9	14.5	22.7	16.6	5.4	21.4
Prior stillbirth/fetal/neonatal death	2.4	1.3	1.3	1.5	1.4	1.7	4.0	1.5
General obstetrical risks	16.2	15.3	19.8	17.6	21.3	20.8	11.7	20.2
Nutrition-related risk conditions	17.0	18.6	29.7	18.1	27.3	23.2	8.4	26.3
Substance abuse	4.4	1.3	2.4	1.6	4.8	5.9	7.4	4.1
Other health risks	2.3	2.4	2.0	1.6	2.4	2.8	5.4	2.4
Dietary	40.3	37.9	27.7	31.7	28.9	32.5	42.9	30.1
Failure to meet DGA	18.0	15.6	10.1	9.8	13.8	13.2	27.3	13.5
Inappropriate nutrition practices	23.2	22.9	18.5	22.2	16.6	20.1	15.8	17.9
Other Risks	48.6	43.6	53.7	51.8	57.4	50.8	27.2	54.8
Regression/transfer/presumptive eligibility	1.5	0.5	0.7	0.7	0.6	0.7	9.2	0.8
Breastfeeding mother and infant dyad	46.4	42.4	52.0	50.2	55.7	48.8	18.2	53.1
Homelessness/migrancy	0.7	0.2	0.5	0.4	0.5	0.6	0.7	0.5
Other nutritional risks	1.5	1.4	2.0	2.4	2.1	2.4	0.6	2.0
No Risk Reported	0.2	0.6	0.7	1.1	0.5	0.4	< 0.1	0.5

Notes

DGA = Dietary Guidelines for Americans

State agencies could report up to 10 nutritional risk criteria for each participant.

Table 5.7c. Distribution of Postpartum Women With Nutritional Risks by Race

Characteristic	American Indian	Asian	Black	Pacific Islander	White	Two or More Races	Race Not Reported	Total Postpartum Women Participants
Number of Postpartum Women Participants								
Anthropometric	10,729	5,222	80,249	2,359	166,801	8,461	446	274,267
Low weight-for-height/length	464	556	3,945	72	8,085	404	18	13,544
High weight-for-height/length	9,256	3,661	64,000	2,025	132,788	6,674	405	218,809
Short stature	0	0	2	0	0	0	0	2
Inappropriate growth/weight gain pattern	4,216	2,382	44,796	1,303	88,760	4,685	91	146,233
Other anthropometric risks	0	0	0	0	0	0	0	0
Biochemical	4,555	2,937	52,897	827	69,552	3,685	188	134,641
Hematocrit/hemoglobin below FNS criteria	4,553	2,937	52,894	827	69,537	3,685	188	134,621
Other biochemical risks	3	1	12	1	17	0	0	34

Characteristic	American Indian	Asian	Black	Pacific Islander	White	Two or More Races	Race Not Reported	Total Postpartum Women Participants
Clinical/Health/Medical	11,141	6,043	78,547	1,915	172,617	8,614	793	279,670
Pregnancy-induced conditions	2,050	1,353	12,499	369	30,150	1,345	139	47,905
Delivery of low birth weight/premature infant	2,876	1,967	35,531	636	62,568	2,964	131	106,673
Prior stillbirth/fetal/neonatal death	1,166	418	3,619	116	10,639	467	108	16,533
General obstetrical risks	3,826	2,053	27,678	764	58,784	3,328	266	96,699
Nutrition-related risk conditions	4,570	2,322	37,245	750	80,834	3,809	185	129,715
Substance abuse	1,610	244	8,120	173	37,690	1,771	169	49,777
Other health risks	468	243	2,191	50	8,163	335	72	11,522
Dietary	8,730	5,521	38,908	1,167	86,731	4,605	1,247	146,909
Failure to meet DGA	4,856	2,578	10,448	415	30,507	1,613	843	51,260
Inappropriate nutrition practices	4,051	2,998	28,933	764	57,138	3,037	408	97,329
Other Risks	2,160	913	12,086	384	32,542	1,563	437	50,085
Regression/transfer/presumptive eligibility	493	89	1,064	38	2,210	133	401	4,428
Breastfeeding mother and infant dyad	868	536	5,132	220	14,222	660	15	21,653
Homelessness/migrancy	140	29	562	17	1,506	99	9	2,362
Other nutritional risks	705	274	5,625	118	15,343	702	16	22,783
No Risk Reported	71	45	618	34	487	33	2	1,290
Percent of Postpartum Women Participants								
Anthropometric	50.8	43.0	66.3	66.3	63.1	63.2	18.5	62.6
Low weight-for-height/length	2.2	4.6	3.3	2.0	3.1	3.0	0.7	3.1
High weight-for-height/length	43.8	30.2	52.9	56.9	50.3	49.9	16.8	50.0
Short stature	0.0	0.0	< 0.1	0.0	0.0	0.0	0.0	< 0.1
Inappropriate growth/weight gain pattern	19.9	19.6	37.0	36.6	33.6	35.0	3.8	33.4
Other anthropometric risks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Biochemical	21.5	24.2	43.7	23.3	26.3	27.5	7.8	30.8
Hematocrit/hemoglobin below FNS criteria	21.5	24.2	43.7	23.3	26.3	27.5	7.8	30.7
Other biochemical risks	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.0	0.0	< 0.1
Clinical/Health/Medical	52.7	49.8	64.9	53.9	65.3	64.4	32.9	63.9
Pregnancy-induced conditions	9.7	11.1	10.3	10.4	11.4	10.1	5.8	10.9
Delivery of low birth weight/premature infant	13.6	16.2	29.4	17.9	23.7	22.2	5.4	24.4
Prior stillbirth/fetal/neonatal death	5.5	3.4	3.0	3.3	4.0	3.5	4.5	3.8
General obstetrical risks	18.1	16.9	22.9	21.5	22.3	24.9	11.1	22.1
Nutrition-related risk conditions	21.6	19.1	30.8	21.1	30.6	28.5	7.7	29.6
Substance abuse	7.6	2.0	6.7	4.9	14.3	13.2	7.0	11.4
Other health risks	2.2	2.0	1.8	1.4	3.1	2.5	3.0	2.6
Dietary	41.3	45.5	32.2	32.8	32.8	34.4	51.8	33.6
Failure to meet DGA	23.0	21.2	8.6	11.7	11.5	12.1	35.0	11.7
Inappropriate nutrition practices	19.2	24.7	23.9	21.5	21.6	22.7	17.0	22.2

Characteristic	American Indian	Asian	Black	Pacific Islander	White	Two or More Races	Race Not Reported	Total Postpartum Women Participants
Other Risks	10.2	7.5	10.0	10.8	12.3	11.7	18.2	11.4
Regression/transfer/presumptive eligibility	2.3	0.7	0.9	1.1	0.8	1.0	16.7	1.0
Breastfeeding mother and infant dyad	4.1	4.4	4.2	6.2	5.4	4.9	0.6	4.9
Homelessness/migrancy	0.7	0.2	0.5	0.5	0.6	0.7	0.4	0.5
Other nutritional risks	3.3	2.3	4.6	3.3	5.8	5.2	0.7	5.2
No Risk Reported	0.3	0.4	0.5	1.0	0.2	0.2	< 0.1	0.3

Notes

DGA = Dietary Guidelines for Americans

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Table 5.7d. Distribution of Infants With Nutritional Risks by Race

Characteristic	American Indian	Asian	Black	Pacific Islander	White	Two or More Races	Race Not Reported	Total Infant Participants
Number of Infant Participants								
Anthropometric	41,131	24,621	240,497	7,308	517,879	62,877	6,028	900,342
Low weight-for-height/length	7,186	5,569	45,886	1,047	86,494	10,458	954	157,595
High weight-for-height/length	13,733	5,084	78,810	3,330	176,081	20,020	1,253	298,312
Short stature	9,641	5,545	62,125	1,221	113,854	14,593	1,793	208,772
Inappropriate growth/weight gain pattern	1,323	950	5,722	221	16,915	1,942	128	27,201
Low birth weight/premature birth	21,052	14,811	141,113	3,495	284,268	35,523	3,500	503,762
Other anthropometric risks	5,169	1,788	21,776	818	57,032	6,946	543	94,072
Biochemical	629	235	2,854	59	4,315	583	35	8,710
Hematocrit/hemoglobin below FNS criteria	626	235	2,848	59	4,285	583	35	8,671
Other biochemical risks	3	0	7	0	34	0	0	44
Clinical/Health/Medical	5,481	1,513	20,835	441	61,743	7,438	716	98,168
Nutrition-related risk conditions	5,126	1,454	20,212	427	57,786	6,897	667	92,570
Substance abuse	0	0	55	0	140	21	0	216
Other health risks	394	64	679	16	4,551	607	58	6,369
Dietary	38,121	20,355	121,939	3,926	312,612	40,193	11,522	548,668
Failure to meet DGA	97	13	33	1	266	39	5	454
Inappropriate nutrition practices	38,038	20,345	121,925	3,925	312,440	40,164	11,518	548,355
Other Risks	67,191	36,395	290,104	10,074	732,386	87,722	12,548	1,236,421
Regression/transfer/presumptive eligibility	2,536	443	4,095	204	10,626	1,357	2,240	21,501
Breastfeeding mother and infant dyad	3,759	3,460	25,378	515	65,613	6,697	946	106,368
Infant of a WIC-eligible mother/mother at risk during pregnancy	63,085	33,988	268,994	9,527	683,470	81,100	10,041	1,150,206
Homelessness/migrancy	532	80	2,004	65	4,690	762	69	8,202
Other nutritional risks	2,836	896	15,102	401	43,878	6,349	409	69,872
No Risk Reported	410	604	6,002	95	10,809	1,091	27	19,038

Characteristic	American Indian	Asian	Black	Pacific Islander	White	Two or More Races	Race Not Reported	Total Infant Participants
Percent of Infant Participants								
Anthropometric	44.5	45.5	57.9	56.0	53.1	52.6	31.1	53.3
Low weight-for-height/length	7.8	10.3	11.0	8.0	8.9	8.7	4.9	9.3
High weight-for-height/length	14.9	9.4	19.0	25.5	18.0	16.7	6.5	17.7
Short stature	10.4	10.2	15.0	9.4	11.7	12.2	9.2	12.4
Inappropriate growth/weight gain pattern	1.4	1.8	1.4	1.7	1.7	1.6	0.7	1.6
Low birth weight/premature birth	22.8	27.4	34.0	26.8	29.1	29.7	18.1	29.8
Other anthropometric risks	5.6	3.3	5.2	6.3	5.8	5.8	2.8	5.6
Biochemical	0.7	0.4	0.7	0.5	0.4	0.5	0.2	0.5
Hematocrit/hemoglobin below FNS criteria	0.7	0.4	0.7	0.5	0.4	0.5	0.2	0.5
Other biochemical risks	< 0.1	0.0	< 0.1	0.0	< 0.1	0.0	0.0	< 0.1
Clinical/Health/Medical	5.9	2.8	5.0	3.4	6.3	6.2	3.7	5.8
Nutrition-related risk conditions	5.6	2.7	4.9	3.3	5.9	5.8	3.4	5.5
Substance abuse	0.0	0.0	< 0.1	0.0	< 0.1	< 0.1	0.0	< 0.1
Other health risks	0.4	0.1	0.2	0.1	0.5	0.5	0.3	0.4
Dietary	41.3	37.6	29.4	30.1	32.0	33.6	59.4	32.5
Failure to meet DGA	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Inappropriate nutrition practices	41.2	37.6	29.4	30.1	32.0	33.6	59.4	32.5
Other Risks	72.8	67.3	69.9	77.2	75.1	73.4	64.7	73.2
Regression/transfer/presumptive eligibility	2.7	0.8	1.0	1.6	1.1	1.1	11.6	1.3
Breastfeeding mother and infant dyad	4.1	6.4	6.1	3.9	6.7	5.6	4.9	6.3
Infant of a WIC-eligible mother/mother at risk during pregnancy	68.3	62.8	64.8	73.1	70.0	67.8	51.8	68.1
Homelessness/migrancy	0.6	0.1	0.5	0.5	0.5	0.6	0.4	0.5
Other nutritional risks	3.1	1.7	3.6	3.1	4.5	5.3	2.1	4.1
No Risk Reported	0.4	1.1	1.4	0.7	1.1	0.9	0.1	1.1

Notes

DGA = Dietary Guidelines for Americans

State agencies could report up to 10 nutritional risk criteria for each participant.

Table 5.7e. Distribution of Children With Nutritional Risks by Race

Characteristic	American Indian	Asian	Black	Pacific Islander	White	Two or More Races	Race Not Reported	Total Child Participants
Number of Child Participants								
Anthropometric	110,405	50,922	343,085	13,140	937,565	105,574	7,013	1,567,704
Low weight-for-height/length	10,893	10,723	48,516	1,322	91,756	11,665	738	175,613
High weight-for-height/length	73,297	22,624	198,250	8,608	575,169	61,658	3,862	943,469
Short stature	22,014	12,345	59,315	2,089	211,496	20,801	1,621	329,682
Inappropriate growth/weight gain pattern	631	963	4,580	73	8,631	1,168	35	16,081
Low birth weight/premature birth	15,268	11,287	95,224	2,493	197,624	26,110	1,742	349,749
Other anthropometric risks	274	247	4,289	29	6,622	955	52	12,468

Characteristic	American Indian	Asian	Black	Pacific Islander	White	Two or More Races	Race Not Reported	Total Child Participants
Biochemical	20,599	12,158	139,760	2,676	231,952	27,610	962	435,717
Hematocrit/hemoglobin below FNS criteria	20,475	11,929	138,530	2,646	229,413	27,254	960	431,207
Other biochemical risks	154	294	1,581	35	2,947	401	4	5,416
Clinical/Health/Medical	29,406	11,783	72,534	2,140	223,752	26,645	2,056	368,316
Nutrition-related risk conditions	19,755	8,288	66,046	1,685	185,146	22,625	1,083	304,629
Substance abuse	0	0	0	0	0	0	0	0
Other health risks	10,435	3,756	7,730	495	43,913	4,637	1,033	72,000
Dietary	221,791	111,903	533,588	23,786	1,600,548	191,028	22,874	2,705,519
Failure to meet DGA	43,032	28,291	132,198	5,184	408,838	42,296	4,676	664,515
Inappropriate nutrition practices	187,000	85,817	412,439	19,054	1,245,498	153,149	18,515	2,121,473
Other Risks	16,276	4,059	61,043	1,434	146,723	19,982	2,943	252,460
Regression/transfer/presumptive eligibility	5,429	1,114	9,602	335	25,296	3,218	2,080	47,074
Breastfeeding mother and infant dyad	48	35	1,194	4	1,556	236	34	3,107
Infant of a WIC-eligible mother/mother at risk during pregnancy	537	651	19,210	93	21,893	3,445	523	46,352
Homelessness/migrancy	1,439	257	4,077	144	11,496	1,517	177	19,107
Other nutritional risks	9,306	2,064	30,051	876	90,809	12,355	253	145,714
No Risk Reported	1,209	2,238	16,981	429	33,705	2,990	22	57,574
Percent of Child Participants								
Anthropometric	39.1	35.3	43.7	43.0	42.3	40.7	25.9	41.9
Low weight-for-height/length	3.9	7.4	6.2	4.3	4.1	4.5	2.7	4.7
High weight-for-height/length	25.9	15.7	25.3	28.2	26.0	23.8	14.3	25.2
Short stature	7.8	8.6	7.6	6.8	9.6	8.0	6.0	8.8
Inappropriate growth/weight gain pattern	0.2	0.7	0.6	0.2	0.4	0.5	0.1	0.4
Low birth weight/premature birth	5.4	7.8	12.1	8.2	8.9	10.1	6.4	9.3
Other anthropometric risks	< 0.1	0.2	0.5	< 0.1	0.3	0.4	0.2	0.3
Biochemical	7.3	8.4	17.8	8.8	10.5	10.7	3.5	11.6
Hematocrit/hemoglobin below FNS criteria	7.2	8.3	17.7	8.7	10.4	10.5	3.5	11.5
Other biochemical risks	< 0.1	0.2	0.2	0.1	0.1	0.2	< 0.1	0.1
Clinical/Health/Medical	10.4	8.2	9.2	7.0	10.1	10.3	7.6	9.8
Nutrition-related risk conditions	7.0	5.8	8.4	5.5	8.4	8.7	4.0	8.1
Substance abuse	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other health risks	3.7	2.6	1.0	1.6	2.0	1.8	3.8	1.9
Dietary	78.5	77.6	68.0	77.9	72.3	73.7	84.4	72.3
Failure to meet DGA	15.2	19.6	16.9	17.0	18.5	16.3	17.3	17.8
Inappropriate nutrition practices	66.2	59.5	52.6	62.4	56.3	59.1	68.3	56.7

Characteristic	American Indian	Asian	Black	Pacific Islander	White	Two or More Races	Race Not Reported	Total Child Participants
Other Risks	5.8	2.8	7.8	4.7	6.6	7.7	10.9	6.7
Regression/transfer/presumptive eligibility	1.9	0.8	1.2	1.1	1.1	1.2	7.7	1.3
Breastfeeding mother and infant dyad	< 0.1	< 0.1	0.2	< 0.1	< 0.1	< 0.1	0.1	< 0.1
Infant of a WIC-eligible mother/mother at risk during pregnancy	0.2	0.5	2.4	0.3	1.0	1.3	1.9	1.2
Homelessness/migrancy	0.5	0.2	0.5	0.5	0.5	0.6	0.7	0.5
Other nutritional risks	3.3	1.4	3.8	2.9	4.1	4.8	0.9	3.9
No Risk Reported	0.4	1.6	2.2	1.4	1.5	1.2	< 0.1	1.5

Notes

DGA = Dietary Guidelines for Americans

State agencies could report up to 10 nutritional risk criteria for each participant.

Table 5.8a. Distribution of Pregnant Women With Nutritional Risks by Ethnicity

Characteristic	Hispanic/Latino	Non-Hispanic/Latino	Ethnicity Not Reported	Total Pregnant Women Participants
Number of Pregnant Women Participants				
Anthropometric	131,056	241,475	55	372,586
Low weight-for-height/length	3,883	11,760	2	15,645
High weight-for-height/length	100,398	176,419	36	276,854
Short stature	0	0	0	0
Inappropriate growth/weight gain pattern	88,768	161,856	42	250,666
Other anthropometric risks	0	0	0	0
Biochemical	12,687	31,307	6	44,000
Hematocrit/hemoglobin below FNS criteria	12,681	31,289	6	43,976
Other biochemical risks	8	20	0	28
Clinical/Health/Medical	100,775	200,019	37	300,832
Pregnancy-induced conditions	15,042	29,111	2	44,155
Delivery of low birth weight/premature infant	23,238	43,847	6	67,091
Prior stillbirth/fetal/neonatal death	9,919	25,111	7	35,037
General obstetrical risks	54,664	98,264	20	152,949
Nutrition-related risk conditions	25,802	64,166	12	89,980
Substance abuse	8,053	45,321	8	53,382
Other health risks	5,978	12,594	1	18,573
Dietary	90,924	111,785	32	202,741
Failure to meet DGA	41,973	42,549	6	84,528
Inappropriate nutrition practices	50,583	70,452	26	121,061
Other Risks	11,396	42,627	106	54,129
Regression/transfer/presumptive eligibility	3,247	2,358	103	5,708
Breastfeeding mother and infant dyad	2,046	5,875	0	7,921
Homelessness/migrancy	1,603	2,083	0	3,686
Other nutritional risks	4,831	33,332	8	38,171
No Risk Reported	254	649	5	908

Characteristic	Hispanic/ Latino	Non-Hispanic/ Latino	Ethnicity Not Reported	Total Pregnant Women Participants
Percent of Pregnant Women Participants				
Anthropometric	62.0	71.0	35.5	67.5
Low weight-for-height/length	1.8	3.5	1.3	2.8
High weight-for-height/length	47.5	51.8	23.2	50.2
Short stature	0.0	0.0	0.0	0.0
Inappropriate growth/weight gain pattern	42.0	47.6	27.1	45.4
Other anthropometric risks	0.0	0.0	0.0	0.0
Biochemical	6.0	9.2	3.9	8.0
Hematocrit/hemoglobin below FNS criteria	6.0	9.2	3.9	8.0
Other biochemical risks	< 0.1	< 0.1	0.0	< 0.1
Clinical/Health/Medical	47.7	58.8	23.9	54.5
Pregnancy-induced conditions	7.1	8.6	1.3	8.0
Delivery of low birth weight/premature infant	11.0	12.9	3.9	12.2
Prior stillbirth/fetal/neonatal death	4.7	7.4	4.5	6.4
General obstetrical risks	25.9	28.9	12.9	27.7
Nutrition-related risk conditions	12.2	18.9	7.7	16.3
Substance abuse	3.8	13.3	5.2	9.7
Other health risks	2.8	3.7	0.6	3.4
Dietary	43.0	32.9	20.6	36.7
Failure to meet DGA	19.9	12.5	3.9	15.3
Inappropriate nutrition practices	23.9	20.7	16.8	21.9
Other Risks	5.4	12.5	68.4	9.8
Regression/transfer/presumptive eligibility	1.5	0.7	66.5	1.0
Breastfeeding mother and infant dyad	1.0	1.7	0.0	1.4
Homelessness/migrancy	0.8	0.6	0.0	0.7
Other nutritional risks	2.3	9.8	5.2	6.9
No Risk Reported	0.1	0.2	3.2	0.2

Notes

DGA = Dietary Guidelines for Americans

State agencies could report up to 10 nutritional risk criteria for each participant.

Table 5.8b. Distribution of Breastfeeding Women With Nutritional Risks by Ethnicity

Characteristic	Hispanic/ Latino	Non-Hispanic/ Latino	Ethnicity Not Reported	Total Breastfeeding Women Participants
Number of Breastfeeding Women Participants				
Anthropometric	161,344	214,504	37	375,885
Low weight-for-height/length	5,386	10,829	1	16,216
High weight-for-height/length	139,250	167,403	35	306,688
Short stature	4	1	0	5
Inappropriate growth/weight gain pattern	69,228	119,277	6	188,511
Other anthropometric risks	1	1	0	2

Characteristic	Hispanic/ Latino	Non-Hispanic/ Latino	Ethnicity Not Reported	Total Breastfeeding Women Participants
Biochemical	74,904	93,329	7	168,240
Hematocrit/hemoglobin below FNS criteria	74,891	93,311	7	168,209
Other biochemical risks	25	27	0	52
Clinical/Health/Medical	148,748	199,379	44	348,172
Pregnancy-induced conditions	28,238	37,505	11	65,754
Delivery of low birth weight/premature infant	59,451	72,302	8	131,761
Prior stillbirth/fetal/neonatal death	4,252	4,747	0	8,999
General obstetrical risks	53,328	71,125	17	124,470
Nutrition-related risk conditions	65,894	95,987	20	161,901
Substance abuse	5,909	19,427	3	25,339
Other health risks	5,786	8,802	0	14,588
Dietary	92,654	93,006	34	185,694
Failure to meet DGA	47,553	35,371	15	82,939
Inappropriate nutrition practices	50,142	60,094	19	110,255
Other Risks	156,317	181,446	116	337,879
Regression/transfer/presumptive eligibility	2,153	2,476	100	4,729
Breastfeeding mother and infant dyad	152,546	174,588	48	327,182
Homelessness/migrancy	1,687	1,353	0	3,040
Other nutritional risks	2,573	9,726	4	12,303
No Risk Reported	809	2,469	2	3,280
Percent of Breastfeeding Women Participants				
Anthropometric	58.4	63.2	26.1	61.0
Low weight-for-height/length	1.9	3.2	0.7	2.6
High weight-for-height/length	50.4	49.3	24.6	49.8
Short stature	< 0.1	< 0.1	0.0	< 0.1
Inappropriate growth/weight gain pattern	25.1	35.1	4.2	30.6
Other anthropometric risks	< 0.1	< 0.1	0.0	< 0.1
Biochemical	27.1	27.5	4.9	27.3
Hematocrit/hemoglobin below FNS criteria	27.1	27.5	4.9	27.3
Other biochemical risks	< 0.1	< 0.1	0.0	< 0.1
Clinical/Health/Medical	53.8	58.7	31.0	56.5
Pregnancy-induced conditions	10.2	11.0	7.7	10.7
Delivery of low birth weight/premature infant	21.5	21.3	5.6	21.4
Prior stillbirth/fetal/neonatal death	1.5	1.4	0.0	1.5
General obstetrical risks	19.3	20.9	12.0	20.2
Nutrition-related risk conditions	23.8	28.3	14.1	26.3
Substance abuse	2.1	5.7	2.1	4.1
Other health risks	2.1	2.6	0.0	2.4
Dietary	33.5	27.4	23.9	30.1
Failure to meet DGA	17.2	10.4	10.6	13.5
Inappropriate nutrition practices	18.1	17.7	13.4	17.9

Characteristic	Hispanic/ Latino	Non-Hispanic/ Latino	Ethnicity Not Reported	Total Breastfeeding Women Participants
Other Risks	56.6	53.4	81.7	54.8
Regression/transfer/presumptive eligibility	0.8	0.7	70.4	0.8
Breastfeeding mother and infant dyad	55.2	51.4	33.8	53.1
Homelessness/migrancy	0.6	0.4	0.0	0.5
Other nutritional risks	0.9	2.9	2.8	2.0
No Risk Reported	0.3	0.7	1.4	0.5

Notes

DGA = Dietary Guidelines for Americans

State agencies could report up to 10 nutritional risk criteria for each participant.

Table 5.8c. Distribution of Postpartum Women With Nutritional Risks by Ethnicity

Characteristic	Hispanic/ Latino	Non-Hispanic/ Latino	Ethnicity Not Reported	Total Postpartum Women Participants
Number of Postpartum Women Participants				
Anthropometric	72,452	201,787	28	274,267
Low weight-for-height/length	2,630	10,911	3	13,544
High weight-for-height/length	61,740	157,046	23	218,809
Short stature	0	2	0	2
Inappropriate growth/weight gain pattern	32,495	113,734	4	146,233
Other anthropometric risks	0	0	0	0
Biochemical	33,881	100,747	13	134,641
Hematocrit/hemoglobin below FNS criteria	33,875	100,733	13	134,621
Other biochemical risks	8	26	0	34
Clinical/Health/Medical	72,594	207,045	31	279,670
Pregnancy-induced conditions	12,869	35,034	2	47,905
Delivery of low birth weight/premature infant	26,921	79,748	4	106,673
Prior stillbirth/fetal/neonatal death	6,524	10,009	0	16,533
General obstetrical risks	26,813	69,874	12	96,699
Nutrition-related risk conditions	30,984	98,716	15	129,715
Substance abuse	5,102	44,670	5	49,777
Other health risks	2,424	9,097	1	11,522
Dietary	49,054	97,829	26	146,909
Failure to meet DGA	24,403	26,851	6	51,260
Inappropriate nutrition practices	25,218	72,091	20	97,329
Other Risks	11,660	38,286	139	50,085
Regression/transfer/presumptive eligibility	1,512	2,778	138	4,428
Breastfeeding mother and infant dyad	7,180	14,473	0	21,653
Homelessness/migrancy	897	1,465	0	2,362
Other nutritional risks	2,233	20,546	4	22,783
No Risk Reported	349	936	5	1,290

Characteristic	Hispanic/ Latino	Non-Hispanic/ Latino	Ethnicity Not Reported	Total Postpartum Women Participants
Percent of Postpartum Women Participants				
Anthropometric	54.5	66.2	16.4	62.6
Low weight-for-height/length	2.0	3.6	1.8	3.1
High weight-for-height/length	46.5	51.5	13.4	50.0
Short stature	0.0	< 0.1	0.0	< 0.1
Inappropriate growth/weight gain pattern	24.5	37.3	2.3	33.4
Other anthropometric risks	0.0	0.0	0.0	0.0
Biochemical	25.5	33.1	7.6	30.8
Hematocrit/hemoglobin below FNS criteria	25.5	33.1	7.6	30.7
Other biochemical risks	< 0.1	< 0.1	0.0	< 0.1
Clinical/Health/Medical	54.6	67.9	18.1	63.9
Pregnancy-induced conditions	9.7	11.5	1.2	10.9
Delivery of low birth weight/premature infant	20.3	26.2	2.3	24.4
Prior stillbirth/fetal/neonatal death	4.9	3.3	0.0	3.8
General obstetrical risks	20.2	22.9	7.0	22.1
Nutrition-related risk conditions	23.3	32.4	8.8	29.6
Substance abuse	3.8	14.7	2.9	11.4
Other health risks	1.8	3.0	0.6	2.6
Dietary	36.9	32.1	15.2	33.6
Failure to meet DGA	18.4	8.8	3.5	11.7
Inappropriate nutrition practices	19.0	23.7	11.7	22.2
Other Risks	8.8	12.6	81.3	11.4
Regression/transfer/presumptive eligibility	1.1	0.9	80.7	1.0
Breastfeeding mother and infant dyad	5.4	4.7	0.0	4.9
Homelessness/migrancy	0.7	0.5	0.0	0.5
Other nutritional risks	1.7	6.7	2.3	5.2
No Risk Reported	0.3	0.3	2.9	0.3

Notes

DGA = Dietary Guidelines for Americans

State agencies could report up to 10 nutritional risk criteria for each participant.

Table 5.8d. Distribution of Infants With Nutritional Risks by Ethnicity

Characteristic	Hispanic/ Latino	Non-Hispanic/ Latino	Ethnicity Not Reported	Total Infant Participants
Number of Infant Participants				
Anthropometric	320,162	579,833	347	900,342
Low weight-for-height/length	53,461	104,074	59	157,595
High weight-for-height/length	106,207	192,031	74	298,312
Short stature	68,145	140,534	93	208,772
Inappropriate growth/weight gain pattern	8,725	18,475	1	27,201
Low birth weight/premature birth	178,433	325,158	170	503,762
Other anthropometric risks	32,917	61,120	35	94,072

Characteristic	Hispanic/ Latino	Non-Hispanic/ Latino	Ethnicity Not Reported	Total Infant Participants
Biochemical	2,561	6,128	21	8,710
Hematocrit/hemoglobin below FNS criteria	2,551	6,099	21	8,671
Other biochemical risks	13	31	0	44
Clinical/Health/Medical	32,716	65,402	50	98,168
Nutrition-related risk conditions	31,322	61,199	49	92,570
Substance abuse	33	183	0	216
Other health risks	1,565	4,802	2	6,369
Dietary	239,956	308,454	258	548,668
Failure to meet DGA	342	112	0	454
Inappropriate nutrition practices	239,697	308,400	258	548,355
Other Risks	486,452	748,971	998	1,236,421
Regression/transfer/presumptive eligibility	8,771	11,981	749	21,501
Breastfeeding mother and infant dyad	42,585	63,750	33	106,368
Infant of a WIC-eligible mother/mother at risk during pregnancy	459,274	690,562	370	1,150,206
Homelessness/migrancy	3,893	4,300	9	8,202
Other nutritional risks	10,323	59,465	84	69,872
No Risk Reported	4,777	14,248	13	19,038
Percent of Infant Participants				
Anthropometric	49.2	55.9	31.6	53.3
Low weight-for-height/length	8.2	10.0	5.4	9.3
High weight-for-height/length	16.3	18.5	6.7	17.7
Short stature	10.5	13.5	8.5	12.4
Inappropriate growth/weight gain pattern	1.3	1.8	< 0.1	1.6
Low birth weight/premature birth	27.4	31.3	15.5	29.8
Other anthropometric risks	5.1	5.9	3.2	5.6
Biochemical	0.4	0.6	1.9	0.5
Hematocrit/hemoglobin below FNS criteria	0.4	0.6	1.9	0.5
Other biochemical risks	< 0.1	< 0.1	0.0	< 0.1
Clinical/Health/Medical	5.0	6.3	4.5	5.8
Nutrition-related risk conditions	4.8	5.9	4.5	5.5
Substance abuse	< 0.1	< 0.1	0.0	< 0.1
Other health risks	0.2	0.5	0.2	0.4
Dietary	36.9	29.7	23.5	32.5
Failure to meet DGA	< 0.1	< 0.1	0.0	< 0.1
Inappropriate nutrition practices	36.8	29.7	23.5	32.5
Other Risks	74.8	72.2	90.8	73.2
Regression/transfer/presumptive eligibility	1.3	1.2	68.2	1.3
Breastfeeding mother and infant dyad	6.5	6.1	3.0	6.3
Infant of a WIC-eligible mother/mother at risk during pregnancy	70.6	66.5	33.7	68.1
Homelessness/migrancy	0.6	0.4	0.8	0.5
Other nutritional risks	1.6	5.7	7.6	4.1
No Risk Reported	0.7	1.4	1.2	1.1

Notes

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State agencies could report up to 10 nutritional risk criteria for each participant.

Table 5.8e. Distribution of Children With Nutritional Risks by Ethnicity

Characteristic	Hispanic/ Latino	Non-Hispanic/ Latino	Ethnicity Not Reported	Total Child Participants
Number of Child Participants				
Anthropometric	650,394	917,045	265	1,567,704
Low weight-for-height/length	62,112	113,476	25	175,613
High weight-for-height/length	413,349	530,016	104	943,469
Short stature	143,127	186,474	80	329,682
Inappropriate growth/weight gain pattern	4,777	11,302	2	16,081
Low birth weight/premature birth	117,043	232,613	93	349,749
Other anthropometric risks	2,557	9,907	4	12,468
Biochemical	164,747	270,891	78	435,717
Hematocrit/hemoglobin below FNS criteria	163,557	267,571	78	431,207
Other biochemical risks	1,418	3,998	0	5,416
Clinical/Health/Medical	150,788	217,472	56	368,316
Nutrition-related risk conditions	115,986	188,589	54	304,629
Substance abuse	0	0	0	0
Other health risks	38,416	33,582	2	72,000
Dietary	1,210,697	1,494,305	517	2,705,519
Failure to meet DGA	308,141	356,338	36	664,515
Inappropriate nutrition practices	954,965	1,166,019	488	2,121,473
Other Risks	61,917	189,918	625	252,460
Regression/transfer/presumptive eligibility	18,640	27,867	567	47,074
Breastfeeding mother and infant dyad	557	2,548	2	3,107
Infant of a WIC-eligible mother/mother at risk during pregnancy	8,104	38,226	22	46,352
Homelessness/migrancy	10,682	8,420	5	19,107
Other nutritional risks	25,678	119,975	61	145,714
No Risk Reported	16,322	41,230	22	57,574
Percent of Child Participants				
Anthropometric	40.7	42.8	25.4	41.9
Low weight-for-height/length	3.9	5.3	2.4	4.7
High weight-for-height/length	25.9	24.7	10.0	25.2
Short stature	9.0	8.7	7.7	8.8
Inappropriate growth/weight gain pattern	0.3	0.5	0.2	0.4
Low birth weight/premature birth	7.3	10.8	8.9	9.3
Other anthropometric risks	0.2	0.5	0.4	0.3
Biochemical	10.3	12.6	7.5	11.6
Hematocrit/hemoglobin below FNS criteria	10.2	12.5	7.5	11.5
Other biochemical risks	< 0.1	0.2	0.0	0.1
Clinical/Health/Medical	9.4	10.1	5.4	9.8
Nutrition-related risk conditions	7.3	8.8	5.2	8.1
Substance abuse	0.0	0.0	0.0	0.0
Other health risks	2.4	1.6	0.2	1.9

Characteristic	Hispanic/ Latino	Non-Hispanic/ Latino	Ethnicity Not Reported	Total Child Participants
Dietary	75.9	69.7	49.5	72.3
Failure to meet DGA	19.3	16.6	3.4	17.8
Inappropriate nutrition practices	59.8	54.4	46.7	56.7
Other Risks	3.9	8.9	59.9	6.7
Regression/transfer/presumptive eligibility	1.2	1.3	54.3	1.3
Breastfeeding mother and infant dyad	< 0.1	0.1	0.2	< 0.1
Infant of a WIC-eligible mother/mother at risk during pregnancy	0.5	1.8	2.1	1.2
Homelessness/migrancy	0.7	0.4	0.5	0.5
Other nutritional risks	1.6	5.6	5.8	3.9
No Risk Reported	1.0	1.9	2.1	1.5

Notes

DGA = Dietary Guidelines for Americans

State agencies could report up to 10 nutritional risk criteria for each participant.

Table 5.9a. Distribution of Pregnant Women With Nutritional Risks by Migrant Farmworker Status

Characteristic	Migrant Farmworker	Not Migrant Farmworker	Not Reported	Total Pregnant Women Participants
Number of Pregnant Women Participants				
Anthropometric	938	370,560	1,088	372,586
Low weight-for-height/length	30	15,562	53	15,645
High weight-for-height/length	690	275,388	776	276,854
Short stature	0	0	0	0
Inappropriate growth/weight gain pattern	688	249,254	724	250,666
Other anthropometric risks	0	0	0	0
Biochemical	98	43,838	64	44,000
Hematocrit/hemoglobin below FNS criteria	98	43,815	63	43,976
Other biochemical risks	0	27	1	28
Clinical/Health/Medical	631	299,333	868	300,832
Pregnancy-induced conditions	110	43,865	180	44,155
Delivery of low birth weight/premature infant	142	66,892	57	67,091
Prior stillbirth/fetal/neonatal death	54	34,954	29	35,037
General obstetrical risks	362	152,022	565	152,949
Nutrition-related risk conditions	120	89,630	230	89,980
Substance abuse	67	53,214	101	53,382
Other health risks	54	18,477	42	18,573
Dietary	379	202,123	239	202,741
Failure to meet DGA	98	84,299	131	84,528
Inappropriate nutrition practices	286	120,664	111	121,061
Other Risks	1,300	52,531	298	54,129
Regression/transfer/presumptive eligibility	6	5,531	171	5,708
Breastfeeding mother and infant dyad	15	7,900	6	7,921
Homelessness/migrancy	1,290	2,366	30	3,686
Other nutritional risks	35	38,042	94	38,171
No Risk Reported	1	907	0	908

Characteristic	Migrant Farmworker	Not Migrant Farmworker	Not Reported	Total Pregnant Women Participants
Percent of Pregnant Women Participants				
Anthropometric	62.6	67.5	73.4	67.5
Low weight-for-height/length	2.0	2.8	3.6	2.8
High weight-for-height/length	46.1	50.2	52.4	50.2
Short stature	0.0	0.0	0.0	0.0
Inappropriate growth/weight gain pattern	45.9	45.4	48.9	45.4
Other anthropometric risks	0.0	0.0	0.0	0.0
Biochemical	6.5	8.0	4.3	8.0
Hematocrit/hemoglobin below FNS criteria	6.5	8.0	4.3	8.0
Other biochemical risks	0.0	< 0.1	< 0.1	< 0.1
Clinical/Health/Medical	42.1	54.5	58.6	54.5
Pregnancy-induced conditions	7.3	8.0	12.1	8.0
Delivery of low birth weight/premature infant	9.5	12.2	3.8	12.2
Prior stillbirth/fetal/neonatal death	3.6	6.4	2.0	6.4
General obstetrical risks	24.2	27.7	38.1	27.7
Nutrition-related risk conditions	8.0	16.3	15.5	16.3
Substance abuse	4.5	9.7	6.8	9.7
Other health risks	3.6	3.4	2.8	3.4
Dietary	25.3	36.8	16.1	36.7
Failure to meet DGA	6.5	15.4	8.8	15.3
Inappropriate nutrition practices	19.1	22.0	7.5	21.9
Other Risks	86.8	9.6	20.1	9.8
Regression/transfer/presumptive eligibility	0.4	1.0	11.5	1.0
Breastfeeding mother and infant dyad	1.0	1.4	0.4	1.4
Homelessness/migrancy	86.1	0.4	2.0	0.7
Other nutritional risks	2.3	6.9	6.3	6.9
No Risk Reported	< 0.1	0.2	0.0	0.2

Notes

DGA = Dietary Guidelines for Americans

State agencies could report up to 10 nutritional risk criteria for each participant.

Table 5.9b. Distribution of Breastfeeding Women With Nutritional Risks by Migrant Farmworker Status

Characteristic	Migrant Farmworker	Not Migrant Farmworker	Not Reported	Total Breastfeeding Women Participants
Number of Breastfeeding Women Participants				
Anthropometric	1,040	372,886	1,959	375,885
Low weight-for-height/length	28	16,088	100	16,216
High weight-for-height/length	937	304,225	1,526	306,688
Short stature	0	5	0	5
Inappropriate growth/weight gain pattern	421	186,996	1,094	188,511
Other anthropometric risks	0	2	0	2

Characteristic	Migrant Farmworker	Not Migrant Farmworker	Not Reported	Total Breastfeeding Women Participants
Biochemical	554	167,419	267	168,240
Hematocrit/hemoglobin below FNS criteria	554	167,389	266	168,209
Other biochemical risks	0	51	1	52
Clinical/Health/Medical	941	345,476	1,755	348,172
Pregnancy-induced conditions	170	65,267	317	65,754
Delivery of low birth weight/premature infant	329	130,878	554	131,761
Prior stillbirth/fetal/neonatal death	10	8,951	38	8,999
General obstetrical risks	355	123,458	657	124,470
Nutrition-related risk conditions	442	160,754	705	161,901
Substance abuse	32	25,177	130	25,339
Other health risks	37	14,459	92	14,588
Dietary	423	184,838	433	185,694
Failure to meet DGA	134	82,663	142	82,939
Inappropriate nutrition practices	302	109,659	294	110,255
Other Risks	1,835	334,243	1,801	337,879
Regression/transfer/presumptive eligibility	15	4,605	109	4,729
Breastfeeding mother and infant dyad	783	324,727	1,672	327,182
Homelessness/migrancy	1,550	1,453	37	3,040
Other nutritional risks	20	12,249	34	12,303
No Risk Reported	1	3,279	0	3,280
Percent of Breastfeeding Women Participants				
Anthropometric	54.9	61.0	65.9	61.0
Low weight-for-height/length	1.5	2.6	3.4	2.6
High weight-for-height/length	49.4	49.8	51.3	49.8
Short stature	0.0	< 0.1	0.0	< 0.1
Inappropriate growth/weight gain pattern	22.2	30.6	36.8	30.6
Other anthropometric risks	0.0	< 0.1	0.0	< 0.1
Biochemical	29.2	27.4	9.0	27.3
Hematocrit/hemoglobin below FNS criteria	29.2	27.4	8.9	27.3
Other biochemical risks	0.0	< 0.1	< 0.1	< 0.1
Clinical/Health/Medical	49.6	56.5	59.0	56.5
Pregnancy-induced conditions	9.0	10.7	10.7	10.7
Delivery of low birth weight/premature infant	17.4	21.4	18.6	21.4
Prior stillbirth/fetal/neonatal death	0.5	1.5	1.3	1.5
General obstetrical risks	18.7	20.2	22.1	20.2
Nutrition-related risk conditions	23.3	26.3	23.7	26.3
Substance abuse	1.7	4.1	4.4	4.1
Other health risks	2.0	2.4	3.1	2.4
Dietary	22.3	30.2	14.6	30.1
Failure to meet DGA	7.1	13.5	4.8	13.5
Inappropriate nutrition practices	15.9	17.9	9.9	17.9

Characteristic	Migrant Farmworker	Not Migrant Farmworker	Not Reported	Total Breastfeeding Women Participants
Other Risks	96.8	54.7	60.6	54.8
Regression/transfer/presumptive eligibility	0.8	0.8	3.7	0.8
Breastfeeding mother and infant dyad	41.3	53.1	56.2	53.1
Homelessness/migrancy	81.8	0.2	1.2	0.5
Other nutritional risks	1.1	2.0	1.1	2.0
No Risk Reported	< 0.1	0.5	0.0	0.5

Notes

DGA = Dietary Guidelines for Americans

State agencies could report up to 10 nutritional risk criteria for each participant.

Table 5.9c. Distribution of Postpartum Women With Nutritional Risks by Migrant Farmworker Status

Characteristic	Migrant Farmworker	Not Migrant Farmworker	Not Reported	Total Postpartum Women Participants
Number of Postpartum Women Participants				
Anthropometric	460	273,478	329	274,267
Low weight-for-height/length	16	13,506	22	13,544
High weight-for-height/length	400	218,173	236	218,809
Short stature	0	2	0	2
Inappropriate growth/weight gain pattern	193	145,840	200	146,233
Other anthropometric risks	0	0	0	0
Biochemical	253	134,324	64	134,641
Hematocrit/hemoglobin below FNS criteria	253	134,304	64	134,621
Other biochemical risks	0	34	0	34
Clinical/Health/Medical	469	278,930	271	279,670
Pregnancy-induced conditions	72	47,808	25	47,905
Delivery of low birth weight/premature infant	153	106,377	143	106,673
Prior stillbirth/fetal/neonatal death	44	16,456	33	16,533
General obstetrical risks	188	96,417	94	96,699
Nutrition-related risk conditions	234	129,427	54	129,715
Substance abuse	47	49,698	32	49,777
Other health risks	13	11,503	6	11,522
Dietary	143	146,681	85	146,909
Failure to meet DGA	47	51,163	50	51,260
Inappropriate nutrition practices	96	97,197	36	97,329
Other Risks	773	49,218	94	50,085
Regression/transfer/presumptive eligibility	10	4,356	62	4,428
Breastfeeding mother and infant dyad	15	21,638	0	21,653
Homelessness/migrancy	751	1,600	11	2,362
Other nutritional risks	21	22,740	22	22,783
No Risk Reported	0	1,288	2	1,290

Characteristic	Migrant Farmworker	Not Migrant Farmworker	Not Reported	Total Postpartum Women Participants
Percent of Postpartum Women Participants				
Anthropometric	53.1	62.7	66.6	62.6
Low weight-for-height/length	1.8	3.1	4.5	3.1
High weight-for-height/length	46.2	50.0	47.8	50.0
Short stature	0.0	< 0.1	0.0	< 0.1
Inappropriate growth/weight gain pattern	22.3	33.4	40.5	33.4
Other anthropometric risks	0.0	0.0	0.0	0.0
Biochemical	29.2	30.8	13.0	30.8
Hematocrit/hemoglobin below FNS criteria	29.2	30.8	13.0	30.7
Other biochemical risks	0.0	< 0.1	0.0	< 0.1
Clinical/Health/Medical	54.2	63.9	54.9	63.9
Pregnancy-induced conditions	8.3	11.0	5.1	10.9
Delivery of low birth weight/premature infant	17.7	24.4	28.9	24.4
Prior stillbirth/fetal/neonatal death	5.1	3.8	6.7	3.8
General obstetrical risks	21.7	22.1	19.0	22.1
Nutrition-related risk conditions	27.0	29.7	10.9	29.6
Substance abuse	5.4	11.4	6.5	11.4
Other health risks	1.5	2.6	1.2	2.6
Dietary	16.5	33.6	17.2	33.6
Failure to meet DGA	5.4	11.7	10.1	11.7
Inappropriate nutrition practices	11.1	22.3	7.3	22.2
Other Risks	89.3	11.3	19.0	11.4
Regression/transfer/presumptive eligibility	1.2	1.0	12.6	1.0
Breastfeeding mother and infant dyad	1.7	5.0	0.0	4.9
Homelessness/migrancy	86.7	0.4	2.2	0.5
Other nutritional risks	2.4	5.2	4.5	5.2
No Risk Reported	0.0	0.3	0.4	0.3

Notes

DGA = Dietary Guidelines for Americans

State agencies could report up to 10 nutritional risk criteria for each participant.

Table 5.9d. Distribution of Infants With Nutritional Risks by Migrant Farmworker Status

Characteristic	Migrant Farmworker	Not Migrant Farmworker	Not Reported	Total Infant Participants
Number of Infant Participants				
Anthropometric	1,905	896,633	1,804	900,342
Low weight-for-height/length	276	157,063	256	157,595
High weight-for-height/length	523	297,250	539	298,312
Short stature	412	207,901	459	208,772
Inappropriate growth/weight gain pattern	53	27,109	39	27,201
Low birth weight/premature birth	1,119	501,767	876	503,762
Other anthropometric risks	257	93,590	225	94,072

Characteristic	Migrant Farmworker	Not Migrant Farmworker	Not Reported	Total Infant Participants
Biochemical	13	8,686	11	8,710
Hematocrit/hemoglobin below FNS criteria	13	8,647	11	8,671
Other biochemical risks	0	44	0	44
Clinical/Health/Medical	248	97,653	267	98,168
Nutrition-related risk conditions	241	92,077	252	92,570
Substance abuse	0	216	0	216
Other health risks	7	6,342	20	6,369
Dietary	1,255	546,567	846	548,668
Failure to meet DGA	0	453	1	454
Inappropriate nutrition practices	1,255	546,255	845	548,355
Other Risks	3,857	1,229,128	3,436	1,236,421
Regression/transfer/presumptive eligibility	48	21,055	398	21,501
Breastfeeding mother and infant dyad	303	105,891	174	106,368
Infant of a WIC-eligible mother/mother at risk during pregnancy	2,285	1,145,079	2,842	1,150,206
Homelessness/migrancy	3,211	4,915	76	8,202
Other nutritional risks	74	69,621	177	69,872
No Risk Reported	18	19,020	0	19,038
Percent of Infant Participants				
Anthropometric	47.5	53.3	39.9	53.3
Low weight-for-height/length	6.9	9.3	5.7	9.3
High weight-for-height/length	13.1	17.7	11.9	17.7
Short stature	10.3	12.4	10.2	12.4
Inappropriate growth/weight gain pattern	1.3	1.6	0.9	1.6
Low birth weight/premature birth	27.9	29.9	19.4	29.8
Other anthropometric risks	6.4	5.6	5.0	5.6
Biochemical	0.3	0.5	0.2	0.5
Hematocrit/hemoglobin below FNS criteria	0.3	0.5	0.2	0.5
Other biochemical risks	0.0	< 0.1	0.0	< 0.1
Clinical/Health/Medical	6.2	5.8	5.9	5.8
Nutrition-related risk conditions	6.0	5.5	5.6	5.5
Substance abuse	0.0	< 0.1	0.0	< 0.1
Other health risks	0.2	0.4	0.4	0.4
Dietary	31.3	32.5	18.7	32.5
Failure to meet DGA	0.0	< 0.1	< 0.1	< 0.1
Inappropriate nutrition practices	31.3	32.5	18.7	32.5

Characteristic	Migrant Farmworker	Not Migrant Farmworker	Not Reported	Total Infant Participants
Other Risks	96.3	73.1	76.1	73.2
Regression/transfer/presumptive eligibility	1.2	1.3	8.8	1.3
Breastfeeding mother and infant dyad	7.6	6.3	3.9	6.3
Infant of a WIC-eligible mother/mother at risk during pregnancy	57.0	68.1	62.9	68.1
Homelessness/migrancy	80.1	0.3	1.7	0.5
Other nutritional risks	1.8	4.1	3.9	4.1
No Risk Reported	0.4	1.1	0.0	1.1

Notes

DGA = Dietary Guidelines for Americans

State agencies could report up to 10 nutritional risk criteria for each participant.

Table 5.9e. Distribution of Children With Nutritional Risks by Migrant Farmworker Status

Characteristic	Migrant Farmworker	Not Migrant Farmworker	Not Reported	Total Child Participants
Number of Child Participants				
Anthropometric	4,807	1,557,305	5,592	1,567,704
Low weight-for-height/length	391	174,769	453	175,613
High weight-for-height/length	3,083	936,886	3,500	943,469
Short stature	1,127	327,297	1,258	329,682
Inappropriate growth/weight gain pattern	67	15,986	28	16,081
Low birth weight/premature birth	820	347,842	1,087	349,749
Other anthropometric risks	17	12,443	8	12,468
Biochemical	1,022	433,352	1,343	435,717
Hematocrit/hemoglobin below FNS criteria	1,017	428,847	1,343	431,207
Other biochemical risks	6	5,409	1	5,416
Clinical/Health/Medical	851	366,071	1,394	368,316
Nutrition-related risk conditions	552	302,933	1,144	304,629
Substance abuse	0	0	0	0
Other health risks	329	71,376	295	72,000
Dietary	7,042	2,688,670	9,807	2,705,519
Failure to meet DGA	598	661,586	2,331	664,515
Inappropriate nutrition practices	6,568	2,107,374	7,531	2,121,473
Other Risks	8,592	242,689	1,179	252,460
Regression/transfer/presumptive eligibility	131	46,461	482	47,074
Breastfeeding mother and infant dyad	3	3,104	0	3,107
Infant of a WIC-eligible mother/mother at risk during pregnancy	39	46,230	83	46,352
Homelessness/migrancy	8,480	10,382	245	19,107
Other nutritional risks	132	145,187	395	145,714
No Risk Reported	15	57,559	0	57,574

Characteristic	Migrant Farmworker	Not Migrant Farmworker	Not Reported	Total Child Participants
Percent of Child Participants				
Anthropometric	43.4	41.9	38.7	41.9
Low weight-for-height/length	3.5	4.7	3.1	4.7
High weight-for-height/length	27.8	25.2	24.3	25.2
Short stature	10.2	8.8	8.7	8.8
Inappropriate growth/weight gain pattern	0.6	0.4	0.2	0.4
Low birth weight/premature birth	7.4	9.4	7.5	9.3
Other anthropometric risks	0.2	0.3	< 0.1	0.3
Biochemical	9.2	11.7	9.3	11.6
Hematocrit/hemoglobin below FNS criteria	9.2	11.5	9.3	11.5
Other biochemical risks	< 0.1	0.1	< 0.1	0.1
Clinical/Health/Medical	7.7	9.9	9.7	9.8
Nutrition-related risk conditions	5.0	8.2	7.9	8.1
Substance abuse	0.0	0.0	0.0	0.0
Other health risks	3.0	1.9	2.0	1.9
Dietary	63.5	72.3	68.0	72.3
Failure to meet DGA	5.4	17.8	16.2	17.8
Inappropriate nutrition practices	59.2	56.7	52.2	56.7
Other Risks	77.5	6.5	8.2	6.7
Regression/transfer/presumptive eligibility	1.2	1.3	3.3	1.3
Breastfeeding mother and infant dyad	< 0.1	< 0.1	0.0	< 0.1
Infant of a WIC-eligible mother/mother at risk during pregnancy	0.4	1.2	0.6	1.2
Homelessness/migrancy	76.5	0.3	1.7	0.5
Other nutritional risks	1.2	3.9	2.7	3.9
No Risk Reported	0.1	1.5	0.0	1.5

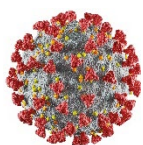
Notes

DGA = Dietary Guidelines for Americans

State agencies could report up to 10 nutritional criteria for each participant.

Chapter 6. Anthropometric Status

Participants' weights and heights (or lengths) are measured and recorded during the eligibility determination process and may be used to determine anthropometric nutritional risks. FNS first implemented national standards to categorize anthropometric status in 1999. WHO growth standards are currently used to assess weight and length for infants and 1-year-old children (WHO, 2006); CDC growth charts are used to assess weight and height for 2- to 4-year-old children (Kuczmarski et al., 2002); and BMI calculations are used for women. This chapter describes measurement data, typically reported in categories that correspond to certain nutritional risks. For information on assigned anthropometric nutritional risks, see chapter 5.



Because of waivers, policies, and procedures State agencies implemented in response to the COVID-19 pandemic, anthropometric data during March and April 2020 were often missing or unreliable. For example, some State agencies reported anthropometric data provided through the most recent measurement prior to the current certification appointment. **Therefore, for PC2020, the anthropometric findings in this chapter are provided for participants certified through February 2020.**

Weight and height/length data were reported for more than 96 percent of infants, children, and breastfeeding and postpartum women certified through February 2020 (see table 6.1). Table 6.2 provides an overview of the distribution of participants who met the criteria associated with certain nutritional risks among those with reported data. Height and weight data for pregnant women are not included. Anthropometric nutritional risks for pregnant women are based on prepregnancy weight or weight changes during pregnancy; neither variable is included in the MDS.⁶⁷

Sections A through D of this chapter describe the anthropometric statuses of infants, 1-year-old children, 2- to 4-year-old children, and women, respectively. The tables in this chapter provide data as of the age at measurement rather than the age at certification. For this reason, the total numbers of infants and children by year of age vary from the totals presented in chapter 3.⁶⁸

Table 6.1. Distribution of Presence of Anthropometric Data by Participant Category

Characteristic	Measurement Data Present	Measurement Data Missing	Total Participants
Number of Participants			
Total breastfeeding women participants	442,830	9,745	452,575
Total postpartum women participants	278,729	5,591	284,320
Total infant participants	1,409,899	53,164	1,463,063
Total 1-year-old child participants	943,678	21,744	965,422
Total 2- to 4-year-old child participants	1,740,560	46,593	1,787,152

⁶⁷ See appendix table C.15 for prepregnancy BMI for pregnant women in State agencies that submitted SDS data. See appendix tables C.16 and C.17 for weight gain during pregnancy for breastfeeding and postpartum women in State agencies that submitted SDS data.

⁶⁸ Appendix tables A.18–A.28, containing historical anthropometric data, were developed with the same methodology as the analyses presented in this report (see chapter 2 for additional details).

Characteristic	Measurement Data Present	Measurement Data Missing	Total Participants
Percent of Participants			
Total breastfeeding women participants	97.8	2.2	100.0
Total postpartum women participants	98.0	2.0	100.0
Total infant participants	96.4	3.6	100.0
Total 1-year-old child participants	97.7	2.3	100.0
Total 2- to 4-year-old child participants	97.4	2.6	100.0

Notes

Percents may not add to 100.0 because of rounding.

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, anthropometric data are reported only for participants certified through February 2020.

The WHO growth charts for infants assume a full-term pregnancy (37–42 weeks). Because many infants are certified soon after birth and measured at the time of certification (27.4 percent were measured for WIC within 1 week of birth, and 62.5 percent were measured within 1 month of birth), the lengths and weights of premature infants may be considered biologically implausible values. Such values are included in the “Measurement Data Missing” category.

Table 6.2. Distribution of Participants Meeting FNS-Issued Risk Criteria for Selected Anthropometric Measures Among Participants Reporting Data

Characteristic	Number	Percent
Total Participants	4,815,695	100.0
Infants		
Underweight	62,082	4.4
At risk of being underweight	30,615	2.2
High weight-for-length	111,068	7.9
Short stature	184,677	13.1
At risk of short stature	79,350	5.6
1-Year-Old Children		
Underweight	6,148	0.7
At risk of being underweight	6,328	0.7
High weight-for-length	127,541	13.5
Short stature	77,089	8.2
At risk of short stature	44,710	4.7
2- to 4-Year-Old Children		
Underweight	67,292	3.9
At risk of being underweight	52,887	3.0
Overweight	266,755	15.3
Obese	253,918	14.6
Short stature	80,584	4.6
At risk of short stature	72,494	4.2

Characteristic	Number	Percent
Breastfeeding Women		
Underweight	3,146	0.7
Overweight or obese	341,736	77.2
Postpartum Women		
Underweight	2,242	0.8
Overweight or obese	220,703	79.2

Notes

Percents may not add to 100.0 because of rounding.

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, anthropometric data are reported only for participants certified through February 2020.

Anthropometric criteria for infants and 1-year-old children were calculated using programming code for pediatric anthropometry developed by WHO based on WHO Child Growth Standards (see CDC, 2016a).

Anthropometric criteria for children aged 2 or older were calculated using programming code for pediatric anthropometry developed by CDC based on current growth charts (CDC, 2016b).

Infants and 1-year-old children who fall at or below the 2.3rd percentile for weight-for-length meet the FNS-issued criteria for *underweight*.

Infants and 1-year-old children who fall above the 2.3rd percentile and at or below the 5th percentile are considered *at risk of being underweight*. Infants and 1-year old children who fall at or above the 97.7th percentile for weight-for-length meet the FNS-issued criteria for *high weight-for-length*.

Infants and 1-year-old children who fall at or below the 2.3rd percentile for length-for-age meet the FNS-issued criteria for *short stature*. Infants and 1-year-old children who fall above the 2.3rd percentile and at or below the 5th percentile are considered *at risk of short stature*.

Children aged 2 or older who fall at or below the 5th percentile for BMI are considered *underweight*. Children aged 2 or older who fall above the 5th percentile and at or below the 10th percentile for BMI are considered *at risk of being underweight*. Children aged 2 or older who fall at or above the 85th percentile and below the 95th percentile for BMI are considered *overweight*. Children aged 2 or older who fall at or above the 95th percentile for BMI are considered *obese*.

Children aged 2 or older who fall at or below the 5th percentile for height-for-age are considered to have *short stature*. Children aged 2 or older who fall above the 5th percentile and at or below the 10th percentile for height-for-age are considered *at risk of short stature*.

For women, FNS uses NIH NHLBI (1998) definitions of *underweight* as having a BMI less than 18.5 and *overweight* as having a BMI greater than or equal to 25.0.

A. Infants

Since 2014, measurements for infants have been compared with WHO growth standards (WHO, 2006) as required by the anthropometric guidance provided in the May 2011 FNS memorandum (USDA FNS, 2011).⁶⁹ These comparisons are used to track growth and identify participants who qualify for certain nutritional risks. Infants are typically measured close to the time of certification; about two-thirds of infants were measured during the 3 months following birth.

WHO Growth Standards Weight-for-Length Thresholds for Infants

Underweight: below or at 2.3rd percentile

At risk of being underweight: between 2.3rd and 5th percentile

High weight-for-length: at or above 97.7th percentile

1. Weight-for-Length and Weight-for-Age

Weight-for-length percentiles are used to determine whether infants are *underweight* or *at risk of being underweight* or have *high weight-for-length* (see text box for thresholds). Overall, 4.4 percent of infants were *underweight*, with an additional 2.2 percent *at risk of being underweight* (see table 6.3).⁷⁰ Among all infants, 7.9 percent had *high weight-for-length*.⁷¹

⁶⁹ Prior to 2014, growth percentiles for infants were calculated using CDC growth charts. Historical data in appendix tables A.18–A.28 provide recalculated measures using WHO growth standards to facilitate analysis of trends over time. The numbers presented in the historical tables differ from the numbers in PC reports prior to PC2018 because of this change from CDC growth charts to WHO growth standards and slight changes in the technique for calculating age (see chapter 2 for additional details on age calculations).

⁷⁰ In comparison, 9.3 percent of infants were assigned the *low weight-for-height/length* nutritional risk.

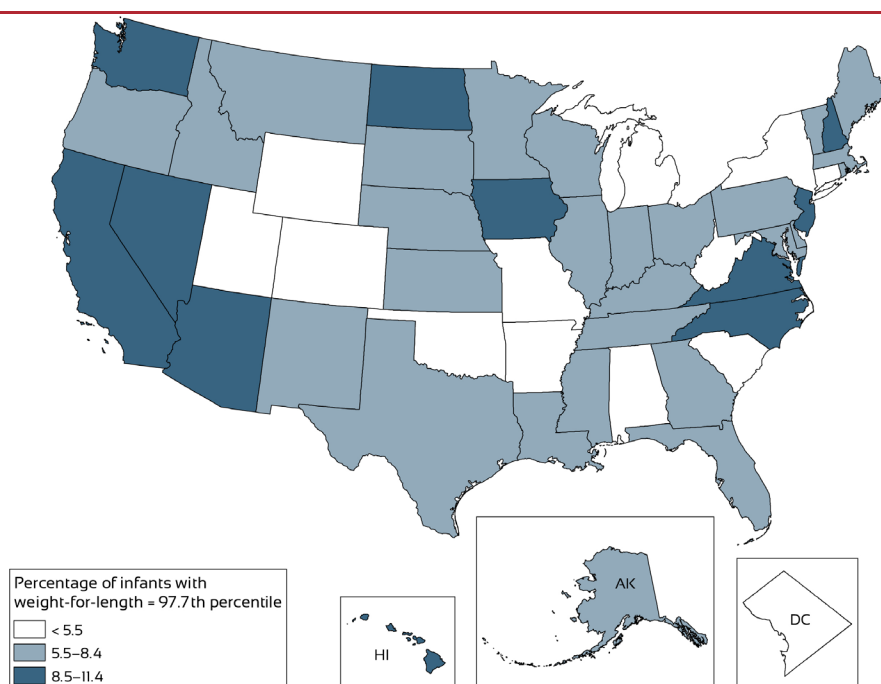
⁷¹ In comparison, 17.7 percent of infants were assigned the *high weight-for-height/length* nutritional risk.

Key findings by race and ethnicity (see table 6.3), State agency (see appendix table B.17), and over time (see appendix table A.18) follow:

- ▶ Among infants with race reported, Black and Asian infants were the most likely to be *underweight* or *at risk of being underweight*. The rate of *underweight* or *at risk of being underweight* was 2.1 percentage points higher among Black and Asian infants than Pacific Islander infants, who were the least likely to meet these criteria. Hispanic/Latino infants were less likely to be *underweight* or *at risk of being underweight* than non-Hispanic infants.
- ▶ Rates of *high weight-for-length* were highest among Pacific Islander infants (10.5 percent). The rate of *high weight-for-length* was 4.6 percentage points lower among Asian infants, who were the least likely to meet these criteria. Hispanic/Latino infants were more likely to have *high weight-for-length* than non-Hispanic/Latino infants.
- ▶ The percentage of infants who were *underweight* ranged substantially across the 50 States and the District of Columbia, from 1.1 percent in Kansas to 13.8 percent in Kentucky.
- ▶ The rate of *high weight-for-length* among infants ranged across the 50 States and the District of Columbia, from 3.6 percent in Connecticut to 11.2 percent in Hawaii (see figure 6.1).
- ▶ The percentage of infants who were either *underweight* or *at risk of being underweight* decreased from 10.6 percent in 1992 to 6.6 percent in 2020. The percentage who were *high weight-for-length* increased from 7.2 percent in 1992 to a peak of 8.8 percent in 2004 and decreased to 7.9 percent in 2020.

No weight-for-age measures are used to determine nutritional risks because weight-for-age percentiles are not part of the FNS nutritional risk criteria. The patterns among racial and ethnic groups were similar to those for *underweight* and *high weight-for-length* (see table 6.4).

Figure 6.1. Rates of High Weight-for-Length Among Infants by State



Note

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, anthropometric data are reported only for participants certified through February 2020.

Table 6.3. Distribution of Infants by Weight-for-Length Percentiles

Characteristic	WHO Growth Standards Weight-for-Length Percentiles						Measurement Data Present
	≤ 2.3	≤ 5	≤ 10	≥ 90	≥ 95	≥ 97.7	
Number of Infant Participants							
Total Infant Participants	62,082	92,697	146,453	295,018	182,951	111,068	1,409,899
Race							
American Indian	3,616	5,178	7,995	17,172	10,849	6,690	76,506
Asian	2,274	3,408	5,398	7,452	4,371	2,588	44,085
Black	17,999	26,502	41,134	69,230	43,473	26,761	348,758
Pacific Islander	325	506	814	2,870	1,856	1,108	10,570
White	33,101	49,976	79,830	174,350	107,590	64,804	818,152
Two or more races	4,101	6,194	9,901	21,065	13,046	8,004	99,100
Race not reported	666	933	1,381	2,879	1,765	1,113	12,728
Ethnicity							
Hispanic/Latino	21,642	32,011	50,710	125,414	78,372	47,649	545,510
Non-Hispanic/Latino	40,416	60,655	95,702	169,517	104,522	63,385	863,928
Ethnicity not reported	24	31	41	87	56	34	461
Percent of Infant Participants							
Total Infant Participants	4.4	6.6	10.4	20.9	13.0	7.9	100.0
Race							
American Indian	4.7	6.8	10.5	22.4	14.2	8.7	100.0
Asian	5.2	7.7	12.2	16.9	9.9	5.9	100.0
Black	5.2	7.6	11.8	19.9	12.5	7.7	100.0
Pacific Islander	3.1	4.8	7.7	27.2	17.6	10.5	100.0
White	4.0	6.1	9.8	21.3	13.2	7.9	100.0
Two or more races	4.1	6.3	10.0	21.3	13.2	8.1	100.0
Race not reported	5.2	7.3	10.9	22.6	13.9	8.7	100.0
Ethnicity							
Hispanic/Latino	4.0	5.9	9.3	23.0	14.4	8.7	100.0
Non-Hispanic/Latino	4.7	7.0	11.1	19.6	12.1	7.3	100.0
Ethnicity not reported	5.2	6.7	8.9	18.9	12.1	7.4	100.0

Notes

WHO = World Health Organization

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, anthropometric data are reported only for participants certified through February 2020.

Anthropometric criteria for infants and 1-year-old children were calculated using programming code for pediatric anthropometry developed by WHO based on WHO Child Growth Standards (see CDC, 2016a).

Percentiles reported in this table are cumulative. For example, the ≤ 5th percentile category includes infants in the ≤ 2.3rd percentile, and the ≥ 95th category includes infants in the ≥ 97.7th percentile.

It is assumed that length for an infant is recumbent length.

Infants who fall at or below the 2.3rd percentile for weight-for-length meet the FNS-issued criteria for *underweight*. Infants who fall above the 2.3rd percentile and at or below the 5th percentile are considered *at risk of being underweight*. Infants who fall at or above the 97.7th percentile for weight-for-length meet the FNS-issued criteria for *high weight-for-length*.

Table 6.4. Distribution of Infants by Weight-for-Age Percentiles

Characteristic	WHO Growth Standards Weight-for-Age Percentiles						Measurement Data Present
	< 3	< 5	< 10	≥ 90	≥ 95	≥ 97	
Number of Infant Participants							
Total Infant Participants	117,079	148,813	222,443	129,458	66,364	42,767	1,409,899
Race							
American Indian	4,426	5,762	8,882	8,757	4,513	2,990	76,506
Asian	2,971	3,888	6,173	3,389	1,649	1,052	44,085
Black	38,580	47,979	69,232	28,371	14,955	9,857	348,758
Pacific Islander	590	749	1,205	1,550	853	567	10,570
White	61,343	78,749	119,527	76,767	38,790	24,647	818,152
Two or more races	8,059	10,281	15,295	9,533	5,038	3,314	99,100
Race not reported	1,110	1,404	2,129	1,091	566	340	12,728
Ethnicity							
Hispanic/Latino	33,819	43,356	67,095	56,925	28,865	18,536	545,510
Non-Hispanic/Latino	83,221	105,410	155,274	72,484	37,470	24,210	863,928
Ethnicity not reported	39	46	74	49	29	21	461
Percent of Infant Participants							
Total Infant Participants	8.3	10.6	15.8	9.2	4.7	3.0	100.0
Race							
American Indian	5.8	7.5	11.6	11.4	5.9	3.9	100.0
Asian	6.7	8.8	14.0	7.7	3.7	2.4	100.0
Black	11.1	13.8	19.9	8.1	4.3	2.8	100.0
Pacific Islander	5.6	7.1	11.4	14.7	8.1	5.4	100.0
White	7.5	9.6	14.6	9.4	4.7	3.0	100.0
Two or more races	8.1	10.4	15.4	9.6	5.1	3.3	100.0
Race not reported	8.7	11.0	16.7	8.6	4.4	2.7	100.0
Ethnicity							
Hispanic/Latino	6.2	7.9	12.3	10.4	5.3	3.4	100.0
Non-Hispanic/Latino	9.6	12.2	18.0	8.4	4.3	2.8	100.0
Ethnicity not reported	8.5	10.0	16.1	10.6	6.3	4.6	100.0

Notes

WHO = World Health Organization

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, anthropometric data are reported only for participants certified through February 2020.

Anthropometric criteria for infants and 1-year-old children were calculated using programming code for pediatric anthropometry developed by WHO based on WHO Child Growth Standards (see CDC, 2016a).

Percentiles reported in this table are cumulative. For example, the < 5th percentile includes infants in the < 3rd percentile, and the ≥ 95th percentile includes infants in the ≥ 97th percentile.

2. Length-for-Age

Infants with very low length-for-age are considered to have *short stature* or be *at risk of short stature* (see text box for thresholds). Among infants, 13.1 percent had *short stature*, and an additional 5.6 percent were *at risk of short stature* (see table 6.5).⁷²

Key findings by race and ethnicity (see table 6.5), State agency (see appendix table B.19), and changes over time (see appendix table A.20) follow:

WHO Growth Standards Length-for-Age Thresholds for Infants

Short stature: below or at 2.3rd percentile

At risk of short stature: between 2.3rd and 5th percentile

- ▶ American Indian infants were the least likely to have *short stature* (9.4 percent) or be *at risk of short stature* (4.6 percent). Black infants were most likely to have *short stature* (16.3 percent) or be *at risk of short stature* (6.1 percent).
- ▶ Non-Hispanic/Latino infants were more likely to have *short stature* (14.6 percent) than their Hispanic/Latino counterparts (10.8 percent).
- ▶ Across the 50 States and the District of Columbia, rates of *short stature* among infants ranged from 8.1 percent in New York to 21.3 percent in Louisiana.
- ▶ The percentage of infants who were of *short stature* or *at risk of short stature* was highest at 18.7 percent in 2020 versus a low of 13.4 percent in 1996.

Table 6.5. Distribution of Infants by Length-for-Age Percentiles

Characteristic	WHO Growth Standards Length-for-Age Percentiles						Measurement Data Present
	≤ 2.3	≤ 5	≤ 10	≥ 90	≥ 95	≥ 97.7	
Number of Infant Participants							
Total Infant Participants	184,677	264,027	368,048	115,445	71,575	46,844	1,409,899
Race							
American Indian	7,193	10,715	15,757	7,649	4,781	3,113	76,506
Asian	4,421	6,527	9,589	4,146	2,539	1,659	44,085
Black	56,830	78,003	104,070	27,611	17,417	11,584	348,758
Pacific Islander	1,117	1,640	2,424	1,157	725	513	10,570
White	100,223	145,932	206,564	65,572	40,288	26,121	818,152
Two or more races	12,946	18,470	25,881	8,389	5,259	3,473	99,100
Race not reported	1,946	2,740	3,763	921	566	381	12,728
Ethnicity							
Hispanic/Latino	58,783	87,315	125,986	46,760	28,986	18,674	545,510
Non-Hispanic/Latino	125,836	176,636	241,952	68,653	42,569	28,156	863,928
Ethnicity not reported	57	76	110	32	20	14	461

⁷² For premature infants, the associated *short stature* and *at risk of short stature* nutritional risks use an adjusted gestational age. However, PC data do not contain an indicator of premature birth or an adjusted gestational age, so the estimates reported here may overstate the true prevalence of *short stature* or being *at risk of short stature*. Many infants were measured for WIC certification shortly after birth (27.4 percent were measured during their first week of life).

Characteristic	WHO Growth Standards Length-for-Age Percentiles						Measurement Data Present
	≤ 2.3	≤ 5	≤ 10	≥ 90	≥ 95	≥ 97.7	
Percent of Infant Participants							
Total Infant Participants	13.1	18.7	26.1	8.2	5.1	3.3	100.0
Race							
American Indian	9.4	14.0	20.6	10.0	6.2	4.1	100.0
Asian	10.0	14.8	21.8	9.4	5.8	3.8	100.0
Black	16.3	22.4	29.8	7.9	5.0	3.3	100.0
Pacific Islander	10.6	15.5	22.9	10.9	6.9	4.9	100.0
White	12.2	17.8	25.2	8.0	4.9	3.2	100.0
Two or more races	13.1	18.6	26.1	8.5	5.3	3.5	100.0
Race not reported	15.3	21.5	29.6	7.2	4.4	3.0	100.0
Ethnicity							
Hispanic/Latino	10.8	16.0	23.1	8.6	5.3	3.4	100.0
Non-Hispanic/Latino	14.6	20.4	28.0	7.9	4.9	3.3	100.0
Ethnicity not reported	12.4	16.5	23.9	6.9	4.3	3.0	100.0

Notes

WHO = World Health Organization

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, anthropometric data are reported only for participants certified through February 2020.

Anthropometric criteria for infants and 1-year-old children were calculated using programming code for pediatric anthropometry developed by WHO based on WHO Child Growth Standards (see CDC, 2016a).

Percentiles reported in this table are cumulative. For example, the ≤ 5th percentile category includes infants in the ≤ 2.3rd percentile, and the ≥ 95th category includes infants in the ≥ 97.7th percentile.

Infants who fall at or below the 2.3rd percentile for length-for-age meet the FNS-issued criteria for *short stature*. Infants who fall above the 2.3rd percentile and at or below the 5th percentile are considered *at risk of short stature*.

B. 1-Year-Old Children

Since 2014, measurements for children younger than 2 years old have been compared with WHO growth standards (WHO, 2006), as required by the anthropometric guidance provided in the May 2011 FNS memorandum (USDA FNS, 2011).⁷³ These comparisons are used to track growth and identify participants who qualify for certain nutritional risks.

1. Weight-for-Length and Weight-for-Age

Weight-for-length percentiles are used to determine whether 1-year-old children are *underweight* or *at risk of being underweight* or have *high weight-for-length* (see text box for thresholds). Fewer than 1.0 percent of 1-year-olds were *underweight* (0.7 percent) or *at risk of being underweight* (0.6 percent; see table 6.6).⁷⁴ Among all 1-year-olds, 13.5 percent had *high weight-for-length*.⁷⁵

WHO Growth Standards Weight-for-Length Thresholds for 1-Year-Old Children

Underweight: below or at 2.3rd percentile

At risk of being underweight: between 2.3rd and 5th percentile

High weight-for-length: at or above 97.7th percentile

⁷³ Prior to 2014, growth percentiles for 1-year-old children were calculated using CDC growth charts. The historical tables in appendix A provide recalculated measures using WHO growth standards to facilitate analysis of trends over time. The numbers presented in the historical tables differ from the numbers in PC reports prior to PC2018 because of this change from CDC growth charts to WHO growth standards and slight changes in the technique for calculating age (see chapter 2 for additional details on age calculations).

⁷⁴ In comparison, 1.8 percent of 1-year-old children were assigned the *low weight-for-height/length* nutritional risk.

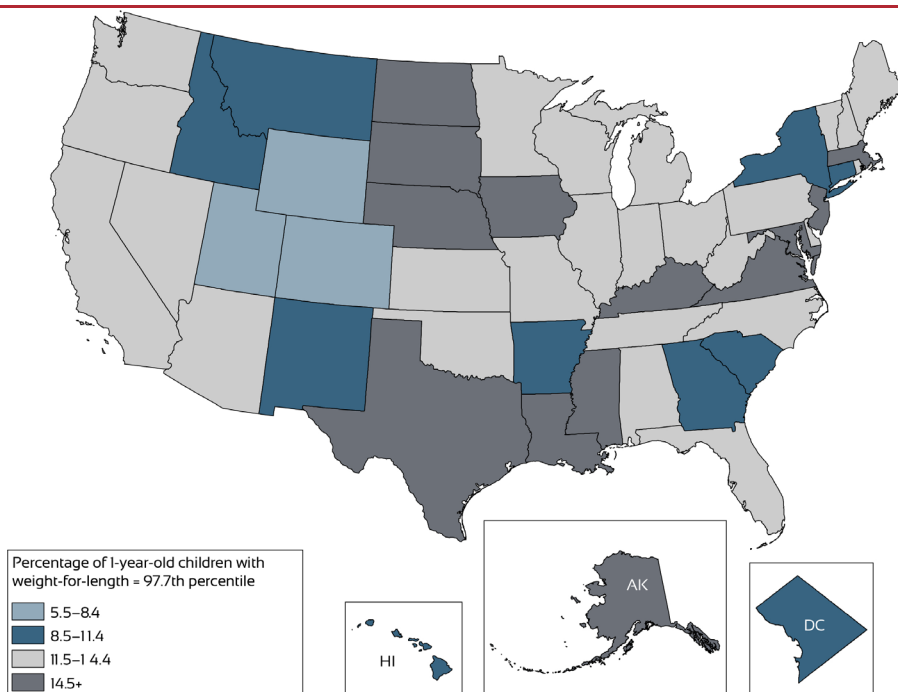
⁷⁵ In comparison, 17.9 percent of 1-year-old children were assigned the *high weight-for-height/length* nutritional risk.

Key findings by race and ethnicity (see table 6.6), State agency (see appendix table B.20), and over time (see appendix table A.21) follow:

- ▶ Asian 1-year-old children were the most likely to be *underweight* (1.2 percent) or *at risk of being underweight* (1.3 percent). Hispanic/Latino 1-year-old children were less likely to be *underweight* or *at risk of being underweight* than non-Hispanic/Latino 1-year-old children.
- ▶ The rate of *high weight-for-length* assignment was highest among Pacific Islander 1-year-old children (16.7 percent), which was 8.5 percentage points more than among Asian 1-year-old children. Hispanic/Latino 1-year-old children were more likely to have *high weight-for-length* than non-Hispanic/Latino infants and 1-year-old children.
- ▶ The percentage of 1-year-olds who were *underweight* was less than 1.0 percent in 43 States; it was highest in the District of Columbia at 1.7 percent.
- ▶ Among 1-year-olds, the rate of *high weight-for-length* ranged from 7.6 percent in Colorado to 17.7 percent in Iowa (see figure 6.2).
- ▶ The percentage of 1-year-olds who were *underweight* or *at risk of being underweight* was less than 1.7 percent from 1992 to 2020. The rate of *high weight-for-length* among 1-year-old children increased from 12.4 percent in 1992 to 16.1 percent in 2004 but then decreased to 13.5 percent in 2020.

Weight-for-age was not used to determine nutritional risk; the patterns among racial and ethnic groups were similar to those for *underweight and high weight-for-length* (see table 6.7).

Figure 6.2. Rates of High Weight-for-Length Among 1-Year-Old Children by State



Note

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, anthropometric data are reported only for participants certified through February 2020.

Table 6.6. Distribution of 1-Year-Old Children by Weight-for-Length Percentiles

Characteristic	WHO Growth Standards Weight-for-Length Percentiles							Measurement Data Present
	≤ 2.3	≤ 5	≤ 10	≥ 85	≥ 90	≥ 95	≥ 97.7	
Number of 1-Year-Old Child Participants								
Total 1-Year-Old Child Participants	6,148	12,476	26,194	386,069	304,455	202,111	127,541	943,678
Race								
American Indian	484	961	1,782	25,467	20,405	13,929	8,993	59,685
Asian	367	780	1,626	9,416	7,058	4,348	2,619	31,811
Black	1,950	3,849	7,891	80,959	63,413	41,888	26,571	215,023
Pacific Islander	44	81	177	3,572	2,892	1,998	1,296	7,769
White	2,914	6,034	12,967	237,007	187,266	124,314	78,141	558,608
Two or more races	369	732	1,639	27,857	21,966	14,658	9,273	66,594
Race not reported	20	39	112	1,790	1,455	975	647	4,187
Ethnicity								
Hispanic/Latino	2,012	4,181	8,650	165,590	131,820	88,475	56,440	380,123
Non-Hispanic/Latino	4,135	8,294	17,541	220,407	172,580	113,606	71,080	563,378
Ethnicity not reported	1	1	3	71	55	30	20	177
Percent of 1-Year-Old Child Participants								
Total 1-Year-Old Child Participants	0.7	1.3	2.8	40.9	32.3	21.4	13.5	100.0
Race								
American Indian	0.8	1.6	3.0	42.7	34.2	23.3	15.1	100.0
Asian	1.2	2.5	5.1	29.6	22.2	13.7	8.2	100.0
Black	0.9	1.8	3.7	37.7	29.5	19.5	12.4	100.0
Pacific Islander	0.6	1.0	2.3	46.0	37.2	25.7	16.7	100.0
White	0.5	1.1	2.3	42.4	33.5	22.3	14.0	100.0
Two or more races	0.6	1.1	2.5	41.8	33.0	22.0	13.9	100.0
Race not reported	0.5	0.9	2.7	42.8	34.8	23.3	15.5	100.0
Ethnicity								
Hispanic/Latino	0.5	1.1	2.3	43.6	34.7	23.3	14.8	100.0
Non-Hispanic/Latino	0.7	1.5	3.1	39.1	30.6	20.2	12.6	100.0
Ethnicity not reported	0.6	0.6	1.7	40.1	31.1	16.9	11.3	100.0

Notes

WHO = World Health Organization

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, anthropometric data are reported only for participants certified through February 2020.

Anthropometric criteria for infants and 1-year-old children were calculated using programming code for pediatric anthropometry developed by WHO based on WHO Child Growth Standards (see CDC, 2016a).

Percentiles reported in this table are cumulative. For example, the ≤ 5th percentile includes children in the ≤ 2.3rd percentile, and the ≥ 95th percentile includes children in the ≥ 97.7th percentile.

One-year-old children who fall at or below the 2.3rd percentile for weight-for-length meet the FNS-issued criteria for *underweight*. One-year-old children who fall above the 2.3rd percentile and at or below the 5th percentile are considered *at risk of being underweight*. One-year-old children who fall at or above the 97.7th percentile for weight-for-length meet the FNS-issued criteria for *high weight-for-length*.

Table 6.7. Distribution of 1-Year-Old Children by Weight-for-Age Percentiles

Characteristic	WHO Growth Standards Weight-for-Age Percentiles						Measurement Data Present
	< 3	< 5	< 10	≥ 90	≥ 95	≥ 97	
Number of 1-Year-Old Child Participants							
Total 1-Year-Old Child Participants	15,966	24,927	48,499	202,409	123,324	86,579	943,678
Race							
American Indian	854	1,321	2,672	14,214	8,945	6,496	59,685
Asian	784	1,218	2,431	5,004	2,912	2,039	31,811
Black	4,396	6,702	12,557	46,275	28,630	20,210	215,023
Pacific Islander	138	220	405	2,111	1,351	990	7,769
White	8,724	13,772	27,067	118,636	71,559	49,854	558,608
Two or more races	1,018	1,608	3,168	15,206	9,345	6,570	66,594
Race not reported	52	86	199	962	581	420	4,187
Ethnicity							
Hispanic/Latino	5,134	8,075	16,386	85,982	52,847	37,437	380,123
Non-Hispanic/Latino	10,830	16,847	32,103	116,391	70,453	49,124	563,378
Ethnicity not reported	2	5	10	36	23	18	177
Percent of 1-Year-Old Child Participants							
Total 1-Year-Old Child Participants	1.7	2.6	5.1	21.4	13.1	9.2	100.0
Race							
American Indian	1.4	2.2	4.5	23.8	15.0	10.9	100.0
Asian	2.5	3.8	7.6	15.7	9.2	6.4	100.0
Black	2.0	3.1	5.8	21.5	13.3	9.4	100.0
Pacific Islander	1.8	2.8	5.2	27.2	17.4	12.7	100.0
White	1.6	2.5	4.8	21.2	12.8	8.9	100.0
Two or more races	1.5	2.4	4.8	22.8	14.0	9.9	100.0
Race not reported	1.2	2.1	4.8	23.0	13.9	10.0	100.0
Ethnicity							
Hispanic/Latino	1.4	2.1	4.3	22.6	13.9	9.8	100.0
Non-Hispanic/Latino	1.9	3.0	5.7	20.7	12.5	8.7	100.0
Ethnicity not reported	1.1	2.8	5.7	20.3	13.0	10.2	100.0

Notes

WHO = World Health Organization

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, anthropometric data are reported only for participants certified through February 2020.

Anthropometric criteria for infants and 1-year-old children were calculated using programming code for pediatric anthropometry developed by WHO based on WHO Child Growth Standards (see CDC, 2016a).

Percentiles reported in this table are cumulative. For example, the < 5th percentile includes children in the < 3rd percentile, and the ≥ 95th percentile includes children in the ≥ 97th percentile.

2. Length-for-Age

One-year-old children with very low length-for-age are considered to have *short stature* or be *at risk of short stature* (see text box for thresholds). Among 1-year-olds, 8.2 percent had *short stature*, and an additional 4.7 were *at risk of short stature* (see table 6.8).

Key findings by race and ethnicity (see table 6.8), State agency (see appendix table B.22), and changes over time (see appendix table A.23) follow:

WHO Growth Standards Length-for-Age Thresholds for 1-Year-Old Children

Short stature: below or at 2.3rd percentile

At risk of short stature: between 2.3rd and 5th percentile

- ▶ American Indian 1-year-old children were the least likely to have *short stature* (6.6 percent) or be *at risk of short stature* (4.0 percent). Pacific Islander 1-year-old children (8.9 percent) were most likely to have *short stature*. White 1-year-old children were most likely to be *at risk of short stature* (5.0 percent).
- ▶ Non-Hispanic/Latino 1-year-old children were more likely to have *short stature* (8.6 percent) than their Hispanic/Latino counterparts (7.5 percent).
- ▶ Across the 50 States and the District of Columbia, rates of *short stature* among 1-year-olds ranged from 4.7 percent in Connecticut to 15.8 percent in Nebraska.
- ▶ The percentage of 1-year-olds who were of *short stature* or *at risk of short stature* was, historically, lowest in 1996 (8.8 percent) and has steadily increased to the highest rate in 2020 (12.9 percent).

Table 6.8. Distribution of 1-Year-Old Children by Length-for-Age Percentiles

Characteristic	WHO Growth Standards Length-for-Age Percentiles						Measurement Data Present
	≤ 2.3	≤ 5	≤ 10	≥ 90	≥ 95	≥ 97.7	
Number of 1-Year-Old Child Participants							
Total 1-Year-Old Child Participants	77,089	121,800	189,555	83,917	49,714	33,026	943,678
Race							
American Indian	3,912	6,351	10,323	5,852	3,492	2,316	59,685
Asian	2,439	3,979	6,284	3,055	1,835	1,192	31,811
Black	17,237	26,323	40,026	24,857	15,236	10,342	215,023
Pacific Islander	695	1,048	1,577	917	585	422	7,769
White	47,570	75,685	118,058	42,579	24,636	16,140	558,608
Two or more races	4,950	7,938	12,525	6,299	3,719	2,475	66,594
Race not reported	286	475	762	358	211	139	4,187
Ethnicity							
Hispanic/Latino	28,613	46,711	74,544	31,194	18,191	11,930	380,123
Non-Hispanic/Latino	48,467	75,073	114,987	52,707	31,513	21,092	563,378
Ethnicity not reported	9	15	24	16	10	4	177

Characteristic	WHO Growth Standards Length-for-Age Percentiles						Measurement Data Present
	≤ 2.3	≤ 5	≤ 10	≥ 90	≥ 95	≥ 97.7	
Percent of 1-Year-Old Child Participants							
Total 1-Year-Old Child Participants	8.2	12.9	20.1	8.9	5.3	3.5	100.0
Race							
American Indian	6.6	10.6	17.3	9.8	5.9	3.9	100.0
Asian	7.7	12.5	19.8	9.6	5.8	3.7	100.0
Black	8.0	12.2	18.6	11.6	7.1	4.8	100.0
Pacific Islander	8.9	13.5	20.3	11.8	7.5	5.4	100.0
White	8.5	13.5	21.1	7.6	4.4	2.9	100.0
Two or more races	7.4	11.9	18.8	9.5	5.6	3.7	100.0
Race not reported	6.8	11.3	18.2	8.6	5.0	3.3	100.0
Ethnicity							
Hispanic/Latino	7.5	12.3	19.6	8.2	4.8	3.1	100.0
Non-Hispanic/Latino	8.6	13.3	20.4	9.4	5.6	3.7	100.0
Ethnicity not reported	5.1	8.5	13.6	9.0	5.6	2.3	100.0

Notes

WHO = World Health Organization

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, anthropometric data are reported only for participants certified through February 2020.

Anthropometric criteria for infants and 1-year-old children were calculated using programming code for pediatric anthropometry developed by WHO based on WHO Child Growth Standards (see CDC, 2016a).

Percentiles reported in this table are cumulative. For example, the ≤ 5th percentile includes children in the ≤ 2.3rd percentile, and the ≥ 95th percentile includes children in the ≥ 97.7th percentile.

One-year-old children who fall at or below the 2.3rd percentile for length-for-age meet the FNS-issued criteria for *short stature*. One-year-old children who fall above the 2.3rd percentile and at or below the 5th percentile are considered *at risk of short stature*.

C. 2- to 4-Year-Old Children

Measurements for children aged 2 and older are compared with the statistical norms in the general population using the CDC growth charts, which are based on standardized distributions developed by CDC's National Center for Health Statistics (NCHS; Kuczmarski et al., 2002). These comparisons are used to track growth and identify participants who qualify for certain nutritional risks.

CDC Growth Charts BMI-for-Age Thresholds for 2- to 4-Year-Old Children

Underweight: below or at 5th percentile

At risk of being underweight: between 5th and 10th percentile

Overweight: between 85th and 95th percentile

Obese: at or above 95th percentile

1. BMI-for-Age and Weight-for-Age

BMI-for-age percentiles are used to determine whether 2- to 4-year-old children are *underweight*, *at risk of being underweight*, *overweight*, or *obese* (see textbox for thresholds). Overall, 3.9 percent of 2- to 4-year-olds were *underweight*, with an additional 3.0 percent *at risk of being underweight* (see table 6.9).⁷⁶ In contrast, being *overweight* and *obese* were much more common conditions among 2- to 4-

⁷⁶ In comparison, 6.4 percent of 2-year-old children, 6.7 percent of 3-year-old children, and 6.1 percent of 4-year-old children were assigned the *low weight-for-height/length* nutritional risk.

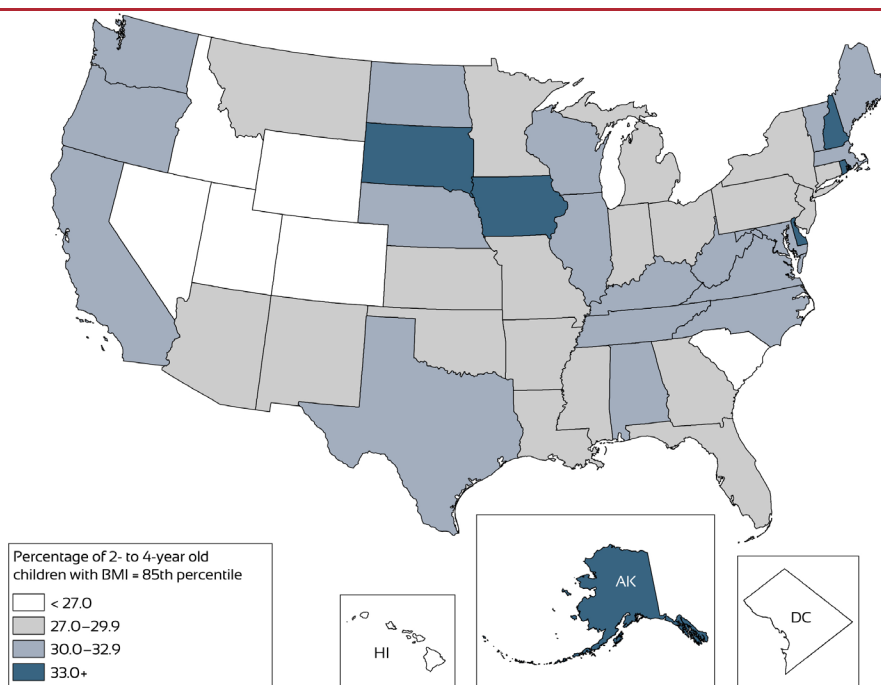
year-olds. About 30 percent of these children fell into one of these categories: 14.6 percent were *obese*, and an additional 15.3 percent were *overweight*.⁷⁷ Key findings by race and ethnicity (see table 6.9), State agency (see appendix table B.23), and over time (see appendix table A.24) follow:

- ▶ Among 2- to 4-year-olds with race reported, Asian children were the most likely to be *underweight* (6.5 percent) or *at risk of being underweight* (4.8 percent). Non-Hispanic/Latino 2- to 4-year-old children were more likely to be *underweight* than Hispanic/Latino children (4.4 and 3.1 percent, respectively) and more likely to be *at risk of being underweight* (3.4 and 2.7 percent, respectively).
- ▶ Among those with race reported, Pacific Islander children were the most likely to be *overweight* (17.3 percent), and American Indian children were the most likely to be *obese* (18.0 percent). Hispanic/Latino children were more likely to be *overweight* or *obese* (16.3 and 17.5 percent, respectively) than non-Hispanic/Latino children (14.7 and 12.4 percent, respectively).
- ▶ Rates of being *underweight* and *at risk of being underweight* did not vary substantially by age.
- ▶ Rates of being *overweight* or *obese* were highest among older children; 27.9 percent of 2-year-old children were either *overweight* or *obese*, in contrast to 30.8 percent of 3-year-old children and 32.1 percent of 4-year-old children.
- ▶ The percentage of 2- to 4-year-olds who were *underweight* was more than three times higher in Mississippi (4.4 percent) than in New Hampshire and Oregon (both 1.2 percent). The percentage of 2- to 4-year-old children who were *overweight* or *obese* was nearly 20 percentage points higher in Alaska (38.1 percent) than in Utah (20.8 percent; see figure 6.3).
- ▶ The percentage of 2- to 4-year-olds who were *overweight* or *obese* increased between 1992 and 2008, peaking at 16.8 percent *overweight* and an additional 15.9 percent *obese*. Rates of being *overweight* or *obese* then decreased through 2016 but increased again through 2020.
- ▶ Since 1992, the percentage of 2-year-olds who were *overweight* has been consistently higher than the percentage of those who were *obese* (see figure 6.4). The percentages of 3- and 4-year-old children who were *overweight* or *obese* have remained consistent since 2002.

Weight-for-age was not used to determine nutritional risk; the patterns among racial and ethnic groups were similar to those for being *underweight*, *overweight*, and *obese* (see table 6.10).

⁷⁷ In comparison, 28.1 percent of 2-year-old children, 30.9 percent of 3-year-old children, and 30.6 percent of 4-year-old children were assigned the *high weight-for-height/length* nutritional risk.

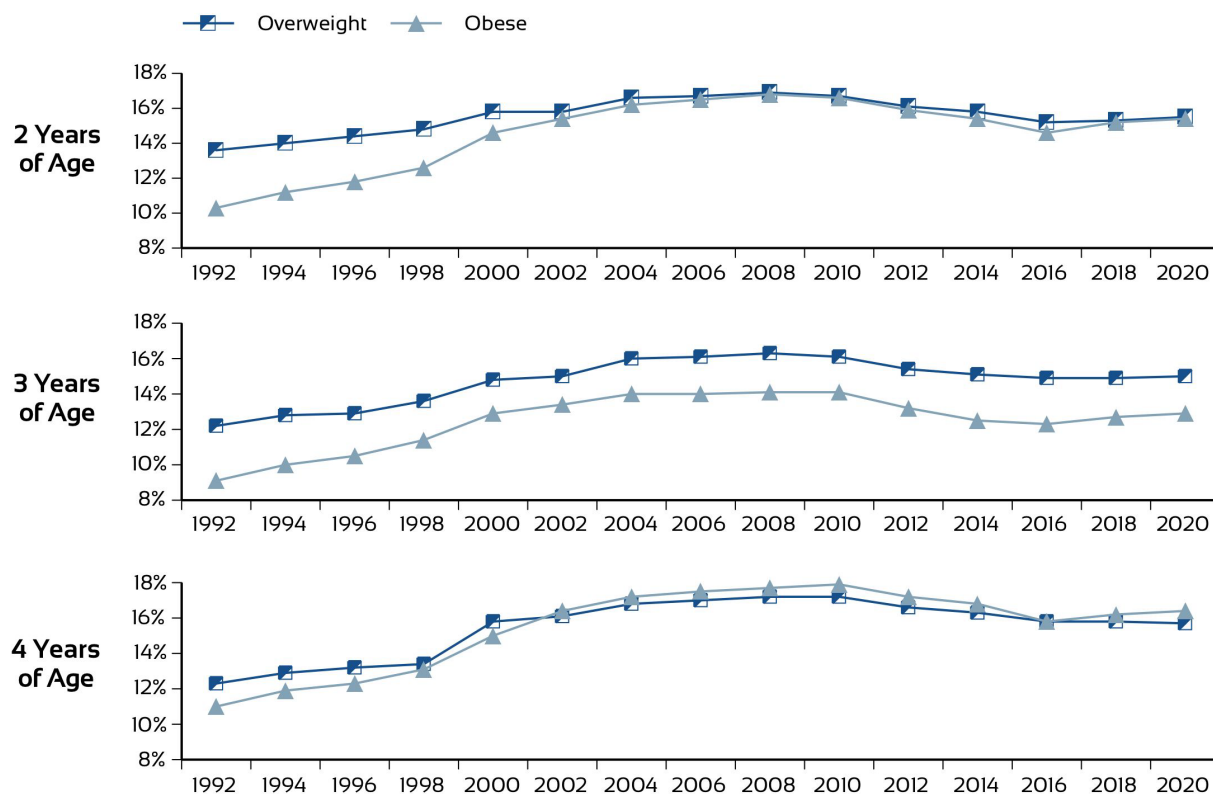
Figure 6.3. Rates of Overweight or Obesity Among 2- to 4-Year-Old Children by State



Note

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, anthropometric data are reported only for participants certified through February 2020.

Figure 6.4. Rates of Overweight or Obesity Among 2- to 4-Year-Old Children: 1992–2020



Note

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, anthropometric data are reported only for participants certified through February 2020.

Table 6.9. Distribution of 2- to 4-Year-Old Children by BMI-for-Age Percentiles

Characteristic	CDC Growth Charts BMI Percentiles							Measurement Data Present
	≤ 2.3	≤ 5	≤ 10	≥ 85	≥ 90	≥ 95	≥ 97.7	
Number of 2- to 4-Year-Old Child Participants								
Total 2- to 4-Year-Old Child Participants	39,453	67,292	120,180	520,673	397,993	253,918	163,500	1,740,560
Race								
American Indian	3,162	5,167	9,107	46,281	36,258	24,276	16,400	134,749
Asian	2,708	4,416	7,641	14,917	11,199	7,047	4,639	67,526
Black	11,647	19,425	33,388	94,359	70,930	44,253	27,729	366,350
Pacific Islander	319	511	894	5,210	3,957	2,489	1,617	15,728
White	18,970	33,166	60,741	322,388	246,977	157,900	101,587	1,030,092
Two or more races	2,508	4,349	7,971	35,122	26,785	16,699	10,698	118,943
Race not reported	139	258	437	2,396	1,887	1,254	829	7,172
Ethnicity								
Hispanic/Latino	13,326	23,179	42,486	249,356	194,955	129,367	86,591	738,391
Non-Hispanic/Latino	26,119	44,104	77,678	271,259	202,994	124,528	76,895	1,001,928
Ethnicity not reported	8	9	15	58	43	23	13	241
Age at Certification								
2 years	15,727	27,495	50,040	199,266	149,573	92,181	56,530	713,901
3 years	14,555	24,643	43,930	197,339	151,956	98,350	64,589	639,839
4 years	9,171	15,154	26,209	124,069	96,464	63,386	42,380	386,819
Percent of 2- to 4-Year-Old Child Participants								
Total 2- to 4-Year-Old Child Participants	2.3	3.9	6.9	29.9	22.9	14.6	9.4	100.0
Race								
American Indian	2.3	3.8	6.8	34.3	26.9	18.0	12.2	100.0
Asian	4.0	6.5	11.3	22.1	16.6	10.4	6.9	100.0
Black	3.2	5.3	9.1	25.8	19.4	12.1	7.6	100.0
Pacific Islander	2.0	3.2	5.7	33.1	25.2	15.8	10.3	100.0
White	1.8	3.2	5.9	31.3	24.0	15.3	9.9	100.0
Two or more races	2.1	3.7	6.7	29.5	22.5	14.0	9.0	100.0
Race not reported	1.9	3.6	6.1	33.4	26.3	17.5	11.6	100.0
Ethnicity								
Hispanic/Latino	1.8	3.1	5.8	33.8	26.4	17.5	11.7	100.0
Non-Hispanic/Latino	2.6	4.4	7.8	27.1	20.3	12.4	7.7	100.0
Ethnicity not reported	3.3	3.7	6.2	24.1	17.8	9.5	5.4	100.0
Age at Certification								
2 years	2.2	3.9	7.0	27.9	21.0	12.9	7.9	100.0
3 years	2.3	3.9	6.9	30.8	23.7	15.4	10.1	100.0
4 years	2.4	3.9	6.8	32.1	24.9	16.4	11.0	100.0

Notes

BMI = body mass index; CDC = Centers for Disease Control and Prevention

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, anthropometric data are reported only for participants certified through February 2020.

Anthropometric criteria for children aged 2 or older were calculated using programming code for pediatric anthropometry developed by CDC based on current growth charts (CDC, 2016b).

Percentiles reported in this table are cumulative. For example, the ≤ 5th percentile includes children in the ≤ 2.3rd percentile, and the ≥ 95th percentile includes children in the ≥ 97.7th percentile.

Children aged 2 or older who fall at or below the 5th percentile for BMI are considered *underweight*. Children aged 2 or older who fall above the 5th percentile and at or below the 10th percentile for BMI are considered *at risk of being underweight*. Children aged 2 or older who fall at or above the 85th percentile and below the 95th percentile for BMI are considered *overweight*. Children aged 2 or older who fall at or above the 95th percentile for BMI are considered *obese*.

Table 6.10. Distribution of 2- to 4-Year-Old Children by Weight-for-Age Percentiles

Characteristic	CDC Growth Charts Weight-for-Age Percentiles						Measurement Data Present
	< 3	< 5	< 10	≥ 90	≥ 95	≥ 97	
Number of 2- to 4-Year-Old Child Participants							
Total 2- to 4-Year-Old Child Participants	48,263	72,435	131,037	348,091	222,330	163,511	1,740,560
Race							
American Indian	3,054	4,625	8,660	31,969	21,473	16,269	134,749
Asian	3,025	4,446	7,773	10,257	6,538	4,807	67,526
Black	10,287	15,118	27,035	76,796	47,968	34,410	366,350
Pacific Islander	521	756	1,305	3,697	2,466	1,885	15,728
White	28,002	42,490	77,271	199,432	127,377	94,037	1,030,092
Two or more races	3,158	4,692	8,470	24,414	15,467	11,324	118,943
Race not reported	216	308	523	1,526	1,040	778	7,172
Ethnicity							
Hispanic/Latino	17,895	27,552	51,171	160,745	106,822	80,865	738,391
Non-Hispanic/Latino	30,359	44,867	79,841	187,299	115,483	82,633	1,001,928
Ethnicity not reported	9	16	25	46	25	13	241
Age at Certification							
2 years	25,919	38,263	67,058	133,421	84,954	62,001	713,901
3 years	14,262	21,729	40,365	134,311	85,249	62,855	639,839
4 years	8,082	12,443	23,613	80,359	52,126	38,654	386,819
Percent of 2- to 4-Year-Old Child Participants							
Total 2- to 4-Year-Old Child Participants	2.8	4.2	7.5	20.0	12.8	9.4	100.0
Race							
American Indian	2.3	3.4	6.4	23.7	15.9	12.1	100.0
Asian	4.5	6.6	11.5	15.2	9.7	7.1	100.0
Black	2.8	4.1	7.4	21.0	13.1	9.4	100.0
Pacific Islander	3.3	4.8	8.3	23.5	15.7	12.0	100.0
White	2.7	4.1	7.5	19.4	12.4	9.1	100.0
Two or more races	2.7	3.9	7.1	20.5	13.0	9.5	100.0
Race not reported	3.0	4.3	7.3	21.3	14.5	10.8	100.0
Ethnicity							
Hispanic/Latino	2.4	3.7	6.9	21.8	14.5	11.0	100.0
Non-Hispanic/Latino	3.0	4.5	8.0	18.7	11.5	8.2	100.0
Ethnicity not reported	3.7	6.6	10.4	19.1	10.4	5.4	100.0
Age at Certification							
2 years	3.6	5.4	9.4	18.7	11.9	8.7	100.0
3 years	2.2	3.4	6.3	21.0	13.3	9.8	100.0
4 years	2.1	3.2	6.1	20.8	13.5	10.0	100.0

Notes

CDC = Centers for Disease Control and Prevention

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, anthropometric data are reported only for participants certified through February 2020.

Anthropometric criteria for children aged 2 or older were calculated using programming code for pediatric anthropometry developed by CDC based on current growth charts (CDC, 2016b).

Percentiles reported in this table are cumulative. For example, the < 5th percentile includes children in the < 3rd percentile, and the ≥ 95th percentile includes children in the ≥ 97th percentile.

2. Height-for-Age

Height-for-age percentiles are used to determine whether 2- to 4-year-old children have *short stature* or are *at risk of short stature* (see text box for thresholds). Among all 2- to 4-year-olds, 4.6 percent were of *short stature*, and an additional 4.2 percent were *at risk of short stature* (see table 6.11).

Key findings by race, ethnicity, and age (see table 6.11); State agency (see appendix table B.25); and over time (see appendix table A.26) follow:

CDC Growth Charts Height-for-Age Thresholds for 2-to-4-Year-Old Children

Short stature: below or at 5th percentile

At risk of short stature: between 5th and 10th percentile

- ▶ Among children with race reported, Pacific Islander children had the highest rates of *short stature* and or being *at risk of short stature* (6.2 and 5.1 percent, respectively). Hispanic/Latino children were equally as likely as non-Hispanic/Latino children to have *short stature* and about as likely to be *at risk of short stature*.
- ▶ Rates of *short stature* were lower among older children than younger children (3.8 percent of 4-year-olds compared with 5.2 percent of 2-year-olds).
- ▶ Wyoming had the highest rate of *short stature* (8.1 percent) among 2- to 4-year-old children, which was over twice the rate in Alaska and North Dakota (both 3.4 percent).
- ▶ The rate of 2- to 4-year-olds with *short stature* or *at risk of short stature* has risen in recent years, from a historical low of 7.2 percent in 2012 to 8.8 percent in 2020.

Table 6.11. Distribution of 2- to 4-Year-Old Children by Height-for-Age Percentiles

Characteristic	CDC Growth Charts Height-for-Age Percentiles						Measurement Data Present
	≤ 2.3	≤ 5	≤ 10	≥ 90	≥ 95	≥ 97.7	
Number of 2- to 4-Year-Old Child Participants							
Total 2- to 4-Year-Old Child Participants	42,052	80,584	153,079	229,718	126,923	82,473	1,740,560
Race							
American Indian	2,633	5,218	10,248	19,499	10,797	7,100	134,749
Asian	1,753	3,424	6,595	8,109	4,364	2,769	67,526
Black	7,133	13,223	24,856	68,740	40,468	27,346	366,350
Pacific Islander	525	980	1,772	2,618	1,599	1,125	15,728
White	27,219	52,346	99,329	113,390	60,030	37,842	1,030,092
Two or more races	2,626	5,070	9,609	16,493	9,193	5,997	118,943
Race not reported	163	323	670	869	471	294	7,172
Ethnicity							
Hispanic/Latino	17,462	34,161	66,039	87,445	46,973	30,039	738,391
Non-Hispanic/Latino	24,584	46,413	87,015	142,240	79,934	52,424	1,001,928
Ethnicity not reported	6	10	25	33	16	10	241
Age at Certification							
2 years	19,413	37,087	69,835	78,808	41,743	25,971	713,901
3 years	14,926	28,679	54,395	88,318	49,137	32,220	639,839
4 years	7,713	14,818	28,848	62,591	36,042	24,282	386,819

Characteristic	CDC Growth Charts Height-for-Age Percentiles						Measurement Data Present
	≤ 2.3	≤ 5	≤ 10	≥ 90	≥ 95	≥ 97.7	
Percent of 2- to 4-Year-Old Child Participants							
Total 2- to 4-Year-Old Child Participants	2.4	4.6	8.8	13.2	7.3	4.7	100.0
Race							
American Indian	2.0	3.9	7.6	14.5	8.0	5.3	100.0
Asian	2.6	5.1	9.8	12.0	6.5	4.1	100.0
Black	1.9	3.6	6.8	18.8	11.0	7.5	100.0
Pacific Islander	3.3	6.2	11.3	16.6	10.2	7.2	100.0
White	2.6	5.1	9.6	11.0	5.8	3.7	100.0
Two or more races	2.2	4.3	8.1	13.9	7.7	5.0	100.0
Race not reported	2.3	4.5	9.3	12.1	6.6	4.1	100.0
Ethnicity							
Hispanic/Latino	2.4	4.6	8.9	11.8	6.4	4.1	100.0
Non-Hispanic/Latino	2.5	4.6	8.7	14.2	8.0	5.2	100.0
Ethnicity not reported	2.5	4.1	10.4	13.7	6.6	4.1	100.0
Age at Certification							
2 years	2.7	5.2	9.8	11.0	5.8	3.6	100.0
3 years	2.3	4.5	8.5	13.8	7.7	5.0	100.0
4 years	2.0	3.8	7.5	16.2	9.3	6.3	100.0

Notes

CDC = Centers for Disease Control and Prevention

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, anthropometric data are reported only for participants certified through February 2020.

Anthropometric criteria for children aged 2 or older were calculated using programming code for pediatric anthropometry developed by CDC based on current growth charts (CDC, 2016b).

Percentiles reported in this table are cumulative. For example, the ≤ 5th percentile includes children in the ≤ 2.3rd percentile, and the ≥ 95th percentile includes children in the ≥ 97.7th percentile.

Children aged 2 or older who fall at or below the 5th percentile for height-for-age are considered to have *short stature*. Children aged 2 or older who fall above the 5th percentile and at or below the 10th percentile for height-for-age are considered *at risk of short stature*.

D. Women

Anthropometric risks for women are measured by BMI, which is based on the relationship of weight to height. Nutritional risk criteria for women's BMI are based on the weight status standards set by the National Institutes of Health's National Heart, Lung, and Blood Institute (NIH NHLBI, 1998).

The rates of high BMI reported in this chapter may be higher than the rates of women assigned the nutritional risk of *high weight-for-height*, as reported in chapter 5. When assigning nutritional risk criteria to postpartum and breastfeeding women, WIC clinic staff do not always use the weight obtained during the current certification period. For postpartum women and breastfeeding women 6 or fewer months postpartum, clinic staff use prepregnancy BMI to assign nutritional risk criteria. For breastfeeding women who are 6 or more months postpartum, WIC clinic staff use measurements from the current certification period.

PC data do not contain a date of delivery for breastfeeding and postpartum women, so the exact timing of height and weight measurement is unknown. However, 6.5 percent of breastfeeding women and 10.0 percent of postpartum women had measurement dates preceding their certification; 81.5 percent of breastfeeding women and 87.9 percent of postpartum women were measured within 1 month of

certification. These data suggest most breastfeeding and postpartum women's measurements were recorded near the time of delivery.

Women with a BMI less than 18.5 are considered *underweight*. Being underweight is uncommon among women who have recently given birth; fewer than 1 percent of breastfeeding and postpartum women were *underweight* (see tables 6.12 and 6.13, respectively). Women with a BMI equal to or greater than 25.0 are considered *overweight* or *obese*. More than three-quarters of breastfeeding and postpartum women were *overweight* or *obese* (77.2 percent of breastfeeding women and 79.2 percent of postpartum women⁷⁸).

Key findings by race and ethnicity (see tables 6.12 and 6.13), State agency (see appendix tables B.26 and B.27), and over time (see appendix tables A.27 and A.28) follow:

- ▶ Pacific Islander and Black women were most likely to be *overweight* or *obese* (81.7 and 80.3 percent of breastfeeding women, respectively, and 83.3 and 80.3 percent of postpartum women).
- ▶ Hispanic/Latino women were more likely than non-Hispanic/Latino women to be *overweight* or *obese* (79.7 percent and 75.1 percent, respectively).
- ▶ Across the 50 States and the District of Columbia, breastfeeding women (68.0 percent) in Vermont and postpartum women (69.6 percent) in West Virginia were least likely to be *overweight* or *obese*. Breastfeeding women in Texas (81.0 percent) and postpartum women in Connecticut (82.2 percent) were most likely to be *overweight* or *obese*.
- ▶ The percentage of *overweight* or *obese* breastfeeding and postpartum women has increased since 1992. In both participant categories, about 56 percent of women were *overweight* or *obese* in 1992 compared with about 78 percent in 2020.

Table 6.12. Distribution of Breastfeeding Women by BMI

Characteristic	Underweight	Normal Weight	Overweight or Obese	Measurement Data Present
Number of Breastfeeding Women Participants				
Total Breastfeeding Women Participants	3,146	97,947	341,736	442,830
Race				
American Indian	206	6,363	22,763	29,332
Asian	230	7,492	11,523	19,245
Black	613	18,142	76,271	95,026
Pacific Islander	23	734	3,374	4,131
White	1,985	61,762	215,336	279,083
Two or more races	82	3,111	11,147	14,340
Race not reported	7	343	1,322	1,672
Ethnicity				
Hispanic/Latino	1,005	39,220	158,238	198,463
Non-Hispanic/Latino	2,141	58,713	183,472	244,326
Ethnicity not reported	0	14	26	40

⁷⁸ In comparison, 49.8 percent of breastfeeding women and 50.0 percent of postpartum women were assigned the nutritional risk of *high weight-for-height*.

Characteristic	Underweight	Normal Weight	Overweight or Obese	Measurement Data Present
Percent of Breastfeeding Women Participants				
Total Breastfeeding Women Participants	0.7	22.1	77.2	100.0
Race				
American Indian	0.7	21.7	77.6	100.0
Asian	1.2	38.9	59.9	100.0
Black	0.6	19.1	80.3	100.0
Pacific Islander	0.6	17.8	81.7	100.0
White	0.7	22.1	77.2	100.0
Two or more races	0.6	21.7	77.7	100.0
Race not reported	0.4	20.5	79.1	100.0
Ethnicity				
Hispanic/Latino	0.5	19.8	79.7	100.0
Non-Hispanic/Latino	0.9	24.0	75.1	100.0
Ethnicity not reported	0.0	35.0	65.0	100.0

Notes

BMI = body mass index

Percents may not add to 100.0 because of rounding.

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, anthropometric data are reported only for participants certified through February 2020.

For women, FNS uses NIH NHLBI (1998) definitions of *underweight* as having a BMI less than 18.5 and *overweight* as having a BMI greater than or equal to 25.0.

Table 6.13. Distribution of Postpartum Women by BMI

Characteristic	Underweight	Normal Weight	Overweight or Obese	Measurement Data Present
Number of Postpartum Women Participants				
Total Postpartum Women Participants	2,242	55,784	220,703	278,729
Race				
American Indian	103	2,180	8,960	11,243
Asian	59	2,533	4,152	6,744
Black	591	15,262	65,230	81,083
Pacific Islander	13	357	1,843	2,213
White	1,405	33,784	133,540	168,729
Two or more races	69	1,599	6,679	8,347
Race not reported	2	69	299	370
Ethnicity				
Hispanic/Latino	494	14,227	62,645	77,366
Non-Hispanic/Latino	1,748	41,550	158,043	201,341
Ethnicity not reported	0	7	15	22

Characteristic	Underweight	Normal Weight	Overweight or Obese	Measurement Data Present
Percent of Postpartum Women Participants				
Total Postpartum Women Participants	0.8	20.0	79.2	100.0
Race				
American Indian	0.9	19.4	79.7	100.0
Asian	0.9	37.6	61.6	100.0
Black	0.7	18.8	80.4	100.0
Pacific Islander	0.6	16.1	83.3	100.0
White	0.8	20.0	79.1	100.0
Two or more races	0.8	19.2	80.0	100.0
Race not reported	0.5	18.6	80.8	100.0
Ethnicity				
Hispanic/Latino	0.6	18.4	81.0	100.0
Non-Hispanic/Latino	0.9	20.6	78.5	100.0
Ethnicity not reported	0.0	31.8	68.2	100.0

Notes

BMI = body mass index

Percents may not add to 100.0 because of rounding.

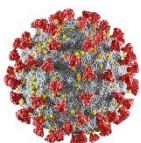
Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, anthropometric data are reported only for participants certified through February 2020.

For women, FNS uses NIH NHLBI (1998) definitions of *underweight* as having a BMI less than 18.5 and *overweight* as having a BMI greater than or equal to 25.0.

Chapter 7. Anemia Status

As part of the nutritional risk assessment, State agencies test (or collect through referral data) the hemoglobin and/or hematocrit levels of participants aged 9 months and older to screen for anemia.⁷⁹ Anemia is a condition in which the body has too few red blood cells; it is associated with adverse maternal and child outcomes. Red blood cells contain hemoglobin, which carries oxygen throughout the body. Anemia, especially anemia caused by iron deficiency, is relatively common among pregnant women because the volume of blood in the body increases during pregnancy. Infants and very young children are also at risk of anemia caused by iron deficiency, especially infants who receive formula not fortified with iron and breastfed infants who do not receive iron-rich complementary foods starting at age 6 months. All children require good dietary sources of iron to maintain iron status and prevent deficiency. To promote adequate iron intake, Federal regulations require minimum iron levels for breakfast cereal, infant cereal, and infant formula.

FNS established standard criteria for screening for anemia status using hemoglobin and hematocrit test results based on CDC recommendations in 1999 (CDC, 1998). The criteria vary by participant category, trimester of pregnancy, and age of the participant (see table 7.1); participants with test results below the relevant threshold may be deemed at nutritional risk. This chapter describes anemia status as determined by hemoglobin or hematocrit tests rather than assigned nutritional risks for anemia (see chapter 5 for additional details on assigned nutritional risks).



Because of waivers, policies, and procedures State agencies implemented in response to the COVID-19 pandemic, hematological data during March and April 2020 were missing or unreliable. For example, some State agencies reported hematological test data that were from the most recent measurement prior to the current certification appointment. It was also unclear whether dates of entry corresponded to dates of the hematological test. **Therefore, for PC2020, the hematological findings in this chapter are provided for participants certified through February 2020.**

Hematological data were reported for 90.1 percent of women and 78.9 percent of children certified through February 2020 (see table 7.2). In addition to the missing data because of physical presence waivers issued as a result of the COVID-19 pandemic, unreported hematologic measures reflect WIC policies for blood test measurements: Women and child participants are allowed to complete blood tests within 90 days of certification, and 2- to 4-year-old children are not required to be given a blood test at recertification if they had normal blood test values within 6 months of their most recent certification appointment. Because blood tests are not required of infants younger than 9 months, this chapter does not describe anemia levels for infants. Hemoglobin tests are much more common than hematocrit tests, with fewer than 2 percent of women and children with blood test data receiving only hematocrit tests (see table 7.3).

Table 7.4 provides an overview of anemia criteria by participant category, trimester of pregnancy, and age. Section A provides additional details on anemia levels among children. Section B provides anemia level information among women.

⁷⁹ State agencies are not required to test for anemia at the time of certification among children who had a blood test that showed normal iron levels in the past year.

Table 7.1. Criteria for Anemia Screening by Participant Category

Participant Category	Hemoglobin Concentration (Grams per Deciliter)	Hematocrit Level (Percentage)
Pregnant Women		
First trimester	< 11.0	< 33.0
Second trimester	< 10.5	< 32.0
Third trimester	< 11.0	< 33.0
Breastfeeding Women and Postpartum Women		
Younger than age 15	< 11.8	< 35.7
15–17 years old	< 12.0	< 35.9
18 years or older	< 12.0	< 35.7
Children		
1 year old	< 11.0	< 32.9
2–4 years old	< 11.1	< 33.0

Notes

FNS-issued nutritional risk criteria for hemoglobin and hematocrit values are based on CDC recommendations (CDC, 1998). Participants with blood measures below the cutoff values are considered to be at risk.

Hemoglobin values are reported in grams per deciliter. Hematocrit values are reported as percentages. Values are reported for nonsmoking women with no adjustments for altitude. States can choose to use values with adjustments for smoking and altitude.

Table 7.2. Distribution of Participants With Hematological Data Reported by Participant Category

Characteristic	Measurement Data Present	Measurement Data Missing	Total
Number of Participants			
Participant Category			
Pregnant women	300,361	29,233	329,595
Breastfeeding women	400,453	52,122	452,575
Postpartum women	260,596	23,724	284,320
Total women	961,410	105,079	1,066,489
Children	2,167,500	578,670	2,746,170
Trimester at Hematological Test Among Pregnant Women			
First trimester	183,722	15,919	199,641
Second trimester	102,536	10,268	112,804
Third trimester	14,104	1,467	15,571
Percent of Participants			
Participant Category			
Pregnant women	91.1	8.9	100.0
Breastfeeding women	88.5	11.5	100.0
Postpartum women	91.7	8.3	100.0
Total women	90.1	9.9	100.0
Children	78.9	21.1	100.0
Trimester at Hematological Test Among Pregnant Women			
First trimester	92.0	8.0	100.0
Second trimester	90.9	9.1	100.0
Third trimester	90.6	9.4	100.0

Notes

Percents may not add to 100.0 because of rounding.

The percentages of participants with measurement data present and missing by State agency are provided in appendix table B.28 (for children) and B.30 (for women).

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, hematological data are reported only for participants certified through February 2020.

Table 7.3. Distribution of Participants by Hematologic Measure

Characteristic	Hemoglobin Measured	Hematocrit Measured	Hemoglobin and Hematocrit Measured	Total With Measurement Data
Number of Participants				
Participant Category				
Pregnant women	279,361	5,188	15,812	300,361
Breastfeeding women	366,836	9,306	24,311	400,453
Postpartum women	247,053	4,068	9,475	260,596
Total women	893,250	18,562	49,598	961,410
Children	2,044,554	35,347	87,599	2,167,500
Percent of Participants				
Participant Category				
Pregnant women	93.0	1.7	5.3	100.0
Breastfeeding women	91.6	2.3	6.1	100.0
Postpartum women	94.8	1.6	3.6	100.0
Total women	92.9	1.9	5.2	100.0
Children	94.3	1.6	4.0	100.0

Notes

Percents may not add to 100.0 because of rounding.

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, hematological data are reported only for participants certified through February 2020.

Table 7.4. Distribution of Participants With Hematological Levels Below Standards

Characteristic	Number	Percent
Total Participants	3,128,911	100.0
Participants With Reported Hematologic Measures		
Total women	961,410	59.9
Pregnant women	300,361	54.4
Pregnant women in first trimester	183,722	92.0
Pregnant women in second trimester	102,536	90.9
Pregnant women in third trimester	14,104	90.6
Breastfeeding women	400,453	65.0
Postpartum women	260,596	59.5
Total children	2,167,500	78.9
1-year-old children	794,712	79.2
2-year-old children	568,508	77.2
3-year-old children	525,406	80.3
4-year-old children	278,875	79.4

Characteristic	Number	Percent
Participants Below Standards Among Those With Reported Hematologic Measures		
Total women	267,388	27.8
Pregnant women	27,360	9.1
Pregnant women in first trimester	13,721	7.5
Pregnant women in second trimester	9,130	8.9
Pregnant women in third trimester	4,509	32.0
Breastfeeding women	134,994	33.7
Postpartum women	105,033	40.3
Total children	293,860	13.6
1-year-old children	130,941	16.5
2-year-old children	81,608	14.4
3-year-old children	56,719	10.8
4-year-old children	24,591	8.8

Note

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, hematological data are reported only for participants certified through February 2020.

A. Children

Among children aged 1 to 4, 13.6 percent of participants were anemic (see table 7.5a).⁸⁰ Rates of anemia were highest among younger participants and decreased steadily among older age groups (see tables 7.5b–7.5e). Whereas 16.5 percent of 1-year-old children’s hematological tests indicated anemia, 8.8 percent of 4-year-old children were determined to be anemic. Anemia rates for children may be overstated; State agencies are not required to test for anemia at the time of certification among children who had a blood test that showed no evidence of anemia in the past year.

Key findings by race and ethnicity (see tables 7.5a–7.5e), State agency (see appendix table B.29), and over time (see appendix table A.29) follow:

- ▶ Black children had the highest levels of anemia across all age groups, whereas American Indian children had the lowest levels of anemia. The largest difference between these groups was among 4-year-old children: Black children were about three times as likely to have anemia as American Indian children (15.4 and 5.3 percent, respectively).
- ▶ Among children with reported ethnicity, non-Hispanic/Latino children had higher levels of anemia than Hispanic/Latino children across all age groups, with rates of anemia were 3–4 percentage points higher among non-Hispanic/Latino children.
- ▶ Across States and the District of Columbia, rates of anemia among children ranged from 3.9 percent in Wyoming to 31.6 percent in Mississippi (see figure 7.1).
- ▶ Anemia rates among children generally increased from 12.9 percent in 2000 to 14.6 percent of children in 2018 and decreased to 13.6 percent in 2020.⁸¹

⁸⁰ In comparison, 11.5 percent of children were assigned the *hematocrit/hemoglobin below FNS criteria* nutritional risk (see table 5.5).

⁸¹ In 2020, results are provided only for participants certified to receive benefits through February 2020.

Figure 7.1. Anemia Rates Among Children by State

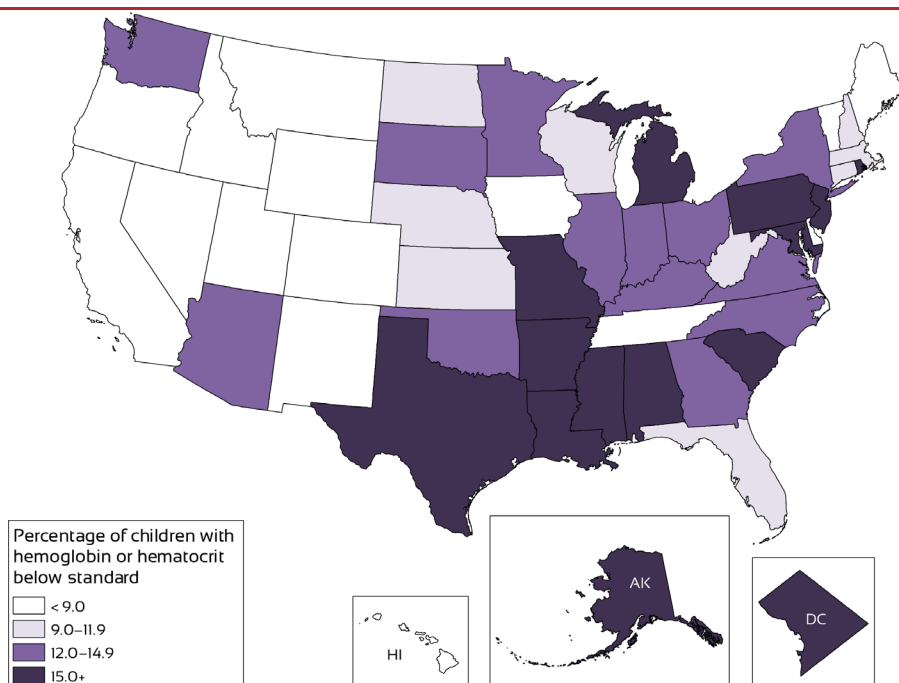


Table 7.5a. Distribution of Children by Anemia Status

Characteristic	Not Anemic (Measure at or Above Standard)	Anemic (Measure Below Standard)	Total With Measurement Data
Number of Children Participants			
Total Child Participants	1,873,640	293,860	2,167,500
Race			
American Indian	131,287	13,221	144,509
Asian	67,239	9,040	76,279
Black	380,864	101,578	482,443
Pacific Islander	16,989	2,102	19,091
White	1,147,953	148,203	1,296,156
Two or more races	123,162	19,059	142,221
Race not reported	6,145	657	6,802
Ethnicity			
Hispanic/Latino	799,556	101,929	901,485
Non-Hispanic/Latino	1,073,814	191,885	1,265,699
Ethnicity not reported	270	46	316
Percent of Children Participants			
Total Child Participants	86.4	13.6	100.0
Race			
American Indian	90.9	9.1	100.0
Asian	88.1	11.9	100.0
Black	78.9	21.1	100.0
Pacific Islander	89.0	11.0	100.0
White	88.6	11.4	100.0
Two or more races	86.6	13.4	100.0
Race not reported	90.3	9.7	100.0

Characteristic	Not Anemic (Measure at or Above Standard)	Anemic (Measure Below Standard)	Total With Measurement Data
Ethnicity			
Hispanic/Latino	88.7	11.3	100.0
Non-Hispanic/Latino	84.8	15.2	100.0
Ethnicity not reported	85.4	14.6	100.0

Notes

Percents may not add to 100.0 because of rounding.

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, hematological data are reported only for participants certified through February 2020.

Table 7.5b. Distribution of 1-Year-Old Children by Anemia Status

Characteristic	Not Anemic (Measure at or Above Standard)	Anemic (Measure Below Standard)	Total With Measurement Data
Number of 1-Year-Old Child Participants			
Total 1-Year-Old Child Participants	663,770	130,941	794,712
Race			
American Indian	35,926	5,220	41,146
Asian	21,252	3,377	24,629
Black	142,717	43,607	186,324
Pacific Islander	5,134	905	6,039
White	412,706	68,898	481,605
Two or more races	44,146	8,646	52,792
Race not reported	1,889	288	2,177
Ethnicity			
Hispanic/Latino	265,765	44,837	310,602
Non-Hispanic/Latino	397,872	86,082	483,954
Ethnicity not reported	134	22	156
Percent of 1-Year-Old Child Participants			
Total 1-Year-Old Child Participants	83.5	16.5	100.0
Race			
American Indian	87.3	12.7	100.0
Asian	86.3	13.7	100.0
Black	76.6	23.4	100.0
Pacific Islander	85.0	15.0	100.0
White	85.7	14.3	100.0
Two or more races	83.6	16.4	100.0
Race not reported	86.8	13.2	100.0
Ethnicity			
Hispanic/Latino	85.6	14.4	100.0
Non-Hispanic/Latino	82.2	17.8	100.0
Ethnicity not reported	85.9	14.1	100.0

Notes

Percents may not add to 100.0 because of rounding.

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, hematological data are reported only for participants certified through February 2020.

Table 7.5c. Distribution of 2-Year-Old Children by Anemia Status

Characteristic	Not Anemic (Measure at or Above Standard)	Anemic (Measure Below Standard)	Total With Measurement Data
Number of 2-Year-Old Child Participants			
Total 2-Year-Old Child Participants	486,899	81,608	568,508
Race			
American Indian	34,537	3,921	38,458
Asian	18,003	2,654	20,657
Black	98,375	28,861	127,236
Pacific Islander	4,660	594	5,254
White	297,289	40,087	337,376
Two or more races	32,380	5,309	37,689
Race not reported	1,655	182	1,837
Ethnicity			
Hispanic/Latino	209,198	28,273	237,471
Non-Hispanic/Latino	277,625	53,318	330,943
Ethnicity not reported	77	17	94
Percent of 2-Year-Old Child Participants			
Total 2-Year-Old Child Participants	85.6	14.4	100.0
Race			
American Indian	89.8	10.2	100.0
Asian	87.2	12.8	100.0
Black	77.3	22.7	100.0
Pacific Islander	88.7	11.3	100.0
White	88.1	11.9	100.0
Two or more races	85.9	14.1	100.0
Race not reported	90.1	9.9	100.0
Ethnicity			
Hispanic/Latino	88.1	11.9	100.0
Non-Hispanic/Latino	83.9	16.1	100.0
Ethnicity not reported	81.9	18.1	100.0

Notes

Percents may not add to 100.0 because of rounding.

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, hematological data are reported only for participants certified through February 2020.

Table 7.5d. Distribution of 3-Year-Old Children by Anemia Status

Characteristic	Not Anemic (Measure at or Above Standard)	Anemic (Measure Below Standard)	Total With Measurement Data
Number of 3-Year-Old Child Participants			
Total 3-Year-Old Child Participants	468,687	56,719	525,406
Race			
American Indian	38,095	2,805	40,900
Asian	17,891	2,033	19,924
Black	90,795	20,211	111,006
Pacific Islander	4,511	404	4,915
White	285,298	27,541	312,839
Two or more races	30,479	3,585	34,064
Race not reported	1,618	140	1,758

Characteristic	Not Anemic (Measure at or Above Standard)	Anemic (Measure Below Standard)	Total With Measurement Data
Ethnicity			
Hispanic/Latino	209,729	20,168	229,897
Non-Hispanic/Latino	258,923	36,546	295,469
Ethnicity not reported	36	5	41
Percent of 3-Year-Old Child Participants			
Total 3-Year-Old Child Participants	89.2	10.8	100.0
Race			
American Indian	93.1	6.9	100.0
Asian	89.8	10.2	100.0
Black	81.8	18.2	100.0
Pacific Islander	91.8	8.2	100.0
White	91.2	8.8	100.0
Two or more races	89.5	10.5	100.0
Race not reported	92.0	8.0	100.0
Ethnicity			
Hispanic/Latino	91.2	8.8	100.0
Non-Hispanic/Latino	87.6	12.4	100.0
Ethnicity not reported	87.8	12.2	100.0

Notes

Percents may not add to 100.0 because of rounding.

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, hematological data are reported only for participants certified through February 2020.

Table 7.5e. Distribution of 4-Year-Old Children by Anemia Status

Characteristic	Not Anemic (Measure at or Above Standard)	Anemic (Measure Below Standard)	Total With Measurement Data
Number of 4-Year-Old Child Participants			
Total 4-Year-Old Child Participants	254,284	24,591	278,875
Race			
American Indian	22,730	1,275	24,005
Asian	10,093	976	11,069
Black	48,977	8,899	57,876
Pacific Islander	2,684	199	2,883
White	152,660	11,676	164,336
Two or more races	16,156	1,519	17,675
Race not reported	983	47	1,030
Ethnicity			
Hispanic/Latino	114,865	8,651	123,516
Non-Hispanic/Latino	139,395	15,938	155,333
Ethnicity not reported	23	2	25

Characteristic	Not Anemic (Measure at or Above Standard)	Anemic (Measure Below Standard)	Total With Measurement Data
Percent of 4-Year-Old Child Participants			
Total 4-Year-Old Child Participants	91.2	8.8	100.0
Race			
American Indian	94.7	5.3	100.0
Asian	91.2	8.8	100.0
Black	84.6	15.4	100.0
Pacific Islander	93.1	6.9	100.0
White	92.9	7.1	100.0
Two or more races	91.4	8.6	100.0
Race not reported	95.4	4.6	100.0
Ethnicity			
Hispanic/Latino	93.0	7.0	100.0
Non-Hispanic/Latino	89.7	10.3	100.0
Ethnicity not reported	92.0	8.0	100.0

Notes

Percents may not add to 100.0 because of rounding.

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, hematological data are reported only for participants certified through February 2020.

B. Women

More than one-quarter (27.8 percent) of all women had a screening result that classified them as anemic (see table 7.6a). Among pregnant women, rates of anemia were highest among those in the third trimester (32.0 percent) and lowest among those in the first trimester (7.5 percent; see table 7.6b). Levels of anemia were higher after pregnancy, with 33.7 percent of breastfeeding women (see table 7.6c) and 40.3 percent of postpartum women (see table 7.6d) categorized as anemic.⁸²

Key findings by race and ethnicity (see tables 7.6a–7.6d), State agency (see appendix table B.31), and over time (see appendix table A.30) follow:

- ▶ Across all participant categories for women, Black women had the highest levels of anemia, including more than half (54.6 percent) of postpartum Black women; this percentage is twice the rate among women overall. White women reported the lowest levels of anemia among pregnant and breastfeeding women (6.3 and 29.5 percent, respectively), and Pacific Islander women reported the lowest levels of anemia among postpartum women (33.8 percent).
- ▶ Among women with reported ethnicity, non-Hispanic/Latino women had higher levels of anemia than Hispanic/Latino women among pregnant and postpartum women. This difference was greatest among postpartum women: 41.6 percent of postpartum non-Hispanic/Latino women were anemic, in contrast to 36.9 percent of postpartum Hispanic/Latino women.
- ▶ Anemia rates among women varied by more than 46 percentage points across States and the District of Columbia, from 2.9 percent of women in Maine to 50.5 percent of women in Mississippi (see figure 7.2).

⁸² In comparison, 8.0 percent of pregnant women, 27.3 percent of breastfeeding women, and 30.7 percent of postpartum women were assigned the *hematocrit/hemoglobin below FNS criteria* nutritional risk (see table 5.5).

- ▶ Rates of anemia among women have varied over time. In 2000, when national standards were established for anemia as a nutritional risk, 23.5 percent of women were anemic. The rate peaked at 28.4 percent in 2012 before decreasing to 27.8 percent in 2018 and 2020.⁸³

Figure 7.2. Anemia Rates Among Women by State

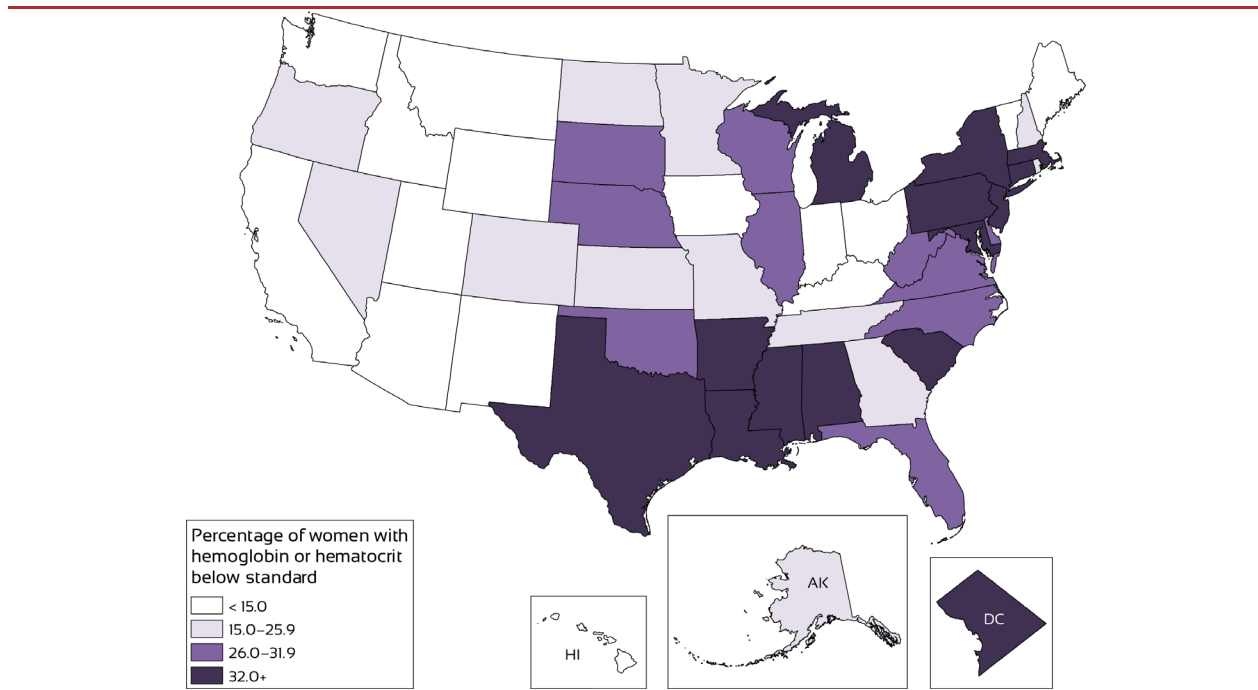


Table 7.6a. Distribution of Women by Anemia Status

Characteristic	Not Anemic (Measure at or Above Standard)	Anemic (Measure Below Standard)	Total With Measurement Data
Number of Women Participants			
Total Women Participants	694,023	267,388	961,410
Race			
American Indian	41,539	13,274	54,813
Asian	22,812	9,428	32,240
Black	136,243	93,310	229,553
Pacific Islander	5,798	2,081	7,879
White	463,590	141,048	604,638
Two or more races	22,021	7,783	29,804
Race not reported	2,020	463	2,483
Ethnicity			
Hispanic/Latino	260,929	93,774	354,703
Non-Hispanic/Latino	433,022	173,596	606,619
Ethnicity not reported	72	17	89

⁸³ In 2020, results are provided only for participants certified to receive benefits through February 2020.

Characteristic	Not Anemic (Measure at or Above Standard)	Anemic (Measure Below Standard)	Total With Measurement Data
Percent of Women Participants			
Total Women Participants	72.2	27.8	100.0
Race			
American Indian	75.8	24.2	100.0
Asian	70.8	29.2	100.0
Black	59.4	40.6	100.0
Pacific Islander	73.6	26.4	100.0
White	76.7	23.3	100.0
Two or more races	73.9	26.1	100.0
Race not reported	81.4	18.6	100.0
Ethnicity			
Hispanic/Latino	73.6	26.4	100.0
Non-Hispanic/Latino	71.4	28.6	100.0
Ethnicity not reported	80.9	19.1	100.0

Notes

Percents may not add to 100.0 because of rounding.

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, hematological data are reported only for participants certified through February 2020.

Table 7.6b. Distribution of Pregnant Women by Anemia Status

Characteristic	Not Anemic (Measure at or Above Standard)	Anemic (Measure Below Standard)	Total With Measurement Data
Number of Pregnant Women Participants			
Total Pregnant Women Participants	273,001	27,360	300,361
Trimester at Hematological Test Among Pregnant Women			
First trimester	170,001	13,721	183,722
Second trimester	93,406	9,130	102,536
Third trimester	9,595	4,509	14,104
Race			
American Indian	16,536	1,256	17,792
Asian	7,737	729	8,466
Black	56,101	12,110	68,211
Pacific Islander	2,032	194	2,226
White	181,146	12,264	193,410
Two or more races	8,623	760	9,383
Race not reported	826	47	873
Ethnicity			
Hispanic/Latino	98,517	7,689	106,206
Non-Hispanic/Latino	174,451	19,666	194,117
Ethnicity not reported	33	5	38
Percent of Pregnant Women Participants			
Total Pregnant Women Participants	90.9	9.1	100.0

Characteristic	Not Anemic (Measure at or Above Standard)	Anemic (Measure Below Standard)	Total With Measurement Data
Trimester at Hematological Test Among Pregnant Women			
First trimester	92.5	7.5	100.0
Second trimester	91.1	8.9	100.0
Third trimester	68.0	32.0	100.0
Race			
American Indian	92.9	7.1	100.0
Asian	91.4	8.6	100.0
Black	82.2	17.8	100.0
Pacific Islander	91.3	8.7	100.0
White	93.7	6.3	100.0
Two or more races	91.9	8.1	100.0
Race not reported	94.6	5.4	100.0
Ethnicity			
Hispanic/Latino	92.8	7.2	100.0
Non-Hispanic/Latino	89.9	10.1	100.0
Ethnicity not reported	86.8	13.2	100.0

Notes

Percents may not add to 100.0 because of rounding.

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, hematological data are reported only for participants certified through February 2020.

Table 7.6c. Distribution of Breastfeeding Women by Anemia Status

Characteristic	Not Anemic (Measure at or Above Standard)	Anemic (Measure Below Standard)	Total With Measurement Data
Number of Breastfeeding Women Participants			
Total Breastfeeding Women Participants	265,459	134,994	400,453
Race			
American Indian	18,194	8,231	26,425
Asian	11,108	6,397	17,505
Black	45,958	40,095	86,053
Pacific Islander	2,496	1,239	3,735
White	178,064	74,672	252,736
Two or more races	8,685	4,035	12,720
Race not reported	953	325	1,278
Ethnicity			
Hispanic/Latino	117,598	59,874	177,472
Non-Hispanic/Latino	147,833	75,116	222,949
Ethnicity not reported	27	4	31
Percent of Breastfeeding Women Participants			
Total Breastfeeding Women Participants	66.3	33.7	100.0
Race			
American Indian	68.9	31.1	100.0
Asian	63.5	36.5	100.0
Black	53.4	46.6	100.0
Pacific Islander	66.8	33.2	100.0
White	70.5	29.5	100.0
Two or more races	68.3	31.7	100.0
Race not reported	74.6	25.4	100.0

Characteristic	Not Anemic (Measure at or Above Standard)	Anemic (Measure Below Standard)	Total With Measurement Data
Ethnicity			
Hispanic/Latino	66.3	33.7	100.0
Non-Hispanic/Latino	66.3	33.7	100.0
Ethnicity not reported	87.1	12.9	100.0

Notes

Percents may not add to 100.0 because of rounding.

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, hematological data are reported only for participants certified through February 2020.

Table 7.6d. Distribution of Postpartum Women by Anemia Status

Characteristic	Not Anemic (Measure at or Above Standard)	Anemic (Measure Below Standard)	Total With Measurement Data
Number of Postpartum Women Participants			
Total Postpartum Women Participants	155,563	105,033	260,596
Race			
American Indian	6,808	3,787	10,595
Asian	3,967	2,302	6,269
Black	34,184	41,105	75,289
Pacific Islander	1,270	648	1,918
White	104,380	54,112	158,492
Two or more races	4,713	2,988	7,701
Race not reported	241	91	332
Ethnicity			
Hispanic/Latino	63.1	36.9	100.0
Non-Hispanic/Latino	58.4	41.6	100.0
Ethnicity not reported	60.0	40.0	100.0
Percent of Postpartum Women Participants			
Total Postpartum Women Participants	59.7	40.3	100.0
Race			
American Indian	64.3	35.7	100.0
Asian	63.3	36.7	100.0
Black	45.4	54.6	100.0
Pacific Islander	66.2	33.8	100.0
White	65.9	34.1	100.0
Two or more races	61.2	38.8	100.0
Race not reported	72.6	27.4	100.0
Ethnicity			
Hispanic/Latino	63.1	36.9	100.0
Non-Hispanic/Latino	58.4	41.6	100.0
Ethnicity not reported	60.0	40.0	100.0

Notes

Percents may not add to 100.0 because of rounding.

Because of missing and unreliable data in March and April 2020 as a result of the COVID-19 pandemic, hematological data are reported only for participants certified through February 2020.

Chapter 8. Breastfeeding Initiation and Duration

This chapter provides breastfeeding initiation and duration estimates for infants and children enrolled in WIC. Section A presents breastfeeding initiation rates, and section B describes breastfeeding duration.

Since the passage of the Child Nutrition and WIC Reauthorization Act (Pub. L. 101–147) in 1989, WIC has strengthened its breastfeeding promotion and support efforts. The legislation established an annual minimum for breastfeeding promotion and support expenditures (in FY 2020, State agencies were required to spend an average of \$41.94 for each pregnant and breastfeeding woman in addition to monthly administrative and food package costs). State and local agencies developed a range of strategies to increase breastfeeding initiation and duration among participants, which included providing current, accurate breastfeeding information through individual or group education for participants and their families; sponsoring peer-counselor programs and support groups; creating breastfeeding-friendly clinic environments and community partnerships; and providing ongoing staff education and training.

Prior to 1998, State agencies were asked to report breastfeeding information only if their MIS contained the data. National estimates could not be calculated because many State agencies were unable to report this information. By 1998, State agencies had improved their reporting of breastfeeding data significantly, which allowed the calculation of national estimates of breastfeeding initiation. State agencies were asked to collect these data on infants and children aged 6 to 13 months in April of the reference year beginning in 2004. Since then, national estimates of breastfeeding duration have been calculated only when sufficient data were collected (see chapter 2 for additional details).

Beginning in 2018, the presentation of PC breastfeeding data has matched that of the national breastfeeding data reported for HHS’s Healthy People initiative (HHS, 2019b; HHS, 2021).⁸⁴ For this initiative, target breastfeeding rates are established for each decade using linear trend and projection analysis. For Healthy People 2020 and 2030, the target breastfeeding rates were based on the data collected through the CDC’s National Immunization Survey (NIS); the baseline breastfeeding rates for projecting 2020 targets are from infants born in 2006, and the baseline breastfeeding rate for projecting the 2030 target is from infants born in 2015. Table 8.1 shows the Healthy People 2020 and 2030 objectives and the baseline and target rates for the breastfeeding measures that correspond to those presented in this chapter.

Table 8.1. Healthy People 2020 and 2030 Objectives for Breastfeeding Initiation and Duration

Healthy People Objective	Baseline Rate ^a	Target Rate
2020		
Increase the proportion of infants who are ever breastfed ^b	74.0 percent	81.9 percent
Increase the proportion of infants who are breastfed at 6 months ^c	43.5 percent	60.6 percent
Increase the proportion of infants who are breastfed at 12 months ^d	22.7 percent	34.1 percent
2030		
Increase the proportion of infants who are breastfed at 12 months ^d	35.9 percent	54.1 percent

Notes

^a Baseline rates for 2020 and 2030 are based on rates from infants born in 2006 and 2015, respectively.

^b Comparable with breastfeeding initiation (71.6 percent; see tables 8.1 and 8.3)

^c Comparable with breastfeeding duration at 6 months (22.1 percent; see tables 8.1 and 8.4)

^d Comparable with breastfeeding duration at 12 months (12.7 percent; see tables 8.1 and 8.5)

Sources: HHS, 2019b; HHS, 2021

⁸⁴ See also <https://www.healthypeople.gov/>

Breastfeeding initiation reporting has generally improved over time. The 2020 estimate of the breastfeeding initiation rate was based on data from 82 State agencies with sufficient data (see table 8.2). In 2004—the first year data were collected for this population—the breastfeeding initiation estimate was based on data from 67 State agencies with sufficient data (Barlett et al., 2006).

State agencies are asked to provide information on the length of time infants and children were breastfed.⁸⁵ Breastfeeding duration rates at 3, 6, and 12 months were calculated using data from 81 State agencies with sufficient data.

Table 8.2. Breastfeeding Data Reporting

Characteristic	Number	Percent
Total State Agencies	89	100.0
State agencies that reported initiation data for at least 75.0 percent of 6- to 13-month-old participants	82	92.1
State agencies that reported duration data for at least 75.0	81	91.0
State agencies that reported duration data for at least 75.0	81	91.0
Total 6- to 13-Month-Old Infant and Child Participants	915,175	100.0
Reported initiation data	898,839	98.2
Initiated breastfeeding (among those reporting)	643,779	71.6
Total 9- to 13-Month-Old Infant and Child Participants	529,964	100.0
Reported duration data	516,850	97.5
Breastfeeding at 3 months (among those reporting)	168,690	32.6
Breastfeeding at 6 months (among those reporting)	114,185	22.1
Total 12- to 13-Month-Old Child Participants	188,445	100.0
Reported duration data	182,830	97.0
Breastfeeding at 12 months (among those reporting)	23,305	12.7

Notes

Eastern Band of Cherokee Indians (NC), Louisiana, New Mexico, North Carolina, Rhode Island, Texas, and West Virginia were unable to provide initiation data for at least 75.0 percent of 6- to 13-month-old infants and children. Louisiana, New Mexico, North Carolina, Puerto Rico, Rhode Island, Texas, Washington, and West Virginia were unable to provide duration data for at least 75.0 percent of 9- to 13-month-old infants and children. Eastern Band of Cherokee (NC), Louisiana, New Mexico, North Carolina, Puerto Rico, Santee Sioux Nation (NE), Texas, and Washington were unable to provide duration data for at least 75.0 percent of 12- to 13-month-old infants and children.

A. Breastfeeding Initiation Rates

Nearly 72 percent of all 6- to 13-month-old infants and children initiated breastfeeding (i.e., were reported as currently or ever breastfed). This proportion has been consistent since 2016, after a steady rise since 2004 (see figure 8.1 and appendix table A.31).⁸⁶

⁸⁵ Breastfeeding duration was counted as missing for the following participants: (1) currently breastfed infants and children for whom the date breastfeeding data were collected was not reported; (2) currently breastfed infants and children who were younger than 22 weeks on the date the data were collected and whose duration estimates could be substantially underreported; and (3) ever-breastfed infants and children for whom duration was not reported.

⁸⁶ Appendix figures A.1 and A.2 provide breastfeeding initiation rates from 1998 to 2018 for 7- to 11-month-old infants by State agency.

Figure 8.1. Breastfeeding Initiation Rates for 6- to 13-Month-Old Infants and Children by State: 2004–2010

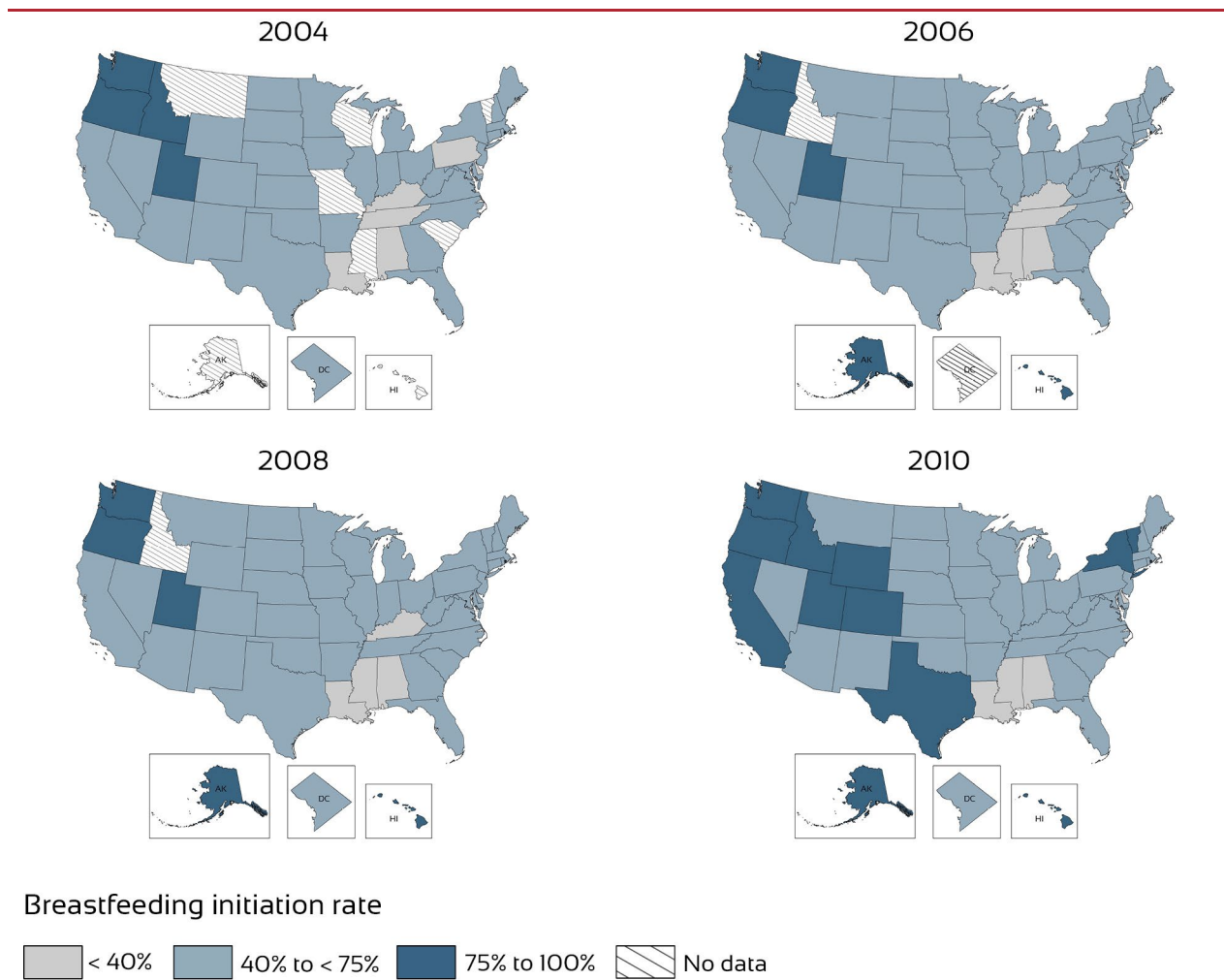
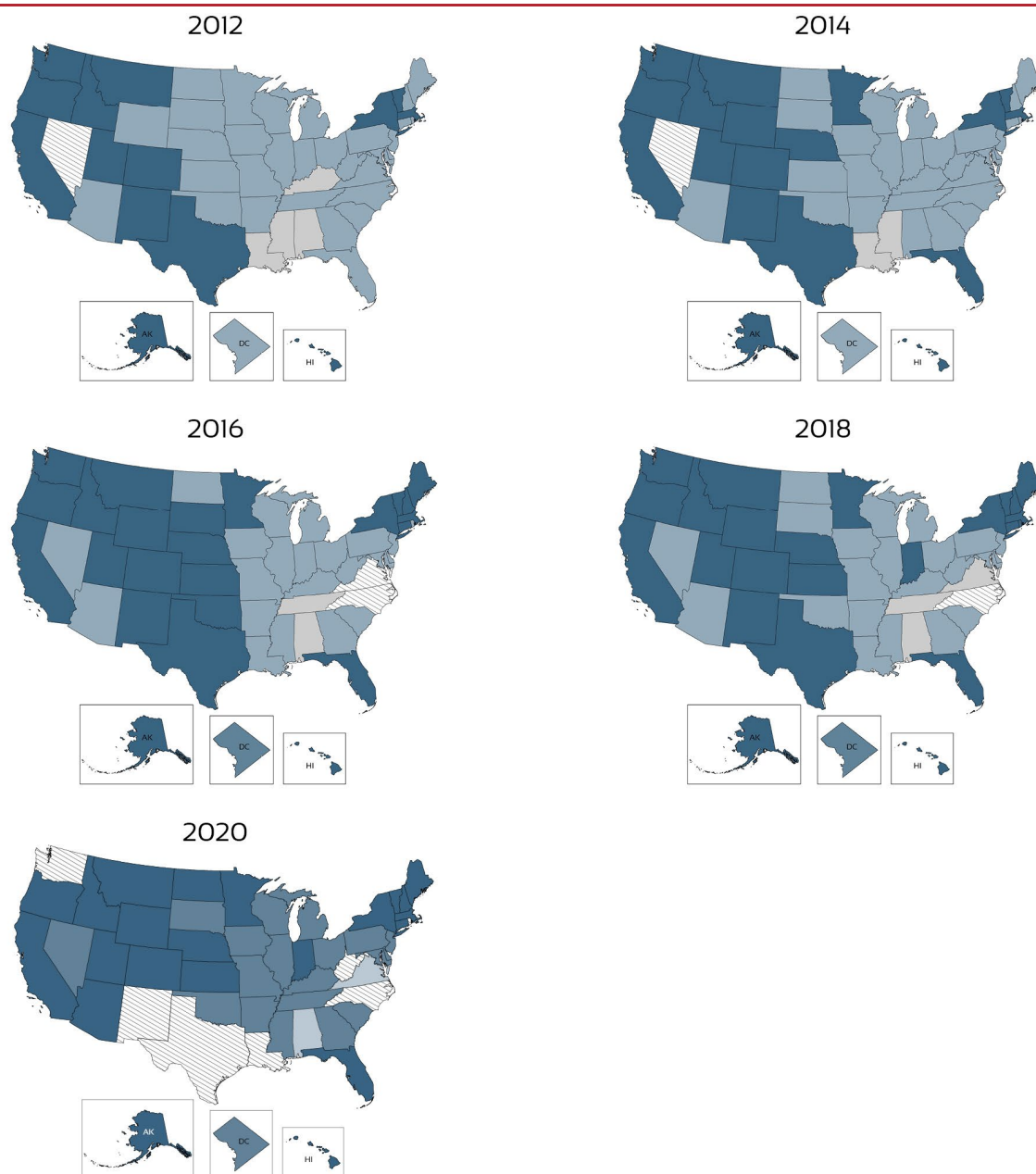


Figure 8.2. Breastfeeding Initiation Rates for 6- to 13-Month-Old Infants and Children by State: 2012–2020



Breastfeeding initiation rate



Pacific Islander infants were the most likely to initiate breastfeeding (79.3 percent), whereas Black infants were the least likely (64.2 percent; see table 8.3)—a 15.1-percentage-point difference in initiation rates. There was a 10.0-percentage-point difference between Hispanic/Latino and non-Hispanic/Latino 6- to 13-month-old infants and children who initiated breastfeeding (78.0 and 68.0 percent, respectively).

Breastfeeding initiation rates varied among the States and the District of Columbia, ranging from 33.7 percent in Virginia to 90.2 percent in Oregon (see appendix table B.32). The median initiation rate across the 44 States and the District of Columbia was 74.7 percent. Nine State agencies met or exceeded the Healthy People 2020 breastfeeding initiation target measure (81.9 percent).

Table 8.3. Breastfeeding Initiation for 6- to 13-Month-Old Infants and Children

Characteristic	Total Participants With Initiation Data	Ever or Currently Breastfed		
		Yes	No	Not Reported
Number of 6- to 13-Month-Old Infant and Child Participants				
Total for State Agencies That Reported Data	898,839	643,779	255,059	16,342
Race				
American Indian	60,075	45,962	14,113	1,265
Asian	32,349	25,153	7,196	439
Black	217,435	139,582	77,853	3,936
Pacific Islander	8,066	6,395	1,671	231
White	504,866	371,632	133,234	8,922
Two or more races	69,833	50,521	19,312	1,338
Race not reported	6,214	4,534	1,680	211
Ethnicity				
Hispanic/Latino	326,772	254,935	71,837	6,106
Non-Hispanic/Latino	571,182	388,494	182,688	10,219
Ethnicity not reported	885	351	534	17
Percent of 6- to 13-Month-Old Infant and Child Participants				
Total for State Agencies That Reported Data	100.0	71.6	28.4	1.8
Race				
American Indian	100.0	76.5	23.5	2.1
Asian	100.0	77.8	22.2	1.4
Black	100.0	64.2	35.8	1.8
Pacific Islander	100.0	79.3	20.7	2.9
White	100.0	73.6	26.4	1.8
Two or more races	100.0	72.3	27.7	1.9
Race not reported	100.0	73.0	27.0	3.4
Ethnicity				
Hispanic/Latino	100.0	78.0	22.0	1.9
Non-Hispanic/Latino	100.0	68.0	32.0	1.8
Ethnicity not reported	100.0	39.7	60.3	1.9

Notes

Percents may not add to 100.0 because of rounding.

This table includes data for State agencies that reported data on breastfeeding initiation for at least 75.0 percent of all 6- to 13-month-old infants and children. Data were excluded for the following State agencies: Eastern Band of Cherokee Indians (NC), Louisiana, New Mexico, North Carolina, Texas, and Washington.

B. Breastfeeding Duration

This section describes the proportion of infants and children with reported data (and within certain age groups) who were breastfed at several benchmark ages (3, 6, and 12 months).

1. Breastfeeding Duration Among 9- to 13-Month-Old Infants and Children

About one-third of 9- to 13-month-old infants and children were breastfed at 3 months (32.6 percent), and about one-quarter were breastfed at 6 months (22.1 percent; see table 8.4). The proportion of 9-to-13-month-old infants and children who were breastfed at 3 months and 6 months decreased from 2018 to 2020 (33.1 versus 32.6 percent and 23.3 versus 22.1 percent, respectively; see appendix table A.33).

The proportion of 9- to 13-month-old infants and children who were breastfed at 3 months and 6 months varied across race and ethnicity in 2020. Asian participants had higher rates of breastfeeding at 3 months and 6 months than participants of other races; Black participants had the lowest rates of breastfeeding at 3 months and 6 months. Hispanic/Latino participants had higher rates of breastfeeding at 3 months and 6 months than non-Hispanic/Latino participants.

Breastfeeding rates at 3 months varied among the 43 States and the District of Columbia, ranging from 12.2 percent in Alabama to 54.7 percent in Alaska and Hawaii (see figure 8.3 and appendix table B.33). Breastfeeding rates at 6 months ranged from 7.2 percent in Alabama to 42.0 percent in Alaska (see figure 8.4).

Figure 8.3. Breastfeeding Duration at 3 Months Among 9- to 13-Month-Old Infants and Children by State: 2018–2020

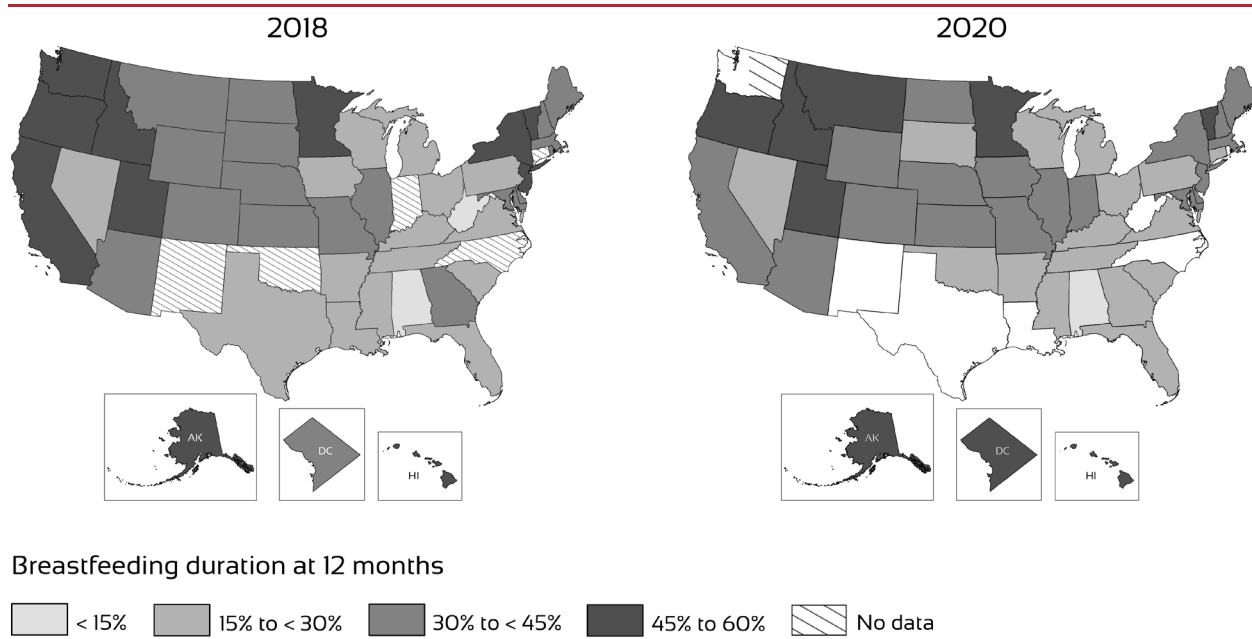


Figure 8.4. Breastfeeding Duration at 6 Months Among 9- to 13-Month-Old Infants and Children by State: 2018–2020

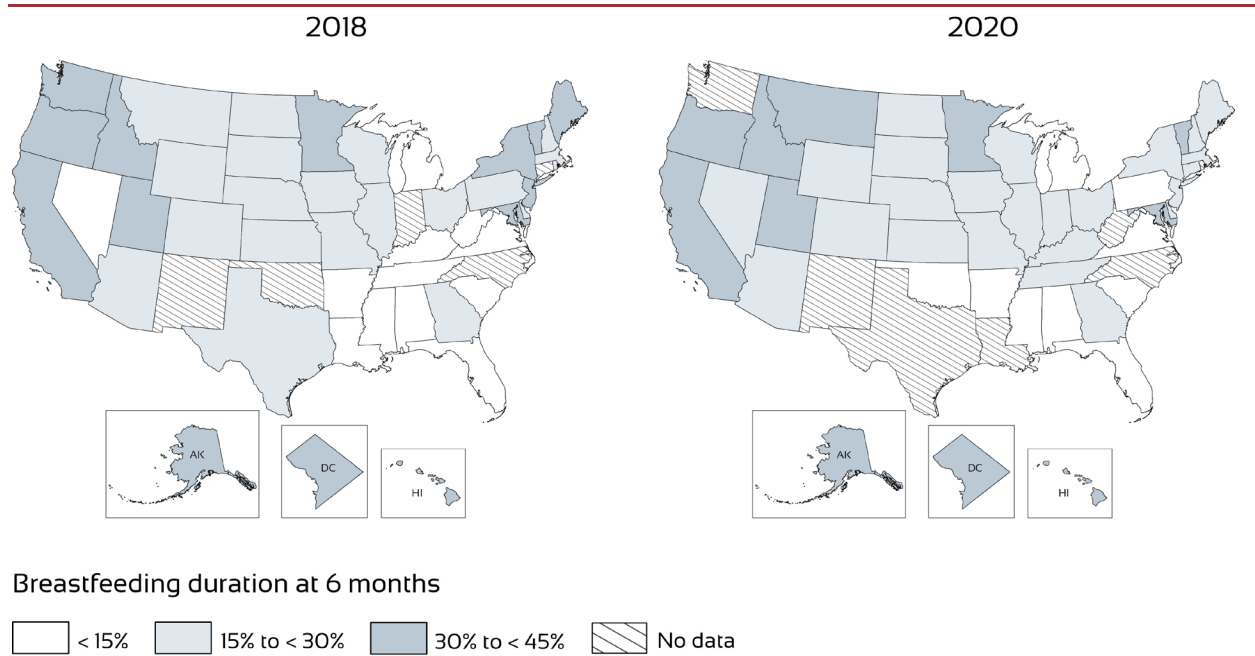


Table 8.4. Distribution of Infants and Children Breastfeeding at 3 and 6 Months Among 9- to 13-Month-Old Infant and Child Participants as of April 30, 2020

Characteristic	Total Participants With Duration Data	Breastfeeding at 3 Months	Breastfeeding at 6 Months
Number of 9- to 13-Month-Old Infant and Child Participants			
Total for State Agencies That Reported Data	516,850	168,690	114,185
Race			
American Indian	33,620	13,504	10,113
Asian	18,958	8,326	5,955
Black	124,378	33,534	21,012
Pacific Islander	4,513	1,843	1,184
White	290,929	96,877	65,882
Two or more races	40,859	13,059	8,832
Race not reported	3,593	1,547	1,207
Ethnicity			
Hispanic/Latino	185,276	69,337	48,600
Non-Hispanic/Latino	331,055	99,245	65,516
Ethnicity not reported	520	108	69

Characteristic	Total Participants With Duration Data	Breastfeeding at 3 Months	Breastfeeding at 6 Months
Percent of 9- to 13-Month-Old Infant and Child Participant			
Total for State Agencies That Reported Data	100.0	32.6	22.1
Race			
American Indian	100.0	40.2	30.1
Asian	100.0	43.9	31.4
Black	100.0	27.0	16.9
Pacific Islander	100.0	40.8	26.2
White	100.0	33.3	22.6
Two or more races	100.0	32.0	21.6
Race not reported	100.0	43.1	33.6
Ethnicity			
Hispanic/Latino	100.0	37.4	26.2
Non-Hispanic/Latino	100.0	30.0	19.8
Ethnicity not reported	100.0	20.8	13.3

Note

This table includes data for State agencies that reported data on breastfeeding duration for at least 75.0 percent of all 9- to 13-month-old infants and children. Data were excluded for the following State agencies: Eastern Band of Cherokee Indians (NC), Louisiana, New Mexico, North Carolina, Oklahoma, Texas, Puerto Rico, and Washington.

2. Breastfeeding Duration Among 12- to 13-Month-Old Children

Among 12- to 13-month-old children, 12.7 percent were breastfed at 12 months (see table 8.5). American Indian and Asian participants, as well as Hispanic/Latino participants, had higher rates of breastfeeding at 12 months than other participants. The proportion of 12- to 13-month-old children who were breastfed at 12 months decreased from 2018 to 2020 (13.8 versus 12.7 percent respectively; see appendix table A.34).

Breastfeeding rates at 12 months among the States and the District of Columbia ranged from 4.7 percent in Alabama to 32.1 percent in Alaska (see figure 8.5 and appendix table B.34).

Although breastfeeding duration rates at 12 months were lower than the Healthy People 2020 breastfeeding duration target (34.1 percent; HHS, 2019b) for the 43 States and the District of Columbia with reported data, 3 States (Alaska, Minnesota, and Oregon) reported breastfeeding at 12 months at rates that exceeded the Healthy People 2020 national baseline measure (22.7 percent; HHS, 2019b). Breastfeeding duration rates at 12 months were lower than the Healthy People 2030 baseline and target measures in the 43 States and the District of Columbia with reported data (HHS, 2021).

Figure 8.5. Breastfeeding Duration at 12 Months Among 12- to 13-Month-Old Children by State: 2018–2020

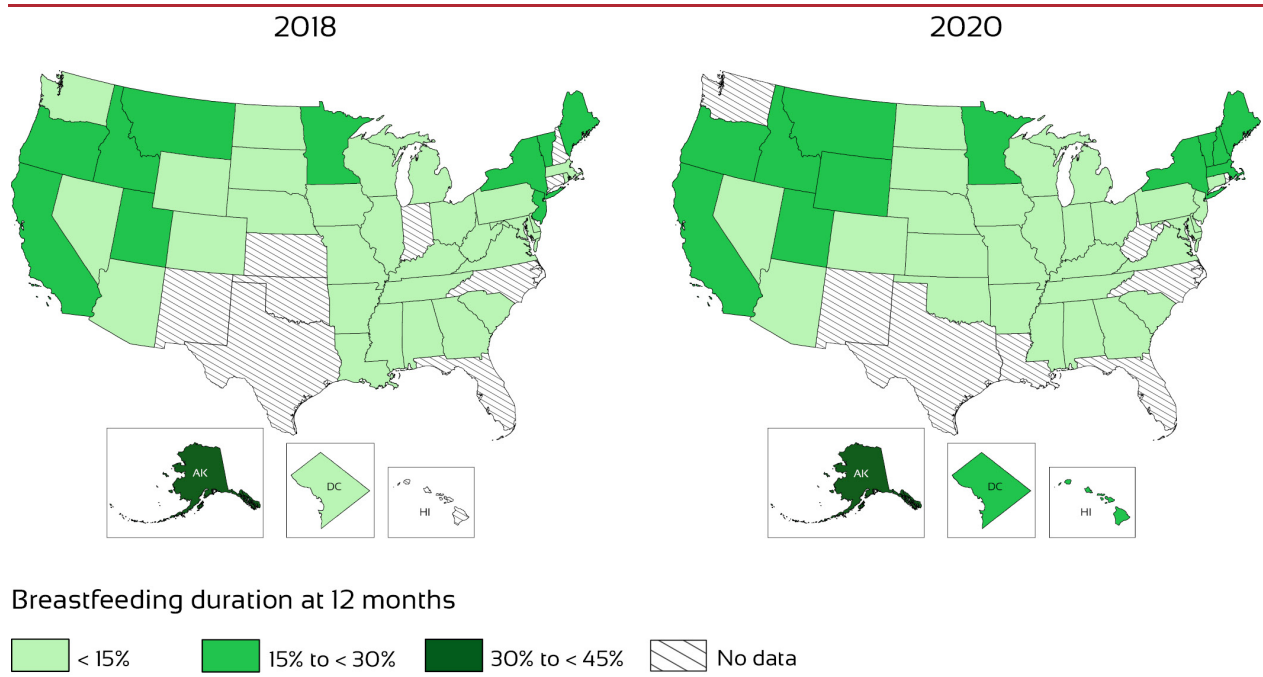


Table 8.5. Distribution of Children Breastfeeding at 12 Months Among 12- to 13-Month-Old Child Participants as of April 30, 2020

Characteristic	Total Participants With Duration Data	Breastfeeding at 12 Months
Number of 12- to 13-Month-Old Child Participants		
Total for State Agencies That Reported Data	207,226	30,676
Race		
American Indian	11,820	2,062
Asian	7,380	1,407
Black	47,080	5,069
Pacific Islander	1,578	249
White	121,649	19,707
Two or more races	15,084	1,842
Race not reported	2,635	340
Ethnicity		
Hispanic/Latino	80,751	15,037
Non-Hispanic/Latino	126,351	15,628
Ethnicity not reported	124	11

Characteristic	Total Participants With Duration Data	Breastfeeding at 12 Months
Percent of 12- to 13-Month-Old Child Participants		
Total for State Agencies That Reported Data	100.0	14.8
Race		
American Indian	100.0	17.4
Asian	100.0	19.1
Black	100.0	10.8
Pacific Islander	100.0	15.8
White	100.0	16.2
Two or more races	100.0	12.2
Race not reported	100.0	12.9
Ethnicity		
Hispanic/Latino	100.0	18.6
Non-Hispanic/Latino	100.0	12.4
Ethnicity not reported	100.0	8.9

Notes

This table includes data for State agencies that reported data on breastfeeding duration for at least 75.0 percent of all 12- to 13-month-old infants and children. Data were excluded for the following State agencies: Eastern Band of Cherokee Indians (NC), Hawaii, Indiana, Inter Tribal Council of Arizona, Kansas, Louisiana, New Hampshire, New Mexico, North Carolina, Oklahoma, Pueblo of Isleta (NM), Puerto Rico, Texas, and Washington.

The 12- to 13-month-old children included in this table consist primarily of children who have had a 1-year certification visit.

Chapter 9. Comparison of WIC Population With Overall U.S. Population

This chapter provides several benchmark comparisons between the WIC population and the general U.S. population. With the exception of age at childbirth, which is drawn from vital statistics data, U.S. population estimates and 95 percent confidence intervals are drawn from nationally representative samples from several surveys. In each case, the selected data sources provide the most recent available estimates for these measures. All parameters for the WIC population are from PC2020. This chapter describes how the WIC population compares with the U.S. population for the following characteristics: race and ethnicity, age at childbirth for women participants, poverty status, overweight and obesity among children, anemia among children, and breastfeeding among infants. Each section notes the differences in collection and reporting between the survey data and PC data.

A. Race and Ethnicity

Table 9.1 shows the race and ethnicity of the overall U.S. population as reported in the 2015–2019 American Community Survey (ACS) compared with the WIC population in 2020. The ACS data represented individuals in more than 11 million households. The response categories for reporting race and ethnicity varied between the ACS and PC2020 data in two ways: (1) The ACS allowed respondents to write in “some other race,” whereas WIC participants were restricted to specific race categories; and (2) race (0.8 percent) and ethnicity (less than 0.1 percent) were not reported for a small number of WIC participants.

The distribution of race and ethnicity in the WIC population was statistically significantly different from the distribution in the overall U.S. population. Racial and ethnic minorities were more common in the WIC population than in the overall U.S. population. Smaller percentages of WIC participants were White or Asian, and greater percentages of WIC participants were Black, American Indian, and Hispanic/Latino. The difference in racial and ethnic distribution was particularly great for the American Indian category; 6.8 percent of WIC participants fell into this category compared with less than 1 percent of the U.S. population. This difference likely resulted, in part, from State agency variations in the reporting of race for Hispanic/Latino participants (see chapters 2 and 3 for additional details).

Table 9.1. Percentages of WIC Participants (2020) and the U.S. Population (2015–2019) by Race and Ethnicity

Characteristics	U.S. Population ^a		WIC Participants
	Estimate	95 Percent Confidence Interval	Population Parameter
Race			
American Indian	0.8	0.7, 0.9	6.8
Asian	5.5	5.4, 5.6	3.6
Black	12.7	12.6, 12.8	22.3
Pacific Islander	0.2	0.1, 0.3	0.8
White	72.5	72.4, 72.6	59.5
Some other race	4.9	4.8, 5.0	N/A
Two or more races	3.3	3.2, 3.4	6.1
Race not reported	N/A	N/A	0.8

Characteristics	U.S. Population ^a		WIC Participants
	Estimate	95 Percent Confidence Interval	Population Parameter
Ethnicity			
Hispanic/Latino	18.0	17.9, 18.1	40.7
Non-Hispanic/Latino	82.0	81.9, 82.1	59.2
Ethnicity not reported	N/A	N/A	< 0.1

Notes

N/A = not applicable

Percents may not add to 100.0, and subtotals may not add to totals, because of rounding.

^aSource: U.S. Census Bureau, n.d.a

B. Age at Childbirth Among Women Participants

Table 9.2 presents data on the age of women at the time of childbirth, both within the WIC population and for the U.S. population as a whole. Age at childbirth is not directly reported in the PC data. To approximate age at childbirth for the WIC population, the study team used the ages of breastfeeding and postpartum women at certification. This measure assumes that breastfeeding and postpartum women were certified close to the birth of their child and overestimates age at childbirth to the extent that breastfeeding and postpartum women delay certification after giving birth. The parameters for U.S. women are drawn from vital statistics data for 2018.

Overall, WIC participants were more likely to give birth at younger ages: WIC participants were more likely to give birth between the ages of 15 and 24 than the U.S. population as a whole but less likely to give birth between the ages of 30 and 39.

Table 9.2. Distribution of Women WIC Participants (2020) and Women in the U.S. Population Who Gave Birth (2018) by Age Group

Age Group at Childbirth	U.S. Women Who Gave Birth in 2018 ^a	WIC Participants
Younger than 15	0.0	0.1
15–19	4.7	7.7
20–24	19.2	27.3
25–29	29.0	29.6
30–34	28.8	21.2
35–39	14.9	11.1
40–44	3.1	2.9
45 or older	0.2	0.2

Notes

Percents may not add to 100.0, and subtotals may not add to totals, because of rounding.

^aSource: Martin et al., 2019

C. Poverty Status

Table 9.3 presents data on income as a percentage of the poverty level for the general U.S. population, people in families, and people in families with children younger than 6 (i.e., age-eligible for WIC), alongside WIC participants with reported income in 2020. The U.S. population data were drawn from the 2020 Current Population Survey's Annual Social and Economic Supplement (CPS-ASEC), which reported on income for a nationally representative sample of 157,959 individuals during calendar year 2019.

The measure reported for WIC participants is based on income as a percentage of the Federal Poverty Guidelines issued annually by HHS, which consider household income and size and are used to determine WIC eligibility. In contrast, the measure reported for the overall U.S. population is based on income as a percentage of the Federal poverty thresholds issued annually by the U.S. Census Bureau, which consider household income, size, and age composition. This measure is included in the CPS-ASEC.

Compared with the broader U.S. population, WIC participants were more likely to be in low-income households. Whereas 69.3 percent of WIC participants had income below the Federal Poverty Guidelines, 10.5 percent of the general U.S. population had income below the Federal poverty thresholds. A small percentage of WIC participants (2.9 percent) had income greater than 200 percent of the Federal Poverty Guidelines, which likely resulted in part from the adjunctive eligibility of Medicaid among participants in States with higher income thresholds for Medicaid. Among the general population, 73.7 percent had income greater than 200 percent of the Federal poverty thresholds.

Table 9.3. Poverty Status of WIC Participants Who Reported Income (2020) Versus the General U.S. Population (2019)

Percent of Federal Poverty Measure	General U.S. Population ^a		Individuals in U.S. Families ^a		Individuals in U.S. Families With Related Children Younger Than 6 ^a		WIC Participants With Reported Income
	Estimate	95 Percent Confidence Interval	Estimate	95 Percent Confidence Interval	Estimate	95 Percent Confidence Interval	Population Parameter
Total (N)	324,753,870		264,637,256		68,062,557		6,519,350
Less than 100	10.5	10.3, 10.6	8.6	8.4, 8.8	14.6	14.1, 15.0	69.3
100–less than 130	4.6	4.4, 4.7	4.1	4.0, 4.2	6.2	5.9, 6.5	13.3
130–less than 150	3.1	3.0, 3.2	2.9	2.8, 3.0	4.3	4.1, 4.6	6.3
150–less than 185	5.6	5.5, 5.8	5.3	5.1, 5.4	7.2	6.9, 7.5	7.0
185–less than 200	2.6	2.5, 2.7	2.4	2.3, 2.5	3.0	2.8, 3.2	0.9
200 or more	73.7	73.4, 73.9	76.8	76.5, 77.0	64.7	64.1, 65.3	2.9

Notes

Percents may not add to 100.0, and subtotals may not add to totals, because of rounding.

The Federal poverty thresholds issued by the U.S. Census Bureau and used in the analysis of the general U.S. population are based on family income, size, and age composition. The Federal Poverty Guidelines issued by HHS and used in the analysis of the WIC population are based only on family income and size as reported by State agencies. Poverty guideline cutoffs are slightly different from those provided in table 4.6 to be comparable with Current Population Survey (CPS) tabulations.

The CPS poverty thresholds reflect respondents' 2018 income.

^aSource: U.S. Census Bureau, n.d.b

D. Overweight and Obesity Among 2- to 4-Year-Old Children

Table 9.4 displays estimates of overweight and obesity among 2- to 4-year-old children in the United States based on data from the National Health and Nutrition Examination Survey (NHANES) 2017–2018 compared with rates of overweight and obesity among child WIC participants in 2020.⁸⁷ NHANES estimates are based on a sample of 544 children with anthropometric data from the most recently released wave of microdata. Similar to the PC data collection, the NHANES data collection includes measuring respondents' height and weight rather than relying on self-reported data.

The rate of overweight was 15.9 percent among the U.S. population compared with 15.3 percent among WIC participants. Conversely, the rate of obesity was 14.6 percent among WIC participants compared

⁸⁷ As in chapter 6, anthropometric findings are provided for children certified through February 2020 because of data quality concerns about data collected during the COVID-19 pandemic.

with 11.7 percent among the U.S. population. The overweight rate for WIC participants fell within the 95 percent confidence interval of the NHANES survey estimates; the obesity rate for WIC participants fell just outside the 95 percent confidence interval of the survey estimates.

Table 9.4. Overweight and Obesity Rates Among Child WIC Participants (2020) and Children in the General U.S. Population (2017–2018)

Children 2–4 Years Old	U.S. Population ^a		WIC Participants
	Estimate	95 Percent Confidence Interval	Population Parameter
Overweight	15.9	11.8, 20.0	15.3
Obese	11.7	8.9, 14.5	14.6

Note

^aSource: CDC NCHS, n.d.

E. Anemia Among 1- to 4-Year-Old Children

Table 9.5 presents the prevalence of anemia among 1- to 4-year-old children in the United States based on NHANES 2017–2018 data compared with rates of anemia among child WIC participants in 2020.⁸⁸ NHANES estimates are based on a sample of 770 children with hematological data from the most recently released wave of microdata. The NHANES data collection includes a measurement of respondents' hemoglobin as part of a complete blood count rather than relying on hemoglobin assessed by other methods (e.g., procedures based on a finger stick sample) or self-reported data. Both sets of estimates exclude children for whom anemia data were missing.⁸⁹

Child WIC participants had higher rates of anemia than children in the general U.S. population. Among 1- to 2-year-olds, 15.6 percent of WIC participants were anemic—a proportion more than 10 percentage points greater than among the general U.S. population (4.8 percent). Both groups of children were less likely to be anemic at age 3–4, although child WIC participants were still more likely to be anemic than children in the general U.S. population (10.1 and 2.2 percent, respectively). The anemia rates for child WIC participants fell outside the 95 percent confidence interval of the NHANES survey estimates. Because WIC State agencies may choose not to conduct a blood test for a child if a blood test within the past year showed the child was not anemic, anemia rates may be overstated among the WIC population (see chapter 7 for additional details).

Table 9.5. Anemia Rates Among Child WIC Participants (2020) and Children in the General U.S. Population (2017–2018)

Age Category	U.S. Population ^a		WIC Participants
	Estimate	95 Percent Confidence Interval	Population Parameter
Children			
1–2 years old	4.8	1.8, 7.8	15.6
3–4 years old	2.2	0.2, 4.2	10.1

Note

^aSource: CDC NCHS, n.d.

⁸⁸ As in chapter 7, hematologic findings are provided for children certified through February 2020 because of data quality concerns about data collected during the COVID-19 pandemic.

⁸⁹ NHANES measures of hemoglobin as provided in the public use data set were corrected for white blood cell interference at the time of data collection; elevated white blood cell count may indicate inflammation.

F. Breastfeeding

Table 9.6 provides data on breastfeeding initiation and the percentage of infants breastfed at 6 months from CDC's NIS and PC2020 data. NIS data are collected from a nationally representative sample of households with children aged 19 to 35 months; data presented here were collected in 2019 for 16,562 infants and young children. For both data sources, infants with missing data were excluded from estimates.⁹⁰

Infant WIC participants were less likely to initiate breastfeeding than infants in the overall population; 71.6 percent of infant WIC participants were ever breastfed compared with 84.1 percent of infants in the U.S. population. Similarly, 22.1 percent of infant WIC participants were breastfed at 6 months compared with 58.3 percent of infants in the general U.S. population.

Table 9.6. Breastfeeding Initiation Rates and Percentage Breastfed at 6 Months Among Infant WIC Participants (2020) and Infants in the General U.S. Population (2019)

Breastfeeding Measure	U.S. Population ^a		WIC Participants
	Estimate	95 Percent Confidence Interval	Population Parameter
Initiation rate	84.1	83.0, 85.1	71.6
Percent breastfed at 6 months	58.3	56.9–59.6	22.1

Note

^a Source: CDC, n.d.

⁹⁰ As in chapter 8, all infants and children from State agencies that provided data on fewer than 75.0 percent of the focal group were excluded from analysis. Eastern Band of Cherokee Indians (NC), Louisiana, New Mexico, North Carolina, Rhode Island, Texas, West Virginia, and Washington were unable to provide initiation data for at least 75.0 percent of 6- to 13-month-old infants and children and are excluded from the initiation rate measure. Louisiana, New Mexico, North Carolina, Puerto Rico, Rhode Island, Texas, Washington, and West Virginia were unable to provide duration data for at least 75.0 percent of 9- to 13-month-old infants and children and are excluded from the calculation of the percentage of infants breastfed at 6 months.

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