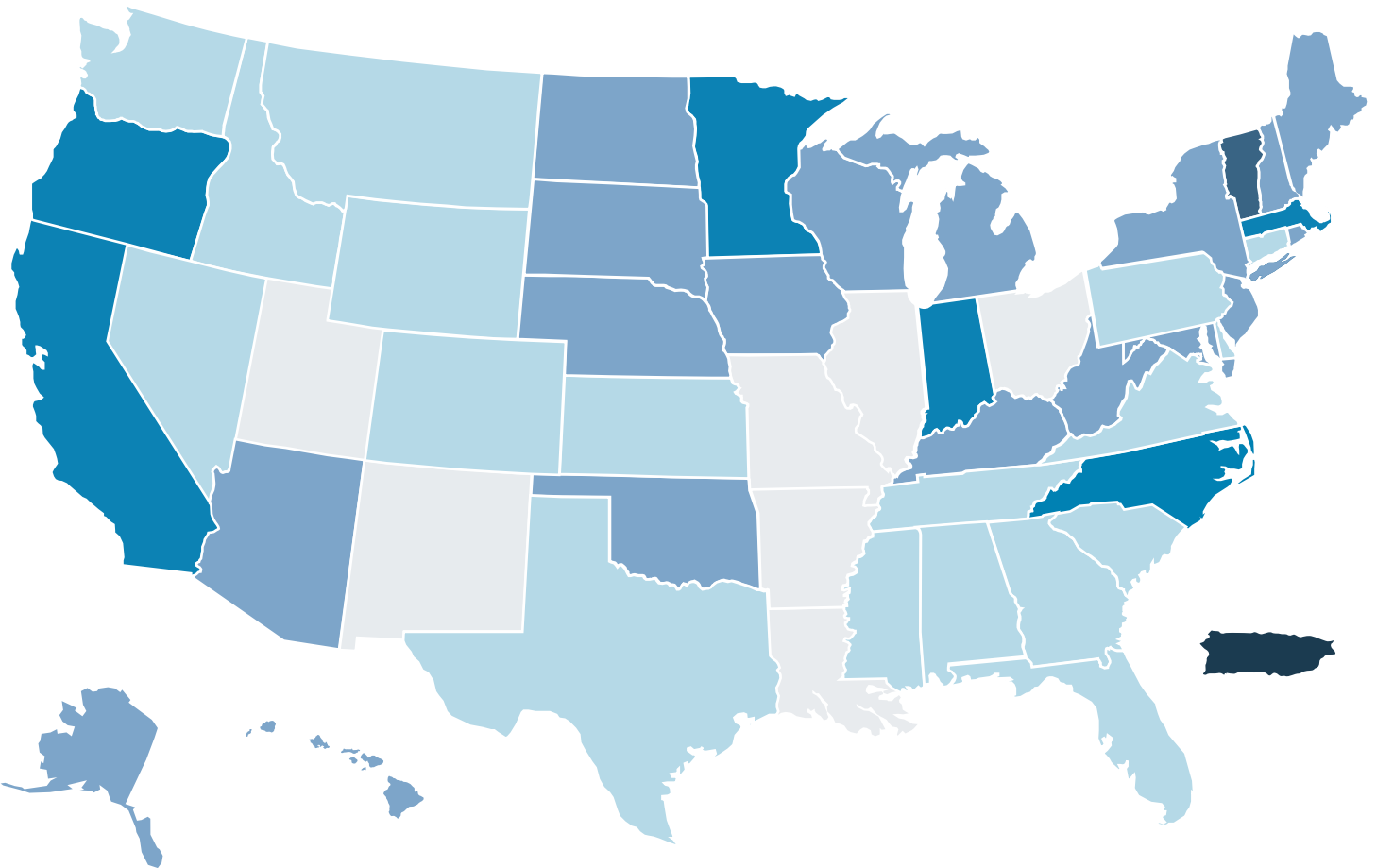




U.S. DEPARTMENT OF AGRICULTURE

National- and State-Level Estimates of WIC Eligibility and WIC Program Reach in 2021

Final Report, Volume I



National- and State-Level Estimates of WIC Eligibility and WIC Program Reach in 2021 Final Report, Volume I

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Executive Summary

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides nutritious foods, nutrition education that includes breastfeeding promotion and support, and referrals to health and social services. WIC serves low-income and nutritionally at-risk pregnant, breastfeeding and non-breastfeeding postpartum women, infants, and children up to age 5. Eligible participants receive electronic benefit transfer (EBT) cards for prescribed foods and redeem them at authorized retail vendors at no charge.¹

To be eligible for WIC, an applicant must be categorically eligible as a pregnant, postpartum breastfeeding,² or postpartum non-breastfeeding³ woman; an infant up to age 1; or a child up to age 5. Applicants must be at nutritional risk and have household income less than or equal to 185 percent of the Federal Poverty Guidelines issued annually by the U.S. Department of Health and Human Services.⁴ Applicants may also be adjunctively income-eligible for WIC if they participate in Medicaid, the Supplemental Nutrition Assistance Program, or Temporary Assistance for Needy Families.⁵ Applicants must live in the State or territory in which they apply or meet the residency requirements established by an Indian Tribal Organization (ITO).

This report presents estimates of the number of individuals eligible to participate in WIC and the percentage of the eligible population participating in calendar year (CY) 2021.⁶ Some tables and figures also include estimates for CY 2016 through CY 2020 using improved methods for estimating WIC eligibility implemented during the development of the CY 2020 and CY 2021 estimates.^{7, 8}

51 percent
of eligible women, infants,
and children participated
in WIC in 2021

For the purposes of this report, WIC participants are defined as those individuals who were enrolled in WIC and received their WIC benefits in an average month in CY 2021.⁹ WIC provides services in 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 ITOs. Estimates are provided at the national, regional, and State levels; national and regional estimates include the U.S. territories unless otherwise noted.¹⁰ Estimates are also provided by participant category—infants, children,

¹ As of July 2023, a small number of participants continue to receive paper checks until they transition to EBT. EBT status for all State agencies can be found in the WIC EBT Detail Status Report (<https://fns-prod.azureedge.us/sites/default/files/resource-files/december22-wic-ebt-detailstatusreport.pdf>).

² Breastfeeding women are categorically eligible up to 1 year postpartum.

³ Non-breastfeeding women are categorically eligible up to 6 months postpartum.

⁴ These guidelines are based on family or household size. The 48 contiguous States, the District of Columbia, and the U.S. territories served by WIC have the same guidelines; Alaska and Hawaii have different guidelines.

⁵ WIC regulations also allow State agencies to extend automatic WIC income eligibility to applicants participating in other qualifying means-tested benefit programs with income eligibility thresholds below those for WIC (see Special Supplemental Nutrition Program for Women, Infants, and Children, 2014). As in previous reports, this report does not consider automatic income eligibility.

⁶ The eligibility estimates are intended to represent average monthly figures—the numbers of women, infants, and children eligible for WIC in an average month of a calendar year—to be consistent with average monthly data on program participation.

⁷ Results for CY 2016 through CY 2020 differ from previously published results because of updates to the methodology.

⁸ The Food and Nutrition Service did not publish a report for the CY 2020 eligibility estimates; abbreviated results for the CY 2020 estimates are available as online graphics (<https://www.fns.usda.gov/wic/eligibility-and-program-reach-estimates-2020>; Gray et al., 2022).

⁹ WIC participants also include (1) infants younger than 6 months who are exclusively breastfed and whose breastfeeding mother received foods or food instruments (e.g., EBT cards, vouchers, coupons) during the reporting period and (2) partially breastfeeding women more than 6 months postpartum who did not receive supplemental foods but whose infants received supplemental foods or food instruments (Special Supplemental Nutrition Program for Women, Infants, and Children, 2014).

¹⁰ Data for those eligible for WIC through ITOs are included in the data for the State where the ITO is located. Estimates cannot be produced for ITOs because of data limitations of the underlying surveys.

pregnant women, and postpartum women¹¹—and by race and Hispanic ethnicity, urbanicity, and reported household income.

The COVID-19 public health emergency (PHE) influenced WIC program eligibility and WIC program operations. The Families First Coronavirus Response Act authorized FNS to issue waivers to provide flexibilities to help State agencies continue to safely serve WIC participants during the pandemic.¹² Estimates for CY 2021 are likely influenced by the COVID-19 pandemic and waivers available because of the PHE.

A. Results

1. WIC Eligibility Estimates

In an average month in CY 2021, 12.1 million individuals were eligible for WIC (see table ES.1). Of those eligible to participate in WIC, almost two-thirds (65 percent) were children aged 1–4, 20 percent were women, and 15 percent were infants. Children eligible for WIC were evenly distributed by year of age. Among total eligible individuals, 15 percent were 1-year-old children, 17 percent were 2-year-old children, 16 percent were 3-year-old children, and 17 percent were 4-year-old children. Pregnant and postpartum women represented about 9 percent and 11 percent of the eligible population, respectively.

Table ES.1. Estimated Average Monthly Number of Individuals Eligible for WIC by Participant Category: CY 2021

Participant Category	Number Eligible	Percent of Total Eligible	Total Population	Eligibility Rate
Infants	1,846,394	15.2	3,667,986	50.3
Children	7,851,014	64.7	15,034,195	52.2
1-year-old children	1,852,884	15.3	3,619,907	51.2
2-year-old children	2,051,553	16.9	3,753,874	54.7
3-year-old children	1,932,072	15.9	3,797,804	50.9
4-year-old children	2,014,506	16.6	3,862,609	52.2
Women	2,433,888	20.1	6,750,485	36.1
Pregnant women	1,128,406	9.3	2,836,373	39.8
Postpartum women	1,305,482	10.8	3,914,112	33.4
Breastfeeding women	796,911	6.6	1,913,230	41.7
Non-breastfeeding women	508,571	4.2	2,000,882	25.4
Total	12,131,296	100.0	25,452,666	47.7

Note: The total population consists of individuals in the 50 States, the District of Columbia, and the U.S. territories served by WIC in each participant category. The eligibility rate is the ratio of the total number of individuals eligible for WIC to the total population in each participant category. The average monthly population of postpartum women includes all women who gave birth less than 1 year prior, even if they are not categorically eligible for WIC because they are more than 6 months postpartum and are not breastfeeding.

CY = calendar year

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b

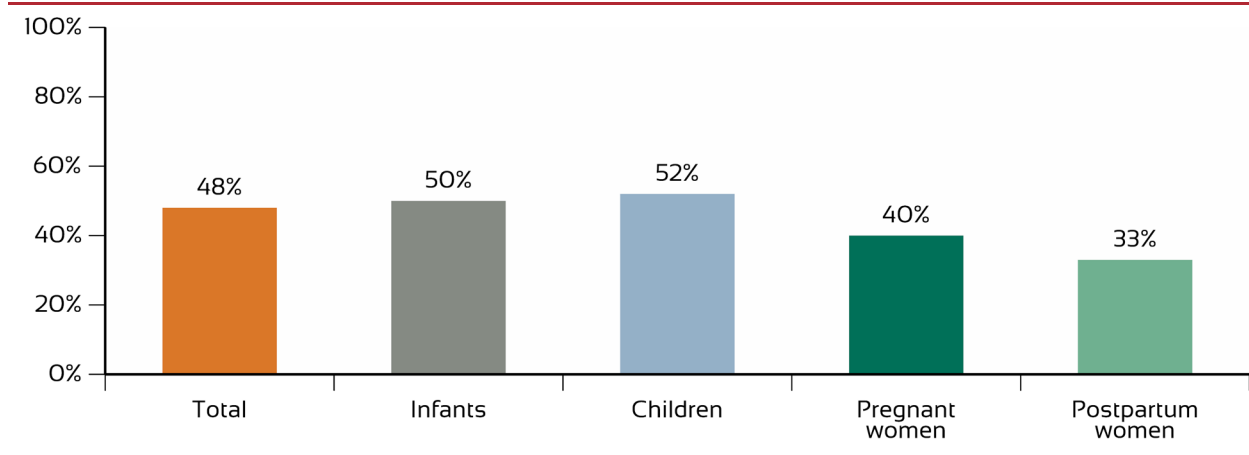
The eligibility rate is the percentage of the total population in each participant category estimated to be eligible for WIC. In an average month in CY 2021, 50 percent of all infants and 52 percent of all children

¹¹ The postpartum women category includes breastfeeding and non-breastfeeding women. This report contains tables and figures that combine breastfeeding and non-breastfeeding women under postpartum women.

¹² See <https://www.fns.usda.gov/disaster/pandemic/covid-19/wic-waivers-flexibilities> for a list of waivers issued to each State agency.

were eligible for WIC (see table ES.1 and figure ES.1). Forty percent of all pregnant women and 33 percent of all postpartum women were eligible.

Figure ES.1. WIC Eligibility Rate by Participant Category: CY 2021



CY = calendar year

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b

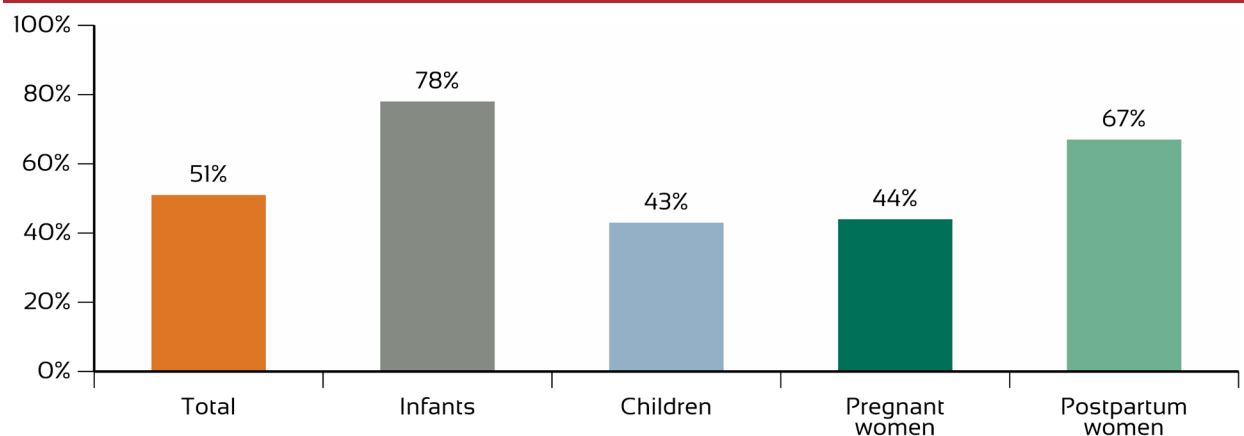
2. Coverage Rates

The coverage rate is the percentage of the total eligible population in each participant category that receives WIC benefits. Coverage rates are useful for understanding how well WIC reaches those who are eligible for the program.

WIC coverage rates varied by participant category and participant characteristics

Of the 12.1 million women, infants, and children eligible for WIC in an average month in CY 2021, a little more than half (6.2 million) received benefits, resulting in a national coverage rate of 51 percent. Across all participant categories, coverage rates were highest for infants (78 percent) and lowest for children and pregnant women (43 percent and 44 percent, respectively; see figure ES.2). Moreover, coverage rates for children decreased with age, from a high of 64 percent for 1-year-old children to a low of 25 percent for 4-year-old children (see figure ES.3). Coverage rates were higher for postpartum non-breastfeeding women (77 percent) than postpartum breastfeeding women (61 percent).

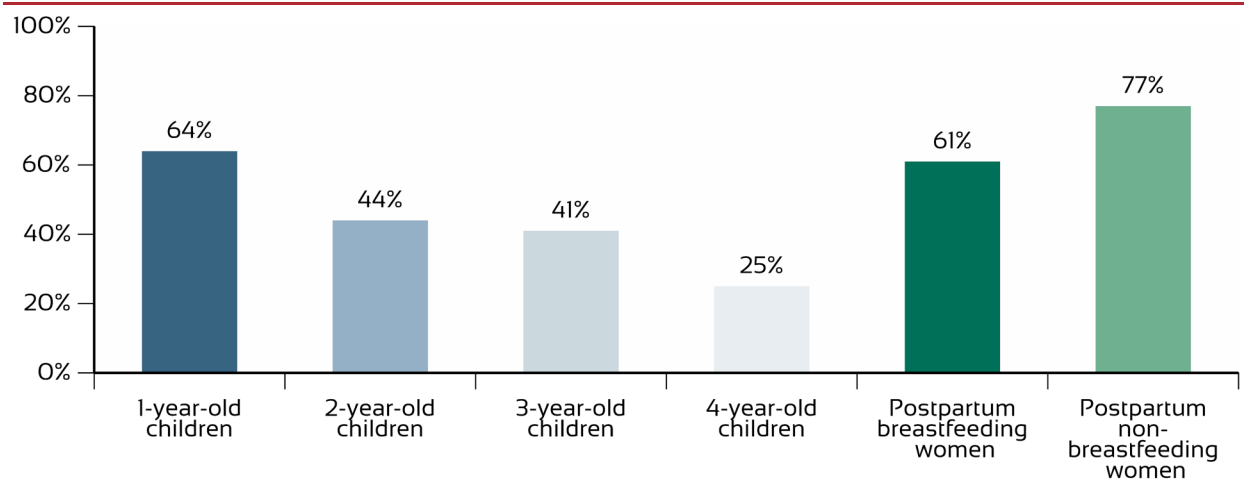
Figure ES.2. WIC Coverage Rate by Participant Category: CY 2021



CY = calendar year

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b; FNS, 2023

Figure ES.3. WIC Coverage Rates for Children by Year of Age and Postpartum Women by Breastfeeding Status: CY 2021



CY = calendar year

Sources: IPUMS-USA, n.d.-b; Kline et al., 2022; U.S. Census Bureau, n.d.-a, n.d.-b; FNS, 2023

This report provides the first estimates of coverage rates by urbanicity and household income relative to the Federal Poverty Guidelines. Coverage rates were higher for individuals living in metropolitan areas (56 percent) than for those living in nonmetropolitan areas (23 percent). Coverage rates were higher for individuals living in households with reported incomes less than or equal to 185 percent of the Federal Poverty Guidelines (82 percent) compared with individuals living in households with reported incomes greater than 185 percent of the Federal Poverty Guidelines (5 percent).

WIC coverage rates varied by race and Hispanic ethnicity

The overall coverage rate was highest for Hispanic/Latino individuals (58 percent) compared with other race and ethnicity groups. Coverage rates were 44 percent for White-only, non-Hispanic individuals; 49 percent for Black-only, non-Hispanic individuals; and 56 percent for non-Hispanic individuals who self-identified as two or more races or as a race other than Black or White (see table ES.2). Coverage rates

were lower for White-only, non-Hispanic infants and children and Black-only, non-Hispanic infants and children compared with all other races and ethnicities. Hispanic/Latino pregnant and postpartum women had the highest coverage rates (51 percent and 73 percent, respectively) compared with all other races and ethnicities.

Table ES.2. WIC Coverage Rates by Participant Category and by Race and Hispanic Ethnicity: CY 2021

Participant Category	Hispanic/ Latino	White-Only, Not Hispanic	Black-Only, Not Hispanic	Two or More Races or Other Race, Not Hispanic	Total
Infants	83.7	67.1*	76.7	†	78.1
Children	50.7*	36.7*	38.7*	47.6	43.2
Pregnant women	50.8*	38.9*	44.2	35.6*	43.7
Postpartum women	73.2	60.7	67.4	66.2	67.2
Breastfeeding women	71.3*	49.2*	59.4	62.0	60.8
Non-breastfeeding women	76.7	78.7	77.0	73.4	77.2
Total	58.1*	44.2*	48.5*	55.7	51.2

Note: Estimates for U.S. territories other than Puerto Rico are not included in the calculation of the coverage rates in this table because information on race and ethnicity for the other U.S. territories was not available in the data.

CY = calendar year

* indicates a statistically significant difference at the 95 percent confidence level between the coverage rate for a participant category's race and ethnicity and the national coverage rate for that category

† indicates an unreliable coverage rate over 100 percent

Sources: IPUMS-USA, n.d.-b; Kline et al., 2022; U.S. Census Bureau, n.d.-a, n.d.-b; FNS, 2023

WIC coverage rates varied by State

WIC coverage rates varied substantially by State, ranging from 35 percent to 72 percent, compared with the national average coverage rate of 51 percent. Puerto Rico had a higher coverage rate (88 percent) than any State. Figure ES.4 provides a national map that illustrates the variations in coverage rates. States with the darkest shading had the highest rates of coverage in CY 2021, whereas States with the lightest shading had the lowest rates. See tables 3.5 and 3.6 in chapter 3 for more details on State coverage rates. State-level coverage rates may be affected by WIC waivers adopted within each State during the PHE.

Coverage rates by race and ethnicity varied across States. In 28 States and the District of Columbia, the coverage rate for Hispanic/Latino individuals was higher than the rate for White-only, non-Hispanic individuals and all other non-Hispanic individuals (see table 3.7 in chapter 3). In four States, the coverage rate for Hispanic/Latino individuals was lower than the rate for White-only, non-Hispanic individuals and all other non-Hispanic individuals.

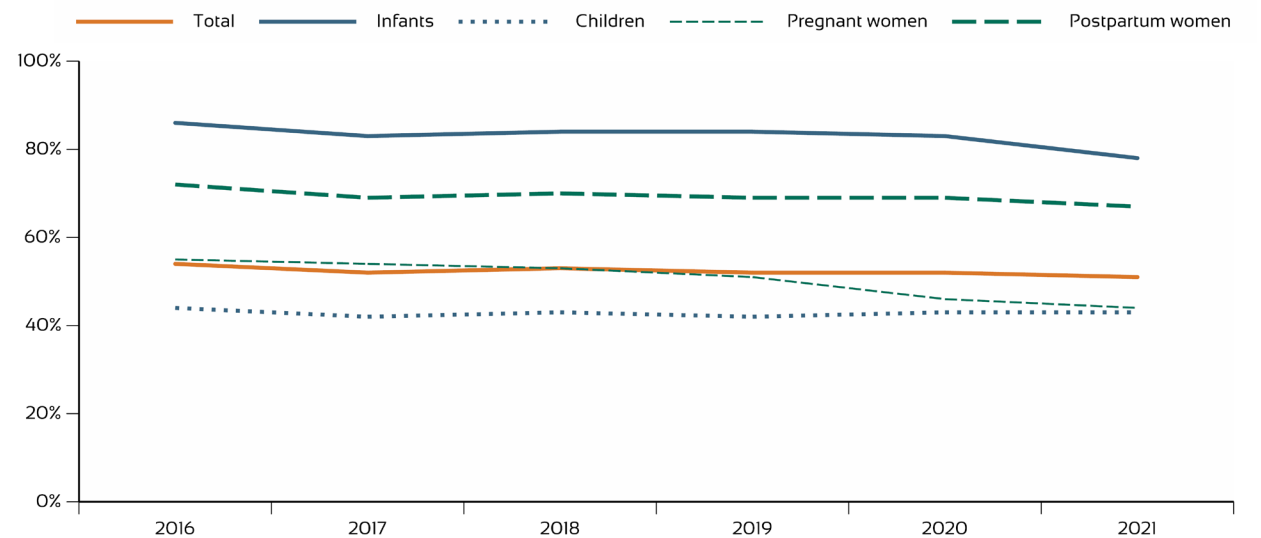
National Coverage Rate: 51.2 Percent



WIC coverage rates varied over time

WIC coverage rates decreased from 54 percent in CY 2016 to a low of 51 percent in CY 2021. The relative order of coverage rates by participant category has remained consistent from CY 2016 to CY 2021, with infants' rates remaining the highest, following by postpartum women and pregnant women, and children's rates remaining the lowest (see figure ES.5). Coverage rates for pregnant women steadily decreased from CY 2016 to CY 2019 before declining more rapidly in CY 2020 and CY 2021. In CY 2021, the coverage rate for pregnant women was slightly higher than that of children. Coverage rates for infants also exhibited a relatively large decline between CY 2020 and CY 2021.

Figure ES.5. Trends in WIC Coverage Rates by Participant Category: CY 2016–CY 2021



Note: The estimates for CY 2016 through CY 2020 presented in this report differ methodologically from those presented in Farson Gray et al., 2022, and Gray et al., 2022, because of improvements to the estimation procedures (see chapter 6 for more information). Estimates for CY 2021 differ methodologically from earlier estimates because of additional improvements to the estimation procedures (see appendix A of volume II for more information).

CY = calendar year

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b; FNS, 2023

B. Methodology

The CY 2021 national estimates presented in this report are based on a methodology initially developed by the Committee on National Statistics of the National Research Council (Ver Ploeg & Betson, 2003) and enhanced during the development of the CY 2020 and CY 2021 WIC eligibility estimates.¹³ The estimates for CY 2016 through CY 2020 presented in this report have been updated using a consistent methodology to facilitate comparisons with the CY 2021 estimates. The estimates in this report should not be compared with previous reports because of the methodological differences.

The primary data source used to develop the national estimates of the eligible populations is the 2022 Current Population Survey Annual Social and Economic Supplement (CPS ASEC) (U.S. Census Bureau, n.d.-a).¹⁴ Methods varied by participant category, with somewhat different approaches for (1) infants and children, (2) pregnant women, and (3) postpartum breastfeeding and non-breastfeeding women. The numbers of income-eligible and adjunctively income-eligible infants and children were first estimated using the CPS ASEC data; the adjunctively income-eligible population was increased based on program participation data from the 2021 American Community Survey (ACS) (see appendix A of volume II for more information). These estimates were then adjusted to account for differences between annual and monthly income. Because the CPS ASEC data do not identify pregnancy or breastfeeding status, the number of pregnant women was determined using the total population of women of reproductive age and adjusted following a recommendation from the Centers for Disease Control and Prevention (CDC, n.d.) for estimating the pregnant population (see table 6.1 for additional information). The number of infants eligible for WIC was then used as the starting point to estimate the number of postpartum women eligible for WIC and adjusted to estimate breastfeeding status.

The State-level estimates are based on a methodology that apportions the national figures using data from the ACS. The 2021 State-level estimates are based on pooled data from the 2019 and 2021 ACS data (Integrated Public Use Microdata Series-USA [IPUMS-USA], n.d.-b).¹⁵ Estimates for the five U.S. territories WIC serves (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands) are based on procedures similar to those used to generate the national estimates. However, estimates for Puerto Rico are based on data from the Puerto Rico Community Survey (PRCS); estimates for the four other U.S. territories are based on the U.S. Census Bureau International Database (IDB).

¹³ The CY 2021 eligibility estimation procedures incorporated two additional improvements to the estimation methodology (see appendix A of volume II for more information).

¹⁴ The 2022 CPS ASEC survey asks about income and program participation during CY 2021.

¹⁵ ACS data were pooled across 2 years to address small area estimation challenges. The estimates use data from the 2019 ACS instead of the 2020 ACS because of data collection concerns with the 2020 ACS as a result of the COVID-19 pandemic.

Chapter 1. Introduction

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides nutritious foods, nutrition education that includes breastfeeding promotion and support, and referrals to health and social services. WIC serves low-income and nutritionally at-risk pregnant, breastfeeding, and non-breastfeeding postpartum women; infants; and children up to age 5. Administered by the U.S. Department of Agriculture's (USDA) Food and Nutrition Service (FNS), WIC provides services through State and local agencies in all 50 States; the District of Columbia;¹⁶ five U.S. territories including American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands; and 33 Indian Tribal Organizations (ITOs). Eligible participants receive electronic benefit transfer (EBT) cards for prescribed foods and redeem them at authorized retail vendors at no charge.¹⁷

WIC served 6.2 million women, infants, and children in an average month in calendar year (CY) 2021.¹⁸ To be eligible for WIC, an applicant must be categorically eligible as a pregnant, postpartum breastfeeding,¹⁹ or postpartum non-breastfeeding²⁰ woman; an infant up to age 1;²¹ or a child aged 1–4. Each applicant must also be income-eligible, at nutritional risk, and live in the geographic location (i.e., State, territory, or tribal land) where the application is submitted.

6.2 million
women, infants, and
children were served by
WIC in an average
month in 2021

WIC is a federally funded program, but the funding is discretionary. The number of eligible women, infants, and children the program can serve depends on the amount of funding Congress provides for the program and how FNS allocates the funds to individual State agencies. Since approximately 1997, Congress has funded WIC at a level sufficient for the program to serve all eligible applicants. Annual WIC funding allocations are based on the number of individuals eligible for WIC and the percentage of the eligible population likely to participate. FNS allocates funds based on a formula that considers the previous year's funding and the estimated eligible population in each State and U.S. territory. Accurately estimating the number of individuals eligible for WIC and the number likely to participate enables FNS to better predict future funding needs, measure WIC performance, and identify potentially unmet nutrition assistance needs.

This report presents estimates of the numbers of women, infants, and children eligible for WIC during an average month in 2021 and historical estimates for 2016–2020.²² It is the latest report in a series that provides eligibility estimates at the national, regional, and State levels. Estimates are also provided by participant category—infants, children, pregnant women, and postpartum women²³—and by race and ethnicity, urbanicity, and reported household income. This report also provides the percentages of eligible individuals who participated in WIC overall and by participant category (i.e., coverage rates) and

¹⁶ Hereafter, this report includes the District of Columbia in references to States.

¹⁷ As of July 2023, a small number of participants continue to receive paper checks until they transition to EBT. EBT status for all State agencies can be found in the WIC EBT Detail Status Report (<https://fns-prod.azureedge.us/sites/default/files/resource-files/december22-wic-ebt-detailstatusreport.pdf>).

¹⁸ The eligibility estimates are intended to represent average monthly figures—the numbers of women, infants, and children eligible for WIC in an average month of a calendar year—to be consistent with average monthly data on program participation. All yearly estimates presented in this report are for the calendar year.

¹⁹ Breastfeeding women are categorically eligible up to 1 year postpartum.

²⁰ Non-breastfeeding women are categorically eligible up to 6 months postpartum.

²¹ An infant must be recertified as a child after the infant's first birthday.

²² The estimates for 2016 through 2020 presented in this report differ from previously published results because of updates to the underlying estimation methodology. See chapter 6 for more information.

²³ Postpartum women category includes breastfeeding and non-breastfeeding women. This report contains some tables and figures that combine breastfeeding and non-breastfeeding women under postpartum women.

the percentages of the total population of individuals who participated in WIC overall and by participant category (i.e., participation rates). Starting with this year's report, a new chapter presents national-level estimates of WIC nonparticipation rates among Medicaid and Supplemental Nutrition Assistance Program (SNAP) participants.²⁴ For the purposes of this report, WIC participants are defined as those individuals who were enrolled in WIC and received or picked up their WIC benefits in an average month in 2021.²⁵

A. WIC Eligibility Requirements

To be eligible for WIC, an individual must be categorically eligible and meet requirements for income or adjunctive income eligibility, nutritional risk, and residency:

- ▶ **Categorical Eligibility.** A participant must be a pregnant, postpartum breastfeeding, or postpartum non-breastfeeding woman; an infant up to age 1 (the first birthday); or a child up to age 5 (the fifth birthday).
- ▶ **Income Eligibility.** A participant can establish income eligibility in two ways:
 - A participant's income may not exceed 185 percent of the Federal Poverty Guidelines issued annually by the U.S. Department of Health and Human Services (HHS); these income guidelines are based on household size.²⁶ Applicants must present proof of income such as recent paystubs or income tax returns.
 - A participant may be adjunctively income-eligible for WIC if they or certain household members can document participation in Medicaid, SNAP, or Temporary Assistance for Needy Families (TANF).²⁷
- ▶ **Nutritional Risk.** A participant must be determined to be at nutritional risk based on a comprehensive assessment by a competent professional authority, such as a nutritionist, nurse, or physician. The applicant must display at least one medical, dietary, socioeconomic, or environmental risk factor (e.g., anemia, inadequate diet, underweight, homelessness) that may lead to a poor health outcome.
- ▶ **Residency.** An applicant must apply for and receive benefits in the geographic region (i.e., State, tribal land/ITO, or U.S. territory) in which they reside.²⁸

B. Overview of Estimation Methodology

The estimation procedures used to develop the estimates for WIC eligibility presented in this report are based primarily on the methodology recommended by the Committee on National Statistics (CNSTAT)

²⁴ Individuals who are categorically eligible for WIC and participate in Medicaid and SNAP are adjunctively income-eligible but may not participate in the program for several reasons. Chapter 5 provides the first published estimates of the proportion of Medicaid and SNAP participants who do not participate in WIC, describes the estimation methodology, and discusses data limitations.

²⁵ WIC participants also include (1) infants younger than 6 months who are exclusively breastfed and whose breastfeeding mother received foods or food instruments (e.g., EBT cards, vouchers, coupons) during the reporting period and (2) partially breastfeeding women more than 6 months postpartum who did not receive supplemental foods but whose infants received supplemental foods or food instruments (Special Supplemental Nutrition Program for Women, Infants, and Children, 2014).

²⁶ See HHS (2020, 2021) for the Federal Poverty Guidelines used to calculate the 2021 WIC eligibility estimates presented in this report. These guidelines are based on family or household size. The 48 contiguous States, the District of Columbia, and the U.S. territories served by WIC have the same guidelines; Alaska and Hawaii have different guidelines.

²⁷ WIC regulations also allow State agencies to extend automatic WIC income eligibility to applicants participating in other qualifying means-tested benefit programs with income eligibility thresholds below those for WIC (see Special Supplemental Nutrition Program for Women, Infants, and Children, 2014). As in previous reports, the estimates presented do not account for automatic income eligibility.

²⁸ Applicants applying for benefits through an ITO must meet the residency requirements established by that ITO.

panel members (Ver Ploeg & Betson, 2003). The methodologies in this report vary from those presented in the 2019 WIC eligibility estimates report (Farson Gray et al., 2022) because of recent improvements to the estimation procedures (see text box for key changes). During the development of the 2020 WIC eligibility estimates, the estimation methodologies were updated to incorporate additional data sources and more closely reflect WIC eligibility criteria; however, the general approach remains consistent with the CNSTAT recommendations. During the development of the 2021 WIC eligibility estimates, two new enhancements were implemented to improve the estimates (see appendix A of volume II for more information). Chapter 6 provides a more detailed description of the estimation methodology, including methodological updates to the estimates presented in this report.

Key Improvements to the 2016–2021 WIC Eligibility Estimate Methodology

The methodology for producing the WIC eligibility estimates was reviewed and updated during the production of the 2020 WIC eligibility estimates. All estimates in this report reflect the updated methodology. Key improvements to the procedures follow (see chapter 6 for further details):

- Use Vital Statistics to weight the Current Population Survey Annual Social and Economic Supplement (CPS ASEC) estimates of infants and children in place of U.S. Census population estimates
- Update the nutritional risk adjustment factor to reflect assumption of nutritional risk for all participant categories
- Use estimates of Medicaid and SNAP participation from the American Community Survey (ACS) to increase the estimated proportion of individuals adjunctively income-eligible for WIC
- Use a new methodology to separate the estimation of pregnant women from the estimation of infants
- Tailor the multiple birth and infant death adjustment factors to breastfeeding and non-breastfeeding women to more closely reflect the eligible populations
- Update the definition of WIC eligibility within the National Immunization Survey data used to estimate breastfeeding status of postpartum women
- Pool 2 years of ACS data to create the State estimates to address small area estimation concerns
- Incorporate data for Puerto Rico in the national-level standard errors

Based on the CNSTAT panel recommendations, CPS ASEC data provide the initial counts of eligible infants and children aged 1–4 in all States. The counts are then refined through a series of adjustment factors designed to reflect WIC eligibility requirements more closely. The numbers of infants and children who are income-eligible or adjunctively income-eligible are first estimated and then adjusted to account for differences between annual and monthly income and for nutritional risk. Beginning with the production of the 2020 WIC eligibility estimates, the ACS was used to better estimate the number of individuals identified as adjunctively income-eligible (see appendix A of volume II for more information).

The CPS ASEC data do not include information on pregnancy or breastfeeding status. The methodology proposed by the Centers for Disease Control and Prevention (CDC, n.d.) was used to estimate the total number of pregnant women in the United States. The estimation procedures for pregnant women start with the total number of women of reproductive age (15–44 years) in the CPS ASEC. This count is then adjusted based on other pregnancy-related data (e.g., multiple births, pregnancy losses) to estimate the total number of pregnant women. From this number, the estimated number of women who are income-eligible or adjunctively income-eligible is determined and then adjusted to reflect WIC eligibility criteria.

Because the CPS ASEC data do not include information on postpartum or breastfeeding status, the estimates of postpartum women eligible for WIC are based on adjusted counts of infants eligible for WIC. Separate estimates are produced for breastfeeding and non-breastfeeding women because certification periods and benefits vary for these two groups. Breastfeeding information is drawn from the most recent National Immunization Survey conducted by the CDC to estimate breastfeeding status among postpartum women.

State-level estimates of individuals eligible for WIC are prepared using the same general procedures used to develop the national-level estimates, but they are based on ACS data instead of CPS ASEC data. CPS ASEC data are considered a better source for national-level estimates because they include more complete income data, but ACS data are preferred for State-level estimates because of the relatively large sample sizes for all States. To create a consistent set of national- and State-level estimates, each State's share of the total ACS-based estimates is calculated. Two years of ACS data are used to address small sample sizes and related fluctuations in small States; the national-level estimates are then allocated across States according to each State's share. As a result, the sum of the State-level estimates of the number of individuals eligible for WIC is the same as the national total. State-level estimates are also summed to produce regional-level estimates. Estimates for the five U.S. territories WIC serves (American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands) are prepared using similar procedures to those used to generate the national estimates; however, estimates for Puerto Rico are based on data from the Puerto Rico Community Survey (PRCS), and estimates for the four other U.S. territories are based on data from the U.S. Census Bureau International Database (IDB).²⁹

The following data sources were used for the 2021 estimates: (1) 2022 CPS ASEC data (U.S. Census Bureau, n.d.-a), which asks about income and program participation during 2021; (2) 2019 and 2021³⁰ ACS data (Integrated Public Use Microdata Series-USA [IPUMS-USA], n.d.-b); (3) 2019 and 2021 PRCS data (IPUMS-USA, n.d.-b); and (4) 2021 IDB data (U.S. Census Bureau, n.d.-b).

The estimates for 2016 through 2020 presented in this report have been updated using a consistent methodology to facilitate comparisons with the 2021 estimates. The estimates in this report should not be compared with previous reports because of the methodological differences.³¹ See chapter 6 for more information.

The COVID-19 public health emergency (PHE) influenced WIC program eligibility and WIC program operations. The Families First Coronavirus Response Act authorized FNS to issue waivers to provide flexibilities to help State agencies continue to safely serve WIC participants during the pandemic (see <https://www.fns.usda.gov/disaster/pandemic/covid-19/wic-waivers-flexibilities> for a list of waivers issued to each State agency). Estimates for 2021 are likely influenced by the COVID-19 pandemic and waivers available because of the PHE.

²⁹ Puerto Rico estimates are included in State-level tables unless otherwise noted. Other territories are not included in State-level tables because of small sample sizes.

³⁰ Beginning with the 2020 WIC eligibility estimates, 2 years of ACS data were pooled to produce State-level coverage rates. This approach helps improve the precision of the estimates. In future years, the 2 most recent years of data will be used to produce State-level estimates; for the 2021 eligibility estimates, the 2019 ACS is used instead of the 2020 ACS because of pandemic-related data collection changes and concerns about the representativeness of the sample.

³¹ Abbreviated results for the 2020 WIC eligibility estimates are available as interactive graphics on the FNS website:

<https://www.fns.usda.gov/wic/eligibility-and-program-reach-estimates-2020> (Gray et al., 2022).

Chapter 2. Estimates of WIC Eligibility for CY 2021

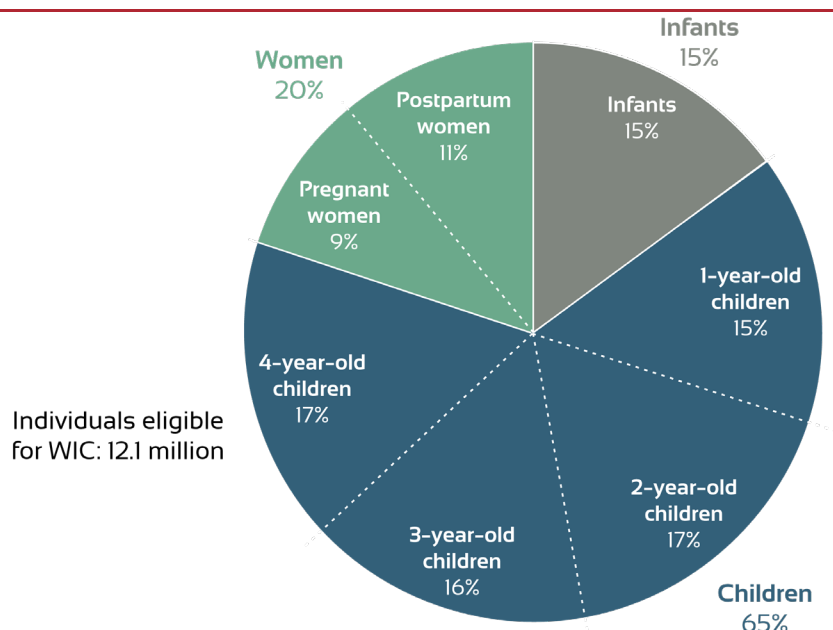
This chapter presents estimates of WIC eligibility in 2021. Section A presents national-level estimates by participant category and describes the characteristics of infants and children eligible for WIC. Section B presents regional- and State-level estimates. Section C examines the changes in the numbers of individuals eligible for WIC overall and by participant category from 2020 to 2021. Section D discusses general trends in WIC eligibility from 2016 to 2021.

Estimates of WIC eligibility in 2021 may have been influenced by demographic shifts related to the COVID-19 pandemic. Changes to Medicaid and SNAP program operations related to program waivers and other Federal policies also likely increased the number of individuals who were adjunctively income-eligible for WIC.

A. National-Level Estimates of Individuals Eligible for WIC

In an average month in 2021, 12.1 million individuals were eligible for WIC in all States and the U.S. territories served by WIC (see figure 2.1). Of those eligible for WIC, almost two-thirds (65 percent) were children, 15 percent were infants, and 20 percent were women.

Figure 2.1. Distribution of Individuals Eligible for WIC: CY 2021



CY = calendar year

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b

Children eligible for WIC were evenly distributed by year of age (see table 2.1). Among total eligible individuals, 15 percent were 1-year-old children; 17 percent were 2-year-old children; 16 percent were 3-year-old children; and 17 percent were 4-year-old children. Pregnant and postpartum women represented 9 percent and 11 percent of the eligible population, respectively. Postpartum breastfeeding women represented a larger proportion than postpartum non-breastfeeding women (7 versus 4 percent).

Table 2.1. Estimated Average Monthly Number of Individuals Eligible for WIC by Participant Category: CY 2021

Participant Category	Number Eligible	Percent of Total Eligible	Total Population	Eligibility Rate
Infants	1,846,394	15.2	3,667,986	50.3
Children	7,851,014	64.7	15,034,195	52.2
1-year-old children	1,852,884	15.3	3,619,907	51.2
2-year-old children	2,051,553	16.9	3,753,874	54.7
3-year-old children	1,932,072	15.9	3,797,804	50.9
4-year-old children	2,014,506	16.6	3,862,609	52.2
Women	2,433,888	20.1	6,750,485	36.1
Pregnant women	1,128,406	9.3	2,836,373	39.8
Postpartum women	1,305,482	10.8	3,914,112	33.4
Breastfeeding women	796,911	6.6	1,913,230	41.7
Non-breastfeeding women	508,571	4.2	2,000,882	25.4
Total	12,131,296	100.0	25,452,666	47.7

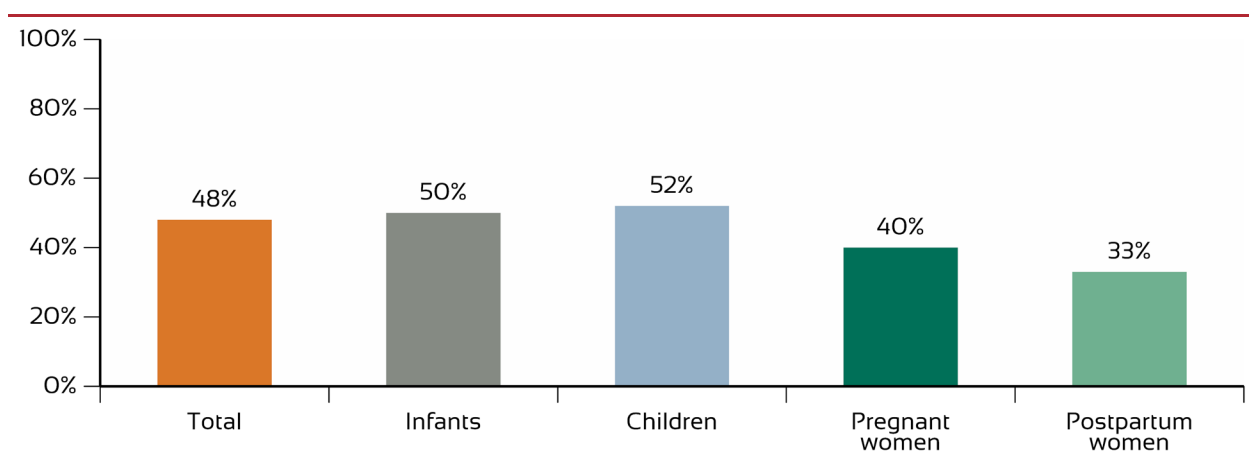
Note: The total population consists of individuals in the 50 States, the District of Columbia, and the U.S. territories served by WIC in each participant category. The eligibility rate is the ratio of the total number of individuals eligible for WIC to the total population in each participant category. The average monthly population of postpartum women includes all women who gave birth less than 1 year prior, even if they are not categorically eligible for WIC because they are more than 6 months postpartum and are not breastfeeding.

CY = calendar year

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b

The eligibility rate is the percentage of the total population in each participant category who are estimated to be eligible for WIC. In an average month in 2021, 50 percent of all infants and 52 percent of all children were eligible for WIC (see figure 2.2 and table 2.1). Forty percent of all pregnant women and 33 percent of all postpartum women were eligible. The eligibility rate is lower for non-breastfeeding women (25 percent) than for breastfeeding women (42 percent) in part because non-breastfeeding women are only eligible for the first 6 months postpartum.

Figure 2.2. WIC Eligibility Rate by Participant Category: CY 2021



CY = calendar year

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b

1. Characteristics of Infants and Children Eligible for WIC

The CPS ASEC and ACS data were used to examine the characteristics of infants and children identified as eligible for WIC in 2021 (see table 2.2).³² Almost two-thirds of infants and children eligible for WIC were White (63 percent), 24 percent were Black, and 13 percent were another race or multiple races. More than one-third of eligible infants and children were Hispanic/Latino (36 percent), and a majority lived in households with two parents (61 percent; see figure 2.3). About 5 percent of eligible infants and children were living with a household member (aged 17 or older) who had served in the U.S. military, and 2 percent were living with a household member who was serving in the U.S. military in 2021. Seventy-six percent of infants and children eligible for WIC lived in households with working parent(s). Most infants and children eligible for WIC lived with families receiving Medicaid (80 percent, see figure 2.3). The characteristics of infants and children eligible for WIC were generally similar (see table 2.2), but infants were more likely than children to live in two-parent households (63 percent versus 60 percent) and less likely to live with working parents (67 percent versus 78 percent).

76 percent
of infants and children
eligible for WIC lived in
households with working
parent(s)

The CPS ASEC and ACS data were also used to examine the characteristics of infants and children who appeared to be solely adjunctively income-eligible (in households with annual income exceeding 185 percent of the Federal Poverty Guidelines but participating in Medicaid, SNAP, or TANF) compared with those income-eligible for WIC (in households with annual income less than or equal to 185 percent of the Federal Poverty Guidelines regardless of whether they participated in Medicaid, SNAP, or TANF).³³ For example, 58 percent of infants and children who were solely adjunctively income-eligible received Medicaid but not SNAP or TANF (see table 2.2). In comparison, 28 percent of directly income-eligible infants and children received Medicaid but not SNAP or TANF. Those who were solely adjunctively income-eligible were more likely to live in two-parent families (72 percent versus 53 percent) and live with one or more working parents (87 percent versus 68 percent) than those who were directly income-eligible.

³² Table 2.2 presents characteristics of infants and children eligible for WIC based on the CPS ASEC and ACS data using weights adjusted for the undercount and overcount in CPS estimates, monthly income, certification periods, and nutritional risks of these individuals. See chapter 6 for more information on the estimation procedures.

³³ Although 40.3 percent of infants and children eligible for WIC were in households with annual income exceeding 185 percent of the Federal Poverty Guidelines, the proportion of WIC participants in households with annual income exceeding 185 percent of the Federal Poverty Guidelines was much lower—3.5 percent of total participants in 2020 (Kline et al., 2022). There are various reasons a small percentage of participants had income exceeding the poverty guidelines. One reason is State Medicaid income thresholds for infants and children are equal to or greater than 250 percent of the Federal Poverty Guidelines for many States and equal to or greater than 300 percent of those for other States (Heberlein et al., 2013). Moreover, the programs that confer adjunctive income eligibility use income disregards and do not necessarily count the income of all members of the economic unit as defined by WIC.

Table 2.2. Distribution of the Average Monthly Numbers of Infants, Children, and Infants and Children Eligible for WIC (Percentage) by Demographic and Income Characteristics and Adjunctive Income Eligibility: CY 2021

Characteristics		Infants Eligible for WIC			Children Eligible for WIC			Infants and Children Eligible for WIC		
		Family Income ≤ 185 Percent FPG ^a	Adjunctively Income-Eligible > 185 Percent FPG ^b	Total	Family Income ≤ 185 Percent FPG ^a	Adjunctively Income-Eligible > 185 Percent FPG ^b	Total	Family Income ≤ 185 Percent FPG ^a	Adjunctively Income-Eligible > 185 Percent FPG ^b	Total
Total		1,101,323	723,693	1,825,015	4,622,992	3,136,936	7,759,928	5,724,315	3,860,629	9,584,943
Sex	Male	47.5	50.6	48.7	49.8	50.8	50.2	49.4	50.7	49.9
	Female	52.5	49.4	51.3	50.2	49.3	49.8	50.6	49.3	50.1
Race	White	60.6	71.0	64.7	61.3	65.5	63.0	61.1	66.5	63.3
	Black	25.6	22.5	24.4	26.4	20.6	24.1	26.2	21.0	24.1
	Other race	13.8	6.5	10.9	12.4	13.9	13.0	12.6	12.5	12.6
Hispanic ethnicity	Hispanic/Latino	35.3	35.5	35.4	36.0	36.4	36.1	35.8	36.2	36.0
	Not Hispanic/Latino	64.7	64.5	64.6	64.0	63.6	63.9	64.2	63.8	64.0
Living arrangement	Two-parent family	54.3	76.5	63.1	52.4	70.9	59.9	52.8	72.0	60.5
	Single-parent family	40.5	18.9	31.9	42.2	26.0	35.6	41.8	24.7	34.9
	No-parent family	5.2	4.6	4.9	5.4	3.1	4.5	5.4	3.4	4.6
	Related nonparent caretaker	1.4	4.6	2.7	2.8	3.1	2.9	2.6	3.4	2.9
	Unrelated nonparent caretaker	3.8	0.0	2.3	2.6	0.0	1.5	2.8	0.0	1.7
Military status of household members	Ever served in U.S. military	3.4	4.3	3.8	3.7	8.6	5.6	3.6	7.8	5.3
	Serving in U.S. military in 2021 ^c	2.2	3.4	2.7	1.5	1.6	1.5	1.6	2.0	1.7
Number of individuals in household	2	5.6	1.6	4.0	5.8	2.3	4.4	5.8	2.2	4.3
	3	24.7	17.3	21.8	16.9	19.0	17.7	18.4	18.7	18.5
	4	21.6	28.6	24.4	25.0	29.3	26.7	24.3	29.1	26.3
	5	20.2	26.7	22.8	21.6	22.1	21.8	21.3	23.0	22.0
	6 or more	28.0	25.7	27.1	30.7	27.2	29.3	30.2	26.9	28.9

Characteristics		Infants Eligible for WIC			Children Eligible for WIC			Infants and Children Eligible for WIC		
		Family Income ≤ 185 Percent FPG ^a	Adjunctively Income-Eligible > 185 Percent FPG ^b	Total	Family Income ≤ 185 Percent FPG ^a	Adjunctively Income-Eligible > 185 Percent FPG ^b	Total	Family Income ≤ 185 Percent FPG ^a	Adjunctively Income-Eligible > 185 Percent FPG ^b	Total
Percent with working parent(s)		57.9	81.2	67.1	70.1	88.6	77.6	67.7	87.2	75.6
Annual family income relative to FPG ^b	No income	9.1	0.0	5.5	7.6	0.0	4.5	7.9	0.0	4.7
	Up to 50% FPG	15.9	0.0	9.6	14.9	0.0	8.9	15.1	0.0	9.0
	More than 50% up to 100% FPG	24.0	0.0	14.5	23.8	0.0	14.2	23.8	0.0	14.2
	More than 100% up to 130% FPG	18.6	0.0	11.2	19.0	0.0	11.3	18.9	0.0	11.3
	More than 130% up to 150% FPG	10.0	0.0	6.0	11.6	0.0	6.9	11.3	0.0	6.8
	More than 150% up to 185% FPG	22.4	0.0	13.5	23.1	0.0	13.8	23.0	0.0	13.7
	More than 185% up to 200% FPG	0.0	12.8	5.1	0.0	11.5	4.6	0.0	11.7	4.7
	More than 200% FPG ^d	0.0	87.2	34.6	0.0	88.5	35.8	0.0	88.3	35.6
Receipt of other benefits	No benefit receipt	22.2	0.0	13.4	17.4	0.0	10.4	18.4	0.0	11.0
	Medicaid, SNAP, and TANF	4.0	1.7	3.1	4.5	2.1	3.5	4.4	2.0	3.4
	SNAP and TANF only	0.1	0.5	0.3	0.0	0.0	0.0	0.0	0.1	0.1
	Medicaid and SNAP only	30.9	26.0	28.9	45.3	28.3	38.4	42.5	27.8	36.6
	Medicaid and TANF only	0.0	1.0	0.4	0.6	0.8	0.7	0.5	0.8	0.6
	SNAP only	12.5	13.0	12.7	5.2	11.1	7.6	6.6	11.4	8.5
	TANF only	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.1	0.0
	Medicaid only	30.3	57.5	41.1	26.9	57.8	39.4	27.6	57.7	39.7

Note: This table does not include estimates for the U.S. territories.

CPS ASEC = Current Population Survey Annual Social and Economic Supplement; CY = calendar year; FPG = Federal Poverty Guidelines; SNAP = Supplemental Nutrition Assistance Program; TANF = Temporary Assistance for Needy Families

^a The WIC economic unit is defined as all individuals in the CPS ASEC household who are related by blood, marriage, or adoption, plus the unmarried partner of any family member and that partner's dependents. Infants and children in economic units with annual income less than or equal to 185 percent of the FPG for the unit's size are income-eligible for WIC.

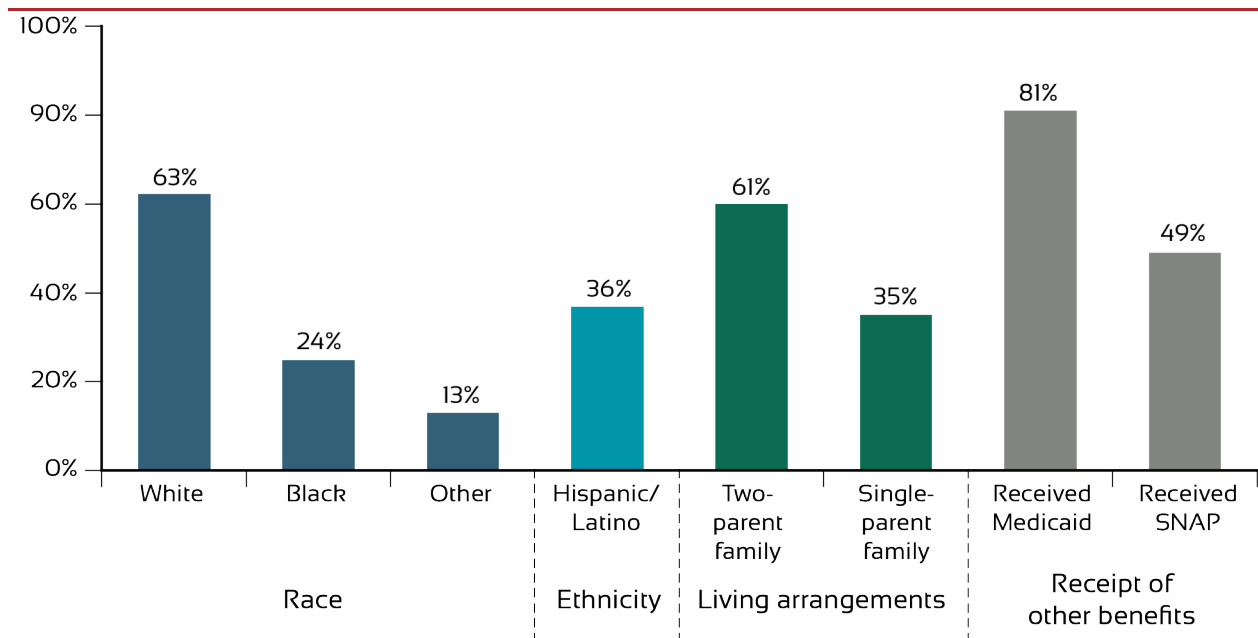
^b Adjunctively income-eligible infants and children were in economic units that reported participating in Medicaid, SNAP, or TANF during the prior year and had annual income exceeding 185 percent of the FPG for the unit's size.

^c The military status of household members who were currently serving in the U.S. military was included in the CPS ASEC only if they resided in civilian housing on or off a military base.

^d Although 40.3 percent of infants and children eligible for WIC were in households with annual income exceeding 185 percent of the Federal Poverty Guidelines, the proportion of WIC participants in households with annual income exceeding 185 percent of the Federal Poverty Guidelines was much lower—3.5 percent of total participants in 2020 (Kline et al., 2022). There are various reasons a small percentage of participants had income exceeding the poverty guidelines. One reason is State Medicaid income thresholds for infants and children are equal to or greater than 250 percent of the Federal Poverty Guidelines for many States and equal to or greater than 300 percent of those for other States (Heberlein et al., 2013). Moreover, the programs that confer adjunctive income eligibility use income disregards and do not necessarily count the income of all members of the economic unit as defined by WIC.

Source: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a

Figure 2.3. Characteristics of Infants and Children Eligible for WIC: CY 2021



Note: The race and ethnicity categories are not mutually exclusive because the race categories include both Hispanic/Latino and non-Hispanic/Latino. This figure does not include estimates for the U.S. territories.

CY = calendar year

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a

B. Regional- and State-Level Estimates of Individuals Eligible for WIC

The number of individuals eligible for WIC varied across FNS Regions and States because of differences in total populations, demographic characteristics, income levels, and State policy choices (see appendix D of volume II for a list of States and U.S. territories by FNS Region). In 2021, the Southeast Region had the greatest percentage of eligible individuals—23 percent (see table 2.3) out of the total population eligible for WIC. In contrast, the Mountain Plains Region represented the smallest share of eligible individuals—5 percent. The distribution of individuals eligible for WIC shows similar regional variations across participant categories.

Table 2.3. Distribution of Individuals Eligible for WIC (Percentage) by FNS Region and Participant Category: CY 2021

FNS Region	Infants	Children	Pregnant Women	Postpartum Women	Total
Northeast	8.8	9.0	8.9	9.1	9.0
Mid-Atlantic	11.1	11.4	11.2	11.3	11.3
Southeast	23.5	22.2	23.3	22.8	22.5
Midwest	14.9	15.5	15.3	14.6	15.3
Southwest	19.9	19.5	19.5	19.5	19.6
Mountain Plains	5.2	5.2	5.4	5.3	5.3
Western	16.6	17.1	16.5	17.5	17.0
Total	100.0	100.0	100.0	100.0	100.0

CY = calendar year; FNS = Food and Nutrition Service

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b

WIC eligibility rates, which indicate the percentage of the total population in each participant category who are estimated to be eligible for WIC, were highest in the Southeast Region (53 percent) and lowest in the Mountain Plains Region (41 percent), as shown in table 2.4. Eligibility rates by participant category show similar variations by FNS Region (see figure 2.4).

By State, California had the largest share of individuals eligible for WIC (12 percent of the national estimate), reflecting its large population (see table 2.5). The States with the four largest eligible populations (California, Texas, Florida, and New York) had 35 percent of the total U.S. population eligible for WIC in 2021.

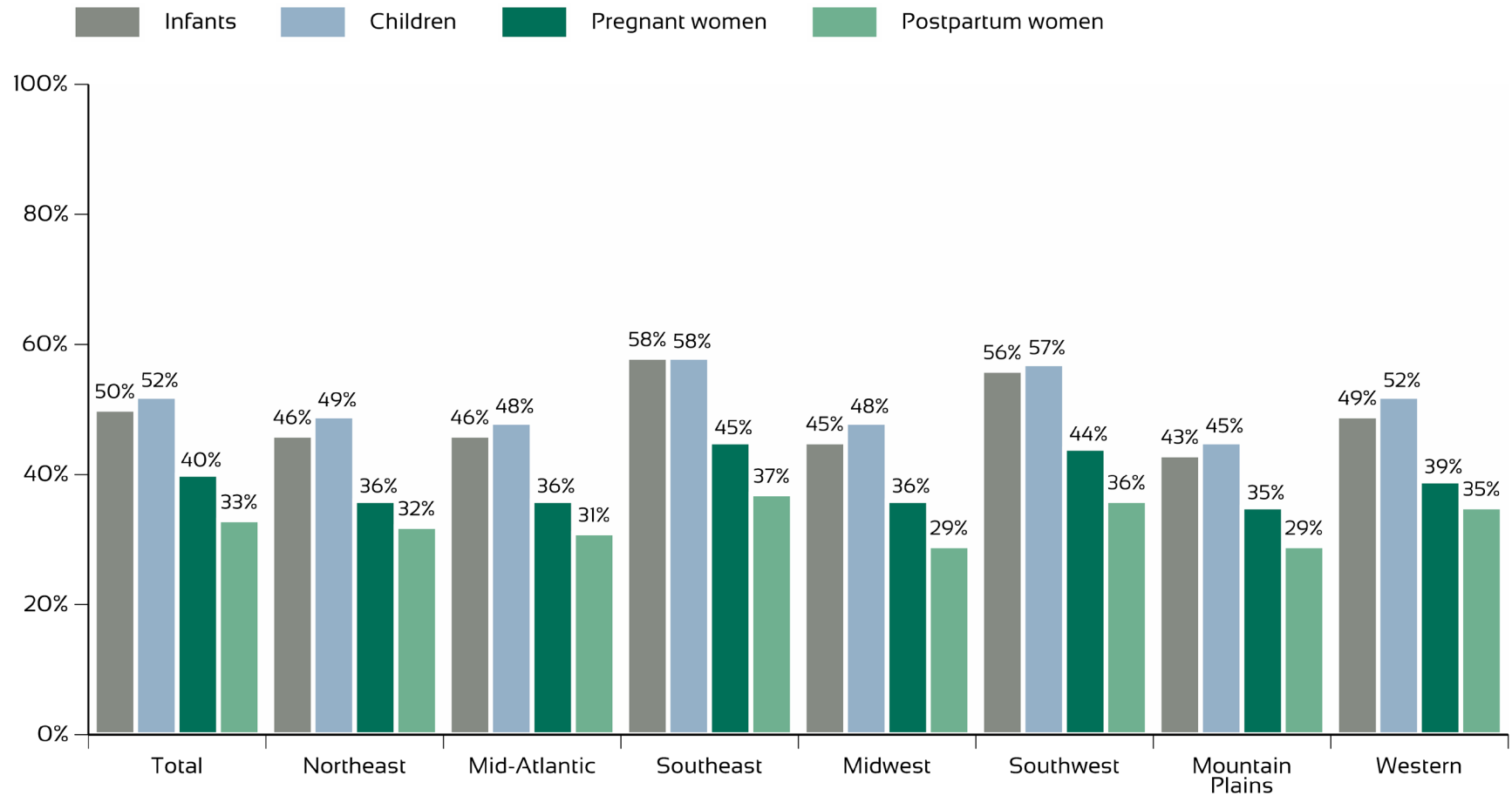
Table 2.4. WIC Eligibility Rates by FNS Region and Participant Category: CY 2021

FNS Region	Infants	Children	Pregnant Women	Postpartum Women	Total
Northeast	46.0	48.9	36.4	31.8	44.5
Mid-Atlantic	45.7	48.1	36.3	31.2	43.9
Southeast	58.0	57.9	45.2	36.8	53.2
Midwest	44.9	48.4	35.8	29.0	43.5
Southwest	56.1	57.1	43.9	35.9	52.2
Mountain Plains	42.8	44.7	34.7	28.9	40.9
Western	49.1	51.8	39.3	34.7	47.5
Total	50.3	52.2	39.8	33.4	47.7

CY = calendar year; FNS = Food and Nutrition Service

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b

Figure 2.4. WIC Eligibility Rates by FNS Region and Participant Category: CY 2021



CY = calendar year; FNS = Food and Nutrition Service
 Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b

Table 2.5. Distribution of Individuals Eligible for WIC (Percentage) by State: CY 2021

State	Percent Share of National Estimate of Population Eligible for WIC
Alabama	1.8
Alaska	0.2
Arizona	2.2
Arkansas	1.2
California	11.7
Colorado	1.4
Connecticut	0.8
Delaware	0.3
District of Columbia	0.2
Florida	6.7
Georgia	3.9
Hawaii	0.4
Idaho	0.6
Illinois	3.5
Indiana	2.1
Iowa	0.9
Kansas	0.8
Kentucky	1.5
Louisiana	1.9
Maine	0.3
Maryland	1.8
Massachusetts	1.5
Michigan	2.9
Minnesota	1.3
Mississippi	1.2
Missouri	1.8
Montana	0.3
Nebraska	0.5
Nevada	1.0
New Hampshire	0.2
New Jersey	2.3
New Mexico	0.8
New York	5.8
North Carolina	3.4
North Dakota	0.2
Ohio	3.4
Oklahoma	1.4
Oregon	1.0
Pennsylvania	3.3
Puerto Rico	0.9

State	Percent Share of National Estimate of Population Eligible for WIC
Rhode Island	0.2
South Carolina	1.8
South Dakota	0.2
Tennessee	2.3
Texas	11.2
Utah	0.8
Vermont	0.1
Virginia	2.0
Washington	2.0
West Virginia	0.5
Wisconsin	1.3
Wyoming	0.1
Total	100.0

Note: State eligibility estimates include individuals in ITOs who were eligible for WIC. Estimates for U.S. territories other than Puerto Rico are not shown because of small sample sizes.

CY = calendar year; FNS = Food and Nutrition Service; ITO = Indian Tribal Organization

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a

C. Changes in the Numbers of Individuals Eligible for WIC: CY 2020–CY 2021

Overall, the estimated total number of individuals eligible for WIC increased less than 1 percent between 2020 and 2021 to remain at 12.1 million (see table 2.6). The change in the estimated number of eligible individuals was not consistent across all WIC participant categories. The estimated number of eligible infants decreased by 1 percent, and the estimated number of eligible children increased by 1 percent. The number of eligible pregnant women increased by 2 percent, and the number of eligible postpartum women decreased by 2 percent.

The percentage changes in the population eligible for WIC shown in table 2.6 can also be viewed as the combined percent change in the total population and the percent change in the eligibility rate for each participant category. For example, the total population of infants increased by slightly more than 1 percent, while the total eligible population decreased by slightly less than 1 percent. As a result, the eligibility rate for infants decreased by 1 percentage point.

Table 2.6. Changes in the Total Population, Total WIC Eligibility, and WIC Eligibility Rates by Participant Category: CY 2020–CY 2021

Participant Category		2020	2021	Percent Change 2020–2021
Total population	Infants	3,619,667	3,667,986	1.3
	Children	15,365,755	15,034,195	-2.2*
	1-year-old children	3,753,620	3,619,907	-3.6*
	2-year-old children	3,796,385	3,753,874	-1.1
	3-year-old children	3,861,684	3,797,804	-1.7
	4-year-old children	3,954,066	3,862,609	-2.3*
	Pregnant women	2,790,074	2,836,373	1.7*
	Postpartum women	3,868,211	3,914,112	1.2
	Breastfeeding women	1,912,007	1,913,230	0.1
	Non-breastfeeding women	1,956,204	2,000,882	2.3
	Total	25,643,707	25,452,666	-0.7*
Number eligible	Infants	1,862,033	1,846,394	-0.8
	Children	7,784,680	7,851,014	0.9
	1-year-old children	1,942,173	1,852,884	-4.6
	2-year-old children	1,916,424	2,051,553	7.1*
	3-year-old children	1,970,726	1,932,072	-2.0
	4-year-old children	1,955,357	2,014,506	3.0
	Pregnant women	1,103,246	1,128,406	2.3*
	Postpartum women	1,331,757	1,305,482	-2.0
	Breastfeeding women	833,152	796,911	-4.4
	Non-breastfeeding women	498,605	508,571	2.0
	Total	12,081,717	12,131,296	0.4
Eligibility rate	Infants	51.4	50.3	-2.1*
	Children	50.7	52.2	3.1*
	1-year-old children	51.7	51.2	-1.1*
	2-year-old children	50.5	54.7	8.3*
	3-year-old children	51.0	50.9	-0.3*
	4-year-old children	49.5	52.2	5.5*
	Pregnant women	39.5	39.8	0.6*
	Postpartum women	34.4	33.4	-3.1*
	Breastfeeding women	43.6	41.7	-4.4*
	Non-breastfeeding women	25.5	25.4	-0.3*
	Total	47.1	47.7	1.2*

Note: The average monthly population of postpartum women includes all women who gave birth less than 1 year prior, even if they are not categorically eligible for WIC because they are more than 6 months postpartum and are not breastfeeding. CPS ASEC = Current Population Survey Annual Social and Economic Supplement; CY = calendar year; PRCS = Puerto Rico Community Survey

* indicates a statistically significant difference between the 2020 and 2021 estimates of individuals eligible for WIC or WIC eligibility rate at the 95 percent confidence level. The statistical significance testing was conducted on the 2020–2021 change in WIC eligibility based on the CPS ASEC and PRCS data, which included data only for States and Puerto Rico. It did not include data for the other U.S. territories served by WIC.

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b

D. Trends in WIC Eligibility Estimates: CY 2016–CY 2021

The relative share of the eligible population by participant category remained the same over time: children consistently made up the largest proportion, followed by infants, pregnant women, postpartum breastfeeding women, and postpartum non-breastfeeding women (see table 2.7). Between 2016 and 2019, the number of individuals eligible for WIC declined across all participant categories. In 2020, the total number of individuals eligible for WIC increased slightly. In 2021, the total number of eligible individuals increased again, largely driven by an increase in the number of children and pregnant women eligible for WIC. The increase in the number of eligible children is a result of more children being adjunctively income-eligible for WIC via Medicaid and SNAP in 2021 compared with 2020 (see table C.8 of volume II). The increase in pregnant women may be a result of changes in household income and Medicaid and SNAP participation (influencing adjunctive income eligibility) because of the COVID-19 pandemic and an increase in the birth rate in 2021.

As figure 2.5 shows, trends in WIC eligibility estimates by participant category have remained relatively stable across all years.

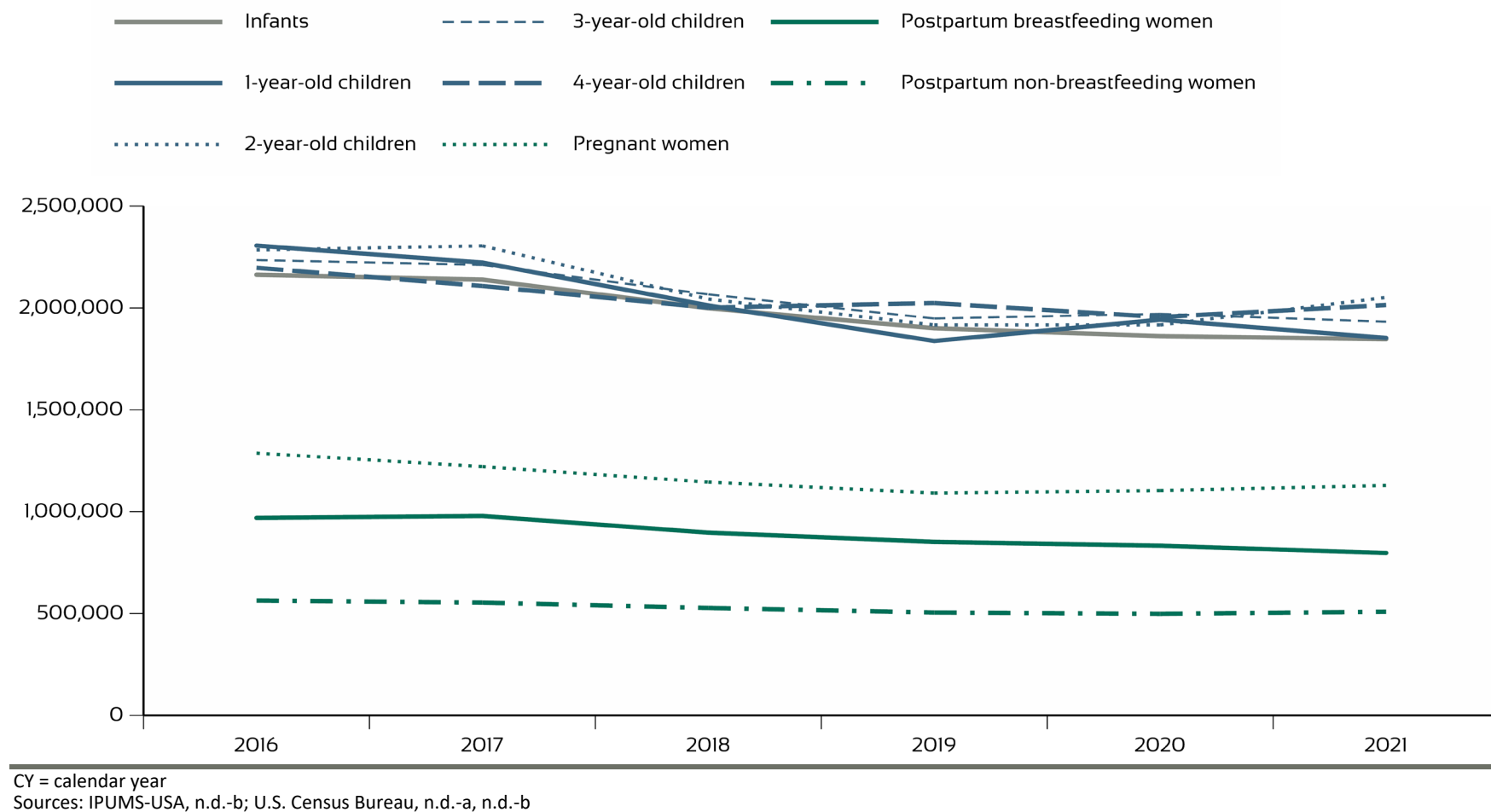
Table 2.7. Estimated Average Monthly Number of Individuals Eligible for WIC by Year and Participant Category: CY 2016–CY 2021

	Year	Infants	Children	Pregnant Women	Postpartum Breastfeeding Women	Postpartum Non-Breastfeeding Women	Total
Total population	2016	3,958,278	15,914,726	3,033,235	2,105,840	2,053,138	27,065,217
	2017	3,864,676	15,896,333	2,971,132	2,070,392	2,021,086	26,823,619
	2018	3,796,919	15,805,148	2,923,104	2,000,839	2,031,436	26,557,445
	2019	3,754,277	15,602,073	2,906,913	1,979,601	2,019,648	26,262,513
	2020	3,619,667	15,365,755	2,790,074	1,912,007	1,956,204	25,643,707
	2021	3,667,986	15,034,195	2,836,373	1,913,230	2,000,882	25,452,666
Number eligible	2016	2,162,700	9,023,248	1,287,402	969,380	562,982	14,005,712
	2017	2,139,130	8,847,389	1,221,038	978,905	553,199	13,739,662
	2018	1,998,988	8,123,987	1,144,961	896,644	527,117	12,691,698
	2019	1,900,491	7,726,475	1,091,257	851,671	504,816	12,074,709
	2020	1,862,033	7,784,680	1,103,246	833,152	498,605	12,081,717
	2021	1,846,394	7,851,014	1,128,406	796,911	508,571	12,131,296
Eligibility rate	2016	54.6	56.7	42.4	46.0	27.4	51.7
	2017	55.4	55.7	41.1	47.3	27.4	51.2
	2018	52.6	51.4	39.2	44.8	25.9	47.8
	2019	50.6	49.5	37.5	43.0	25.0	46.0
	2020	51.4	50.7	39.5	43.6	25.5	47.1
	2021	50.3	52.2	39.8	41.7	25.4	47.7

CY = calendar year

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b

Figure 2.5. Trends in WIC Eligibility by Participant Category: CY 2016–CY 2021



Chapter 3. WIC Coverage Rates for CY 2021

This chapter presents coverage rates for women, infants, and children in 2021. The coverage rates were calculated as the percentages of women, infants, and children eligible for WIC who received or picked up their WIC benefits in an average month in 2021. WIC coverage rates are useful for understanding how well WIC reaches those who are eligible for the benefits provided by the program.

Coverage Rate

Percentage of women, infants, and children eligible for WIC who received or picked up their WIC benefits in an average month

Coverage rates are affected by both the number of individuals eligible for WIC and the number of eligible individuals who participate in the program. In 2021, both these counts may have been influenced by the COVID-19 pandemic and the PHE.

A. National-Level WIC Coverage Rates

Of the 12.1 million individuals eligible for WIC in an average month in 2021, 6.2 million participated, resulting in a national coverage rate of 51 percent (see table 3.1). Coverage rates were highest for infants (78 percent), followed by postpartum women (67 percent; see figure 3.1). Coverage rates were lowest for children and pregnant women (43 percent and 44 percent, respectively).³⁴ Moreover, coverage rates for children decreased with age; rates were highest for 1-year-olds (64 percent) and lowest for 4-year-olds (25 percent; see figure 3.2). Coverage rates were higher for postpartum non-breastfeeding women (77 percent) than postpartum breastfeeding women (61 percent).

Coverage rates were highest for Hispanic/Latino individuals (58 percent) and lowest for White-only, non-Hispanic individuals (44 percent; see tables 3.1 and 3.2 and figure 3.3). The coverage rate was 49 percent for Black-only, non-Hispanic individuals and 56 percent for individuals who self-identified as two or more races or self-identified as a race other than Black or White.

Coverage rates were higher for individuals living in metropolitan areas (56 percent) compared with individuals living in nonmetropolitan areas (23 percent). Individuals living in households with reported incomes up to 185 percent of the Federal Poverty Guidelines had higher coverage rates (82 percent) compared with individuals living in households with reported incomes more than 185 percent of the Federal Poverty Guidelines (5 percent).

³⁴ As noted in the methodology section (chapter 6), pregnant women's eligibility for WIC in this analysis is defined as beginning at conception, which is consistent with Federal WIC eligibility guidelines. However, not all women realized they were pregnant during the first several weeks of pregnancy and, therefore, were not enrolled in WIC at conception. This would contribute to a lower coverage rate among pregnant women relative to infants or postpartum women.

Table 3.1. WIC Coverage Rate by Participant Characteristic: CY 2021

Characteristic		Number Eligible	Number Participating	Coverage Rate
Total		12,131,296	6,205,143	51.2
Participant category	Infants	1,846,394	1,440,283	78.0
	Children	7,851,014	3,395,487	43.2
	1-year-old children	1,852,884	1,191,689	64.3
	2-year-old children	2,051,553	906,409	44.2
	3-year-old children	1,932,072	800,319	41.4
	4-year-old children	2,014,506	497,070	24.7
	Pregnant women	1,128,406	492,562	43.7
	Postpartum women	1,305,482	876,811	67.2
	Breastfeeding women	796,911	484,379	60.8
	Non-breastfeeding women	508,571	392,433	77.2
Race and Hispanic ethnicity ^a	Hispanic/Latino	4,387,861	2,549,618	58.1
	White-only, not Hispanic	4,031,059	1,781,517	44.2
	Black-only, not Hispanic	2,651,588	1,285,626	48.5
	Two or more races or other race, not Hispanic	1,030,690	573,604	55.7
Urbanicity	Metropolitan	10,460,926	5,817,383	55.6
	Nonmetropolitan	1,670,370	387,759	23.2
Annual family income relative to FPG	Up to 185 percent of FPG	7,248,996	5,965,643	82.3
	More than 185 percent of FPG	4,882,301	239,500	4.9

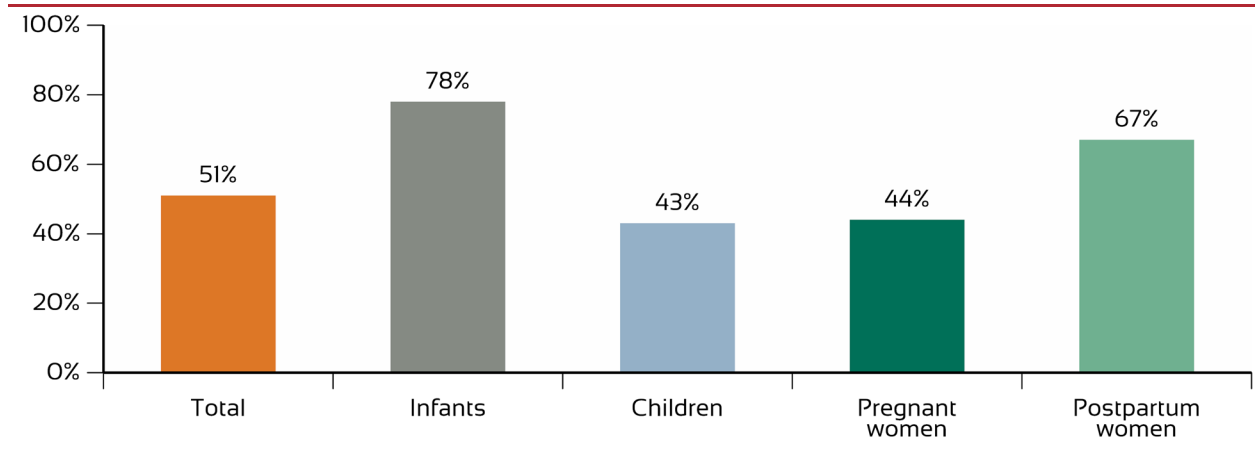
Note: WIC administrative data on participating children by year of age were not available. The numbers of participating children by year of age in this table are based on the distribution among children enrolled in WIC according to WIC PC2020 data. In addition, data on coverage rates by urbanicity and family income relative to the Federal Poverty Guidelines are based on WIC PC2020 data. Urbanicity is based on the CPS ASEC measure of metropolitan status, which uses Office of Management and Budget metropolitan designations and classifies residences as metropolitan or nonmetropolitan.

CY = calendar year; FPG = Federal Poverty Guidelines; WIC PC = WIC Program and Participant Characteristics

^a Estimates for U.S. territories other than Puerto Rico are not included in the estimates of eligible individuals and program participants by race and ethnicity because information on race and ethnicity was not available for the other U.S. territories in the WIC PC2020 data.

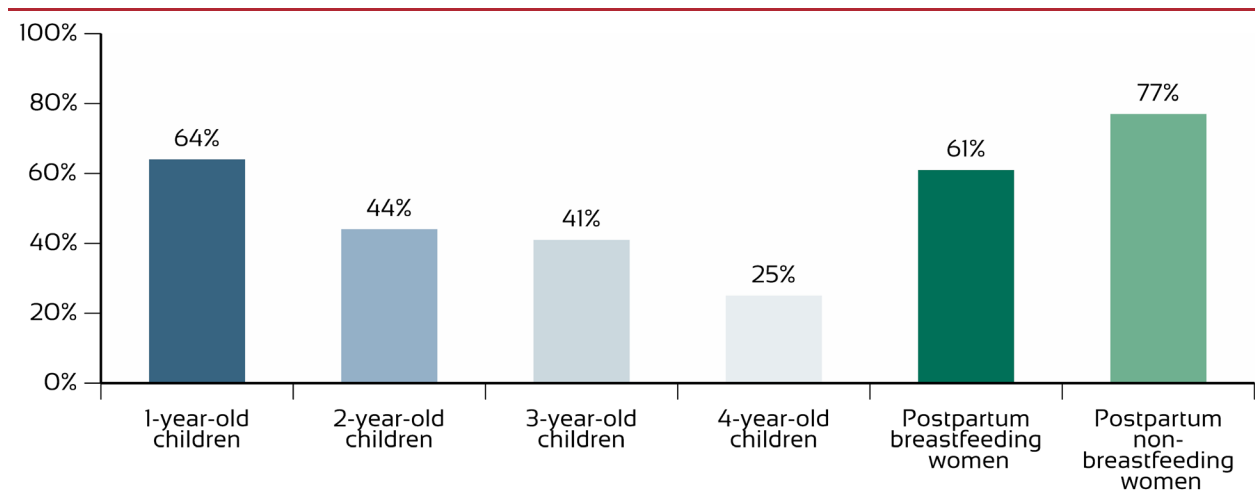
Sources: IPUMS-USA, n.d.-b; Kline et al., 2022; U.S. Census Bureau, n.d.-a, n.d.-b; FNS, 2023

Figure 3.1. WIC Coverage Rate by Participant Category: CY 2021



CY = calendar year; FNS = Food and Nutrition Service
Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b; FNS, 2023

Figure 3.2. WIC Coverage Rates for Children by Year of Age and Postpartum Women by Breastfeeding Status: CY 2021



CY = calendar year
Sources: IPUMS-USA, n.d.-b; Kline et al., 2022; U.S. Census Bureau, n.d.-a, n.d.-b; FNS, 2023

Table 3.2. WIC Eligibility, Participants, and Coverage Rates by Participant Category and by Race and Hispanic Ethnicity: CY 2021

Participant Category		Hispanic/ Latino	White-Only, Not Hispanic	Black-Only, Not Hispanic	Two or More Races or Other Race, Not Hispanic	Total
Number eligible	Infants	662,446	615,340	428,732	135,042	1,841,560
	Children	2,874,347	2,553,989	1,701,633	702,330	7,832,299
	Pregnant women	375,744	422,378	230,533	96,469	1,125,124
	Postpartum women	475,324	439,352	290,691	96,850	1,302,217
	Total	4,387,861	4,031,059	2,651,588	1,030,690	12,101,199
Number participating	Infants	554,744	412,899	329,020	140,742	1,437,405
	Children	1,455,871	937,387	658,831	334,419	3,386,509
	Pregnant women	190,982	164,455	101,863	34,303	491,603
	Postpartum women	348,021	266,777	195,911	64,139	874,848
	Total	2,549,618	1,781,517	1,285,626	573,604	6,190,365
Coverage rate	Infants	83.7	67.1*	76.7	†	78.1
	Children	50.7*	36.7*	38.7*	47.6	43.2
	Pregnant women	50.8*	38.9*	44.2	35.6*	43.7
	Postpartum women	73.2	60.7	67.4	66.2	67.2
	Total	58.1*	44.2*	48.5*	55.7	51.2

Note: Estimates for U.S. territories other than Puerto Rico are not included in the calculation of the coverage rates in this table because information on race and ethnicity was not available for the other U.S. territories in the data.

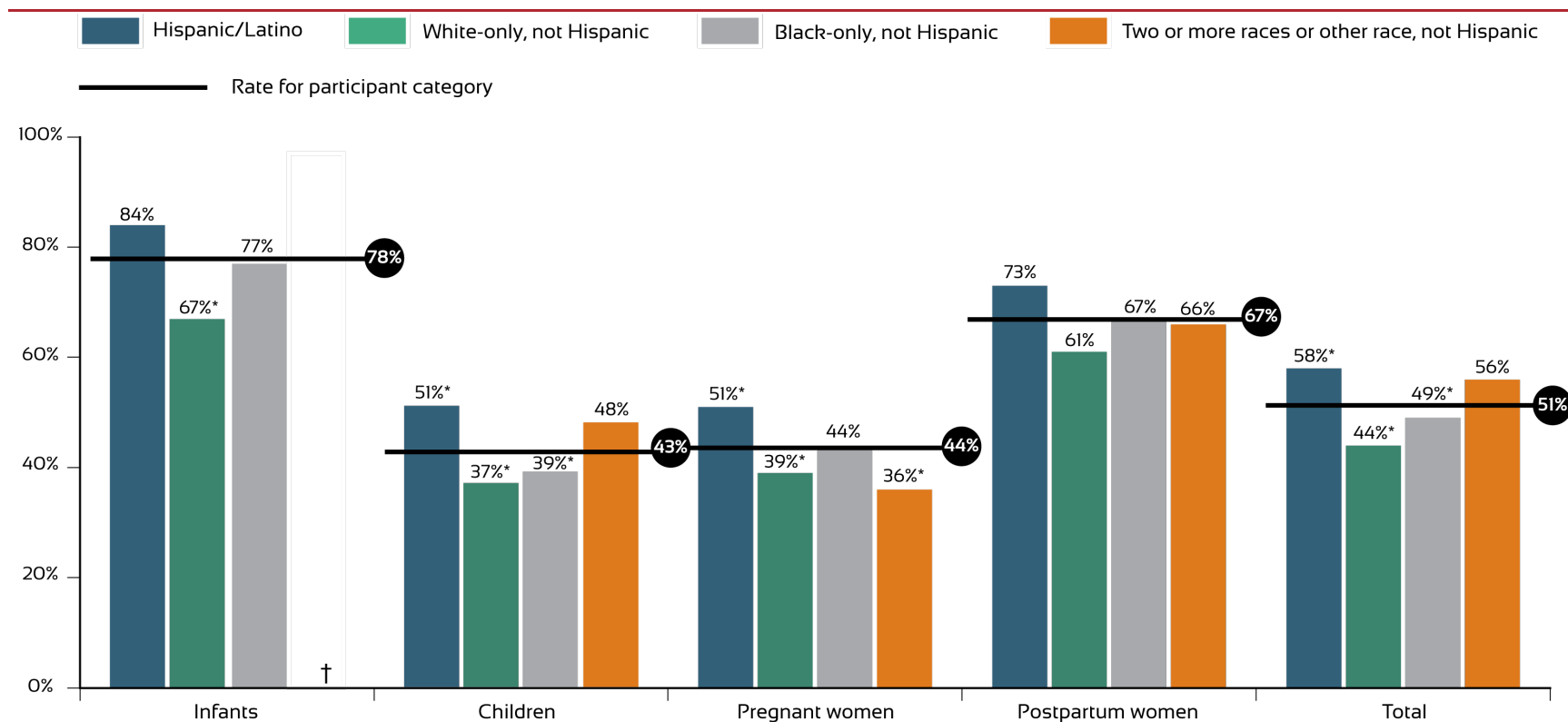
CY = calendar year

* indicates a statistically significant difference at the 95 percent confidence level between the coverage rate for a participant category's race and ethnicity and the national coverage rate for that category

† indicates an unreliable coverage rate over 100 percent

Sources: IPUMS-USA, n.d.-b; Kline et al., 2022; U.S. Census Bureau, n.d.-a; FNS, 2023

Figure 3.3. WIC Coverage Rates by Race and Hispanic Ethnicity and by Participant Category: CY 2021



Note: Estimates for U.S. territories other than Puerto Rico are not included in the calculation of the coverage rates in this figure because information on race and ethnicity was not available for the other U.S. territories in the data.

CY = calendar year

* indicates a statistically significant difference at the 95 percent confidence level between the coverage rate for a participant category's race and ethnicity and the national coverage rate for that category

† indicates an unreliable coverage rate over 100 percent

Sources: IPUMS-USA, n.d.-b; Kline et al., 2022; U.S. Census Bureau, n.d.-a; FNS, 2023

B. Regional- and State-Level WIC Coverage Rates

WIC coverage rates varied somewhat by FNS Region and more substantially by State (see appendix D of volume II for a list of States and U.S. territories by FNS Region). Comparisons of total coverage rates across FNS Regions indicate the Western Region had the highest rate (62 percent), and the Mountain Plains Region had the lowest rate (45 percent), while the national rate was 51 percent (see table 3.3).

In general, when comparing coverage rates by participant category, regional rates mirrored national rates (see table 3.3). For example, coverage rates were highest for infants and postpartum women across all FNS Regions. And, like national rates, coverage rates were lowest for children and pregnant women across all FNS Regions.

Regional coverage rates varied by race and ethnicity (see table 3.4). The coverage rates in all FNS Regions, except the Southeast Region, were lowest for White-only, non-Hispanic participants, whereas the Southeast Region had the lowest rate for non-Hispanic participants who self-identified as two or more races or a race other than Black or White. The coverage rates in the Northeast, Midwest, Southwest, and Mountain Plains Regions were highest for non-Hispanic participants who self-identified as two or more races or a race other than Black or White, whereas the Mid-Atlantic, Southeast, and Western Regions had the highest rate for Hispanic/Latino participants.

States showed substantial variation in coverage rates in 2021. Rates ranged from a high of 72 percent in Vermont to a low of 35 percent in Arkansas and New Mexico (see table 3.5 and figure 3.4). Puerto Rico had a higher coverage rate (88 percent) than any State. Twenty-four States and Puerto Rico had coverage rates greater than the national average (51 percent). Seven States had coverage rates below 40 percent (Arkansas, Illinois, Louisiana, Missouri, New Mexico, Ohio, and Utah).

State coverage rates ranged from a low of **35 percent** to a high of **72 percent**. The national coverage rate was **51 percent**.

State coverage rates by participant category were generally consistent with national coverage rates overall but differed in some cases. Coverage rates were consistently higher than national rates across all participant categories and age groups in seven States and Puerto Rico (California, Indiana, Kentucky, Minnesota, North Carolina, Oregon, and Vermont; see table 3.6 and figures 3.5 through 3.8). Seventeen States (Arkansas, Colorado, Georgia, Idaho, Illinois, Kansas, Louisiana, Mississippi, Missouri, Montana, Nevada, New Mexico, Pennsylvania, South Carolina, Tennessee, Utah, and Wyoming) had coverage rates consistently lower than national rates across all categories and age groups. Many States had higher or lower coverage rates compared with average coverage rates across participant categories. For example, compared with the national average, coverage rates in New Jersey were lower for infants and pregnant women (by 6 percentage points), but slightly higher for children and postpartum women (by 1 and 2 percentage points, respectively). Compared with the national average, coverage rates in Texas were much higher for postpartum women (by 21 percentage points) and slightly higher for infants and pregnant women (by 3 and 2 percentage points, respectively) but lower for children (by 7 percentage points).

State coverage rates by race and Hispanic ethnicity were generally consistent with national coverage rates by race and Hispanic ethnicity. For example, similar to national coverage rates, State-level coverage rates were lowest for White-only, non-Hispanic individuals in most States (42; see table 3.7 and figures 3.9 through 3.11).³⁵ Similarly, in 28 States, coverage rates were highest for Hispanic/Latino individuals.

Some of the variations in State coverage rates by participant category and race and ethnicity may be because of sampling variability or limitations in data resulting from small sample sizes; caution should be used when examining State-level estimates, especially for smaller States. See appendix B of volume II for more information on measures of statistical uncertainty for the estimates.

Table 3.3. WIC Eligibility, Participants, and Coverage Rates by FNS Region and Participant Category: CY 2021

FNS Region		Infants	Children	Pregnant Women	Postpartum Women	Total
Number eligible	Northeast	162,956	707,007	99,926	119,365	1,089,254
	Mid-Atlantic	204,462	896,476	125,962	147,419	1,374,319
	Southeast	433,693	1,740,291	262,626	297,188	2,733,798
	Midwest	274,912	1,216,543	172,370	190,040	1,853,865
	Southwest	367,909	1,532,537	220,278	254,300	2,375,024
	Mountain Plains	96,458	412,096	61,464	69,128	639,146
	Western	306,004	1,346,064	185,780	228,041	2,065,890
	Total	1,846,394	7,851,014	1,128,406	1,305,482	12,131,296
Number participating	Northeast	126,302	337,984	42,985	79,427	586,698
	Mid-Atlantic	159,157	394,658	54,887	97,586	706,288
	Southeast	331,156	703,815	111,706	183,444	1,330,121
	Midwest	225,211	490,943	72,567	120,047	908,768
	Southwest	285,257	539,086	92,507	191,760	1,108,609
	Mountain Plains	70,606	153,577	23,346	41,538	289,067
	Western	242,595	775,424	94,564	163,009	1,275,592
	Total	1,440,283	3,395,487	492,562	876,811	6,205,143
Coverage rate	Northeast	77.5	47.8*	43.0	66.5	53.9*
	Mid-Atlantic	77.8	44.0	43.6	66.2	51.4
	Southeast	76.4	40.4*	42.5	61.7*	48.7*
	Midwest	81.9	40.4*	42.1*	63.2	49.0*
	Southwest	77.5	35.2*	42.0*	75.4*	46.7*
	Mountain Plains	73.2	37.3*	38.0*	60.1*	45.2*
	Western	79.3	57.6*	50.9*	71.5	61.7*
	Total	78.0	43.2	43.7	67.2	51.2

Note: Regional eligibility estimates and participant data include individuals in ITOs who were eligible for WIC or receiving WIC.

CY = calendar year; FNS = Food and Nutrition Service; ITO = Indian Tribal Organization

* indicates a statistically significant difference between the regional coverage rate and the national coverage rate at the 95 percent confidence level

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b; FNS, 2023

³⁵ Because of small sample sizes, State-level estimates for Black-Only, Not Hispanic and Two or More Races or Other Race, Not Hispanic subgroups were combined. This category includes Black-only, non-Hispanic individuals and non-Hispanic individuals who self-identify as two or more races or as a race other than Black or White.

Table 3.4. WIC Eligibility, Participants, and Coverage Rates by FNS Region and by Race and Hispanic Ethnicity Category: CY 2021

FNS Region		Hispanic/ Latino	White-Only, Not Hispanic	Black-Only, Not Hispanic	Two or More Races or Other Race, Not Hispanic	Total
Number eligible	Northeast	383,736	375,320	211,534	112,138	1,082,728
	Mid-Atlantic	458,427	448,164	363,827	103,900	1,374,319
	Southeast	635,939	950,649	960,518	186,692	2,733,798
	Midwest	333,993	892,400	460,896	166,576	1,853,865
	Southwest	1,206,040	576,280	430,193	162,512	2,375,024
	Mountain Plains	165,567	326,218	81,278	66,082	639,146
	Western	1,204,157	462,028	143,343	232,791	2,042,318
	Total	4,387,861	4,031,059	2,651,588	1,030,690	12,101,199
Number participating	Northeast	221,948	175,780	115,746	70,408	583,882
	Mid-Atlantic	296,937	187,338	175,428	46,585	706,288
	Southeast	329,371	451,525	471,837	77,388	1,330,121
	Midwest	175,608	404,688	226,877	101,595	908,768
	Southwest	614,728	228,548	175,068	90,265	1,108,609
	Mountain Plains	82,429	132,911	38,599	35,127	289,067
	Western	828,598	200,728	82,070	152,235	1,263,631
	Total	2,549,618	1,781,517	1,285,626	573,604	6,190,365
Coverage rate	Northeast	57.8	46.8	54.7	62.8	53.9
	Mid-Atlantic	64.8	41.8	48.2	44.8	51.4
	Southeast	51.8	47.5	49.1	41.5	48.7
	Midwest	52.6	45.3	49.2	61.0	49.0
	Southwest	51.0	39.7	40.7	55.5	46.7
	Mountain Plains	49.8	40.7	47.5	53.2	45.2
	Western	68.8	43.4	57.3	65.4	61.9
	Total	58.1	44.2	48.5	55.7	51.2

Note: Estimates for U.S. territories other than Puerto Rico are not included in the calculation of the coverage rates in this table because information on race and ethnicity was not available for the other U.S. territories in the data. Estimates for Puerto Rico are included in regional totals.

CY = calendar year; FNS = Food and Nutrition Service

Sources: IPUMS-USA, n.d.-b; Kline et al., 2022; U.S. Census Bureau, n.d.-a; FNS, 2023

Table 3.5. WIC Eligibility, Participants, and Coverage Rates by State and FNS Region: CY 2021

State/FNS Region		Number Eligible	Number Participating	Coverage Rate
State	Alabama	220,194	109,747	49.8
	Alaska	28,091	14,408	51.3
	Arizona	271,936	140,509	51.7
	Arkansas	144,987	50,720	35.0*
	California	1,417,356	942,175	66.5*
	Colorado	170,527	78,046	45.8*
	Connecticut	96,056	44,295	46.1*
	Delaware	36,423	17,331	47.6
	District of Columbia	23,076	13,715	59.4*
	Florida	814,565	400,284	49.1*
	Georgia	471,020	190,336	40.4*
	Hawaii	44,967	25,374	56.4
	Idaho	66,665	29,463	44.2*
	Illinois	419,107	151,949	36.3*
	Indiana	252,238	153,439	60.8*
	Iowa	104,993	57,705	55.0*
	Kansas	96,619	44,120	45.7*
	Kentucky	180,011	106,572	59.2*
	Louisiana	234,766	87,343	37.2*
	Maine	30,828	16,852	54.7
	Maryland	213,702	118,404	55.4*
	Massachusetts	181,992	111,303	61.2*
	Michigan	345,945	203,233	58.7*
	Minnesota	158,386	97,361	61.5*
	Mississippi	150,349	70,109	46.6*
	Missouri	215,077	84,912	39.5*
	Montana	32,286	13,994	43.3*
	Nebraska	60,106	35,010	58.2*
	Nevada	116,730	56,066	48.0
	New Hampshire	26,154	14,025	53.6
	New Jersey	281,823	142,360	50.5
	New Mexico	100,479	34,771	34.6*
	New York	701,750	369,708	52.7
	North Carolina	412,059	254,104	61.7*
	North Dakota	19,350	10,291	53.2
	Ohio	411,728	160,311	38.9*
	Oklahoma	171,640	88,790	51.7
	Oregon	122,707	74,870	61.0*
	Pennsylvania	397,747	163,013	41.0*
	Puerto Rico	111,437	98,563	88.4*

State/FNS Region		Number Eligible	Number Participating	Coverage Rate
State (continued)	Rhode Island	30,176	16,408	54.4
	South Carolina	212,200	86,863	40.9*
	South Dakota	29,103	15,690	53.9
	Tennessee	273,400	112,106	41.0*
	Texas	1,351,113	669,830	49.6*
	Utah	100,103	36,646	36.6*
	Vermont	15,772	11,292	71.6*
	Virginia	246,807	120,503	48.8
	Washington	245,803	121,274	49.3
	West Virginia	63,305	32,399	51.2
	Wisconsin	161,468	84,769	52.5
	Wyoming	16,078	7,003	43.6*
FNS Region	Northeast	1,089,254	586,698	53.9*
	Mid-Atlantic	1,374,319	706,288	51.4
	Southeast	2,733,798	1,330,121	48.7*
	Midwest	1,853,865	908,768	49.0*
	Southwest	2,375,024	1,108,609	46.7*
	Mountain Plains	639,146	289,067	45.2*
	Western	2,065,890	1,275,592	61.7*
	Total	12,131,296	6,205,143	51.2

Note: State and regional eligibility estimates and participant data include individuals in ITOs who were eligible for WIC or receiving WIC. Estimates for U.S. territories other than Puerto Rico are included in regional totals but not shown separately because of constraints related to small sample size.

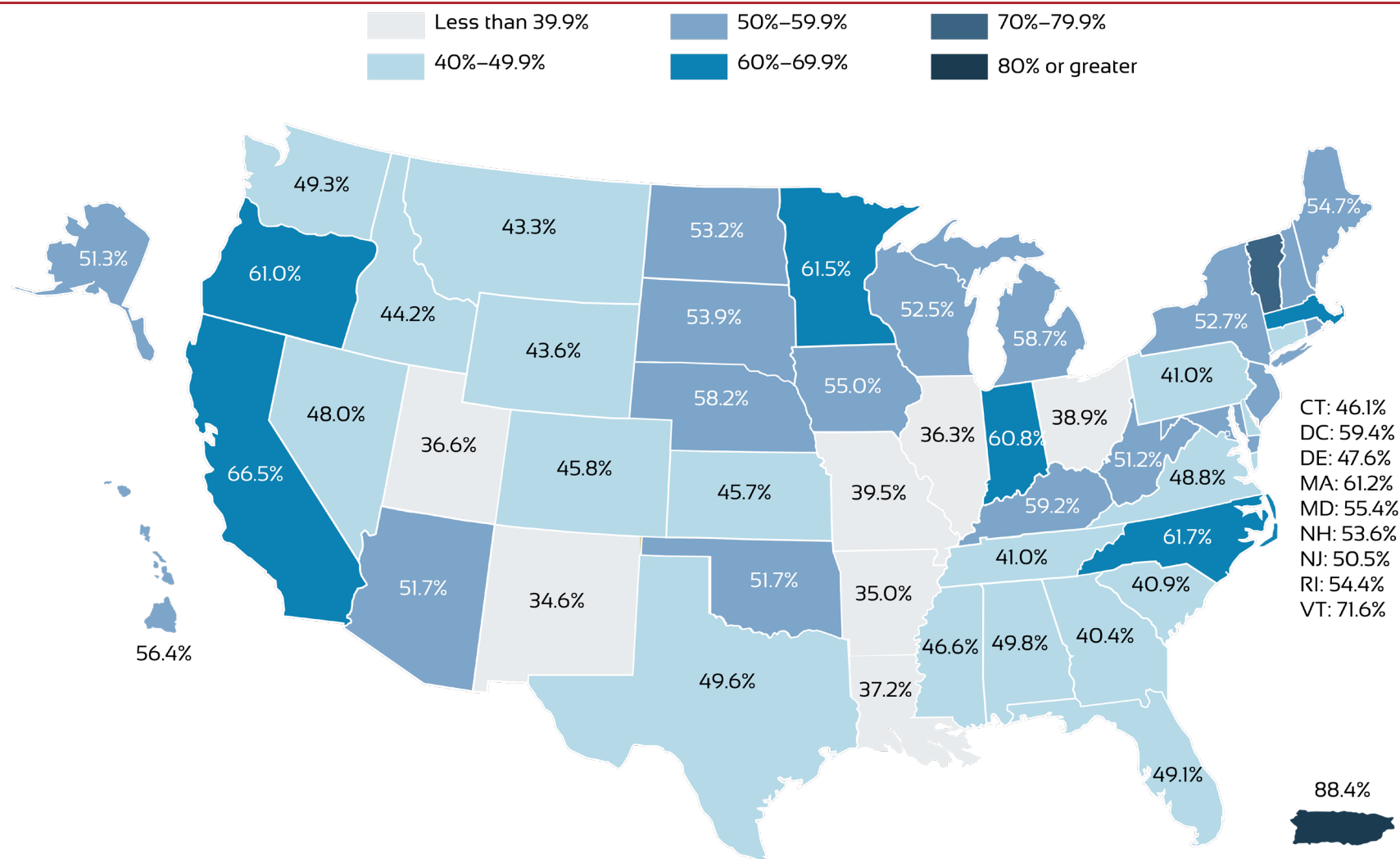
CY = calendar year; FNS = Food and Nutrition Service; ITO = Indian Tribal Organization

* indicates a statistically significant difference between the State or regional coverage rate and the national coverage rate at the 95 percent confidence level

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b; FNS, 2023

Figure 3.4. WIC Coverage Rate for Total Eligible Individuals by State: CY 2021

National Coverage Rate: 51.2 Percent



CY = calendar year

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b; FNS, 2023

Table 3.6. WIC Coverage Rates by State and FNS Region and Participant Category: CY 2021

State/FNS Region		Infants	All Children	1-Year-Old Children	2-Year-Old Children	3-Year-Old Children	4-Year-Old Children	Pregnant Women	Postpartum Women	Total
State	Alabama	84.6	39.9	60.7	46.2	35.7	19.2	52.0	56.6	49.8
	Alaska	78.7	44.8	67.0	51.2	44.6	22.7	43.4	61.7	51.3
	Arizona	77.4	46.0	74.8	45.8	41.8	24.4	36.5	62.0	51.7
	Arkansas	73.6	22.6	37.7	21.3	20.2	12.5	38.1	54.7	35.0
	California	82.4	62.8	81.9	63.6	62.2	44.8	56.4	74.7	66.5
	Colorado	68.1	39.0	57.4	41.2	37.7	20.3	38.2	60.8	45.8
	Connecticut	80.2	37.1	51.8	37.6	36.4	21.9	50.2	54.5	46.1
	Delaware	79.5	39.5	53.2	45.9	39.3	19.9	42.6	57.9	47.6
	District of Columbia	90.3	49.0	83.5	61.1	44.5	18.6	44.6	90.4	59.4
	Florida	75.4	40.7	62.7	41.7	37.7	21.2	42.6	67.4	49.1
	Georgia	65.6	32.7	47.7	35.2	34.3	15.3	36.5	52.4	40.4
	Hawaii	86.0	49.4	72.3	51.8	53.9	20.7	46.2	72.6	56.4
	Idaho	73.3	36.7	61.4	36.2	32.0	20.6	34.1	63.3	44.2
	Illinois	71.4	26.4	36.8	27.5	25.0	17.1	36.2	51.0	36.3
	Indiana	87.7	54.0	83.4	55.7	51.2	28.7	43.8	78.2	60.8
	Iowa	83.1	47.3	72.4	51.6	45.4	22.4	40.5	75.9	55.0
	Kansas	76.3	37.6	57.4	38.4	36.0	19.9	42.4	59.0	45.7
	Kentucky	96.3	50.5	79.4	51.8	44.5	30.3	49.9	68.5	59.2
	Louisiana	73.6	23.8	41.5	23.8	20.6	10.5	34.5	63.1	37.2
	Maine	96.3	45.6	59.9	50.7	46.3	26.8	48.8	73.3	54.7
	Maryland	82.6	46.7	67.7	51.6	46.7	23.9	51.4	70.8	55.4
	Massachusetts	74.9	59.4	91.9	57.8	56.8	34.5	45.6	64.9	61.2
	Michigan	86.0	52.8	74.2	57.4	53.3	27.2	52.0	62.1	58.7
	Minnesota	91.9	54.2	75.4	51.6	58.1	34.2	50.6	77.0	61.5
	Mississippi	77.2	38.3	56.7	38.6	38.8	20.8	32.7	58.8	46.6
	Missouri	72.1	29.0	49.4	27.7	25.1	15.8	36.5	56.0	39.5
	Montana	67.5	38.3	57.5	42.2	36.3	20.6	33.0	50.8	43.3

State/FNS Region		Infants	All Children	1-Year-Old Children	2-Year-Old Children	3-Year-Old Children	4-Year-Old Children	Pregnant Women	Postpartum Women	Total
State (continued)	Nebraska	86.0	51.6	75.8	54.4	44.4	34.2	40.8	76.2	58.2
	Nevada	73.1	41.4	63.9	41.3	38.2	22.4	34.8	64.6	48.0
	New Hampshire	79.3	48.1	61.5	62.0	48.6	25.7	44.1	68.2	53.6
	New Jersey	72.0	44.3	69.8	50.1	38.8	20.8	37.7	69.3	50.5
	New Mexico	56.2	27.7	42.5	26.9	25.7	17.8	31.0	48.6	34.6
	New York	76.5	46.3	69.1	47.8	42.7	27.3	40.9	67.4	52.7
	North Carolina	84.1	55.9	85.4	57.2	52.7	31.4	51.4	70.3	61.7
	North Dakota	87.3	45.2	62.0	56.6	34.3	28.9	37.6	75.3	53.2
	Ohio	80.9	27.1	38.8	26.9	26.1	17.7	35.7	54.9	38.9
	Oklahoma	90.3	40.9	57.4	42.2	41.0	24.3	54.6	65.5	51.7
	Oregon	84.9	55.6	89.6	53.0	45.6	36.9	46.9	74.8	61.0
	Pennsylvania	66.1	33.6	58.7	32.7	31.1	15.2	32.6	59.6	41.0
	Rhode Island	88.0	45.2	65.2	54.1	39.0	25.4	46.6	71.7	54.4
	South Carolina	66.6	33.3	56.8	33.7	30.6	13.7	33.0	53.5	40.9
	South Dakota	77.5	49.6	79.9	50.7	33.4	39.8	37.6	59.8	53.9
	Tennessee	73.9	30.5	47.4	32.5	29.1	13.9	39.3	56.3	41.0
	Texas	80.6	36.3	59.5	35.5	34.8	17.1	45.6	88.0	49.6
	Utah	53.0	31.9	48.1	32.4	28.1	19.3	25.4	48.3	36.6
	Vermont	95.8	66.4	85.0	81.4	71.1	35.8	55.0	92.1	71.6
	Virginia	79.5	41.3	59.5	43.5	39.4	25.2	43.6	56.5	48.8
	Washington	64.9	45.5	61.0	43.5	46.2	32.1	39.6	58.5	49.3
	West Virginia	85.0	44.4	73.4	41.4	39.0	28.6	39.4	55.3	51.2
	Wisconsin	83.0	45.1	71.2	42.7	48.0	23.2	41.9	71.7	52.5
	Wyoming	65.5	37.1	58.1	38.3	33.0	20.0	33.8	58.2	43.6

State/FNS Region		Infants	All Children	1-Year-Old Children	2-Year-Old Children	3-Year-Old Children	4-Year-Old Children	Pregnant Women	Postpartum Women	Total
FNS Region	Northeast	77.5	47.8	70.5	49.4	44.9	28.0	43.0	66.5	53.9
	Mid-Atlantic	77.8	44.0	67.8	46.4	41.6	23.1	43.6	66.2	51.4
	Southeast	76.4	40.4	61.9	42.2	38.3	20.8	42.5	61.7	48.7
	Midwest	81.9	40.4	58.9	41.3	39.9	23.0	42.1	63.2	49.0
	Southwest	77.5	35.2	56.7	34.7	33.3	17.6	42.0	75.4	46.7
	Mountain Plains	73.2	37.3	57.6	38.2	33.5	21.2	38.0	60.1	45.2
	Western	79.3	57.6	77.6	57.8	56.5	39.9	50.9	71.5	61.7
	Total	78.0	43.2	64.3	44.2	41.4	24.7	43.7	67.2	51.2

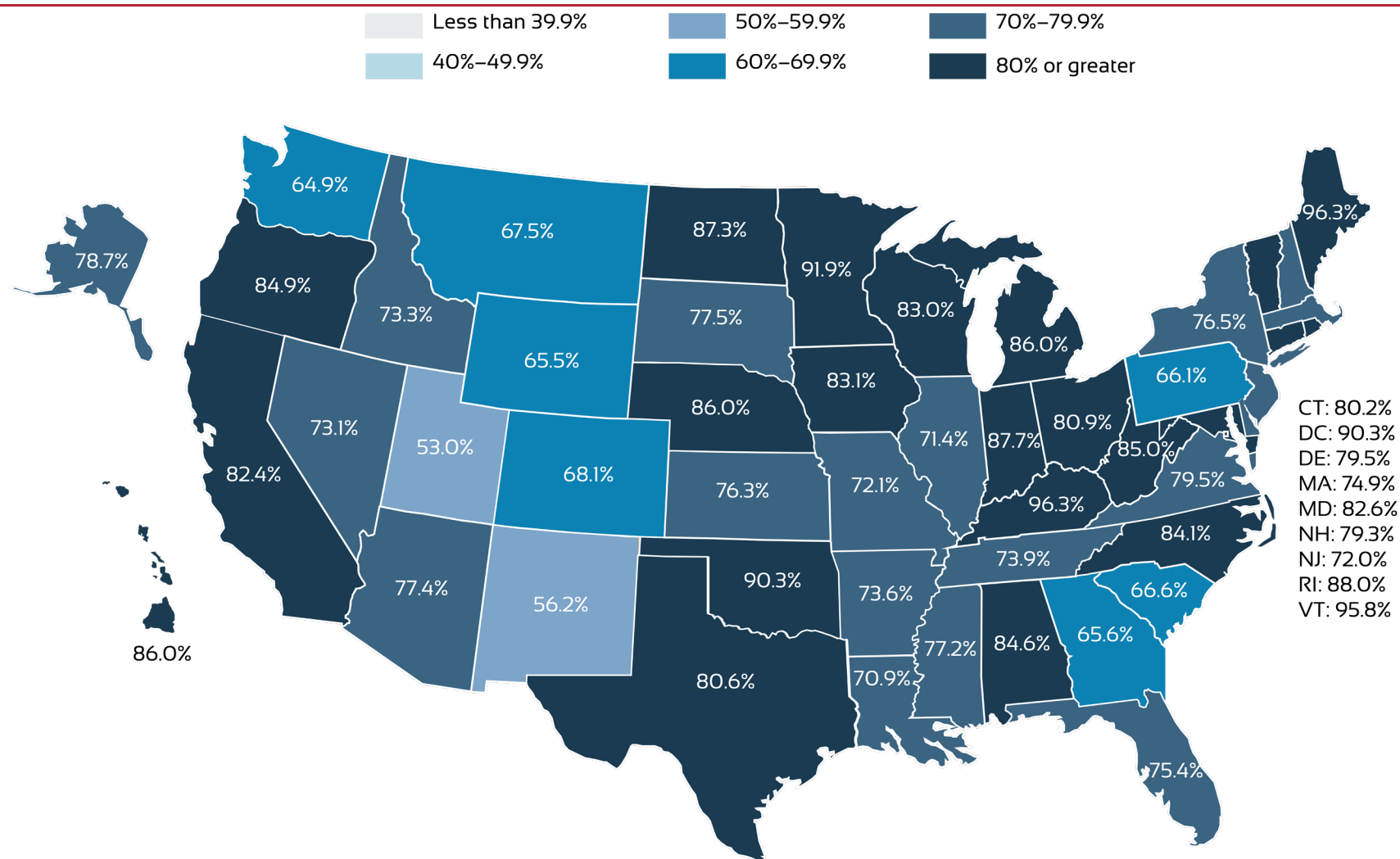
Note: Estimates for the U.S. territories are included in the total but are not shown separately because of small sample sizes. Estimates of State-level coverage rates by year of age for children and other participant categories should be viewed with caution because of the small sample sizes for many States. See appendix B of volume II for more details on statistical uncertainty for these estimates. State and regional eligibility estimates and participant data include individuals in ITOs who were eligible for WIC.

CY = calendar year; FNS = Food and Nutrition Service; ITO = Indian Tribal Organization

Sources: IPUMS-USA, n.d.-b; Kline et al., 2022; U.S. Census Bureau, n.d.-a, n.d.-b; FNS, 2023

Figure 3.5. WIC Coverage Rate for Infants by State: CY 2021

National Coverage Rate for Infants: 78.0 Percent



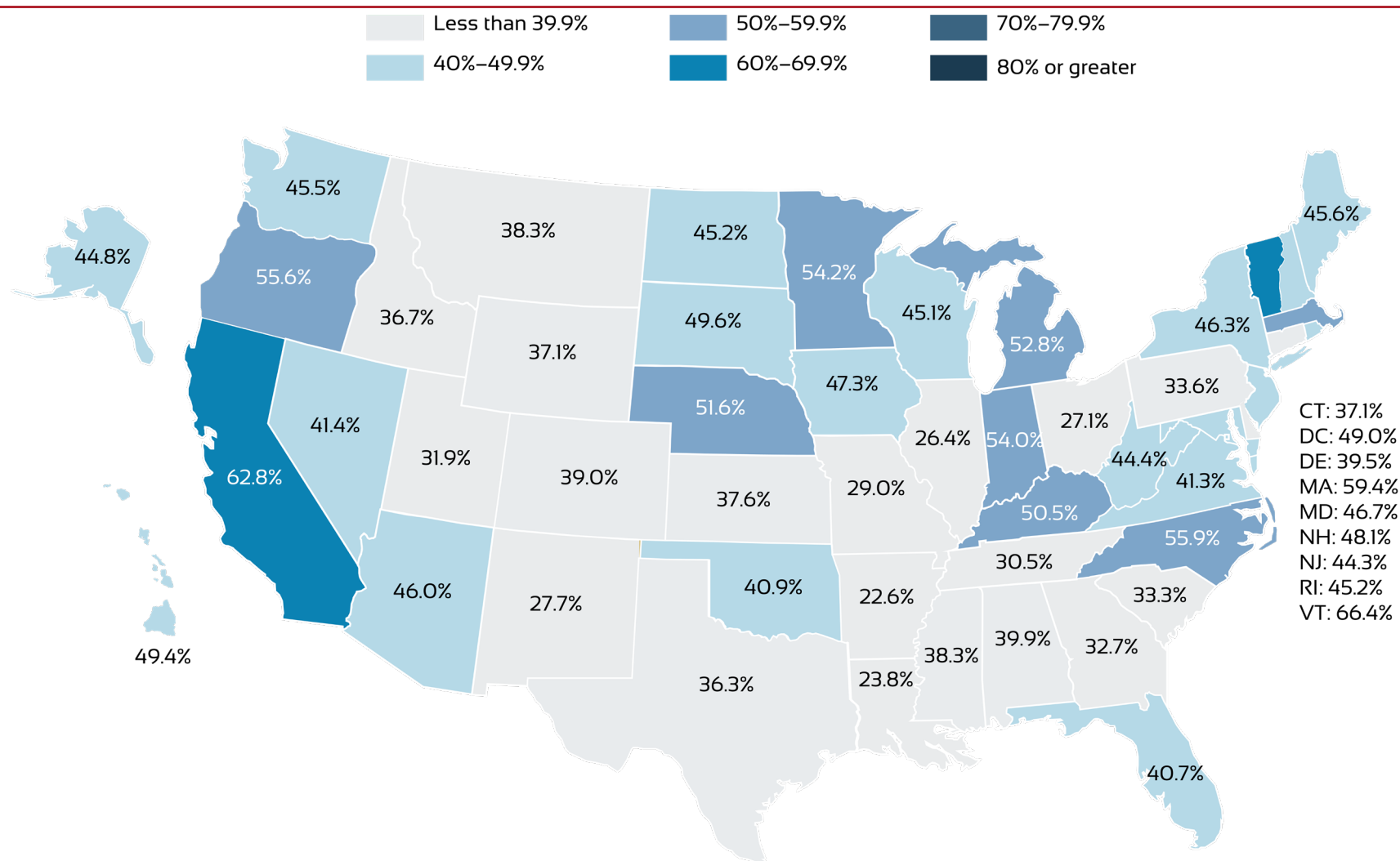
Note: Estimates for the U.S. territories are included in the national coverage rate but are not shown separately because of small sample sizes.

CY = calendar year

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b; FNS, 2023

Figure 3.6. WIC Coverage Rate for Children by State: CY 2021

National Coverage Rate for Children: 43.2 Percent



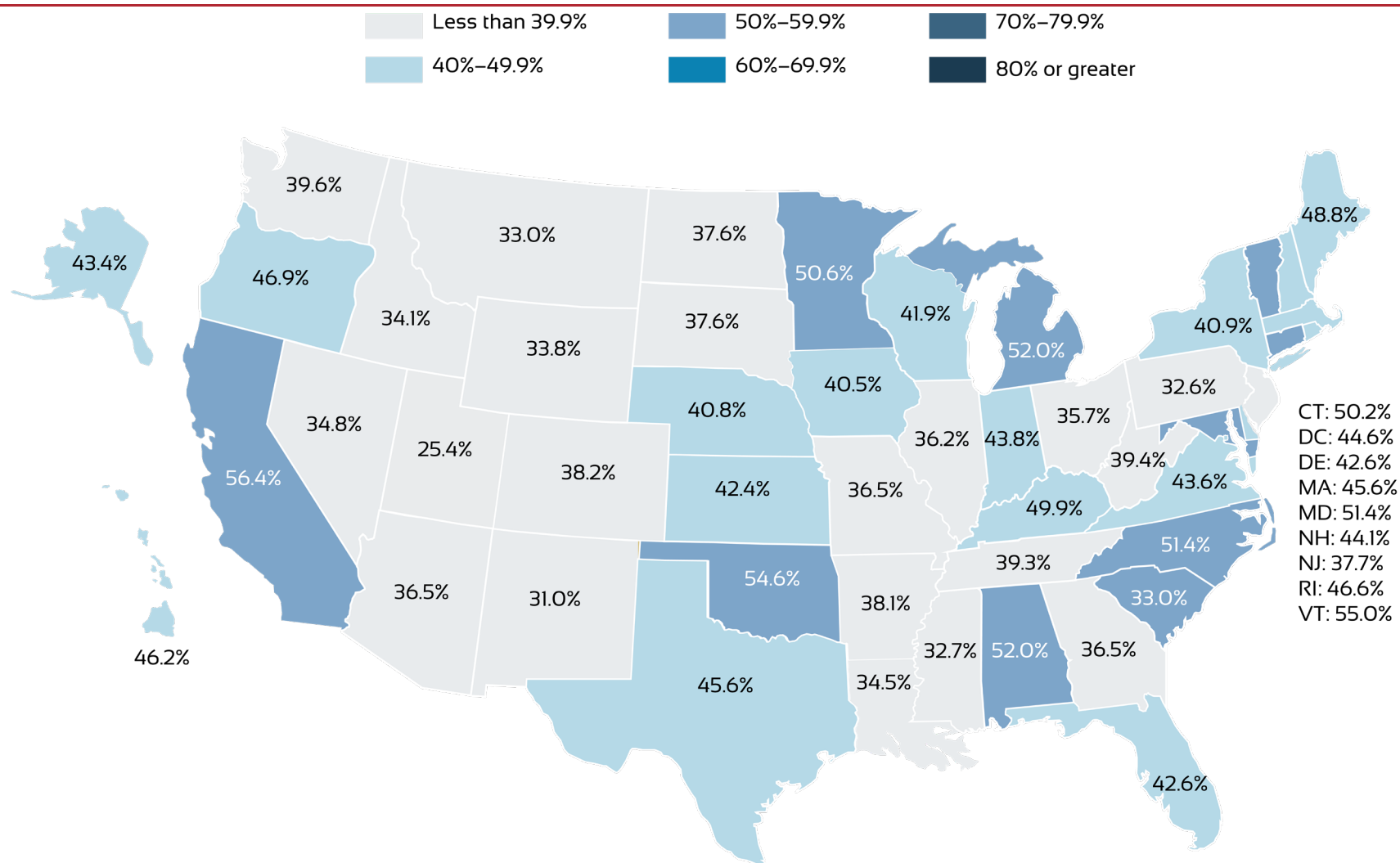
Note: Estimates for the U.S. territories are included in the national coverage rate but are not shown separately because of small sample sizes.

CY = calendar year

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b; FNS, 2023

Figure 3.7. WIC Coverage Rate for Pregnant Women by State: CY 2021

National Coverage Rate for Pregnant Women: 43.7 Percent



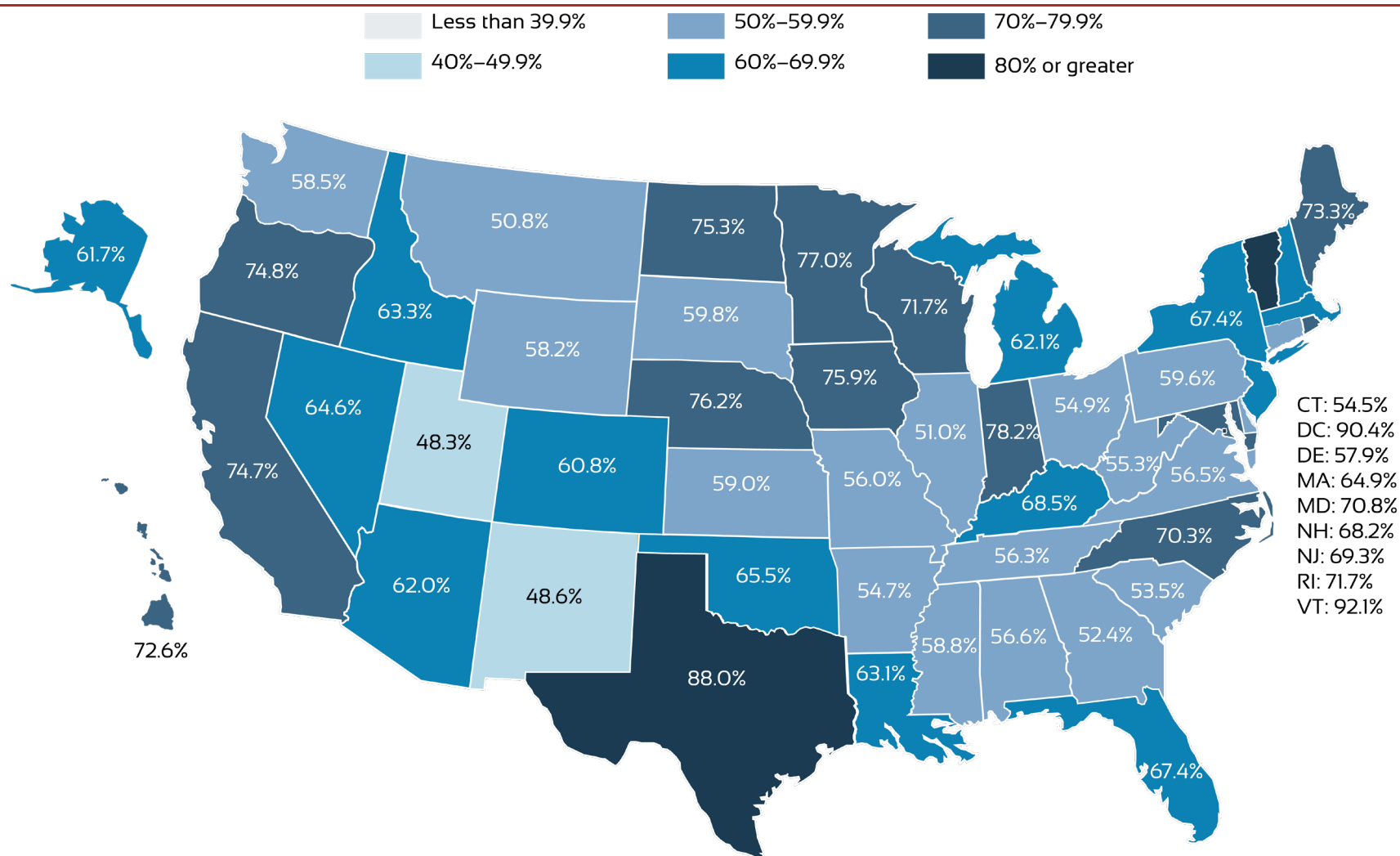
Note: Estimates for the U.S. territories are included in the national coverage rate but are not shown separately because of small sample sizes.

CY = calendar year

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b; FNS, 2023

Figure 3.8. WIC Coverage Rate for Postpartum Women by State: CY 2021

National Coverage Rate for Postpartum Women: 67.2 Percent



Note: Estimates for the U.S. territories are included in the national coverage rate but are not shown separately because of small sample sizes.

CY = calendar year

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b; FNS, 2023

Table 3.7. State-Level WIC Coverage Rates by Race and Hispanic Ethnicity: CY 2021

State	Hispanic/ Latino	White-Only, Not Hispanic	Other Than White-Only, Not Hispanic ^a	Total
Alabama	66.0	46.2	49.4	49.8
Alaska	39.6	33.8*	69.0	51.3
Arizona	49.8*	48.4*	62.6	51.7
Arkansas	34.4*	36.6*	33.0*	35.0*
California	72.7*	39.3*	64.4*	66.5*
Colorado	48.8*	41.3	47.0	45.8*
Connecticut	53.0*	33.4*	46.2	46.1*
Delaware	58.5	39.5	47.7	47.6
District of Columbia	89.9*	52.4	53.1	59.4*
Florida	54.1*	38.4*	52.3	49.1*
Georgia	40.6*	42.4	39.4*	40.4*
Hawaii	43.8*	37.0	66.5	56.4
Idaho	48.8*	40.5	61.9	44.2*
Illinois	39.4*	32.5*	36.7*	36.3*
Indiana	68.3*	56.8*	64.6*	60.8*
Iowa	64.4	48.0	68.4*	55.0*
Kansas	46.6*	42.5	52.3	45.7*
Kentucky	53.5	59.9*	59.1	59.2*
Louisiana	34.4*	34.6*	39.2*	37.2*
Maine	70.7	52.1*	64.0	54.7
Maryland	72.5*	45.8	50.4	55.4*
Massachusetts	69.1*	51.9*	60.2*	61.2*
Michigan	68.4*	56.6*	58.8*	58.7*
Minnesota	61.9	49.5*	76.3*	61.5*
Mississippi	54.4	44.8	46.9*	46.6*
Missouri	40.9*	39.4*	39.1*	39.5*
Montana	40.3	38.3*	62.0	43.3*
Nebraska	70.1	46.5	67.5	58.2*
Nevada	44.2*	53.8*	52.0	48.0
New Hampshire	62.3	51.4*	57.0	53.6
New Jersey	58.4	39.4*	48.4	50.5
New Mexico	33.8*	31.8*	43.3	34.6*
New York	54.7*	45.0	58.0*	52.7
North Carolina	60.2	63.1*	61.4*	61.7*
North Dakota	45.5	42.5	73.5	53.2
Ohio	42.8*	36.5*	41.6*	38.9*
Oklahoma	52.5*	43.3	62.9	51.7
Oregon	63.3	61.3*	54.3	61.0*

State	Hispanic/ Latino	White-Only, Not Hispanic	Other Than White-Only, Not Hispanic ^a	Total
Pennsylvania	42.9*	38.5*	43.2*	41.0*
Rhode Island	62.3	40.9	54.9	54.4
South Carolina	38.8*	36.8*	44.6*	40.9*
South Dakota	57.5	36.1*	80.6	53.9
Tennessee	39.0*	47.8*	33.2*	41.0*
Texas	53.7*	42.0	43.3*	49.6*
Utah	47.0*	30.2*	44.9	36.6*
Vermont	†	66.5*	93.4*	71.6*
Virginia	59.8	44.6	46.6	48.8
Washington	55.2	40.8*	57.0	49.3
West Virginia	61.9	49.8*	60.0	51.2
Wisconsin	72.5*	41.5	58.6	52.5
Wyoming	51.0	40.5	48.6	43.6*
Total	58.1	44.2	50.5	51.2

Note: Estimates for Puerto Rico are included in the totals but not shown separately because of small sample sizes. Estimates for U.S. territories other than Puerto Rico are not included in the calculation of the coverage rates in this table because information on race and ethnicity was not available for the other U.S. territories in the data. See appendix B of volume II for more details on statistical uncertainty for these estimates.

CY = calendar year

* indicates a statistically significant difference at the 95 percent confidence level between the State coverage rate for a participant category's race and ethnicity and the national coverage rate for that category

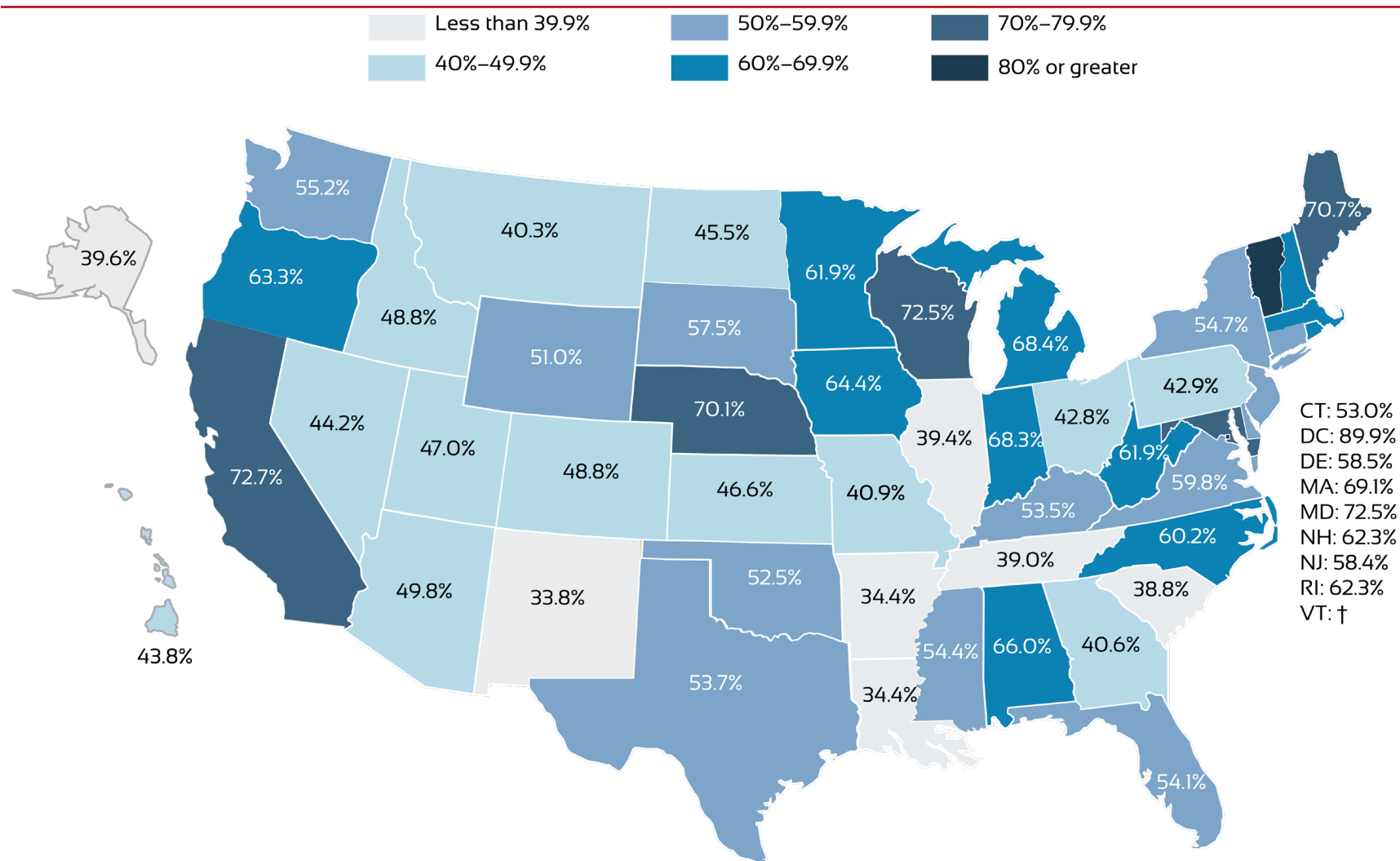
† indicates an unreliable coverage rate over 100 percent

^a This category includes non-Hispanic individuals who self-identify as two or more races or self-identify as a race other than White. These categories were combined because of sample size concerns.

Sources: IPUMS-USA, n.d.-b; Kline et al., 2022; U.S. Census Bureau, n.d.-a; FNS, 2023

Figure 3.9. WIC Coverage Rate for Hispanic/Latino Individuals by State: CY 2021

National Coverage Rate for Hispanic/Latino Individuals: 58.1 Percent



Note: Estimates for U.S. territories other than Puerto Rico are not included in the calculation of the coverage rates in this figure because information on race and ethnicity was not available for the other U.S. territories in the data. Estimates for Puerto Rico are included in the national coverage rate.

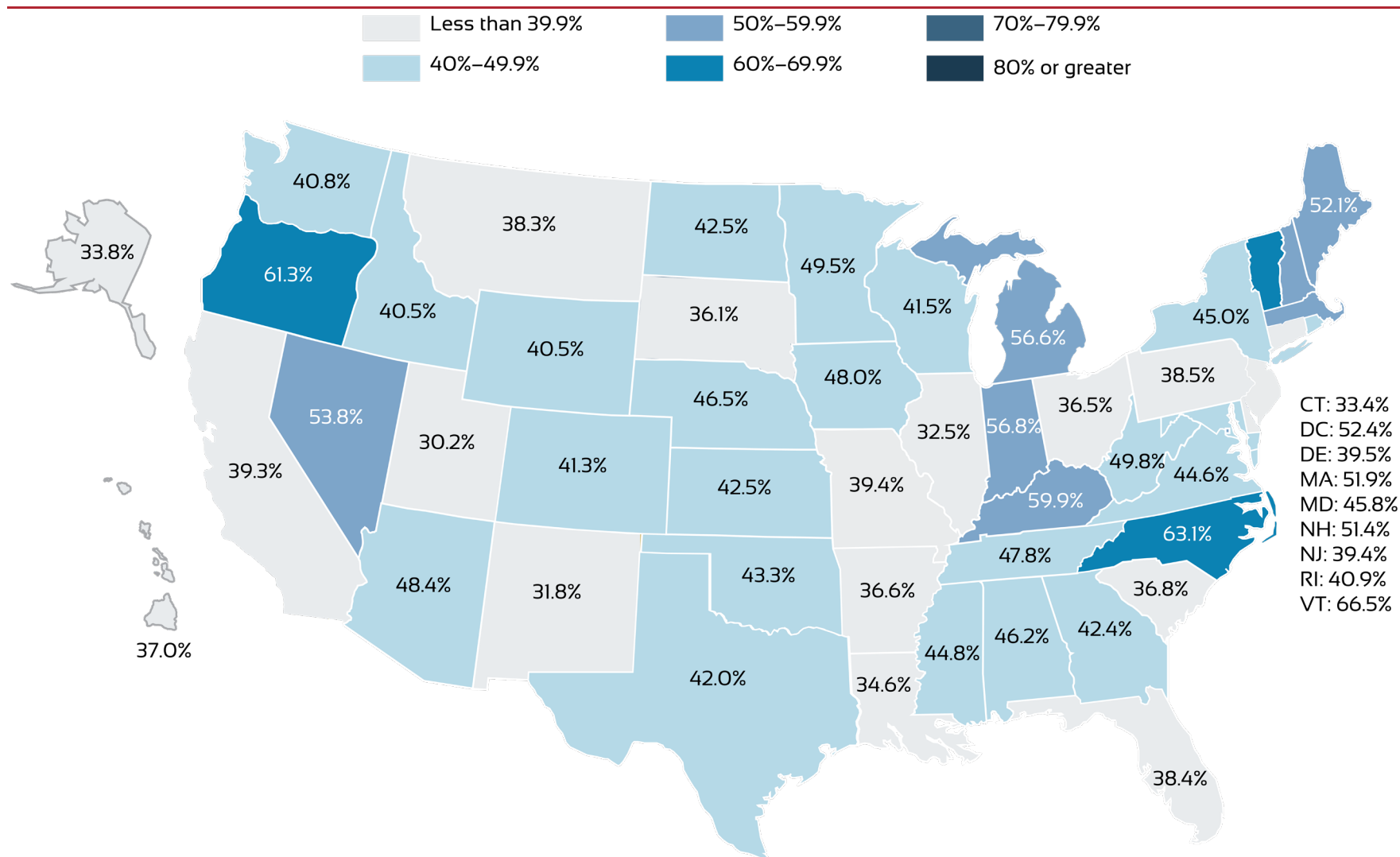
CY = calendar year

† indicates an unreliable coverage rate over 100 percent

Sources: IPUMS-USA, n.d.-b; Kline et al., 2022; U.S. Census Bureau, n.d.-a; FNS, 2023

Figure 3.10. WIC Coverage Rate for White-Only, Not Hispanic Individuals by State: CY 2021

National Coverage Rate for White-Only, Not Hispanic Individuals: 44.2 Percent



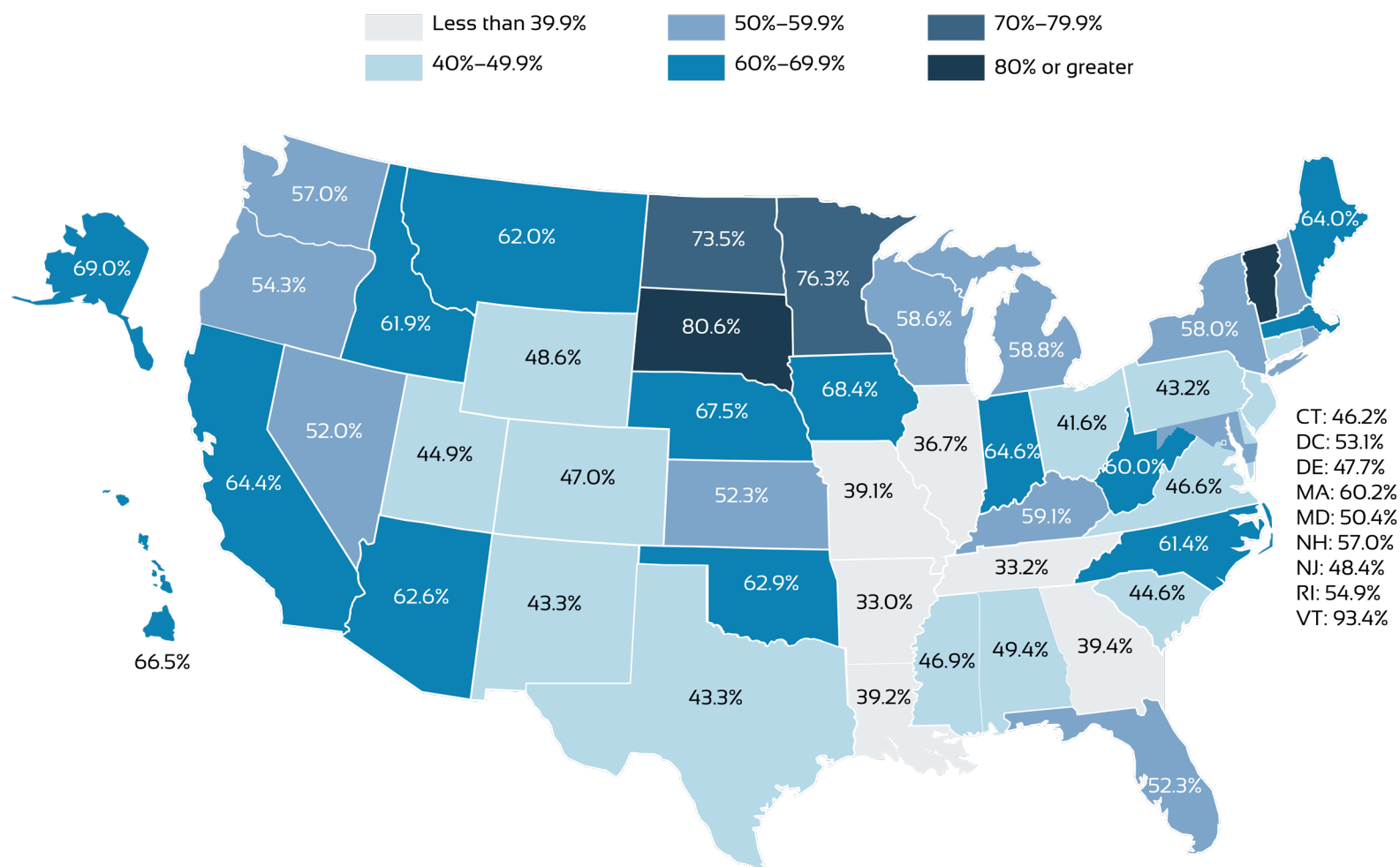
Note: Estimates for U.S. territories other than Puerto Rico are not included in the calculation of the coverage rates in this figure because information on race and ethnicity was not available for the other U.S. territories in the data. Estimates for Puerto Rico are included in the national coverage rate.

CY = calendar year

Sources: IPUMS-USA, n.d.-b; Kline et al., 2022; U.S. Census Bureau, n.d.-a; FNS, 2023

Figure 3.11. WIC Coverage Rate for Other Than White-Only, Not Hispanic Individuals by State: CY 2021

National Coverage Rate for Other Than White-Only, Not Hispanic Individuals: 50.5 Percent



Note: Estimates for U.S. territories other than Puerto Rico are not included in the calculation of the coverage rates in this figure because information on race and ethnicity was not available for the other U.S. territories in the data. Estimates for Puerto Rico are included in the national coverage rate. The “Black-Only, Not Hispanic” and “Two or More Races or Other Race, Not Hispanic” categories were combined because of sample size concerns. This category includes Black-only, non-Hispanic individuals and non-Hispanic individuals who self-identify as two or more races or self-identify as a race other than Black or White.

CY = calendar year

Sources: IPUMS-USA, n.d.-b; Kline et al., 2022; U.S. Census Bureau, n.d.-a; FNS, 2023

C. Changes in WIC Coverage Rates: CY 2020–CY 2021

Overall, the national WIC coverage rate decreased by 1 percentage point between 2020 and 2021 to 51 percent. The decrease in coverage rates during this period occurred because the total number of WIC participants WIC caseload decreased by 1 percent while the estimated number of individuals eligible for WIC increased by less than 1 percent. These changes may be the result of the PHE and WIC waivers available to State agencies. For example, the PHE increased the number of individuals receiving Medicaid, which increased the number of individuals eligible for WIC. Despite this increase, the overall number of individuals participating in WIC continued to decline, leading to a lower overall coverage rate. Coverage rates decreased across all participant categories, except children. The largest decreases were for postpartum non-breastfeeding women and infants (6 percentage points and 5 percentage points, respectively, see figure 3.12). The coverage rate decreased by 3 percentage points for pregnant women.

Table 3.8. Change in WIC Coverage Rate by Participant Category: CY 2020–CY 2021

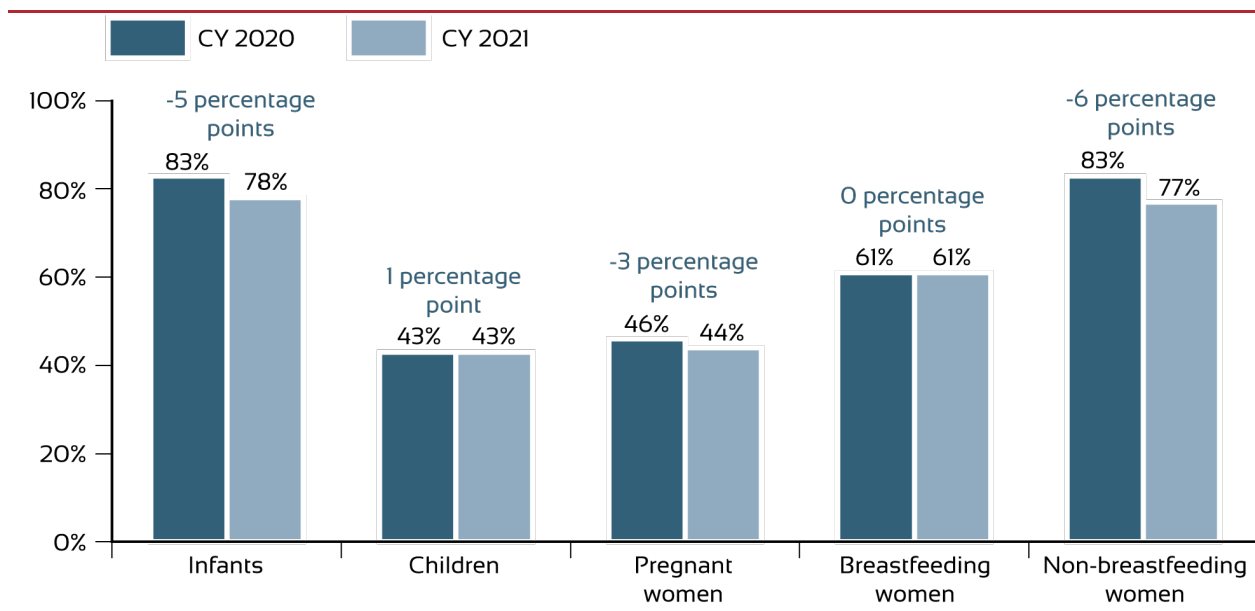
Participant Category		2020	2021	Difference 2020–2021	Percent Change 2020–2021
Number eligible	Infants	1,862,033	1,846,394	-15,639	-0.8
	Children	7,784,680	7,851,014	66,335	0.9
	Pregnant women	1,103,246	1,128,406	25,160	2.3*
	Postpartum women	1,331,757	1,305,482	-26,275	-2.0
	Breastfeeding women	833,152	796,911	-36,241	-4.4
	Non-breastfeeding women	498,605	508,571	9,966	2.0
	Total	12,081,717	12,131,296	49,580	0.4
Number participating	Infants	1,536,838	1,440,283	-96,555	-6.3
	Children	3,315,833	3,395,487	79,654	2.4
	Pregnant women	509,659	492,562	-17,097	-3.4
	Postpartum women	921,133	876,811	-44,322	-4.8
	Breastfeeding women	507,693	484,379	-23,314	-4.6
	Non-breastfeeding women	413,440	392,433	-21,007	-5.1
	Total	6,283,462	6,205,143	-78,319	-1.2
Coverage rate	Infants	82.5	78.0	-4.5	-5.5
	Children	42.6	43.2	0.7	1.5
	Pregnant women	46.2	43.7	-2.5	-5.5*
	Postpartum women	69.2	67.2	-2.0	-2.9
	Breastfeeding women	60.9	60.8	-0.2	-0.3
	Non-breastfeeding women	82.9	77.2	-5.8	-6.9*
	Total	52.0	51.2	-0.9	-1.7

CPS ASEC = Current Population Survey Annual Social and Economic Supplement; CY = calendar year; PRCS = Puerto Rico Community Survey

* indicates a statistically significant difference between the 2020 and 2021 estimates of individuals eligible for WIC and the 2020 and 2021 estimates of WIC coverage rates at the 95 percent confidence level. The number of total WIC participants by category is not subject to statistical uncertainty because it is based on WIC administrative data, which is a census of WIC participants receiving benefits; no sampling is involved. The statistical significance testing was conducted on the change in WIC eligibility based on the CPS ASEC data and PRCS, which included data only for States and Puerto Rico. It did not include data for the other U.S. territories served by WIC.

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b; FNS, 2023

Figure 3.12. Change in WIC Coverage Rate by Participant Category: CY 2020–CY 2021



Note: Change in percentage points may not match subtraction of coverage rates by year because of rounding.

CPS ASEC = Current Population Survey Annual Social and Economic Supplement; CY = calendar year; PRCS = Puerto Rico Community Survey

* indicates a statistically significant difference between the 2020 and 2021 estimates of individuals eligible for WIC and the 2020 and 2021 estimates of WIC coverage rates at the 95 percent confidence level. The statistical significance testing was conducted on the change in WIC eligibility based on the CPS ASEC and PRCS data, which included data only for States and Puerto Rico. It did not include data for the other U.S. territories served by WIC.

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a; FNS, 2023

When estimates were stratified by participant category and race and ethnicity, larger differences were observed (see table 3.9). Specifically, the coverage rate for Hispanic/Latino infants experienced a statistically significant 10 percentage point decline between 2020 and 2021. Black-only, non-Hispanic infants also experienced a statistically significant decline in coverage in the same period.³⁶ In contrast, White-only, non-Hispanic infants and non-Hispanic infants identified as two or more races or a race other than Black or White experienced non-statistically significant increases in coverage. See the discussion in the text box titled “Change in Coverage Rates for Infants by Race and Ethnicity: CY 2020–CY 2021” for more information on how changes to the number of individuals eligible for WIC contributes to these variations.

³⁶ In 2020, Black-only, non-Hispanic infants had a coverage rate estimated to be over 100 percent; in 2021, the coverage rate declined to 77 percent. While this decline is statistically significant, this result should be interpreted with caution given the statistical uncertainty associated with the 2020 coverage rate.

Table 3.9. Change in WIC Coverage Rates by Participant Category and by Race and Hispanic Ethnicity: CY 2020–CY 2021

Participant Category		Hispanic/ Latino	White-Only, Not Hispanic	Black-Only, Not Hispanic	Two or More Races or Other Race, Not Hispanic	Total
Coverage rate 2021	Infants	83.7	67.1	76.7	†	78.1
	Children	50.7	36.7	38.7	47.6	43.2
	Pregnant women	50.8	38.9	44.2	35.6	43.7
	Postpartum women	73.2	60.7	67.4	66.2	67.2
	Breastfeeding women	71.3	49.2	59.4	62.0	60.8
	Non-breastfeeding women	76.7	78.7	77.0	73.4	77.2
	Total	58.1	44.2	48.5	55.7	51.2
Coverage rate 2020	Infants	94.1	63.3	†	79.1	82.6
	Children	53.4	33.9	39.6	42.3	42.6
	Pregnant women	54.8	39.5	49.5	37.9	46.2
	Postpartum women	80.4	56.3	86.4	49.2	69.2
	Breastfeeding women	76.0	45.8	70.5	46.6	60.9
	Non-breastfeeding women	89.3	72.7	†	53.6	83.0
	Total	62.8	41.8	54.1	48.6	52.0
Change in coverage rate for 2020 versus 2021 (percentage point difference)	Infants	-10.4*	3.8	††*	††	-4.5
	Children	-2.8*	2.8*	-0.9	5.4*	0.7
	Pregnant women	-3.9*	-0.6	-5.3*	-2.4*	-2.5*
	Postpartum women	-7.2	4.4	-19.0*	17.0	-2.0
	Breastfeeding women	-4.7	3.5	-11.1*	15.4	-0.1
	Non-breastfeeding women	-12.6*	6.0	††*	19.9*	-5.7*
	Total	-4.6*	2.4*	-5.6*	7.1*	-0.8

Note: Estimates for U.S. territories other than Puerto Rico are not included in the calculation of the coverage rates in this table because information on race and ethnicity for the other U.S. territories was not available in the data.

CY = calendar year

† indicates an unreliable coverage rate over 100 percent

†† indicates a difference calculated from a censored coverage rate. All censored differences were over 20 percentage points.

* indicates a statistically significant difference between the 2020 and 2021 estimates of WIC coverage rates at the 95 percent confidence level

Sources: IPUMS-USA, n.d.-b; Kline et al., 2022; U.S. Census Bureau, n.d.-a; FNS 2023

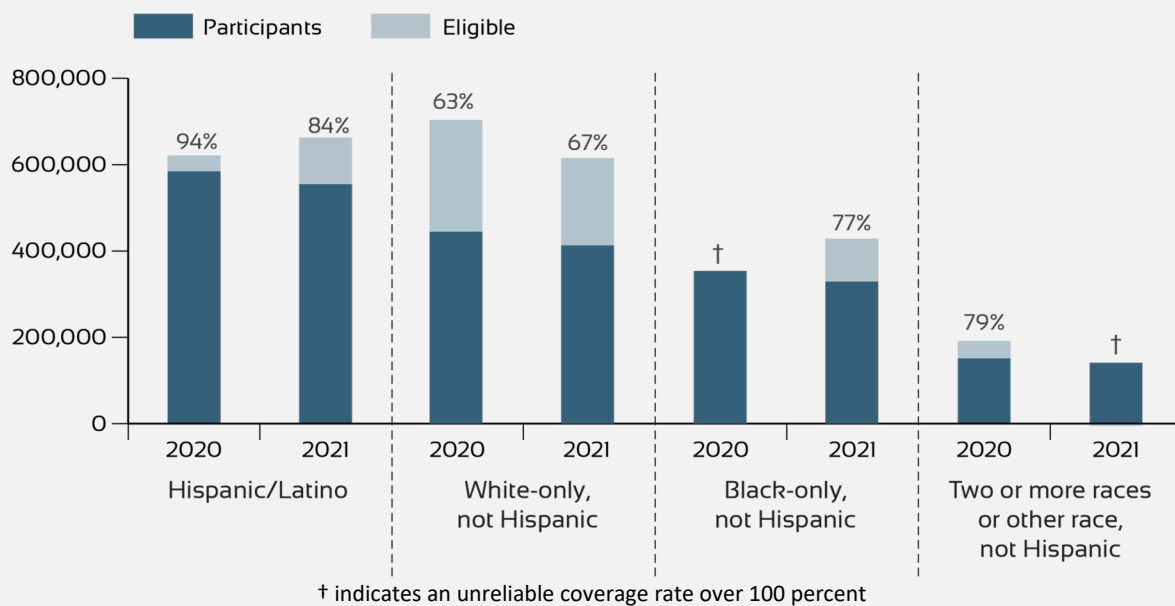
A similar pattern was observed for postpartum women. Black-only, non-Hispanic postpartum women experienced a statistically significant decline in coverage by 19 percentage points. The coverage rate for Hispanic/Latino postpartum women declined by 7 percentage points, although this change was not statistically significant. Coverage rates declined even more for non-breastfeeding postpartum women. Black-only, non-Hispanic non-breastfeeding women and Hispanic/Latino non-breastfeeding women experienced statistically significant declines in coverage. Postpartum women who self-identify as White-only, non-Hispanic or as two or more races or a race other than Black or White, non-Hispanic experienced increases in coverage. These increases were not statistically significant, however.

Smaller changes were observed for children and pregnant women. Among children, the largest change occurred for children identified as non-Hispanic and two or more races or a race other than Black or White (5 percentage points; this decline was statistically significant). White-only, non-Hispanic children were the only group of children to experience an increase in coverage rates (3 percentage points; this increase was statistically significant). The coverage rates for pregnant women declined across all race and ethnicity categories; these declines were statistically significant for all groups except White-only, non-Hispanic pregnant women and largest for Black-only, non-Hispanic women (5 percentage points).

Change in Coverage Rates for Infants by Race and Ethnicity: CY 2020–CY 2021

While similar, modest declines in infant participation were observed across all racial and ethnic subgroups, data show substantial variation in the changes to the number of infants eligible for WIC by race and ethnicity between 2020 and 2021. Black-only, non-Hispanic infants and Hispanic/Latino infants experienced a statistically significant decline in coverage between 2020 and 2021. This decline was driven by the small decline in WIC participation and a larger increase in WIC eligibility for these infants (see figure below). WIC eligibility is affected by income and participation in programs conferring adjunctive income eligibility (i.e., Medicaid, SNAP, or TANF). For Hispanic/Latino infants, the increase in eligibility is driven entirely by an increase in adjunctive income eligibility (i.e., an increase in participation in Medicaid, SNAP, or TANF). The increase in eligibility for Black-only, non-Hispanic infants results from increases in income and adjunctive income eligibility. No other group of infants experienced an increase in income eligibility. During the same period, the number of eligible White-only, non-Hispanic infants and non-Hispanic infants identified as two or more races or a race other than Black or White decreased. Broader social patterns related to the COVID-19 pandemic may have influenced the observed changes in eligibility and participation. Changes in eligibility, participation, and coverage for postpartum women across racial/ethnic subgroups mirrored the changes for infants.

Changes in Infant WIC Coverage Rates by Race and Hispanic Ethnicity: CY 2020–CY 2021



Coverage rates come from a combination of the CPS ASEC, WIC administrative data, and the WIC Participant and Program Characteristics (WIC PC) report. Stratification by both participant category and race/ethnicity leads to small sample sizes. Although the survey data are weighted to be representative, nonresponse bias could influence results in unknown directions. These small sample sizes contribute to large coefficients of variation, which indicate lower levels of precision for the estimates for infants and postpartum women. For example, only 144 Black-only, non-Hispanic infants are represented in the CPS ASEC. Other infant groups are similarly small: 158 infants identified as two or more races or other race, non-Hispanic; 327 Hispanic infants; and 801 White-only, non-Hispanic infants. Sample sizes for children and pregnant women are larger, leading to more precise estimates.

The change in coverage rates between 2020 and 2021 also varied across FNS Regions and participant categories (see table 3.10). However, the Midwest and Southwest Regions were the only FNS Regions with statistically significant changes in the overall coverage rate between 2020 and 2021. Across all participant categories, except children, the Southeast Region saw the greatest change in coverage rates compared with all other FNS Regions. The overall coverage rate decreased between 2020 and 2021 for all FNS Regions except the Northeast and Western Regions.

Table 3.10. WIC Coverage Rates by FNS Region and Participant Category: CY 2020–CY 2021

FNS Region		Infants	Children	Pregnant Women	Postpartum Women	Total
Coverage rate 2020	Northeast	78.5	45.3	42.7	65.2	52.5
	Mid-Atlantic	80.5	44.7	44.2	67.1	52.7
	Southeast	86.0	39.1	47.8	68.0	50.2
	Midwest	88.8	41.1	45.3	65.9	51.4
	Southwest	80.9	35.8	44.0	77.1	48.2
	Mountain Plains	75.1	38.5	41.5	61.0	47.1
	Western	80.3	54.3	52.4	70.6	59.9
	Total	82.5	42.6	46.2	69.2	52.0
Coverage rate 2021	Northeast	77.5	47.8	43.0	66.5	53.9
	Mid-Atlantic	77.8	44.0	43.6	66.2	51.4
	Southeast	76.4	40.4	42.5	61.7	48.7
	Midwest	81.9	40.4	42.1	63.2	49.0
	Southwest	77.5	35.2	42.0	75.4	46.7
	Mountain Plains	73.2	37.3	38.0	60.1	45.2
	Western	79.3	57.6	50.9	71.5	61.7
	Total	78.0	43.2	43.7	67.2	51.2
Change in coverage rate for 2020 versus 2021 (percentage point difference)	Northeast	-1.0	2.5	0.4	1.4	1.4
	Mid-Atlantic	-2.7	-0.7	-0.6	-0.9	-1.3
	Southeast	-9.6*	1.3	-5.3*	-6.3*	-1.5
	Midwest	-6.8*	-0.7	-3.2*	-2.7	-2.4*
	Southwest	-3.4	-0.7	-2.0*	-1.7	-1.6*
	Mountain Plains	-1.9	-1.2	-3.5*	-0.9	-1.9
	Western	-1.0	3.3	-1.5	0.8	1.8
	Total	-4.5	0.7	-2.5*	-2.0	-0.9

CPS ASEC = Current Population Survey Annual Social and Economic Supplement; CY = calendar year; FNS = Food and Nutrition Service PRCS = Puerto Rico Community Survey

* indicates a statistically significant difference between the 2020 and 2021 estimates of WIC coverage rates at the 95 percent confidence level. The statistical significance testing was conducted on the change in WIC eligibility based on the CPS ASEC and PRCS data, which included data only for States and Puerto Rico. It did not include data for the other U.S. territories served by WIC.

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b; FNS, 2023

D. Trends in WIC Coverage Rates: CY 2016–CY 2021

The overall WIC coverage rate decreased consistently from 2016 to 2021, except for a 1 percentage point increase between 2017 and 2018 (see table 3.11 and figure 3.13). Throughout the 2016 to 2021 period, coverage rates were consistently highest for infants, followed by those for postpartum women, and lowest for children (see table 3.12 and figure 3.13). Among children, coverage rates for 1-year-old children were consistently highest across all children by year of age, followed by 2-year-old and 3-year-old children; 4-year-old children consistently had the lowest coverage rates (see figure 3.14).

Figure 3.15 shows the overall coverage rates by FNS Region from 2016 through 2021. The Western Region consistently had the highest rates of coverage during this period (primarily because of the high rates in California), and the Mountain Plains Region had the lowest. See table F.5 of volume II of this report for trends in coverage rates by FNS Region from 2016 through 2021 for each participant category.

Table 3.11. WIC Coverage Rates: CY 2016–CY 2021

Year	Number Eligible	Number Participating	Coverage Rate
2016	14,005,712	7,593,888	54.2
2017	13,739,662	7,183,994	52.3
2018	12,691,698	6,748,797	53.2
2019	12,074,709	6,311,597	52.3
2020	12,081,717	6,283,462	52.0
2021	12,131,296	6,205,143	51.2

CY = calendar year

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b; FNS, 2023

Table 3.12. WIC Coverage Rates by Participant Category: CY 2016–CY 2021

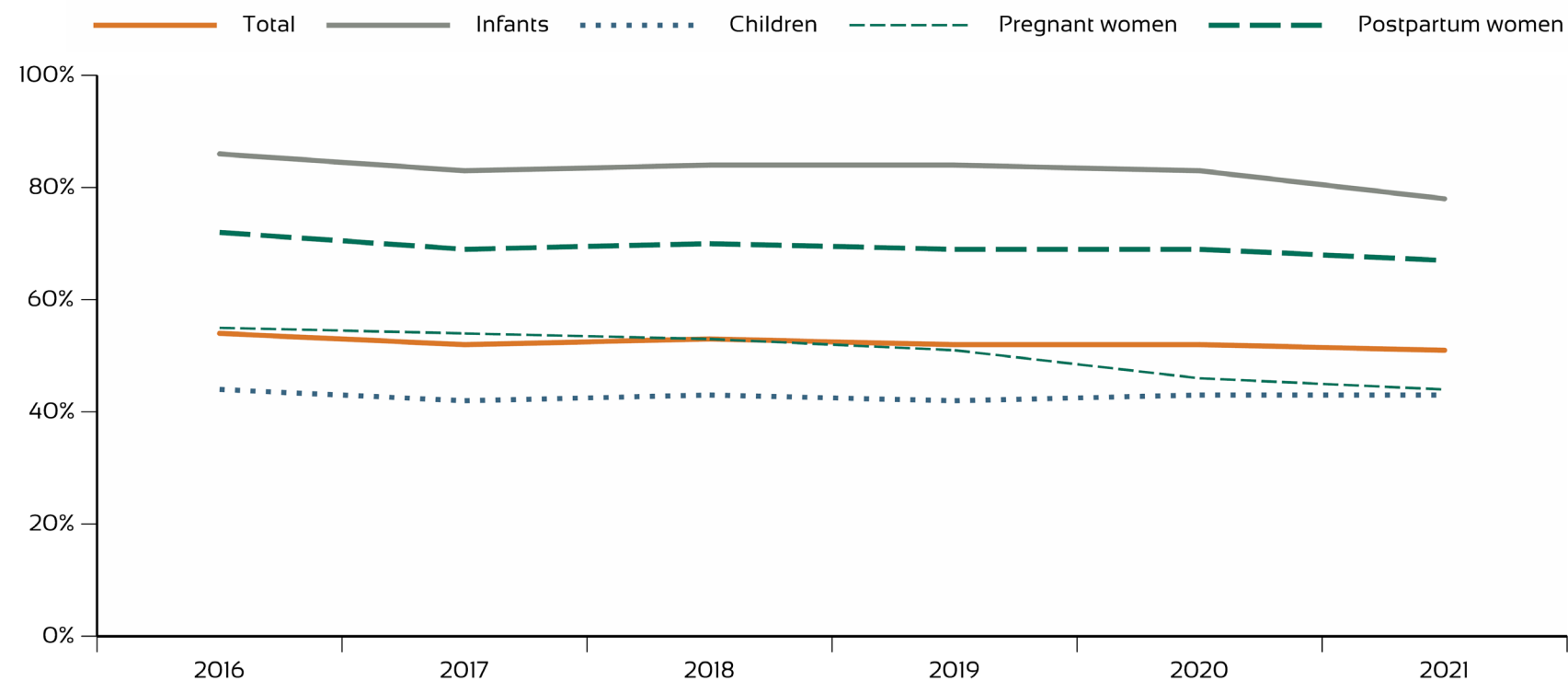
Participant Category		2016	2017	2018	2019	2020	2021
Number eligible	Infants	2,162,700	2,139,130	1,998,988	1,900,491	1,862,033	1,846,394
	Children	9,023,248	8,847,389	8,123,987	7,726,475	7,784,680	7,851,014
	1-year-old children	2,306,123	2,222,959	2,012,357	1,837,802	1,942,173	1,852,884
	2-year-old children	2,284,503	2,304,834	2,043,373	1,916,514	1,916,424	2,051,553
	3-year-old children	2,235,416	2,211,684	2,066,549	1,948,148	1,970,726	1,932,072
	4-year-old children	2,197,205	2,107,912	2,001,709	2,024,011	1,955,357	2,014,506
	Pregnant women	1,287,402	1,221,038	1,144,961	1,091,257	1,103,246	1,128,406
	Postpartum women	1,532,362	1,532,105	1,423,761	1,356,486	1,331,757	1,305,482
	Breastfeeding women	969,380	978,905	896,644	851,671	833,152	796,911
	Non-breastfeeding women	562,982	553,199	527,117	504,816	498,605	508,571
	Total	14,005,712	13,739,662	12,691,698	12,074,709	12,081,717	12,131,296
Number participating	Infants	1,853,720	1,767,555	1,687,302	1,590,861	1,536,838	1,440,283
	Children	3,926,229	3,702,118	3,460,346	3,223,616	3,315,833	3,395,487
	1-year-old children	1,371,580	1,294,717	1,181,957	1,101,365	1,165,601	1,191,689
	2-year-old children	1,052,589	992,638	934,510	870,824	884,764	906,409
	3-year-old children	931,729	878,098	835,755	778,771	781,059	800,319
	4-year-old children	570,331	536,666	508,123	472,656	484,408	497,070
	Pregnant women	707,747	658,141	606,369	557,735	509,659	492,562
	Postpartum women	1,106,191	1,056,180	994,781	939,385	921,133	876,811
	Breastfeeding women	590,427	570,521	536,944	507,593	507,693	484,379
	Non-breastfeeding women	515,764	485,659	457,837	431,792	413,440	392,433
	Total	7,593,888	7,183,994	6,748,797	6,311,597	6,283,462	6,205,143

Participant Category		2016	2017	2018	2019	2020	2021
Coverage rate	Infants	85.7	82.6	84.4	83.7	82.5	78.0
	Children	43.5	41.8	42.6	41.7	42.6	43.2
	1-year-old children	59.5	58.2	58.7	59.9	60.0	64.3
	2-year-old children	46.1	43.1	45.7	45.4	46.2	44.2
	3-year-old children	41.7	39.7	40.4	40.0	39.6	41.4
	4-year-old children	26.0	25.5	25.4	23.4	24.8	24.7
	Pregnant women	55.0	53.9	53.0	51.1	46.2	43.7
	Postpartum women	72.2	68.9	69.9	69.3	69.2	67.2
	Breastfeeding women	60.9	58.3	59.9	59.6	60.9	60.8
	Non-breastfeeding women	91.6	87.8	86.9	85.5	82.9	77.2
Total		54.2	52.3	53.2	52.3	52.0	51.2

CY = calendar year

Sources: IPUMS-USA, n.d.-b; Kline et al., 2022; U.S. Census Bureau, n.d.-a, n.d.-b; FNS, 2023

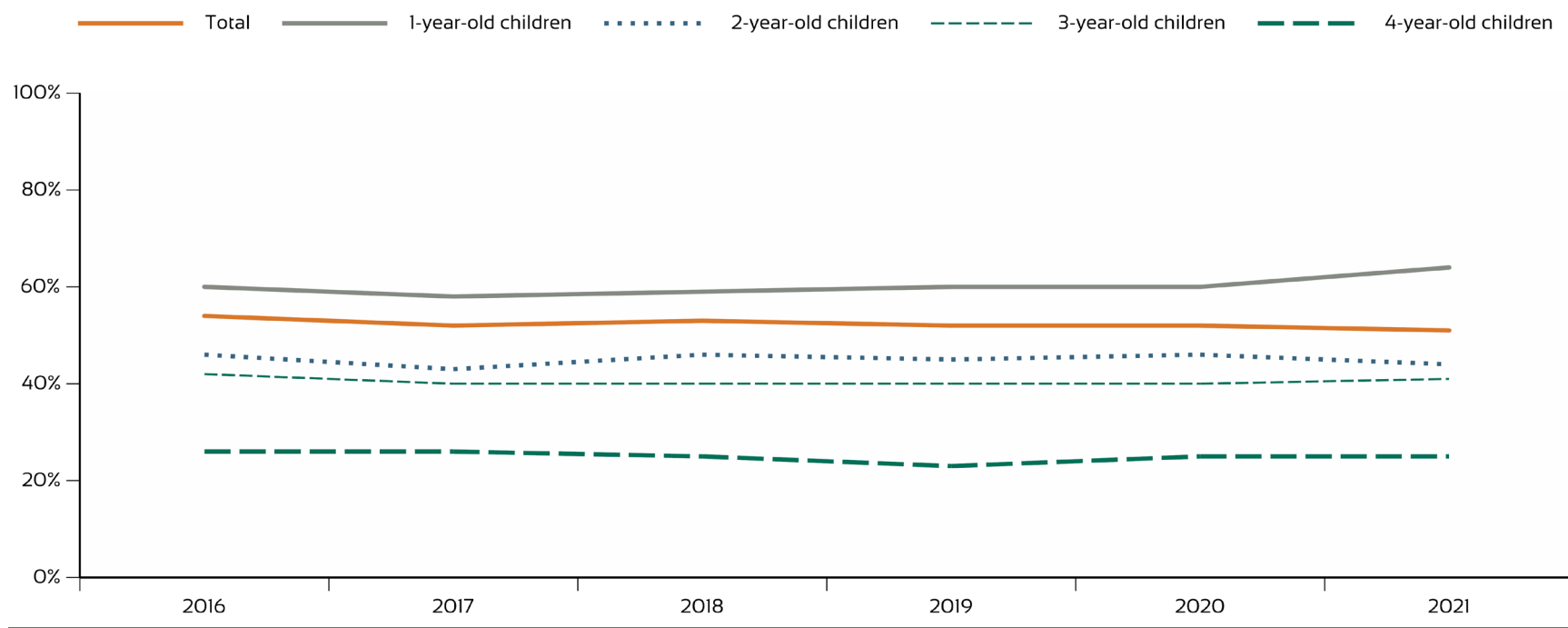
Figure 3.13. Trends in WIC Coverage Rates by Participant Category: CY 2016–CY 2021



CY = calendar year

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b; FNS, 2023

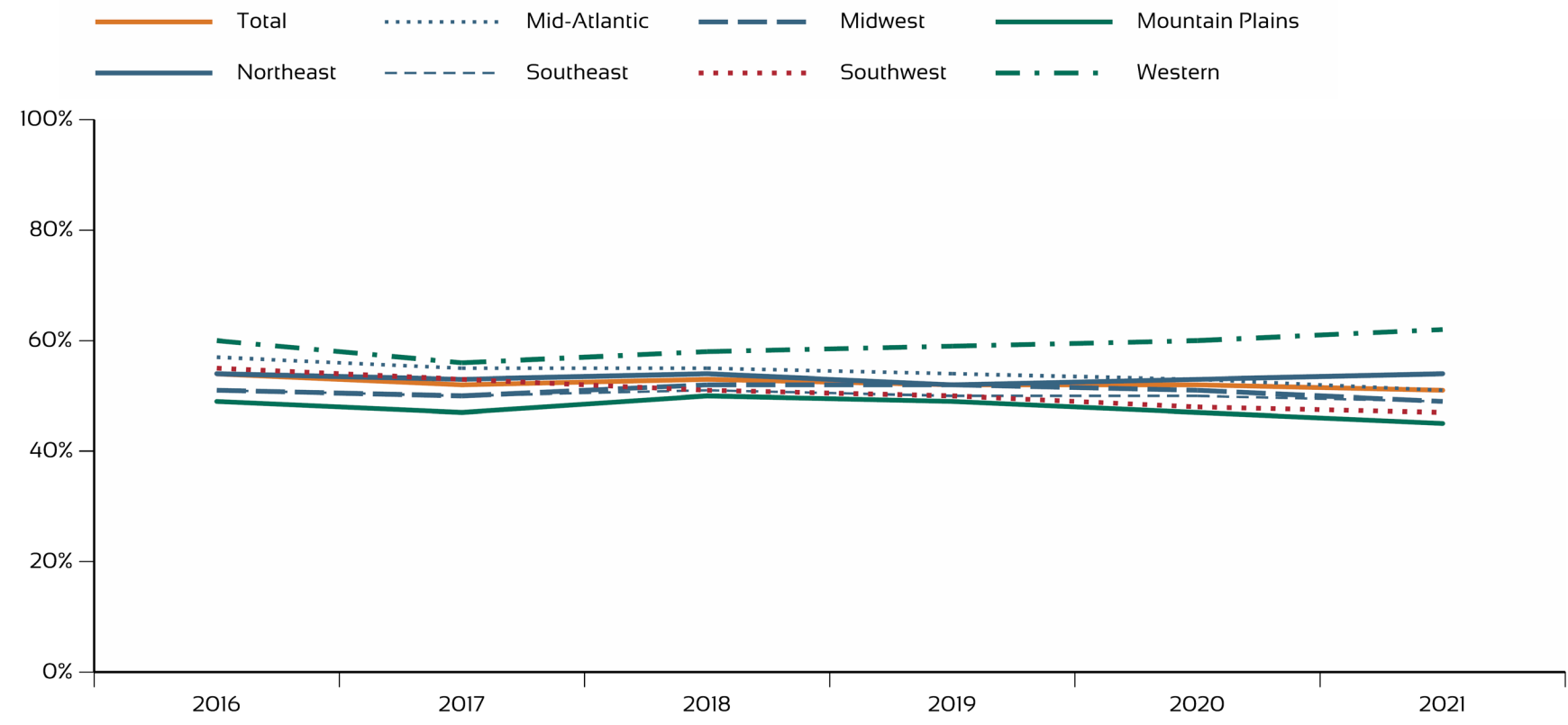
Figure 3.14. Trends in WIC Coverage Rates for Children by Year of Age: CY 2016–CY 2021



CY = calendar year

Sources: IPUMS-USA, n.d.-b; Kline et al., 2022; U.S. Census Bureau, n.d.-a, n.d.-b; FNS, 2023

Figure 3.15. Trends in WIC Coverage Rates by FNS Region: CY 2016–CY 2021



CY = calendar year; FNS = Food and Nutrition Service

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b; FNS, 2023

Chapter 4. WIC Participation Rates for CY 2021

This chapter presents participation rates for women, infants, and children in 2021. The participation rates were calculated as the percentages of the total population of women, infants, and children who received or picked up WIC benefits in an average month in 2021. In contrast to coverage rates, participation rates are calculated as the ratio of the number of WIC participants to the number of individuals in the population, regardless of income level, adjunctive income eligibility, or nutritional risk. Participation rates are useful for understanding the overall reach of WIC across the total population. The COVID-19 pandemic and the PHE likely affected WIC participation rates for 2021.

Participation Rate

Percentage of the total population of women, infants, and children who received or picked up WIC benefits in an average month

A. National-Level WIC Participation Rates

Thirty-nine percent of all infants and 23 percent of all children in the Nation received WIC benefits (see table 4.1). Similar to WIC coverage rates, participation rates for children were highest for 1-year-old children (33 percent) and lowest for 4-year-old children (13 percent). More postpartum women (22 percent) than pregnant women (17 percent) received WIC benefits. The participation rate for postpartum breastfeeding women was 25 percent and the rate for postpartum non-breastfeeding women was 20 percent.

Table 4.1. WIC Participation Rates by Participant Category: CY 2021

Participant Category	Number Participating	Total Population	Participation Rate
Infants	1,440,283	3,667,986	39.3
Children	3,395,487	15,034,195	22.6
1-year-old children	1,191,689	3,619,907	32.9
2-year-old children	906,409	3,753,874	24.1
3-year-old children	800,319	3,797,804	21.1
4-year-old children	497,070	3,862,609	12.9
Pregnant women	492,562	2,836,373	17.4
Postpartum women	876,811	3,914,112	22.4
Breastfeeding women	484,379	1,913,230	25.3
Non-breastfeeding women	392,433	2,000,882	19.6
Total	6,205,143	25,452,666	24.4

Note: WIC administrative data on participating children by year of age were not available. The number of participating children by year of age in this table is based on the distribution of children who were enrolled in WIC in 2020 according to WIC PC2020 data.

CY = calendar year; WIC PC = WIC Program and Participant Characteristics

Sources: Kline et al., 2022; U.S. Census Bureau, n.d.-a, n.d.-b; FNS, 2023

B. Regional- and State-Level WIC Participation Rates

Participation rates varied among FNS Regions and States. The Western Region had the highest participation rate (29 percent), and the Mountain Plains Region had the lowest (19 percent) in comparison with the national average of 24 percent (see table 4.2). Among States, rates ranged from a low of 12 percent in Utah to a high of 32 percent in California. Most States (33) had participation rates

between 20 percent and 30 percent. Puerto Rico had a higher participation rate (72 percent) than any State.

Table 4.2. WIC Participation Rates by State and FNS Region: CY 2021

	State/FNS Region	Number Participating	Total Population	Participation Rate
State	Alabama	109,747	407,493	26.9*
	Alaska	14,408	61,204	23.5
	Arizona	140,509	532,895	26.4*
	Arkansas	50,720	246,840	20.5*
	California	942,175	2,923,701	32.2*
	Colorado	78,046	417,524	18.7*
	Connecticut	44,295	235,660	18.8*
	Delaware	17,331	73,460	23.6
	District of Columbia	13,715	58,786	23.3
	Florida	400,284	1,506,299	26.6*
	Georgia	190,336	878,018	21.7*
	Hawaii	25,374	102,804	24.7
	Idaho	29,463	150,287	19.6*
	Illinois	151,949	948,751	16.0*
	Indiana	153,439	547,872	28.0*
	Iowa	57,705	250,811	23.0*
	Kansas	44,120	235,215	18.8*
	Kentucky	106,572	354,993	30.0*
	Louisiana	87,343	403,465	21.6*
	Maine	16,852	80,966	20.8*
	Maryland	118,404	486,309	24.3
	Massachusetts	111,303	461,389	24.1
	Michigan	203,233	738,336	27.5*
	Minnesota	97,361	443,887	21.9*
	Mississippi	70,109	252,999	27.7*
	Missouri	84,912	483,533	17.6*
	Montana	13,994	75,181	18.6*
	Nebraska	35,010	166,172	21.1*
	Nevada	56,066	236,701	23.7*
	New Hampshire	14,025	81,580	17.2*
	New Jersey	142,360	689,019	20.7*
	New Mexico	34,771	152,747	22.8*
	New York	369,708	1,475,031	25.1*
	North Carolina	254,104	804,766	31.6*
	North Dakota	10,291	67,024	15.4*
	Ohio	160,311	908,313	17.6*
	Oklahoma	88,790	323,257	27.5*

	State/FNS Region	Number Participating	Total Population	Participation Rate
State (continued)	Oregon	74,870	278,449	26.9*
	Pennsylvania	163,013	908,545	17.9*
	Puerto Rico	98,563	136,884	72.0*
	Rhode Island	16,408	70,311	23.3
	South Carolina	86,863	391,064	22.2*
	South Dakota	15,690	76,121	20.6*
	Tennessee	112,106	545,156	20.6*
	Texas	669,830	2,577,407	26.0*
	Utah	36,646	314,398	11.7*
	Vermont	11,292	36,741	30.7*
	Virginia	120,503	658,658	18.3*
	Washington	121,274	566,099	21.4*
	West Virginia	32,399	118,636	27.3*
	Wisconsin	84,769	427,960	19.8*
	Wyoming	7,003	42,720	16.4*
FNS Region	Northeast	586,698	2,450,392	23.9*
	Mid-Atlantic	706,288	3,130,296	22.6*
	Southeast	1,330,121	5,140,788	25.9*
	Midwest	908,768	4,265,930	21.3*
	Southwest	1,108,609	4,551,008	24.4
	Mountain Plains	289,067	1,563,490	18.5*
	Western	1,275,592	4,350,761	29.3*
	Total	6,205,143	25,452,666	24.4

Note: Estimates for U.S. territories other than Puerto Rico are included in regional totals but not shown separately because of constraints related to small sample size. Estimates for Puerto Rico are shown separately. State and regional estimates and participant data include individuals in ITOs.

CPS ASEC = Current Population Survey Annual Social and Economic Supplement; CY = calendar year; FNS = Food and Nutrition Service; ITO = Indian Tribal Organization; PRCS = Puerto Rico Community Survey

* indicates a statistically significant difference between the State or regional participation rate and the national participation rate at the 95 percent confidence level. The statistical significance testing was conducted based on the CPS ASEC and PRCS data, which included data only for States and Puerto Rico. It did not include data for the other U.S. territories served by WIC.

Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b; FNS, 2023

Four States (California, Kentucky, North Carolina, and Oklahoma) consistently had higher participation rates than national participation rates across all participant categories (see table 4.3). Eight States (Alabama, Indiana, Iowa, Michigan, Mississippi, North Carolina, Oklahoma, and Vermont) consistently had higher participation rates than national participation rates across race and Hispanic ethnicity (see table 4.4).

Table 4.3. WIC Participation Rates by State and FNS Region and Participant Category: CY 2021

State/FNS Region		Infants	All Children	1-Year-Old Children	2-Year-Old Children	3-Year-Old Children	4-Year-Old Children	Pregnant Women	Postpartum Women	Total
State	Alabama	49.2	24.0	36.6	27.0	21.8	11.7	23.3	19.9	26.9
	Alaska	35.7	22.7	29.4	26.7	22.8	12.5	17.1	20.2	23.5
	Arizona	42.0	25.4	39.1	27.2	23.5	13.0	15.7	23.0	26.4
	Arkansas	44.8	14.9	24.3	15.1	12.3	8.3	18.7	20.7	20.5
	California	41.2	33.3	42.7	35.5	32.1	23.5	22.2	26.7	32.2
	Colorado	28.7	17.5	26.3	19.1	16.2	9.0	12.7	18.1	18.7
	Connecticut	33.2	16.9	25.3	18.0	15.0	9.7	16.1	14.9	18.8
	Delaware	40.0	22.0	33.3	24.1	20.9	10.8	16.8	19.1	23.6
	District of Columbia	34.8	22.5	35.8	24.5	20.5	10.0	12.7	22.8	23.3
	Florida	44.3	24.1	37.7	25.6	21.7	12.2	19.6	24.6	26.6
	Georgia	38.3	19.1	28.0	21.1	19.3	9.0	16.4	19.6	21.7
	Hawaii	35.7	23.8	33.6	27.8	24.7	9.8	17.3	22.8	24.7
	Idaho	31.3	18.4	28.3	19.3	16.8	10.0	12.0	19.0	19.6
	Illinois	32.0	13.1	18.1	14.3	12.0	8.5	12.7	14.7	16.0
	Indiana	43.2	27.2	40.4	29.4	24.6	14.9	17.4	24.8	28.0
	Iowa	36.1	21.9	33.6	23.7	20.0	10.8	14.4	21.6	23.0
	Kansas	30.8	17.4	25.3	19.1	16.7	8.9	13.8	16.3	18.8
	Kentucky	50.7	28.5	42.0	29.9	25.0	17.7	21.7	22.8	30.0
	Louisiana	47.5	15.2	26.8	15.3	12.7	6.9	17.0	24.2	21.6
	Maine	32.6	20.3	26.7	20.9	21.8	12.0	13.9	17.2	20.8
	Maryland	38.8	22.3	31.8	24.4	21.8	11.9	18.3	23.0	24.3
	Massachusetts	32.8	24.9	36.2	25.8	23.2	14.7	15.7	19.3	24.1
	Michigan	42.9	27.1	39.1	29.9	26.4	13.9	20.6	19.9	27.5
	Minnesota	31.9	21.7	29.1	23.0	21.7	13.5	14.4	19.2	21.9
	Mississippi	52.5	24.7	36.4	25.3	24.8	13.3	17.0	23.3	27.7
	Missouri	34.9	13.9	22.4	14.2	12.1	7.5	14.3	17.5	17.6

State/FNS Region		Infants	All Children	1-Year-Old Children	2-Year-Old Children	3-Year-Old Children	4-Year-Old Children	Pregnant Women	Postpartum Women	Total
State (continued)	Montana	30.1	17.7	26.0	18.6	16.8	10.1	12.7	15.9	18.6
	Nebraska	32.1	20.5	29.1	21.6	18.3	13.6	12.3	19.3	21.1
	Nevada	37.8	22.3	34.8	24.1	19.7	11.6	14.3	22.4	23.7
	New Hampshire	23.0	18.0	23.6	20.2	17.6	10.9	10.6	13.4	17.2
	New Jersey	31.1	19.7	30.3	22.6	17.3	9.3	12.7	20.4	20.7
	New Mexico	38.5	19.9	27.9	21.7	18.5	12.2	16.9	23.3	22.8
	New York	37.4	24.3	34.7	26.2	22.6	14.2	15.8	23.0	25.1
	North Carolina	48.1	30.6	44.7	33.0	27.9	17.6	23.0	26.1	31.6
	North Dakota	24.5	14.7	21.8	15.9	13.2	8.3	9.0	13.9	15.4
	Ohio	38.2	13.6	18.8	14.4	12.5	9.0	13.5	16.6	17.6
	Oklahoma	48.1	24.2	33.4	27.3	22.5	14.5	24.2	23.2	27.5
	Oregon	37.2	27.1	41.9	28.4	21.6	17.3	17.0	23.7	26.9
	Pennsylvania	29.9	16.4	27.1	16.6	14.7	7.6	11.7	17.4	17.9
	Rhode Island	39.7	21.1	29.6	23.4	20.1	11.8	16.4	22.3	23.3
	South Carolina	40.1	19.5	32.9	20.7	17.0	8.0	15.5	20.6	22.2
	South Dakota	33.4	19.9	28.2	21.8	13.3	16.8	13.6	16.6	20.6
	Tennessee	39.4	16.6	25.7	18.2	15.0	7.8	16.6	20.9	20.6
	Texas	45.7	20.8	33.6	21.5	19.7	9.5	20.0	31.6	26.0
	Utah	19.1	10.6	15.6	11.5	9.7	5.9	7.5	11.7	11.7
	Vermont	37.4	32.7	46.4	34.3	30.6	20.4	18.4	25.9	30.7
	Virginia	30.2	17.0	23.4	18.5	16.0	10.7	13.1	15.8	18.3
	Washington	30.7	21.1	28.0	22.3	19.7	14.6	15.3	18.6	21.4
	West Virginia	46.2	25.8	37.9	26.8	21.8	17.0	18.1	22.3	27.3
	Wisconsin	30.6	19.6	29.3	20.9	18.2	10.7	12.4	15.9	19.8
	Wyoming	26.6	15.0	23.0	16.7	13.5	7.7	11.1	15.9	16.4

State/FNS Region		Infants	All Children	1-Year-Old Children	2-Year-Old Children	3-Year-Old Children	4-Year-Old Children	Pregnant Women	Postpartum Women	Total
FNS Region	Northeast	35.7	23.4	33.5	25.0	21.8	13.7	15.7	21.1	23.9
	Mid-Atlantic	35.5	21.2	31.5	22.8	19.7	11.4	15.8	20.7	22.6
	Southeast	44.3	23.4	35.6	25.2	21.6	12.1	19.2	22.7	25.9
	Midwest	36.8	19.5	27.9	21.1	18.3	11.3	15.1	18.3	21.3
	Southwest	43.5	20.1	31.7	21.0	18.6	9.8	18.4	27.1	24.4
	Mountain Plains	31.3	16.7	25.0	17.7	14.9	9.4	13.2	17.4	18.5
	Western	38.9	29.9	39.4	31.9	28.4	20.4	20.0	24.8	29.3
	Total	39.3	22.6	32.9	24.1	21.1	12.9	17.4	22.4	24.4

Note: Estimates for the U.S. territories are included in the total but are not shown separately because of small sample sizes. Estimates of State-level participation rates by year of age for children and other participant categories should be viewed with caution because of the small sample sizes for many States.

CY = calendar year; FNS = Food and Nutrition Service

Sources: IPUMS-USA, n.d.-b; Kline et al., 2022; U.S. Census Bureau, n.d.-a, n.d.-b; FNS, 2023

Table 4.4. State-Level WIC Participation Rates by Race and Hispanic Ethnicity: CY 2021

State	Hispanic/ Latino	White-Only, Not Hispanic	Other Than White-Only, Not Hispanic ^a	Total
Alabama	45.5*	18.0*	35.5*	26.9*
Alaska	22.7*	12.4*	37.7*	23.5
Arizona	32.8*	15.4*	31.9*	26.4*
Arkansas	26.4*	17.9*	23.4*	20.5*
California	47.0*	10.9*	22.6*	32.2*
Colorado	30.4*	11.3*	21.4*	18.7*
Connecticut	37.1	7.2*	21.5*	18.8*
Delaware	39.4	13.8	28.0	23.6
District of Columbia	33.9	1.2*	32.1*	23.3
Florida	35.3*	14.5	33.4*	26.6*
Georgia	28.6*	14.9	25.5*	21.7*
Hawaii	22.4*	14.8	27.9	24.7
Idaho	30.8*	16.3*	21.0*	19.6*
Illinois	24.3*	9.2*	21.5*	16.0*
Indiana	43.5*	21.7*	39.9*	28.0*
Iowa	45.6*	16.4*	43.0*	23.0*
Kansas	31.2*	13.2*	26.5	18.8*
Kentucky	36.7	27.7*	37.9*	30.0*
Louisiana	22.9*	13.6*	30.2*	21.6*
Maine	31.8	18.4*	37.6*	20.8*
Maryland	46.6*	10.2*	27.4	24.3
Massachusetts	49.8*	12.0*	28.3	24.1
Michigan	41.2	20.7*	38.9*	27.5*
Minnesota	38.3	12.1*	43.9*	21.9*
Mississippi	40.0	18.5*	35.2*	27.7*
Missouri	25.1*	14.8	23.6*	17.6*
Montana	28.1	14.8	35.6*	18.6*
Nebraska	38.0	12.2*	39.1*	21.1*
Nevada	28.3*	16.0*	25.8*	23.7*
New Hampshire	36.7	15.0	19.0*	17.2*
New Jersey	35.8*	9.9*	21.0*	20.7*
New Mexico	25.1*	14.3	26.8	22.8*
New York	35.6*	14.9*	31.9*	25.1*
North Carolina	43.5*	22.0*	39.2*	31.6*
North Dakota	25.1*	9.0*	36.2*	15.4*
Ohio	26.6*	13.2*	27.1*	17.6*
Oklahoma	41.0*	18.3*	36.2*	27.5*
Oregon	41.4*	23.1*	21.1*	26.9*

State	Hispanic/ Latino	White-Only, Not Hispanic	Other Than White-Only, Not Hispanic ^a	Total
Pennsylvania	31.2*	12.2*	25.8*	17.9*
Rhode Island	44.0*	9.9*	28.7	23.3
South Carolina	29.0*	14.0*	31.7*	22.2*
South Dakota	37.8	10.2*	51.8*	20.6*
Tennessee	27.3*	18.7*	21.9*	20.6*
Texas	35.7*	12.1*	22.7*	26.0*
Utah	23.6*	8.1*	15.0*	11.7*
Vermont	50.5	29.6*	36.9	30.7*
Virginia	31.4*	11.2*	22.6*	18.3*
Washington	38.8	14.3	20.9*	21.4*
West Virginia	35.1	25.9*	40.3*	27.3*
Wisconsin	42.4	11.3*	36.8*	19.8*
Wyoming	23.1*	14.0	23.5	16.4*
Total	38.2	14.6	28.4	24.4

Note: Estimates for Puerto Rico are included in the totals but not shown separately because of small sample sizes. Estimates for U.S. territories other than Puerto Rico are not included in the calculation of the coverage rates in this table because information on race and ethnicity was not available for the other U.S. territories in the data.

CPS ASEC = Current Population Survey Annual Social and Economic Supplement; CY = calendar year; PRCS = Puerto Rico Community Survey

^a This category includes non-Hispanic individuals who self-identify as two or more races or self-identify as a race other than White. These categories were combined because of sample size concerns.

* indicates a statistically significant difference between the State participation rate for a participant category's race and ethnicity and the national participation rate for that category at the 95 percent confidence level. The statistical significance testing was conducted based on the CPS ASEC and PRCS data, which included data only for States and Puerto Rico. It did not include data for the other U.S. territories served by WIC.

Sources: IPUMS-USA, n.d.-b; Kline et al., 2022; U.S. Census Bureau, n.d.-a; FNS, 2023

Chapter 5. WIC Nonparticipation Among Individuals Participating in Medicaid and SNAP for CY 2021

Pregnant and postpartum women, infants, and children who participate in Medicaid or SNAP are adjunctively income-eligible for WIC, yet many do not participate. This chapter describes the estimated WIC nonparticipation rates among Medicaid and SNAP participants in 2021. This chapter also presents trends in WIC nonparticipation among Medicaid and SNAP participants from 2016 through 2021. These analyses use a different approach than the coverage and participation rates presented in chapters 3 and 4 but use the same methodology for identifying adjunctively income-eligible individuals via Medicaid and SNAP. The 2021 WIC nonparticipation rates may be influenced by the COVID-19 pandemic and the PHE.

WIC Nonparticipation Rate

Percentage of the total population of Medicaid and SNAP participants categorically eligible for WIC who do not participate in WIC

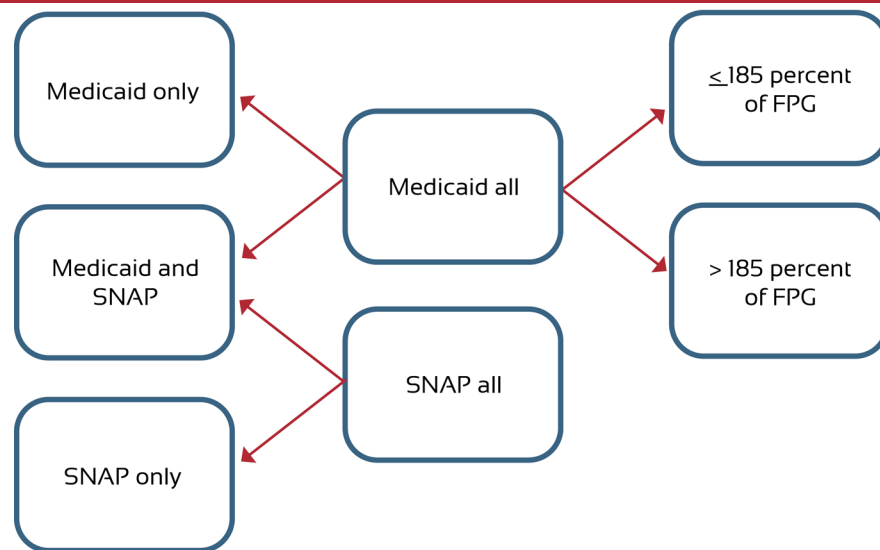
A. WIC Nonparticipation Methodology

The CPS ASEC is the primary data source for estimating the WIC nonparticipation rates among Medicaid and SNAP participants. The overall WIC eligibility estimates rely on FNS administrative and WIC PC data to provide data on WIC participation; however, Medicaid and SNAP participation measurement is limited in WIC PC and unavailable in the FNS administrative data. As a result, neither of these data sources could be used for the nonparticipation analyses. Instead, these analyses use WIC participation as measured in the CPS ASEC to calculate the numerator of the nonparticipation rates. The denominator for the rates is calculated using the same general procedures and adjustments as the overall eligibility estimates, except that the ACS is not used to impute Medicaid and SNAP participation.³⁷ WIC nonparticipation rates are calculated as the proportion of categorically eligible Medicaid and SNAP participants who do not participate in WIC. WIC nonparticipation rates are estimated overall and for four WIC participant categories: infants, children aged 1–4, pregnant women, and postpartum women.

This chapter presents WIC nonparticipation rates for seven overlapping categories of Medicaid and SNAP participation (figure 5.1) to account for possible differences in participation between individuals enrolled in, for example, only Medicaid compared with individuals participating in both Medicaid and SNAP. These groups include (1) all Medicaid participants (regardless of whether they participate in SNAP); (2) all SNAP participants (regardless of whether they participate in Medicaid); (3) Medicaid-only participants (i.e., they do not participate in SNAP); (4) SNAP-only participants (i.e., they do not participate in Medicaid); and (5) SNAP and Medicaid participants. The universe of Medicaid participants is further broken out by poverty status, specifically (6) above and (7) at or below 185 percent of the Federal Poverty Guidelines.

³⁷ The ACS does not include a measure of WIC participation, so WIC participation cannot be imputed using the same techniques used to impute Medicaid and SNAP. Imputing Medicaid and SNAP without imputing WIC would result in artificially high nonparticipation rates. See appendix A of volume II for more information on the imputation procedures.

Figure 5.1. Medicaid and SNAP Categories Used for Producing Nonparticipation Rates Among WIC-Eligible Individuals



FPG = Federal Poverty Guidelines; SNAP = Supplemental Nutrition Assistance Program

The WIC nonparticipation analyses have several key limitations:

- ▶ All data used to produce the WIC nonparticipation rates come from self-reported data. Using any survey inherently adds uncertainty to the estimates. Data collected during the COVID-19 pandemic may be particularly limited because of data collection challenges (Rothbaum & Bee, 2021).
- ▶ The CPS ASEC has a documented undercount of low-income individuals (U.S. Census Bureau, 2016, 2019) and underreporting of program participation (Meyer et al., 2020). The underreporting of WIC, Medicaid, and SNAP varies (Noon et al., 2019; Macartney, 2013; Meyer et al., 2020), which may mean the actual levels of participation among the three programs are higher than reported.
- ▶ The CPS ASEC lacks a measure of pregnancy, making the estimation of women particularly challenging.

Chapter 6 includes a more detailed description of the methodology used to produce the WIC nonparticipation estimates.

B. WIC Nonparticipation Rates: CY 2021

In 2021, a total of 9.1 million individuals who were categorically eligible for WIC participated in Medicaid, SNAP, or both. Table 5.1 presents the WIC nonparticipation rates among individuals who were eligible for WIC and participated in Medicaid and SNAP. Nonparticipation rates were higher among those enrolled in Medicaid (64 percent) than those enrolled in SNAP (54 percent). These nonparticipation rates are higher than the nonparticipation rate (49 percent) calculated among the entire population of individuals eligible for WIC in 2021.³⁸

³⁸ Chapter 3 estimates an overall WIC coverage rate of 51 percent for 2021, which translates to a WIC nonparticipation rate of 49 percent.

Among both programs, pregnant women were least likely to be enrolled in WIC of the four WIC participant categories examined in the analysis, followed by children. Estimated nonparticipation rates were similar for infants and postpartum women because the estimates of postpartum women are based on the counts of eligible infants.³⁹ Postpartum women and infants often enroll simultaneously, which may contribute to similar participation rates.

Table 5.1. WIC Nonparticipation Among WIC-Eligible Medicaid and SNAP Participants: CY 2021

Medicaid and SNAP Subgroups		Number Eligible for WIC	Number not Participating in WIC	WIC Nonparticipation Rate	Coefficient of Variation (Percent)
Medicaid all	Total	7,902,342	5,016,828	63.5	1.7
	Infants	1,069,121	558,543	52.2	5.2
	Children, 1–4	5,470,595	3,539,202	64.7	1.8
	Pregnant women	606,531	523,423	86.3	0.6
	Postpartum women	756,096	395,660	52.3	5.2
SNAP all	Total	4,679,739	2,505,902	53.5	2.8
	Infants	655,245	277,912	42.4	9.0
	Children, 1–4	3,133,108	1,678,521	53.6	3.0
	Pregnant women	429,651	353,381	82.2	1.0
	Postpartum women	461,735	196,089	42.5	8.9
Medicaid only	Total	4,398,463	3,210,626	73.0	2.1
	Infants	653,610	402,670	61.6	5.9
	Children, 1–4	2,931,800	2,201,665	75.1	2.0
	Pregnant women	349,107	320,031	91.7	0.6
	Postpartum women	463,946	286,260	61.7	5.9
SNAP only	Total	1,175,860	699,701	59.5	5.9
	Infants	239,733	122,040	50.9	12.9
	Children, 1–4	594,313	340,984	57.4	7.7
	Pregnant women	172,227	149,988	87.1	1.1
	Postpartum women	169,586	86,688	51.1	12.9
Medicaid and SNAP	Total	3,503,880	1,806,202	51.5	3.2
	Infants	415,511	155,872	37.5	11.5
	Children, 1–4	2,538,795	1,337,537	52.7	3.5
	Pregnant women	257,424	203,392	79.0	1.3
	Postpartum women	292,149	109,401	37.4	11.5
Medicaid ≤ 185 percent of FPG	Total	4,739,691	2,727,611	57.5	2.4
	Infants	648,247	298,008	46.0	7.9
	Children, 1–4	3,305,003	1,945,474	58.9	2.6
	Pregnant women	328,661	273,035	83.1	1.0
	Postpartum women	457,779	211,095	46.1	7.8

³⁹ The numerator and denominator for the nonparticipation rates among postpartum women are based on infant WIC participation in the CPS ASEC (numerator) and Medicaid and SNAP program participation in the CPS ASEC (denominator). As a result, nonparticipation rates for infants and postpartum women are much more similar than the coverage rates for infants and postpartum women presented in the rest of this report.

Medicaid and SNAP Subgroups		Number Eligible for WIC	Number not Participating in WIC	WIC Nonparticipation Rate	Coefficient of Variation (Percent)
Medicaid > 185 percent of FPG	Total	3,162,652	2,289,217	72.4	2.4
	Infants	420,874	260,535	61.9	7.1
	Children, 1–4	2,165,592	1,593,728	73.6	2.2
	Pregnant women	277,870	250,389	90.1	0.8
	Postpartum women	298,317	184,565	61.9	7.1

Note: Estimates are not comparable to the counts used to produce the overall WIC coverage rates. For the nonparticipation rates presented in this table, WIC participation and nonparticipation is calculated using self-reported CPS ASEC data, while other tables calculate coverage rates using FNS administrative data.

CPS ASEC = Current Population Survey Annual Social and Economic Supplement; FPG = Federal Poverty Guidelines; SNAP = Supplemental Nutrition Assistance Program

Source: U.S. Census Bureau, n.d.-a.

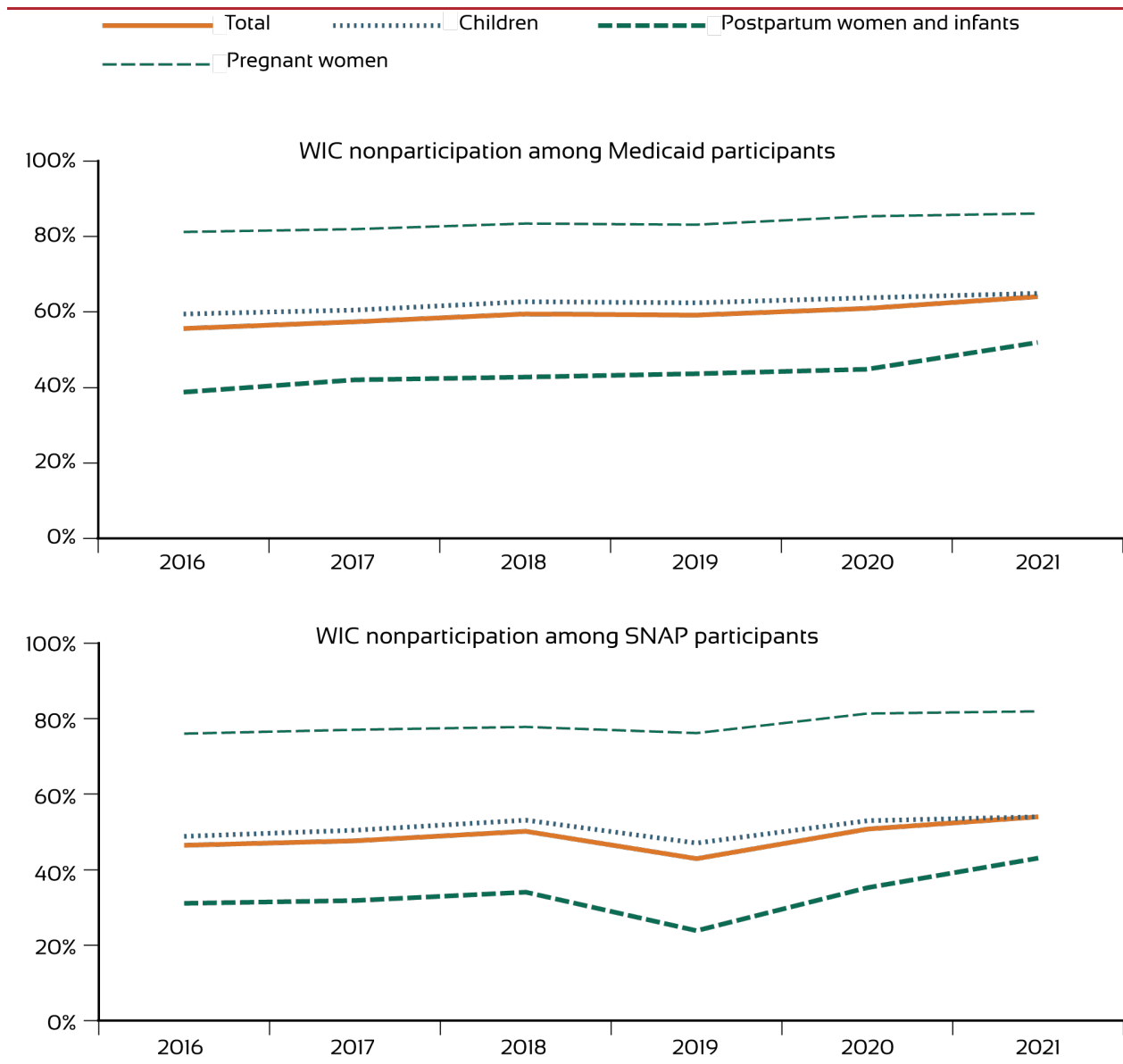
For individuals who only participated in Medicaid, WIC nonparticipation rates were consistently higher than WIC nonparticipation rates of individuals participating in SNAP only or both Medicaid and SNAP. WIC nonparticipation rates were lower overall and for each WIC participant category among individuals enrolled in both Medicaid and SNAP compared with individuals enrolled in only one program.

Among Medicaid participants, WIC nonparticipation rates were higher for individuals living in households with incomes above 185 percent of the FPG, with 72 percent of this group not participating in WIC compared with 58 percent of individuals living in households with income at or below 185 percent of the FPG.

C. Trends in National WIC Nonparticipation Rates

National-level WIC nonparticipation rates among Medicaid participants remained relatively stable between 2016 and 2021 (figure 5.2, top panel), with an increase in nonparticipation rates across all participant categories between 2020 and 2021. The largest increases were observed for infants and postpartum women participating in Medicaid, from 45 percent in 2020 to 52 percent in 2021. WIC nonparticipation rates among SNAP participants increased from an observed nonparticipation low of 43 percent in 2019 to 54 percent in 2021 (figure 5.2, bottom panel). Nonparticipation rates among infants and postpartum women participating in SNAP increased by 7 percentage points between 2020 and 2021.

Figure 5.2. Trends in WIC Nonparticipation Rates, CY 2016–CY 2021



CY = calendar year; SNAP = Supplemental Nutrition Assistance Program

Source: U.S. Census Bureau, n.d.-a

Chapter 6. Methodology

This chapter describes the methodology used to produce estimates of individuals eligible for WIC, coverage rates, and participation rates for 2021.⁴⁰ The estimation procedures used to develop the estimates for WIC eligibility are based primarily on the methodology recommended by the Committee on National Statistics (CNSTAT) panel members (Ver Ploeg & Betson, 2003). The methods were reexamined during the production of the 2020 eligibility estimates. Although the general procedures and primary data sources were maintained, several improvements were incorporated to the estimation methodology. This chapter highlights methodological improvements that differ from the last published report (Farson Gray et al., 2022); the 2016–2021 estimates presented in this report reflect the updated methodologies unless otherwise noted. The estimates also include two additional improvements to the estimation methodology (see appendix A of volume II for more information).

Methodological updates implemented as part of the production of the 2020 WIC eligibility estimates are highlighted in text boxes throughout chapter 6.

The following data sources were used as the starting point for the 2021 estimates: (1) 2022 CPS ASEC data (U.S. Census Bureau, n.d.-a), which asks about income and program participation during 2021; (2) 2019 and 2021 ACS and PRCS data (IPUMS-USA, n.d.-b); and (3) 2021 IDB data (U.S. Census Bureau, n.d.-b). Additional data sources were used to adjust the estimates to more closely reflect the population eligible for WIC.

The step-by-step process for producing the 2021 national, State, and U.S. territory estimates of individuals eligible for WIC is explained in section A (for infants and children), section B (for pregnant women), and section C (for postpartum women). Section D describes the method used to calculate WIC coverage rates, section E explains the method used to calculate participation rates, and section F explains the method used to calculate WIC nonparticipation rates among Medicaid and SNAP participants, a new chapter added to this year's report. Section G highlights additions to this report compared with the most recent report (Farson Gray et al., 2022).

Table 6.1 summarizes the steps, data sources, and adjustment factors used to estimate eligibility for WIC in 2021. Table 6.2 shows the derivation of the number of individuals eligible for WIC at each step of the process and the final number of eligible individuals. Tables 6.1 and 6.2 appear at the end of this chapter.

A. Determining the Number of Infants and Children Eligible for WIC

The first step in estimating the number of individuals eligible for WIC was to determine the number of infants and children eligible for WIC nationally, in each State, and in the U.S. territories WIC serves.⁴¹

1. National Estimates

Produce preliminary counts of infants and children

The national estimates of infants and children eligible for WIC are based on the 2022 CPS ASEC data. These data are used to produce preliminary counts of infants and children eligible for WIC in 2021. The

⁴⁰ The eligibility estimates are intended to represent average monthly figures—the numbers of women, infants, and children eligible for WIC in an average month of a calendar year—to be consistent with average monthly data on program participation.

⁴¹ Data for those eligible for WIC through ITOs are included in the data for the State where the ITO is located.

data were collected in spring 2022, and each household was asked to report income and program participation for the prior calendar year (2021).

Produce adjusted counts of infants and children

Methodological update. Prior to the production of the 2020 eligibility estimates, counts of infants and children from the CPS ASEC were weighted to U.S. Census Bureau population estimates. Under the revised methodology, the CPS ASEC counts are weighted to Vital Statistics data, which provide more recent estimates of births in the United States than the U.S. Census population estimates.

The preliminary counts of infants and children from the CPS ASEC were then adjusted to compensate for the differences between the weighted counts of infants and children in the CPS ASEC data and the CDC Vital Statistics annual report of births adjusted for observed infant deaths (CDC WONDER, n.d.) and immigration patterns (Migration Policy Institute, n.d.). There are two possible reasons for the differences in the number of infants and children reported in the CPS ASEC and the CDC Vital Statistics data: (1) the U.S. Census Bureau's weighting procedures for the CPS ASEC data were not designed to meet population targets by year of age and (2) Vital Statistics data offers the most recent and accurate count of births. The adjustment factors (see table 6.1) reflect Vital Statistics data by age and sex relative to the weighted counts in the CPS ASEC data for the same year.⁴² The adjustment factors inflated or deflated the CPS ASEC count for each subgroup (age and sex) to better reflect the Vital Statistics population estimate for that subgroup.

Determine the number of income-eligible infants and children

WIC regulations specify all individuals living as one economic unit (i.e., related or unrelated individuals who contribute to the household income) are treated as one unit for eligibility determination.⁴³ The CPS ASEC data do not explicitly indicate how household members (people living in the same dwelling) share resources. For purposes of estimating WIC eligibility, the economic unit was defined as all individuals in the CPS ASEC household who were related by blood, marriage, or adoption, plus the unmarried partner of any of those individuals and that partner's dependents.⁴⁴ Economic units in the CPS ASEC with annual income less than or equal to 185 percent of the Federal Poverty Guidelines were identified as income-eligible.^{45, 46} The adjusted counts of infants and children were used to estimate the number of income-eligible infants and children.

Determine the number of adjunctively income-eligible infants and children

Methodological update. Prior to the production of the 2020 eligibility estimates, the CPS ASEC was used to estimate participation in programs that confer adjunctive income eligibility. The new estimation procedures use information from the ACS to increase the number of individuals who participate in Medicaid and SNAP to address concerns about underreporting of program participation in the CPS ASEC. During the development of

⁴² The national-level adjustment factors were calculated separately by (1) age of infant or child (0, 1, 2, 3, or 4 years old) and (2) sex (female or male).

⁴³ For all references to WIC regulations in this report, see Special Supplemental Nutrition Program for Women, Infants, and Children, 7 C.F.R. § 246 (2014).

⁴⁴ For example, if a CPS ASEC household consisted of a woman living with her children, her unmarried partner, and the partner's child from a prior relationship, all individuals would be included in the economic unit for the purposes of calculating the WIC eligibility estimates in this report.

⁴⁵ Special Supplemental Nutrition Program for Women, Infants, and Children (WIC): 2021/2022 Income Eligibility Guidelines. 86 FR 12903.

⁴⁶ HHS issues new Federal Poverty Guidelines near the start of each calendar year, but the WIC program begins using each year's new guidelines in July; therefore, the poverty guidelines for 2 consecutive years were averaged to estimate income eligibility for WIC. For the 2021 estimates, the guidelines used to estimate WIC eligibility from July 2020 through June 2021 (the guidelines released in early 2020) were averaged with the guidelines used by the WIC program for July 2021 through June 2022 (the guidelines released in early 2021).

the 2021 eligibility estimates, these methods were further refined (see appendix A of volume II for more information).

Individuals who participate in Medicaid, SNAP, or TANF may be adjunctively income-eligible for WIC. Under prior published estimates (Farson Gray et al., 2022), participation in these programs was determined by identifying the infants and children who appeared adjunctively income-eligible according to data from the CPS ASEC. However, the CPS ASEC is known to underestimate participation in these programs, especially relative to the ACS (Meyer et al., 2020). During the development of the 2020 WIC eligibility estimates and updated 2016–2019 estimates (Gray et al., 2022), the ACS was used to estimate rates of program participation nationally by age, race and ethnicity, and income eligibility status.

Beginning with the 2021 estimates, Medicaid and SNAP participation was imputed in the CPS ASEC at the individual level by running logistic regression models on the ACS with covariates common to both surveys to improve the accuracy of the adjunctively income-eligible estimates. Because the concern in relying on the CPS ASEC is with the survey underreporting program participation rates, the imputations were made only for CPS ASEC respondents who indicated they were nonparticipants but were likely to have participated based on their characteristics that the ACS regression models identified as highly correlated with program participation. Imputations were made until the share of participants in the CPS ASEC was equal to the share of participants in the ACS.⁴⁷ Appendix A of volume II provides additional information on these logistic regression models. While these imputations were made for all infants and children regardless of income eligibility, only adjunctively income-eligible infants and children in economic units whose annual income exceeded 185 percent of the Federal Poverty Guidelines were added to the number of income-eligible infants and children.⁴⁸

Adjust for fluctuations in monthly income and certification periods

After determining the adjusted count of income-eligible or adjunctively income-eligible infants and children, adjustments were made to address (1) the differences between annual and monthly income, and (2) the effects of 6- and 12-month certification periods.⁴⁹ The annual-to-monthly income adjustment accounted for how annual income data and program participation data could incorrectly estimate monthly eligibility.⁵⁰ The adjustment for certification periods accounted for the fact that eligible infants were certified for a year, whereas some eligible children were certified for only 6 months and others for a year, depending on the State or territory.⁵¹ After a participant's certification period ends, eligibility must be confirmed again. These adjustment factors—calculated separately for infants and children by race and ethnicity and to reflect shorter certification periods for children in some States and territories⁵²—were calculated using data from the Survey of Income and Program Participation (SIPP), which provides month-by-month observation of family circumstances (see table 6.1; U.S. Census Bureau, n.d.-c). The 2016–2017 eligibility estimates presented in this report use data collected as part of

⁴⁷ TANF participation, however, was still based on the CPS ASEC's program participation data, similar to how TANF was estimated prior to the 2020 estimates. This is because the ACS does not ask specifically about receiving TANF benefits, while the CPS ASEC does.

⁴⁸ Adjunctive income eligibility is counted by the first program that qualifies the person for WIC, in this order: SNAP, TANF, and Medicaid.

⁴⁹ The Healthy, Hunger-Free Kids Act of 2010 (Pub. L. 111–296) gave States the option of certifying children eligible for WIC every 12 months instead of every 6 months. Whether and when a State has adopted this option affects WIC eligibility for children.

⁵⁰ For example, family income may fluctuate during the year, which may result in an infant or child being eligible based on income in certain months even though the family's annual income is above 185 percent of the poverty guidelines, or the family's annual income may suggest eligibility but the family's monthly income is above 185 percent of the poverty guidelines for certain months of the year. Program participation in Medicaid, SNAP, and TANF may also fluctuate during the year.

⁵¹ For example, an infant or child may appear ineligible based on annual income but could have been eligible because they were certified in the prior year. Conversely, a child may appear eligible based on annual income, but the family income could have increased by the time the child needed to be recertified.

⁵² Forty-nine States and the District of Columbia implemented the 12-month certification policy for children prior to 2021. In 2021, Arkansas maintained a 6-month certification policy for children. Among territories, the U.S. Virgin Islands also uses a 6-month certification policy for children.

the 2014 SIPP panel to calculate the annual-to-monthly adjustment factor. The 2018–2021 SIPP panels were used to update the adjustment factor (see appendix A of volume II for more information) for the 2018–2021 estimates.

Adjust for nutritional risk

Methodological update. As part of the production of the 2020 WIC eligibility estimates, FNS recommended updating the nutritional risk criteria adjustment factor to 1.0 for all participant categories based on the assumption of nutritional risk.

The final step in producing national estimates of infants and children eligible for WIC was to adjust for nutritional risk. Individuals eligible for WIC must be determined to be at nutritional risk regardless of their income. Prior to the 2020 estimates, the estimates were adjusted to account for the fact that a small percentage of otherwise eligible infants and children may not have been determined to be at nutritional risk. For the 2016–2021 estimates presented in this report, the nutritional risk adjustment factor is set to 1.0 based on guidance from the Institute of Medicine (2002) establishing “failure to meet the Dietary Guidelines [for Americans]” (p. 5) as a WIC nutritional risk category. Although this risk code does not apply to infants or children under 2, FNS and a panel of subject matter experts recommended updating this factor to 1.0 for all participant categories.

2. State Estimates

Methodological update. As part of the 2020 WIC eligibility estimate revisions, 2 years of ACS State-level data were pooled to address small area estimation challenges in small States. Previous versions of the estimates used only 1 year of ACS data.

The State-level estimates of infants and children eligible for WIC were calculated using the same methods used to generate the national-level estimates but with ACS data instead of CPS ASEC data.⁵³ Data from the 2019 and 2021 ACS were pooled to account for small sample sizes in several States.⁵⁴ The total numbers of infants and children were first identified in each State, and the counts were then adjusted to reflect State population estimates (U.S. Census Bureau, 2022c).⁵⁵ The number of infants and children in economic units with annual income less than or equal to 185 percent of the Federal Poverty Guidelines was determined, and the numbers of adjunctively income-eligible infants and children were added to that count. The annual-to-monthly income adjustments and the nutritional risk adjustments were then applied.⁵⁶ The ACS-based counts of infants and children eligible for WIC were totaled across the States, and each State’s share of the ACS-based national-level estimate was determined (separately by year of age⁵⁷ of participant) and applied to the CPS-based national estimates to derive State-specific estimates by age.

⁵³ Unlike the CPS ASEC data, the ACS data provide information for each household member’s relationship to the reference person (householder) rather than the members’ relationships to each other. To better understand relationships across all household members, which is important for determining WIC eligibility, the Minnesota Population Center’s IPUMS data were used. IPUMS data provide users with educated conjectures about the relationships between household members not related to the reference person.

⁵⁴ The 2020 ACS data have known challenges related to data collection during the pandemic (IPUMS-USA, n.d.-a) and were therefore excluded from the present analyses. In future years, the 2 most recent years of data will be pooled to produce State-level estimates.

⁵⁵ For State estimates, the weight adjustments were calculated by year of age (within each State), not by sex or race and ethnicity.

⁵⁶ When the annual-to-monthly factors were applied at the State level, two race and ethnicity factors were applied in each State: one for White-only, non-Hispanic children and one for children who were either non-White or Hispanic/Latino. The factors for children varied by each State’s implementation of 12-month certification.

⁵⁷ Age 0, 1, 2, 3, or 4

3. Territory Estimates

Estimates of infants and children eligible for WIC in Puerto Rico are based on the 2019 and 2021 PRCS data and were created with the same methods and adjustments used to develop the State-level estimates. Estimates for the other four U.S. territories WIC serves are based on the 2021 IDB data for those areas. Starting from the numbers of infants and children in the U.S. territories in the IDB data, two adjustments were applied: (1) 2010 decennial census data were used to estimate the percentage of the income-eligible population, and (2) the relationship between income eligibility and adjunctive income eligibility in the States and Puerto Rico in 2021 was used to estimate the additional number of infants and children eligible through adjunctive income eligibility in the other four U.S. territories.⁵⁸

B. Determining the Number of Pregnant Women Eligible for WIC

Methodological update. Prior to the 2020 eligibility estimate revision, pregnant women were estimated based on the estimated number of eligible infants. National estimates in this report use women of reproductive age (15–44) identified in the CPS ASEC as the starting point for estimating women; counts are then adjusted following a CDC-recommended procedure for estimating pregnant women (CDC, n.d.). Because of these methodological changes, the pregnancy estimation procedures no longer incorporate separate adjustments for (1) multiple births and infant deaths; (2) length of pregnancy; and (3) income during pregnancy. State estimates for pregnant women continue to use the estimated number of eligible infants as the starting point.

The next step in estimating eligibility for WIC in 2021 was to determine the number of pregnant women eligible for WIC in the States and U.S. territories WIC serves. Because the CPS ASEC and ACS data do not include information about pregnancy, there is no direct way to identify pregnant women in either survey. In prior reports, the final average monthly estimate of infants eligible for WIC was used as the starting point to estimate the number of pregnant women eligible for WIC both nationally and at the State level. Under the updated methodology, the national count of pregnant women was derived by first identifying women of reproductive age (15–44) in the CPS ASEC and then adjusting for the likelihood of pregnancy among this group based on CDC guidance on estimating the pregnant population (CDC, n.d.). The State-level estimates continued to use the final average monthly estimates of infants eligible for WIC as the starting point for estimating pregnant women.

1. National Estimates

Produce preliminary counts of pregnant women

Under the updated methodology, the number of pregnant women was derived from the population of women of reproductive age (15–44) in the CPS ASEC. Using the population of potentially pregnant women instead of using the final estimates of infants as the starting point for the estimates removes the possibility of overestimating characteristics that are more common in infants than in pregnant women. It also enables more accurate characteristics that may differ between an infant and a mother (e.g., if a mother of a single race/ethnicity gives birth to a child of more than one race/ethnicity). The total population of women of reproductive age is then adjusted to account for the likelihood of being pregnant based on CDC guidance (CDC, n.d.). The procedures estimate pregnancy based on the number of live births from Vital Statistics, number of multiple births (e.g., twins), and number of pregnancy

⁵⁸ The relationship between adjunctive income eligibility and income eligibility in Puerto Rico and the mainland in 2019 was used to estimate the additional number of infants and children who would gain eligibility through participation in other safety net programs. These procedures resulted in an estimate of 80 percent of infants and 84 percent of children eligible for WIC in the other island territories because of annual income or program participation.

losses and induced abortions and adjust for the expected duration of pregnancy.⁵⁹ The estimates of the total pregnant population account for differences in the likelihood of pregnancy based on race and ethnicity.

Produce adjusted counts of pregnant women

The preliminary counts of pregnant women from the CPS ASEC were then adjusted to compensate for the differences between the weighted counts of pregnant women in the CPS ASEC data and the U.S. Census Bureau's population estimates. The adjustment factors (see table C.3c2 of volume II of this report for the full list of adjustment factors by age) reflect national population estimates (U.S. Census Bureau, 2022b) by race and ethnicity and age during a 4-year period relative to the weighted counts in the CPS ASEC data for the same period. The adjustment factors inflated or deflated the CPS ASEC count for each subgroup (i.e., age; race and ethnicity) to better reflect the U.S. Census Bureau population estimate for that subgroup. The adjustment factors were used only when the direction of the difference between the U.S. Census Bureau population estimate and the CPS weighted count was the same as for the 4-year accumulations (i.e., if the Census Bureau figure was either greater or smaller in both cases). If the direction of the difference was not the same for a particular group, no adjustment was performed (i.e., the weight adjustment factor was 1.0). The same procedures for estimating income and adjunctive income eligibility, including the ACS imputation for Medicaid and SNAP, are applied to the adjusted count of pregnant women.

Adjust for nutritional risk

Based on recommendations from FNS and presumption of nutritional risk, all estimates provided in this report set the nutritional risk adjustment factor to 1.0 for pregnant women (see table 6.1).

2. State Estimates

The State-level estimates were calculated by using the ACS-based State estimates of infants eligible for WIC as a starting point. The infant estimates were then adjusted to reflect the population of pregnant women, accounting for multiple births and infant deaths, length of pregnancy, income during pregnancy, and nutritional risk, generating each State's share of pregnant women eligible for WIC in the ACS. Those shares were then applied to the national-level estimate of pregnant women eligible for WIC based on the CPS ASEC data to produce the final State-level estimates of eligible pregnant women.

Adjust estimates for multiple births and infant deaths

The number of pregnant women can differ from the number of infants because of (1) multiple births (which reduce the number of pregnant women compared with the number of infants) and (2) fetal and infant deaths (which increase the number of pregnant women compared with the number of infants). The adjustment factor is calculated using National Vital Statistics System data on births, infant deaths, and fetal deaths (see table 6.1).

⁵⁹ Counts of births, multiple births, and pregnancy losses come from Vital Statistics. Counts of induced abortions are based on the CDC's Abortion Surveillance System (Kortsmitt et al., 2021).

Adjust estimates for length of pregnancy

The 2021 estimates were also adjusted to reflect that the length of a typical pregnancy is 9 months⁶⁰ (see table 6.1).

3. Territory Estimates

Estimates of pregnant women eligible for WIC in the U.S. territories were calculated with a method parallel to the one used to estimate the number of women eligible for WIC in the States. The adjustments described earlier in this section were applied to the infant eligibility estimates for the U.S. territories to derive the number of pregnant women eligible for WIC.

C. Determining the Number of Postpartum Women Eligible for WIC

The final step in estimating the number of individuals eligible for WIC in 2021 was to calculate the number of postpartum breastfeeding and non-breastfeeding women eligible for WIC in the Nation, States, and U.S. territories. National, State, and territory estimates of postpartum women eligible for WIC were calculated using adjusted counts of infants eligible for WIC instead of separate counts from the CPS ASEC data. Breastfeeding status is key to estimating WIC eligibility for postpartum women, and CPS ASEC data do not identify breastfeeding status. A new mother may receive WIC benefits for 6 months if she is not breastfeeding and up to 12 months if she is breastfeeding. Therefore, information was needed on breastfeeding rates among mothers eligible for WIC during the first 6 months and second 6 months after giving birth and the rate at which breastfeeding mothers ceased breastfeeding during these two periods. These rates were applied to the count of postpartum women to estimate the numbers of postpartum breastfeeding and postpartum non-breastfeeding women for 2021.

1. National Estimates

The national estimates of postpartum women were calculated based on the estimated counts of infants eligible for WIC. A series of adjustments were made to the final average monthly estimate of infants eligible for WIC to create the national-level estimate of postpartum women eligible for WIC. Descriptions of these adjustments follow.

Adjust estimates for multiple births, infant deaths, and maternal deaths

Methodological update. As part of the 2020 eligibility estimate revision, separate multiple birth and infant death adjustments were made to capture variation in the breastfeeding and non-breastfeeding populations. The adjustment factors were also revised to incorporate maternal mortality.

The number of postpartum breastfeeding and non-breastfeeding women can differ from the number of infants for a variety of reasons. These include (1) multiple births (which reduce the number of postpartum women compared with the number of infants); (2) fetal and infant deaths (which increase the number of non-breastfeeding women compared with the number of infants); (3) maternal deaths (which reduce the number of postpartum women compared with the number of infants); and (4) induced abortions (which increase the number of non-breastfeeding women compared with the number of infants). Separate breastfeeding and non-breastfeeding adjustment factors are calculated using National Vital Statistics System data on births, infant deaths, and fetal deaths; the Pregnancy Mortality

⁶⁰ The estimates calculate pregnant women as eligible from conception, which is consistent with Federal WIC eligibility guidelines.

Surveillance System data on maternal deaths (CDC, 2020); and the Abortion Surveillance System data on induced abortions (Kortsmit et al., 2021). Separate adjustments were made to the counts of infants eligible for WIC for four race and ethnicity groups: White-Only, Not Hispanic; Black-Only, Not Hispanic; Two or More Races or Other Race, Not Hispanic; and Hispanic/Latino (see table 6.1).

Adjust estimates for breastfeeding status

National breastfeeding rates were used to adjust for breastfeeding status by race and ethnicity for the 2021 estimates. The breastfeeding rates were drawn from the most recent National Immunization Survey (NIS) conducted by the CDC: the 2021 and 2020 surveys for the 2019 birth cohort.⁶¹ CDC conducted special tabulations of the NIS data to provide breastfeeding rates for all infants, infants participating in WIC, and nonparticipating infants who were eligible for WIC and were born in 2019. Under the updated methodology used for the 2016–2021 estimates, the determination of WIC eligibility was expanded to include Medicaid participation in addition to income. NIS participant caregivers of children aged 19–35 months were asked whether the child was ever breastfed or fed breast milk and the age when the child completely stopped breastfeeding or being fed breast milk. These data were provided for three points in time: (1) ever, (2) at 6 months, and (3) at 12 months. These data were also collected for four racial and ethnic categories: White-Only, Not Hispanic; Black-Only, Not Hispanic; Two or More Races or Other Race, Not Hispanic; and Hispanic/Latino. This information was used to calculate adjustments to derive postpartum women eligible for WIC by breastfeeding status.

Adjust for nutritional risk

All postpartum women were assumed to be at nutritional risk, so an adjustment factor of 1.0 was used (see table 6.1).

2. State Estimates

Adjustments similar to those applied to the CPS ASEC data were applied to the ACS-based infant eligibility estimates to derive State-level estimates of postpartum breastfeeding and non-breastfeeding women eligible for WIC. State-level NIS data on breastfeeding rates were provided by CDC to produce the 2019 estimates.⁶² The ACS-based estimates were then used to generate each State's share of total postpartum women eligible for WIC, and those shares were applied to the national-level estimate of postpartum women eligible for WIC based on the CPS ASEC data.

3. Territory Estimates

Adjustments similar to those applied to the CPS ASEC data were applied to the estimates of eligible infants in the U.S. territories to derive estimates of postpartum breastfeeding and non-breastfeeding women eligible for WIC in the U.S. territories WIC serves. National breastfeeding rates were used to estimate the numbers of postpartum breastfeeding and non-breastfeeding women eligible for WIC in the U.S. territories other than Puerto Rico.⁶³

⁶¹ Unpublished internal CDC data

⁶² The three most recent birth cohorts were pooled to produce a 3-year average rate for each State to reduce year-to-year variation because of small sample sizes in some States. Both 2018 and 2019 birth cohort data included Medicaid status in the determination of WIC eligibility; in 2017 (and prior years), only income was used to determine WIC eligibility.

⁶³ National breastfeeding rates were used because breastfeeding rates were not available for the U.S. territories other than Puerto Rico.

D. Estimating Coverage Rates

The coverage rate is defined as the percentage of women, infants, and children eligible for WIC who were enrolled in WIC *and* claimed their benefits in an average month in 2021.⁶⁴ Coverage rates are useful for understanding how well WIC reaches those who may benefit from the program.

The source for the number of participants was WIC administrative data from FNS.⁶⁵ FNS provides these administrative counts of WIC program participants by State for each of the five WIC participant categories: infants, children, pregnant women, postpartum breastfeeding women, and postpartum non-breastfeeding women. The coverage rates were calculated based on the ratio of WIC participants (numerator) in an average month in 2021 to the estimates of individuals eligible for WIC (denominator) in an average month in 2021.

The administrative data on WIC participant counts used for this study did not provide the number of participating children by year of age (age 1, 2, 3, or 4) and did not count participants by race and ethnicity. However, these data were available in the WIC PC2020 report (Kline et al., 2022). Therefore, the distribution of WIC-enrolled individuals across these participant categories was applied to the total number of WIC participants to estimate coverage rates by year of age for children and by race and Hispanic ethnicity.⁶⁶ This implicitly assumes that the likelihood an enrolled person's benefits are not claimed does not vary by race or ethnicity or a child's age.

National coverage rate estimates for 2021 were derived for infants, children by year of age, pregnant women, and postpartum breastfeeding and non-breastfeeding women, as well as by race and Hispanic ethnicity (see chapter 3). State coverage rates were also derived for infants, children by year of age, and pregnant and postpartum women by race and Hispanic ethnicity.

Each coverage rate is estimated independently based on the number of participating individuals in WIC compared with the estimated number of individuals eligible for WIC in that category. To create a consistent set of estimates, the total number of eligible individuals is the same regardless of how they are stratified by subgroup. This report contains some coverage rate estimates over 100 percent, meaning the number of individuals estimated to be eligible in a particular subgroup was smaller than the number of participants. In large part, it is likely the result of sampling variability in the CPS ASEC or ACS survey data used to estimate the number of eligible individuals (denominator of the rate). Appendix B of volume II contains more information on measures of statistical precision for the eligibility estimates. Rates over 100 percent are indicated in the notes of each table and figure.

E. Estimating Participation Rates

The participation rate is defined as the percentage of the total population of women, infants, and children who received WIC benefits in an average month in 2021. Participation rates provide information on the percentage of all infants, children, pregnant women, and postpartum women in the Nation who received WIC benefits in 2021.

⁶⁴ A small number of individuals who were enrolled in WIC during a given month may not have participated (claimed their benefits from their State agencies that month).

⁶⁵ All WIC administrative data referenced in this report is unpublished internal FNS data.

⁶⁶ For example, to estimate the number of WIC participants who were 2 years old, WIC PC2020 data were used to estimate the percentage of WIC-enrolled children with those characteristics; that proportion was then applied to the number of WIC-participating children according to WIC administrative data.

National participation rate estimates for 2021 were derived for infants, children by year of age, pregnant women, and postpartum breastfeeding and non-breastfeeding women (see chapter 4).

F. Estimating Nonparticipation Among Medicaid and SNAP Participants

This report includes the first published national estimates of WIC nonparticipation among Medicaid and SNAP participants. Medicaid and SNAP confer adjunctive income eligibility to categorically eligible individuals (i.e., pregnant, breastfeeding, or non-breastfeeding women; infants; and children up to age 5). Research on WIC participation among individuals eligible for WIC who participate in Medicaid and SNAP is limited.

The CPS ASEC served as the starting point for estimating WIC nonparticipation among Medicaid and SNAP participants eligible for WIC (the denominator of the nonparticipation rates). WIC participation (the numerator of the nonparticipation rates) was determined using the CPS ASEC measure of WIC participation at any time during the past year instead of FNS administrative data. One limitation of this approach is that the WIC participation variable on the CPS ASEC is only asked of households with adult females (individuals aged 15 or older).⁶⁷ Individuals whose WIC status was not assessed were removed from the analysis.

Medicaid and SNAP participation is not mutually exclusive; individuals can participate in both programs. Individuals enrolled only in Medicaid may also have a different likelihood of participating in WIC than individuals who participate in both Medicaid and SNAP. Nonparticipation rates were calculated for seven groups:

1. All individuals in Medicaid
2. All individuals in SNAP
3. All individuals in Medicaid whose income is below 185 percent of the Federal Poverty Guidelines
4. All individuals in Medicaid whose income is at or above 185 percent of the Federal Poverty Guidelines
5. Individuals only in Medicaid
6. Individuals only in SNAP
7. Individuals in both Medicaid and SNAP

The total number of individuals eligible for WIC was determined for each of the seven groups. The CPS ASEC WIC participation variable was then used to identify the proportion of individuals in each group who did not participate in WIC using the following formula:

$$NonParticipation Rate_{PY} = \frac{CategoricallyEligPop_{PY,CPS} - WICParticipants_{PY,CPS}}{CategoricallyEligPop_{PY,CPS}}$$

—where *PY* represents the population that participates in program *P* (Medicaid, SNAP, or both) in year *Y*.

⁶⁷ In 2021, the CPS ASEC overestimated the number of WIC participants by an estimated 6 percent. Approximately 84,000 additional children under 5 from households without an adult female participated in Medicaid or SNAP but did not have their WIC status assessed by the CPS ASEC.

WIC nonparticipation rates were calculated among all individuals eligible for WIC and then separately for infants, children, pregnant women, and postpartum women.

G. Additions to This Year's Report

This section summarizes changes from the previous report on national- and State-level estimates of individuals eligible for WIC (Farson Gray et al., 2022). Additional improvements to the estimation methodology are discussed in appendix A of volume II.

1. Coverage Rates by Urbanicity and Poverty Status

Table 3.1 includes new analyses of national coverage rates stratified by urbanicity and poverty status.

Urbanicity among the population eligible for WIC is determined using the CPS ASEC measure of metropolitan status based on Office of Management and Budget (OMB) metropolitan designations. The OMB classifies a core based statistical area as metropolitan if it includes at least one urbanized area with 50,000 or more individuals; all other areas are classified as nonmetropolitan (U.S. Office of Management and Budget, 2021).⁶⁸ For urbanicity among WIC participants, ZIP Codes for each participant's WIC local agency serve as a proxy for ZIP Code of residence. Local agency ZIP Codes are classified as metropolitan or nonmetropolitan using the core-based statistical area codes. Using the WIC local agency likely leads to some misclassification of participant residences, with more metropolitan agencies than metropolitan residences. This misclassification results in an overestimation of coverage rates for metropolitan areas and an underestimation of coverage rates for nonmetropolitan areas.

For poverty status, household income is calculated as a percentage of the Federal Poverty Guidelines and split into two categories (see table 3.1). The CPS ASEC measures of household income determine poverty status for eligible individuals. The 2020 WIC PC data are used to determine the poverty status for WIC participants. WIC participants with missing income data are excluded from the coverage rate calculations.⁶⁹

2. Additional Participation Rates for States

Two tables are added to the report, presenting participation rates by (1) State and participant type and (2) State and race/ethnicity. These new tables were enabled by pooling 2 years of State data, which stabilized smaller estimates for smaller States. Consistent with the State and race and ethnicity tables for coverage rates, the race and ethnicity category is stratified into three groups: Hispanic, non-Hispanic White only, and non-Hispanic other than White only.

3. State-Level Estimates by WIC Participant Category and Race/Ethnicity

Pooling State-level data also allowed State estimates to be stratified by both WIC participant category and race/ethnicity for children. (Estimates for infants and women remained unstable because of small sample sizes.) Results are presented in appendix D (table D.12).

⁶⁸ In the CPS ASEC, less than 1 percent of the WIC-eligible population is classified as "not identified."

⁶⁹ The 2020 WIC PC reported 7.5 percent of participants had missing income data (Kline et al., 2022).

4. WIC Nonparticipation Among Medicaid and SNAP Participants

Chapter 5 presents new analyses estimating the proportion of Medicaid and SNAP participants who are categorically eligible for WIC but do not participate in WIC. The overall eligibility estimation procedures use the WIC PC and FNS administrative data to determine national and State counts of WIC participants used for the numerator of the WIC coverage rates. In contrast, for the nonparticipation rates, WIC participation is measured using the CPS ASEC for the numerator because of data concerns about measurement of Medicaid and SNAP in the WIC PC data. This methodological difference limits the ability to directly compare coverage rates and nonparticipation rates.

5. Revised Confidence Intervals

In past iterations of the eligibility estimates, certain subgroups with minimal coverage in the ACS (e.g., race and ethnicity stratifications in small States with homogenous populations) have exhibited large confidence intervals and confidence intervals that extend beyond the expected bounds of the coverage rates. Past eligibility estimates reports have suppressed coverage rates with the lower bound of the confidence interval above 100 percent or coverage rates with the lower bound of the confidence interval below 0 percent and the upper bound of the confidence interval above 100 percent.

The online graphics accompanying this report on the FNS website use the Wilson score method, which adapts the traditional confidence interval methodology to acknowledge that coverage rate estimates near 0 and 100 do not align with the traditional confidence interval assumptions (Griffiths, 2009). The Wilson score method uses the same inputs—point estimate, standard error, sample size, and z-value—to create more realistic confidence bounds. Wilson score confidence intervals diverge from those of the traditional method to a greater degree as the coverage rate estimate moves away from 50. Importantly, this means they become less symmetrical around the point estimate in a reflection of the skewness of a coverage rate's range as it approaches 0 or 100. Past versions of the report have included margins of error; however, under the Wilson score method, the upper and lower bounds of the confidence interval are no longer equivalent, which limits the interpretability of the margin of error. This report presents coefficients of variation in place of margins of error as a measure of imprecision (see appendix B of volume II for more details) because coefficients of variation are not affected by the adoption of the Wilson score methods.

Table 6.1. Steps, Data Sources, Methods, and Adjustment Factors Used for CY 2021 Estimates of WIC Eligibility

Participant Category	Step	Data Source(s)	Methods and Adjustment Factors	
Infants and children	Categorical eligibility	2022 CPS ASEC, national estimates 2019 and 2021 ACS, State estimates 2019 and 2021 PRCS, Puerto Rico estimates 2021 IDB, other island territories estimates	Identify individuals aged 0, 1, 2, 3, and 4 in each survey.	
	Weight adjustment	- National estimates - Vital Statistics and March CPS ASEC for 2022 - State and Puerto Rico estimates - Postcensal population estimates from U.S. Census Bureau	Adjust sampling weights to account for undercount or overcount in CPS estimates relative to Vital Statistics estimates by year of age and sex.	Adjustment Factors for Females - Infants: 1.0517 1-year-old children: 0.9819 2-year-old children: 0.9848 3-year-old children: 1.0328 4-year-old children: 0.9630 Adjustment Factors for Males - Infants: 1.0795 1-year-old children: 0.9572 2-year-old children: 1.0068 3-year-old children: 0.9900 4-year-old children: 0.9830
	Income eligibility	2022 CPS ASEC, national estimates 2019 and 2021 ACS, State estimates 2019 and 2021 PRCS, Puerto Rico estimates 2021 IDB, other island territories estimates - Blended 2020 and 2021 FPGs	Count as eligible if prior year's annual income was ≤ 185 percent of the Federal Poverty Guidelines.	
	Adjunctive income eligibility	2022 CPS ASEC 2021 ACS 2021 PRCS	Add as eligible those infants and children in families that reported participating in Medicaid, SNAP, or TANF at any point during the prior calendar year. Use 2021 ACS to impute Medicaid and SNAP participation for those who do not report participating in either program to account for potential underreporting of program participation in CPS ASEC.	
	Adjust for fluctuations in monthly income and certification periods	Average of factors from 2018, 2019, 2020, and 2021 Survey of Income and Program Participation panel	Adjust estimates to account for impact of monthly fluctuations in income and program participation and for impact of 6- and 12-month certification periods. ^a - Infants adjustment factor (used for estimates from PRCS and IDB data): 1.0130 - Infants adjustment factors by race and ethnicity (used for estimates from CPS ASEC and ACS data) - White-Only, Not Hispanic: 1.1000 - All others: 1.0000 - Children adjustment factor assuming 12-month certification periods (used for estimates from PRCS and IDB data): 1.0000 - Children adjustment factors by race and ethnicity (used for estimates from CPS ASEC data) - White-Only, Not Hispanic: 1.0000 - All others: 1.0000	
	Adjust for nutritional risk	CNSTAT panel and FNS	Multiply infant and child estimates by factor to account for otherwise eligible infants and children who might not be at nutritional risk. Estimates assume all infants and children were at nutritional risk. Adjustment factor for infants and children: 1.0000	

Participant Category	Step	Data Source(s)	Methods and Adjustment Factors
Pregnant women	Categorical eligibility	2022 CPS ASEC, national estimates 2019 and 2021 ACS, State estimates 2019 and 2021 PRCS, Puerto Rico estimates - Average of 3 years of CDC National Vital Statistics data (i.e., 2019–2021 Births: Final Data, 2018–2020 Period Linked Birth – Infant Death Data Files, and 2018–2020 Fetal Death Data Files); Abortion Surveillance System (2018–2020); and Pregnancy Mortality Surveillance System (2018–2020)	National: Identify women of reproductive age (15–44) in the CPS ASEC and apply adjustments proposed by the CDC (n.d.) to estimate the number of pregnant women based on births, multiple births, abortions, and fetal deaths accounting for average duration of pregnancy. State and territory: Use as a starting point the final average monthly eligibility estimate for infants. Multiply by factor to account for impact of multiple births, induced abortions, and fetal and infant deaths (so the number of pregnant women is not exactly equal to the number of infants).
	Weight adjustment	- National estimates - Postcensal population estimates from U.S. Census Bureau and March CPS ASEC for 2019, 2020, 2021, and 2022 - State and Puerto Rico estimates - Postcensal population estimates from U.S. Census Bureau for July 2021	Adjust sampling weights to account for undercount or overcount in CPS estimates relative to U.S. Census Bureau population estimates by year of age and four race/ethnic categories (White-Only, Not Hispanic; Black-Only, Not Hispanic; Two or More Races or Other Race, Not Hispanic; and Hispanic/Latino).
	Income eligibility	2022 CPS ASEC, national estimates 2019 and 2021 ACS, State estimates 2019 and 2021 PRCS, Puerto Rico estimates 2021 IDB, Other island territories estimates - Blended 2020 and 2021 FPGs	Count as eligible if prior year's annual income was ≤ 185 percent of the Federal Poverty Guidelines.
	Adjunctive income eligibility	2022 CPS ASEC 2021 ACS 2021 PRCS	Add in as eligible women in families who reported participating in Medicaid, SNAP, or TANF at any point during the prior calendar year. Use 2021 ACS data to impute Medicaid and SNAP participation for those who do not report participating in either program to account for CPS ASEC undercount.
	Adjust for length of pregnancy	N/A	For State estimates account for 9 months of pregnancy (0.75 factor). National-level pregnancy calculations account for pregnancy duration.
	Adjust for fluctuations in monthly income	Average of factors for 2018, 2019, 2020, and 2021 Survey of Income and Program Participation panel	Adjust estimates to account for impact of monthly fluctuations in income. Use infants adjustment factors - Infant adjustment factor (used for estimates from PRCS and IDB data): 1.0130 - Infants adjustment factors by race and ethnicity (used for State-level estimates) - White-Only, Not Hispanic: 1.1000 - All others: 1.0000
	Adjust for nutritional risk	CNSTAT panel and FNS	Multiply pregnant women estimates by factor to account for otherwise eligible pregnant women who might not be at nutritional risk. Estimates assume all pregnant women were at nutritional risk. Adjustment factor for pregnant women: 1.0000

Participant Category	Step	Data Source(s)	Methods and Adjustment Factors
Postpartum women	Starting point	Infants as estimated using methods outlined earlier in table	Use as a starting point the final average monthly eligibility estimate for infants.
	Adjust for multiple births and infant deaths	Average of 3 years of CDC National Vital Statistics data (i.e., 2019–2021 Births: Final Data, 2018–2020 Period Linked Birth – Infant Death Data Files, and 2018–2020 Fetal Death Data Files); Abortion Surveillance System (2018–2020); and Pregnancy Mortality Surveillance System (2018–2020)	Breastfeeding postpartum women: Multiply by factor to account for impact of multiple births and maternal, fetal, and infant deaths (so the number of breastfeeding women is not exactly equal to the number of infants). ▪ Breastfeeding postpartum women adjustment factors – White-Only, Not Hispanic: 0.9829 – Black-Only, Not Hispanic: 0.9784 – Two or More Races or Other Race, Not Hispanic: 0.9857 – Hispanic/Latino: 0.9873 Non-breastfeeding postpartum women: Multiply by factor to account for impact of multiple births, abortions, and maternal, fetal, and infant deaths (so the number of non-breastfeeding women is not exactly equal to the number of infants). ▪ Non-breastfeeding postpartum women adjustment factors – White-Only, Not Hispanic: 1.1721 – Black-Only, Not Hispanic: 1.1745 – Two or More Races or Other Race, Not Hispanic: 1.1448 – Hispanic/Latino: 1.1434
	Adjust for breastfeeding status	CDC NIS breastfeeding rates computed for 2019 birth cohort (NIS survey years 2020 and 2021)	Multiply by factors to estimate average monthly women eligible for WIC as breastfeeding women (0 < 12 months postpartum) or non-breastfeeding women (< 6 months postpartum). Separate State-level breastfeeding adjustments are used for the ACS data. ▪ Breastfeeding (used for estimates from PRCS and IDB data): 0.4408 ▪ Breastfeeding by race and ethnicity (used for estimates from CPS ASEC) – Hispanic/Latino: 0.4703 – White-Only, Not Hispanic: 0.4431 – Black-Only, Not Hispanic: 0.3774 – Two or More Races or Other Race, Not Hispanic: 0.4600 ▪ Non-breastfeeding (used for estimates from PRCS and IDB data): 0.2346 ▪ Non-breastfeeding by race and ethnicity (used for estimates from CPS ASEC) – Hispanic/Latino: 0.2223 – White-Only, Not Hispanic: 0.2376 – Black-Only, Not Hispanic: 0.2629 – Two or More Races or Other Race, Not Hispanic: 0.2304

Participant Category	Step	Data Source(s)	Methods and Adjustment Factors
Postpartum women (continued)	Adjust for nutritional risk	CNSTAT panel and FNS	Multiply estimates for postpartum women by factor to account for some otherwise eligible women who may not have been at nutritional risk. Estimates assume all postpartum women were at nutritional risk. Adjustment factor for postpartum women: 1.0000

Note: CDC NIS breastfeeding rates are based on unpublished internal CDC data. Adjustment factors shown in this table were used to produce estimates of eligible individuals. When applicable, the same adjustment factors were used to produce estimates of the total population; because of differences in breastfeeding rates, adjustment factors differed for mothers eligible for WIC and the total population of mothers.

ACS = American Community Survey; CDC = Centers for Disease Control and Prevention; CNSTAT = Committee on National Statistics; CPS ASEC = Current Population Survey Annual Social and Economic Supplement; CY = calendar year; IDB = International Database; N/A = not applicable; NIS = National Immunization Survey; PRCS = Puerto Rico Community Survey; SIPP = Survey of Income and Program Participation

^a An adjustment factor for the total number of children (1.0652) was also calculated but not used for any adjustment. The separate adjustment factors by race and ethnicity were used for the estimates.

Sources: The data sources listed in this table are as follows, in order of mention: for 2022 CPS ASEC data, see U.S. Census Bureau, n.d.-a; for 2019 and 2021 ACS and PRCS data, see IPUMS-USA, n.d.-b; for 2021 IDB data, see U.S. Census Bureau, n.d.-b; for 2019–2021 National Vital Statistics data, see National Center for Health Statistics, n.d.; for July 2021 postcensal population estimate data, see U.S. Census Bureau, 2022a, 2022b, 2022c; for WIC income eligibility criteria, see 7 C.F.R. § 246; for 2020 Federal Poverty Guidelines, see HHS, 2020; for 2021 Federal Poverty Guidelines, see HHS, 2021; for 2018–2021 SIPP data, see U.S. Census Bureau, n.d.-c; for the Committee on National Statistics panel data, see Ver Ploeg & Betson, 2003; for 2018–2020 Abortion Surveillance System data, see Kortsmits et al. 2021; for 2018–2020 Pregnancy Mortality Surveillance System data, see CDC, 2020.

Table 6.2. Step-by-Step Adjustments Applied to CPS ASEC Data to Derive the Average Monthly Number of Individuals Eligible for WIC by Participant Category: CY 2021

Step	Infants	1-Year-Old Children	2-Year-Old Children	3-Year-Old Children	4-Year-Old Children	All Children	Pregnant Women	Postpartum Breastfeeding Women	Postpartum Non-Breastfeeding Women	Total
Total number of infants and children in CPS ASEC data	3,418,945	3,708,438	3,741,880	3,731,114	3,939,012	15,120,444	–	–	–	18,539,389
Number after adjustment for CPS undercount, overcount	3,643,654	3,593,909	3,726,649	3,770,227	3,833,156	14,923,940	–	–	–	18,567,595
Number with annual income ≤ 185 percent of the FPG	1,070,123	1,070,731	1,239,431	1,115,132	1,197,697	4,622,992	–	–	–	5,693,115
Number adjunctively income-eligible and with annual income > 185 percent of the FPG ^a	698,975	760,658	789,361	794,190	792,726	3,136,936	–	–	–	3,835,911
Through SNAP	291,118	335,825	317,463	310,695	335,479	1,299,462	–	–	–	1,590,580
Through TANF	9,588	2,206	2,189	11,848	8,124	24,368	–	–	–	33,955
Through Medicaid	398,270	422,627	469,709	471,647	449,123	1,813,106	–	–	–	2,211,376
Total number income- and adjunctively income-eligible	1,769,098	1,831,390	2,028,793	1,909,322	1,990,423	7,759,928	–	–	–	9,529,026
Number after adjustment for monthly income and certification periods	1,825,015	1,831,390	2,028,793	1,909,322	1,990,423	7,759,928	–	–	–	9,584,943
Total number eligible: Number after adjustment for nutritional risk (infants and children)	1,825,015	1,831,390	2,028,793	1,909,322	1,990,423	7,759,928	–	–	–	9,584,943
Starting point for estimates of pregnant and postpartum women	–	–	–	–	–	–	25,342,904	1,825,015	1,825,015	28,992,935

Step	Infants	1-Year-Old Children	2-Year-Old Children	3-Year-Old Children	4-Year-Old Children	All Children	Pregnant Women	Postpartum Breastfeeding Women	Postpartum Non-Breastfeeding Women	Total
Total number eligible: Number after adjustments for pregnancy and breastfeeding status	–	–	–	–	–	–	1,113,832	787,451	503,535	2,404,818
Total number eligible in the 50 States and the District of Columbia, excluding the U.S. territories served by WIC	1,825,015	1,831,390	2,028,793	1,909,322	1,990,423	7,759,928	1,113,832	787,451	503,535	11,989,762
Total number eligible in all U.S. territories served by WIC ^b	21,379	21,494	22,761	22,749	24,082	91,086	14,574	9,460	5,035	141,535
Total number eligible in the 50 States, the District of Columbia, and the U.S. territories served by WIC	1,846,394	1,852,884	2,051,553	1,932,072	2,014,506	7,851,014	1,128,406	796,911	508,571	12,131,296

CPS = Current Population Survey; CPS ASEC = CPS Annual Social and Economic Supplement; CY = calendar year; FPG = Federal Poverty Guidelines; SNAP = Supplemental Nutrition Assistance Program; TANF = Temporary Assistance for Needy Families

^a Adjunctive income eligibility was counted by the first program that qualified the individual for WIC, in this order: SNAP, TANF, and Medicaid.

^b See appendix D of volume II for the derivation of WIC eligibility in U.S. territories.

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Sources: IPUMS-USA, n.d.-b; U.S. Census Bureau, n.d.-a, n.d.-b

Abbreviations and Acronyms

ACS	American Community Survey
CDC	Centers for Disease Control and Prevention
CNSTAT	Committee on National Statistics
CPS ASEC	Current Population Survey Annual Social and Economic Supplement
CY	calendar year
EBT	electronic benefit transfer
FNS	Food and Nutrition Service
FPG	Federal Poverty Guidelines
FY	fiscal year
HHS	U.S. Department of Health and Human Services
IDB	International Database (of U.S. Census Bureau)
IOM	Institute of Medicine
ITO	Indian Tribal Organization
IPUMS	Integrated Public Use Microdata Series
NBER	National Bureau of Economic Research
NIS	National Immunization Survey
OMB	Office of Management and Budget
PHE	public health emergency
PRCS	Puerto Rico Community Survey
SIPP	Survey of Income and Program Participation
SNAP	Supplemental Nutrition Assistance Program
TANF	Temporary Assistance for Needy Families
USDA	U.S. Department of Agriculture
WIC	Special Supplemental Nutrition Program for Women, Infants and Children
WIC PC	WIC participant and program characteristics

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