



WIC PARTICIPANT DATA REPORT 2018-2020

Submitted to: Iowa Department of Public Health Bureau of Nutrition and Physical Activity

Submitted by: Altarum

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Acknowledgements

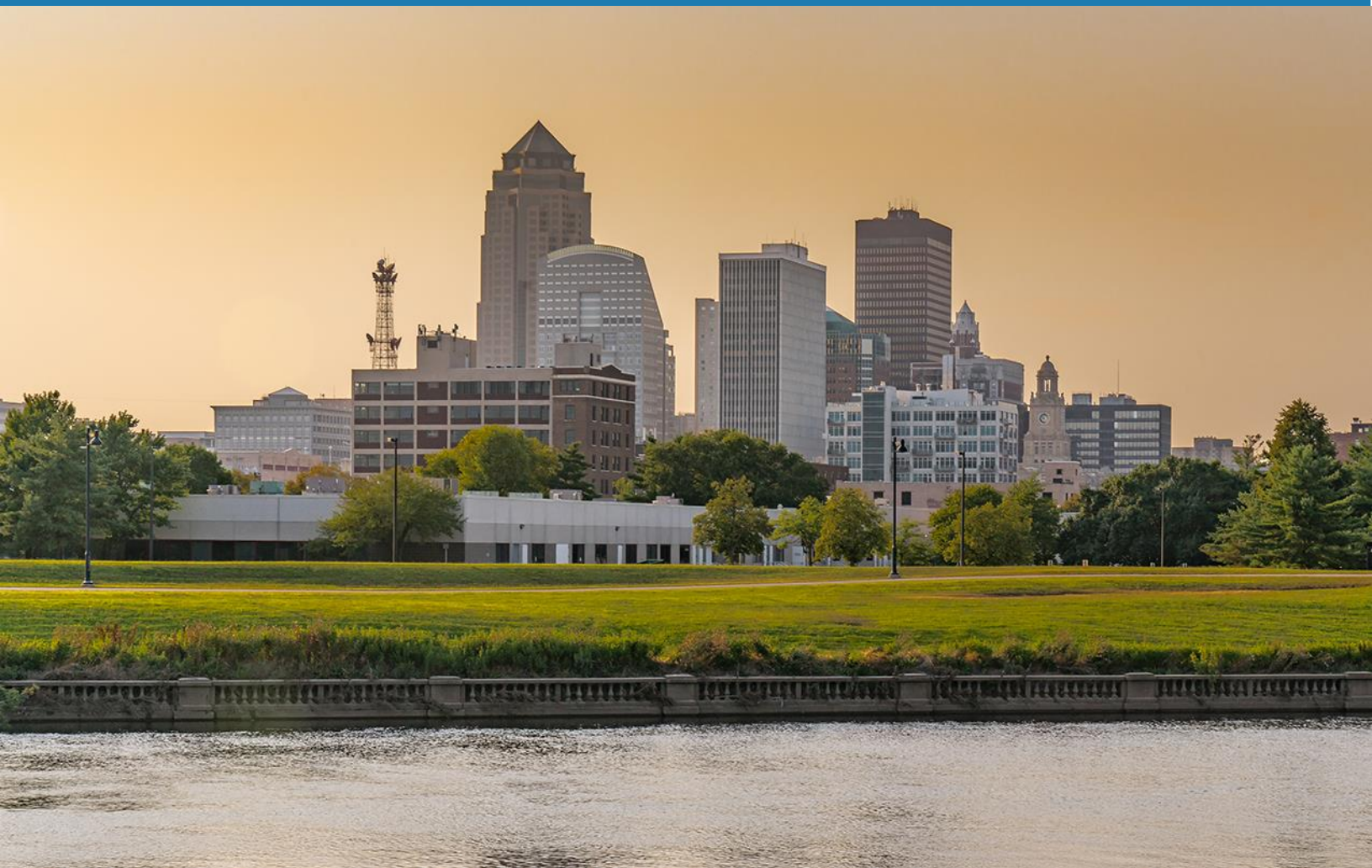
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Background

Since its inception in 1974, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) has earned the reputation of being one of the most successful federally-funded nutrition programs in the United States. Collective findings of studies, reviews, and reports demonstrate that WIC is cost-effective in protecting and improving the health and nutritional status of low-income women, infants, and children.^{1,2} WIC is administered by the U.S. Department of Agriculture (USDA) Food and Nutrition Service (FNS), which provides grants to state agencies to operate the program locally. USDA provides states with both Food grants and Nutrition Services and Administration grants.

In Iowa, WIC is administered by the Bureau of Nutrition and Physical Activity (BNPA), which resides within the Division of Health Promotion and Chronic Disease Prevention at the Iowa Department of Public Health (IDPH). The IDPH BNPA contracts with a variety of community-based agencies and organizations to provide WIC services locally to eligible families, including nutrition education, breastfeeding promotion and support, nutritious food packages, and referrals to other health programs. WIC serves as an adjunct to health care during critical times of growth and development, and studies have linked WIC participation to the prevention of low birth weight, premature birth, and the improved health status of infants and children.³ Currently, subcontractors deliver programming in all of Iowa's 99 counties. These local agencies reached over 64,000 participants in 2020.

WIC Program Description

WIC serves to safeguard the health of low-income pregnant, postpartum, and breastfeeding women, infants, and children up to age five. The mission of WIC⁴ is *"to assure healthy pregnancies, healthy birth outcomes, and healthy growth and development for women, infants, and children up to age five who are at nutritional risk, by providing nutritious supplemental foods, breastfeeding promotion and support, education on healthy eating, and referrals to health care and critical social services."*

Eligibility for WIC

To be eligible for WIC benefits, applicants must meet the following four requirements.⁵

1. Categorical eligibility: Women during pregnancy, women up to 1 year postpartum, if breastfeeding, or up to 6 months postpartum if not breastfeeding; infants up to age 1 (the first birthday); and children up to age 5 (the fifth birthday).

WIC Program Services

WIC serves to safeguard the health of low-income pregnant, postpartum, and breastfeeding women, infants, and children up to age five who are at nutritional risk.

WIC provides:

- Supplemental foods;
- Nutrition education as individual counseling, group classes, and/or wichealth.org;
- Breastfeeding promotion and support; and
- Referrals for health care or social services.

WIC in Iowa

Local agencies deliver WIC program services in all of Iowa's 99 counties and reached over **64,000** women, infants, and children in 2020.

2. Residency: An applicant must live in the state where they are applying for WIC.
3. Income eligibility: Applicants must meet income eligibility standards and have a household income at or below 185 percent of the Federal Poverty Guidelines. Applicants who participate in other federally-administered programs, such as the Family Investment Program (FIP, also known as Iowa's Temporary Assistance to Needy Families program), Supplemental Nutrition Assistance Program (SNAP), Medicaid, or Head Start/Early Head Start.
4. Nutritional risk: An applicant must be determined to be at nutritional risk based on a medical and/or nutritional assessment by a competent professional authority such as dietitians, nurses, nutrition educators, or nutrition assistants. Examples of medical-based conditions include anemia, overweight, or history of early term delivery. Dietary-based conditions include inappropriate nutrition practices or feeding practices that disregard developmental needs.

Supplemental Foods

WIC food packages are disseminated to provide supplemental foods designed to meet the special nutritional needs of low-income pregnant, breastfeeding and non-breastfeeding postpartum women, infants, and children up to five years of age who are at nutritional risk. WIC food packages align with the Dietary Guidelines for Americans and the infant feeding practice guidelines from the American Academy of Pediatrics. The food packages promote and support the establishment of long-term breastfeeding, provide participants with a wide variety of foods, and provide state agencies with flexibility in prescribing packages to accommodate cultural food preferences.⁶

Nutrition Education

WIC nutrition education is offered at no cost to participants. Nutrition education must be easily understood and relate to the participant's nutritional needs, household situation, and cultural preferences. In addition, it must be designed to achieve two goals: 1) emphasize the relationship between nutrition, physical activity, and health and 2) assist the participant in achieving a positive change in dietary and physical activity habits, resulting in improved nutritional status and the prevention of nutrition-related problems.⁷

Breastfeeding Promotion and Support

WIC promotes breastfeeding as the optimal feeding choice for infants (unless inadvisable for medical reasons) so participants get the health, nutrition, and emotional benefits that research shows breastfeeding provides. WIC supports breastfeeding through education, peer counseling, and by providing exclusively breastfeeding mothers with an enhanced food package, longer eligibility, and a breast pump, if a need exists for the mother. WIC provides infant formula to mothers who do not breastfeed.⁸

Over half of Iowa local agencies offer the WIC Breastfeeding Peer Counseling (BFPC) Program. In the WIC Goals and Objectives for fiscal year 2022 (FY22), Iowa WIC included the following objective in their Breastfeeding Action Plan:

By September 30, 2022, increase the proportion of Iowa WIC participants who initiate breastfeeding, breastfeed exclusively through six months, and continue to breastfeed until one year of age, by improving breastfeeding support through partnership development and providing extended, consistent education for all WIC staff.

Referrals to Health Care or Social Services

Providing referrals to health care and social services helps to meet the additional needs of WIC participants and assists in improving health or achieving positive health outcomes. The referral process also informs applicants who are ineligible for WIC of other programs and services that may benefit them.⁹

Report Purpose and Organization

The purpose of this report is to summarize and describe Iowa WIC participant and program data for 2018 and 2020 to assist the IDPH BNPA in identifying priority populations for WIC outreach and services. This report describes WIC participants based on demographic characteristics, income-related factors, nutritional risk factors, and breastfeeding rates. Findings from this report can be used to guide WIC staff in future service delivery expansions or enhancements. This report is organized into the following sections.

- ▲ Methodology
- ▲ Demographic characteristics
- ▲ Income-related factors
- ▲ Nutrition risk factors
- ▲ Breastfeeding rates

Appendices are included at the conclusion of the report and present supplemental data and information. For example, Appendix A describes WIC participant demographics and breastfeeding rates by the 15 Collaborative Service Areas (CSAs) that will go into effect in Iowa in 2022.



Methodology

Data Sources

To evaluate WIC participant and program characteristics (PC), in 1992, USDA FNS began routinely collecting a set of data elements from WIC state agencies known as the Minimum Data Set (MDS) for a census of WIC participants. Local agency staff are also encouraged to submit Supplemental Data Set (SDS) information when it is available.¹⁰ State agency staff collect these data to certify applicants for WIC benefits, guide nutrition education, and issue supplemental food benefits. The majority of the results in this report are from the PC data files, however, demographic and breastfeeding data by county are from the Iowa WIC Data System.

A WIC participant is defined as a person who was certified to receive WIC benefits in April of the reference year, including individuals who did not claim a food package and those who were not prescribed a food package, as was the case with fully breastfed infants. Table 1 below shows Iowa WIC participant counts by year and category.

Table 1. Iowa WIC Participant Count by Participant Category and Year.

Participant Category	2018	2020
Total Participants	70,601	64,368
Total Women	15,723	14,246
Pregnant Women	5,316	4,578
Breastfeeding Women	4,636	4,478
Postpartum Women	5,771	5,189
Infants	15,659	14,702
Children	39,219	35,420



Measures

This report summarizes WIC participant data for the state of Iowa using the MDS measures described in Table 2.

Table 2. MDS Measures and Measure Descriptions of Iowa WIC Participant Data.

MDS Measure Number	MDS Measure Name	Description
5.	Race/Ethnicity	Classification of participants based on one ethnicity category (Hispanic/Latino or Non-Hispanic/Latino) and five racial categories, which consist of (1) American Indian or Alaska Native; (2) Asian; (3) Black or African American; (4) Native Hawaiian or Other Pacific Islander; and (5) White. These categories are required by the Office of Management and Budget; one or more racial categories may be selected.
6a.	Certification Category	One of five possible categories under which a person is certified as eligible for WIC benefits: (1) pregnant woman; (2) breastfeeding woman; (3) postpartum woman (not breastfeeding); (4) infant (younger than 12 months); and (5) child (12–59 months)
10a–c.	Participation in TANF, SNAP, Medicaid	The participant's reported participation in each of these programs at the time of the most recent WIC certification as of April 2020
12.	Number in Family or Economic Unit	The number of persons in the family or economic unit upon which WIC income eligibility was based
13a–c.	Family or Economic Unit Income.	For persons for whom income is determined during the certification process, the income amount that was determined to qualify the participant for WIC at the time of the most recent WIC certification as of April 2020
14a–j.	Nutritional Risks Present at Certification	Highest priority nutritional risks assigned for the most recent WIC certification as of April 2020, up to a maximum of 10; uniform coding is required in submissions from all State agencies according to WIC Policy Memorandum 98-9
19a.	Currently Breastfed	For infants and children aged 6 through 13 months in April 2020, whether the participant was being breastfed at that time
19b.	Ever Breastfed	For infants and children aged 6 through 13 months in April 2020, whether the participant ever received breastmilk
19c.	Length of Time Breastfed	For infants and children aged 6 through 13 months in April 2020, the number of weeks the participant received breastmilk

Demographic Characteristics of Iowa WIC Participants

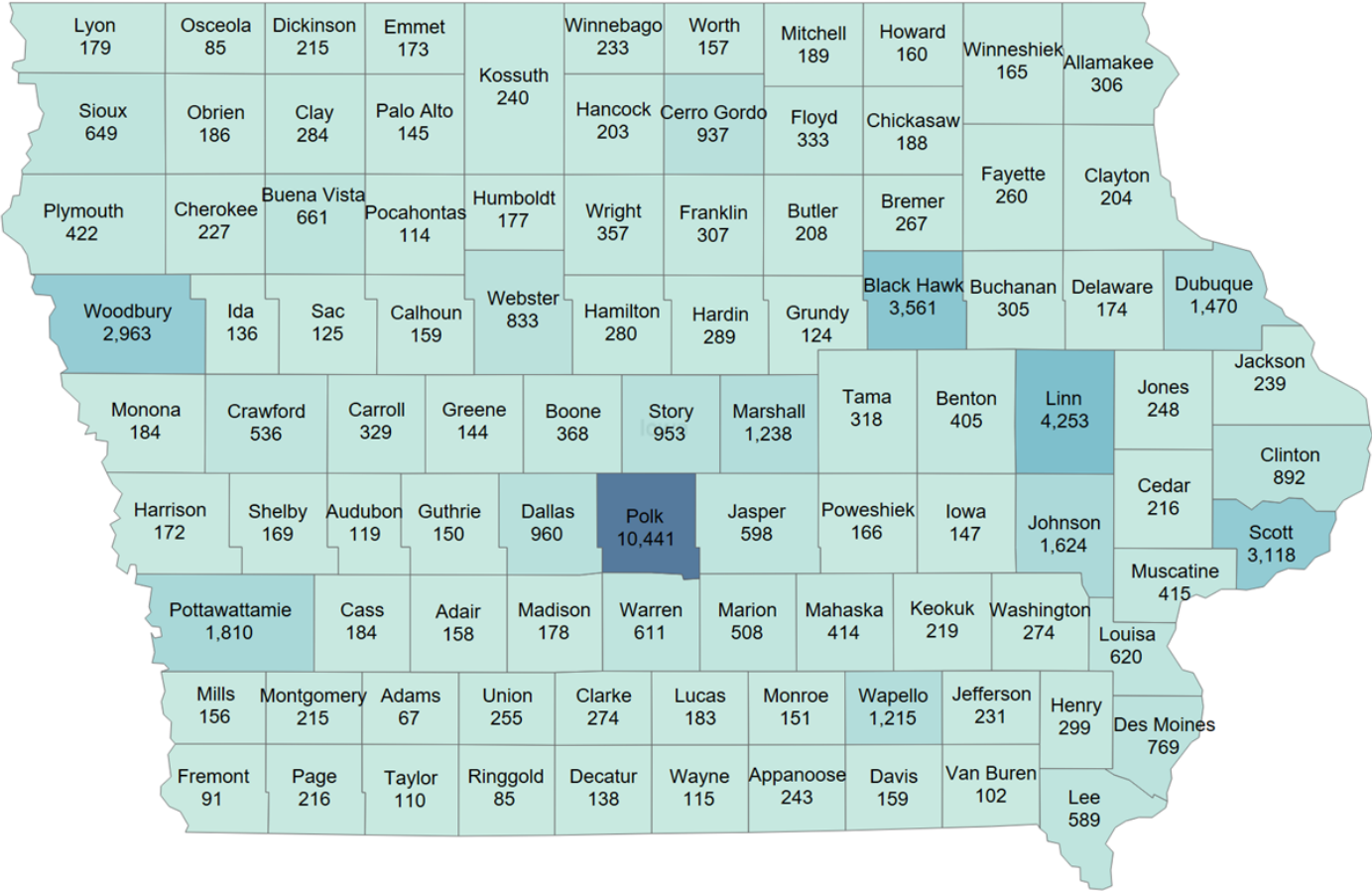
This section of the report includes descriptive characteristics of Iowa WIC participants in 2018 and 2020 including participant category, age, and race/ethnicity. In Iowa in 2020, there were 64,368 WIC participants, including women, infants and children combined. Figure 1 shows that Polk County has the highest concentration of Iowans participating in WIC, based on data from the Iowa WIC Data System. According to USDA, in 2018, 60.3% of Iowans eligible for WIC were enrolled.¹¹

In Iowa in 2020, there were

64,368

WIC participants

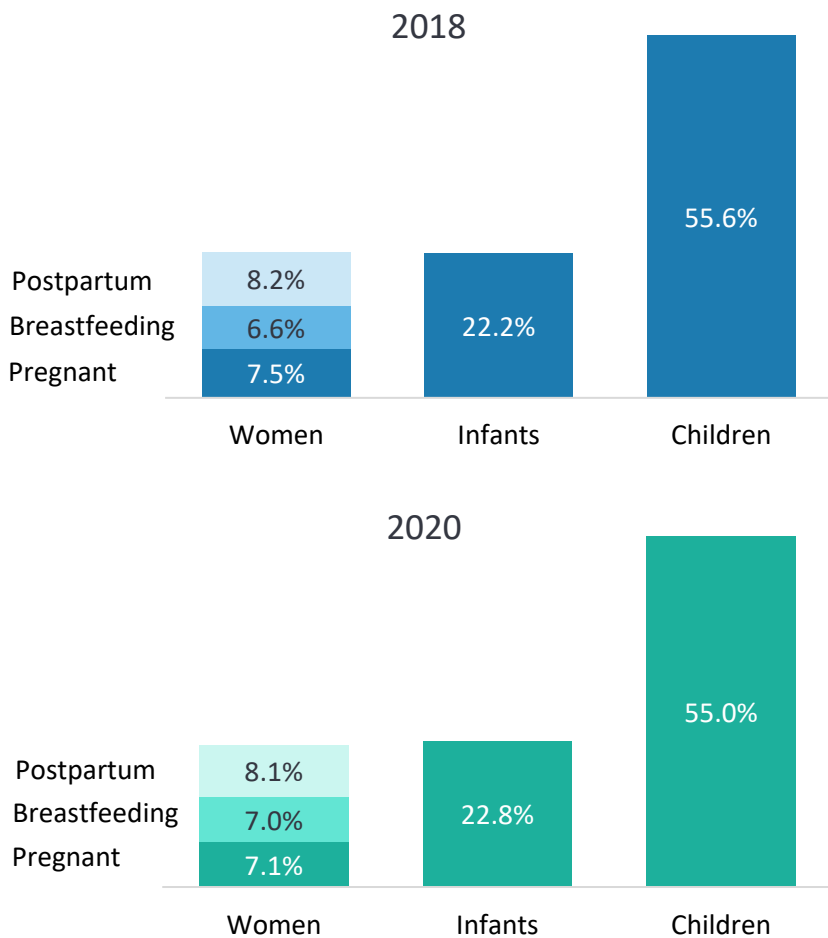
Figure 1. Number of WIC Participants by County, 2020.



Data source: Iowa WIC Data System. Note: Darker colors indicate higher numbers of WIC participants.

As previously described, WIC participants comprise three categories of women: pregnant, postpartum, and breastfeeding, as well as infants (0-12 months of age), and children (ages 1-5 years). Figure 2 shows in both 2018 and 2020, women and infants made up just over one-fifth of participants each, while children comprised more than half of the WIC population. Over 85% of women participating in WIC are between the ages of 18 and 34 years old, about half of pregnant women are certified in the first trimester, almost all infants (96%) are certified within the first 3 months after birth, and children are most frequently certified at 1 year (41%). The age at certification did not vary across racial and ethnic groups.

Figure 2. Percentage of Iowa WIC Participants by Category, 2018 and 2020.



Half of households receiving WIC benefits contain 3-4 members, 38% have five or more people in the household, and 12% have 1-2 household members. This was unchanged between 2018 and 2020 and the distribution was similar across participant categories and racial and ethnic groups. In Iowa, of the households with children, 62% contained 3-4 members and 30% had five or more members in 2019 according to U.S. Census data.¹²

WIC Participant Categories



Women

- **Pregnant.** During pregnancy and up to 6 weeks after birth of an infant or the end of pregnancy.
- **Postpartum.** Up to 6 months after the birth of the infant or the end of the pregnancy.
- **Breastfeeding.** Up to the infant's first birthday.



Infants

0-12 months of age



Children

1-5 years of age

Figure 3 below shows the racial and ethnic makeup of WIC participants by women, infants, and children. Around three-quarters of WIC participants are White and about 15% are Black across categories, with infants and children having slightly higher percentages of non-White participants than women. Additionally, about one in five WIC participants are Hispanic or Latino. Compared to the overall Iowa population, based on data from the Behavioral Risk Factor Surveillance System (BRFSS), the WIC population includes a higher proportion of people identifying as Black or African American and Hispanic (Figure 4 shown at right).

Figure 4. Overall population in Iowa, BRFSS data.

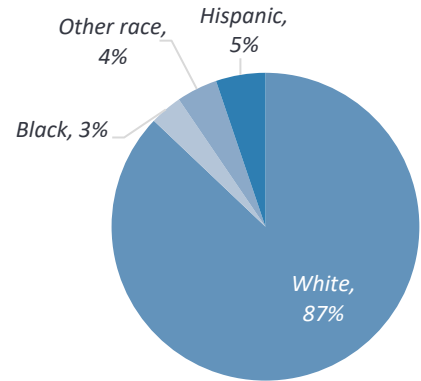
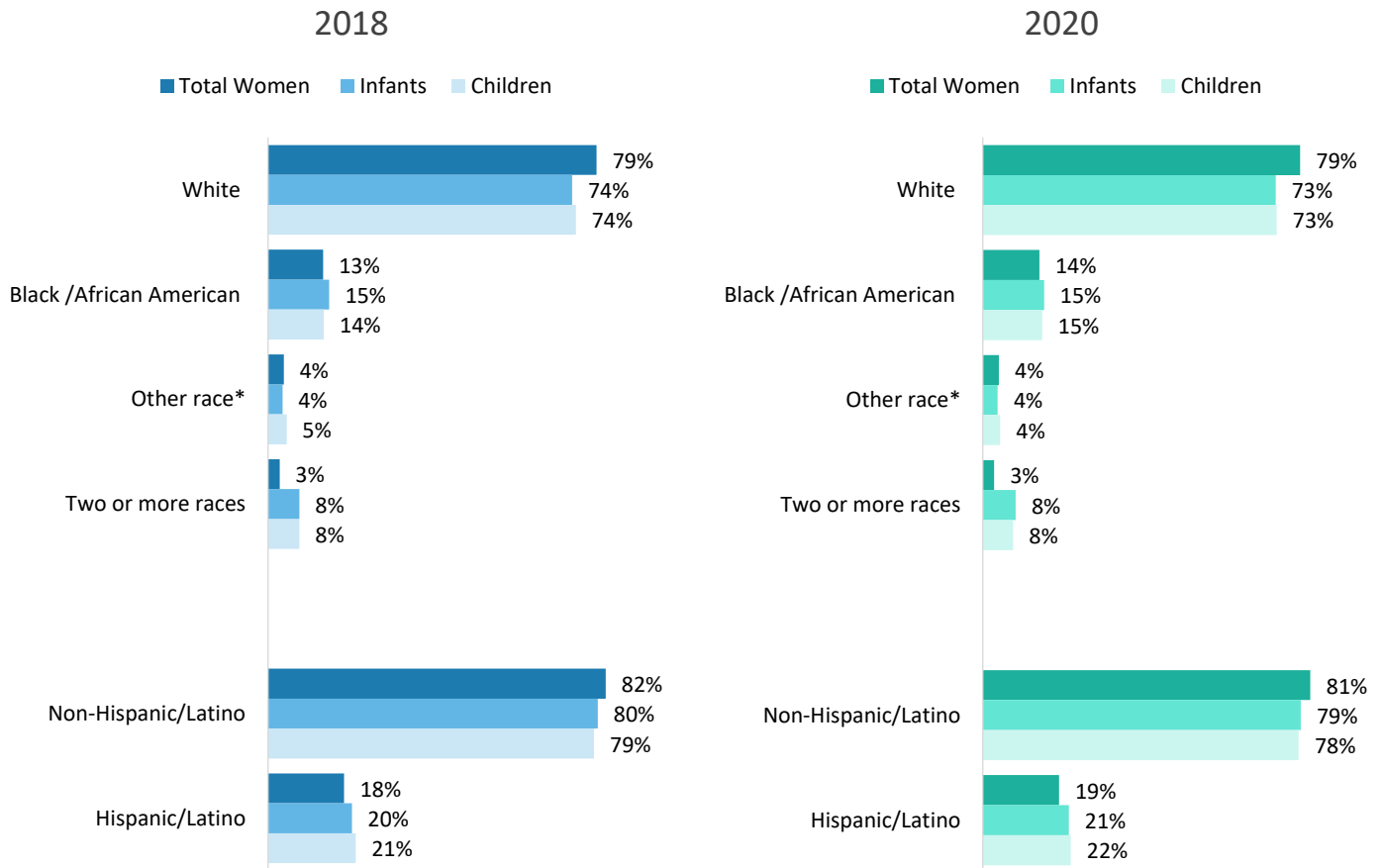


Figure 3. Race and Ethnicity of WIC Participants, by Category, 2018 and 2020.



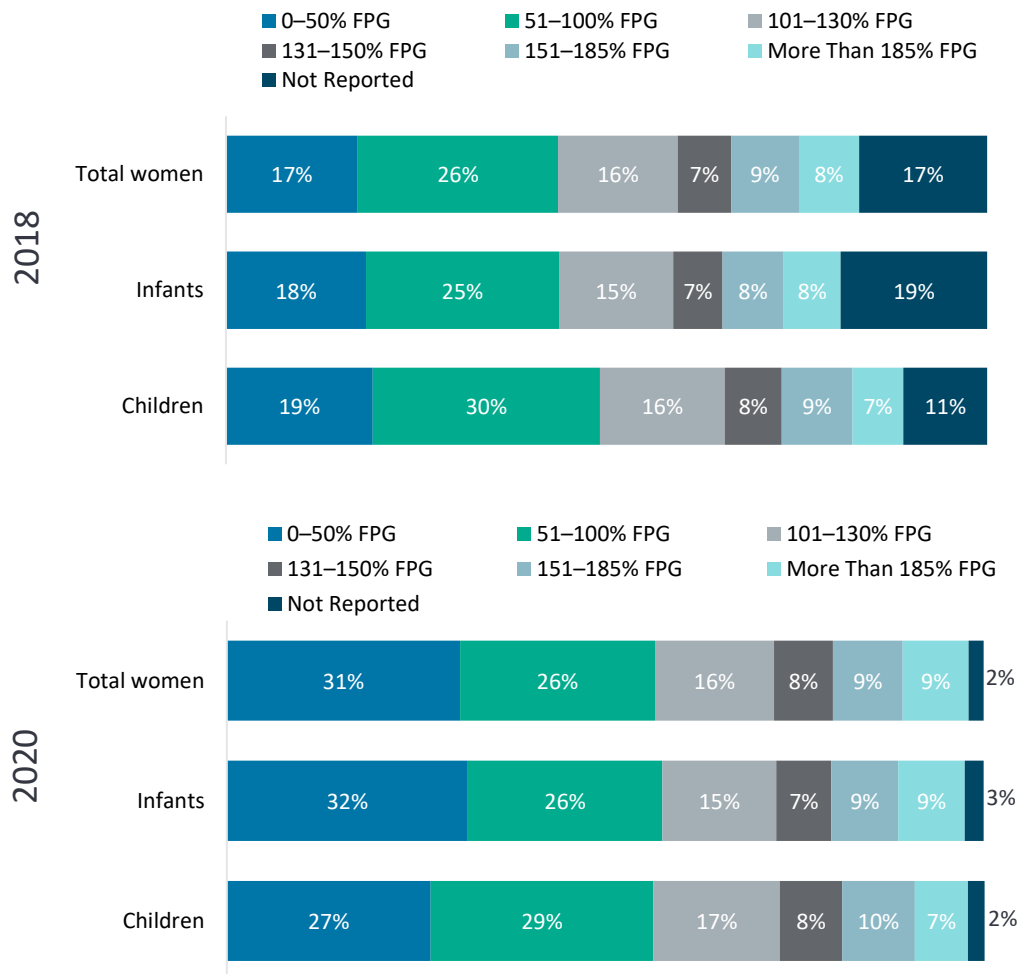
*Other race includes American Indian/Alaskan Native, Asian, and Hawaiian/Pacific Islander.

Income-Related Factors

To qualify for WIC, applicants must be at or below 185 percent of the Federal Poverty Guidelines (FPG, shown in sidebar) or participate in TANF (FIP), Head Start/Early Head Start, SNAP, or Medicaid. The poverty guidelines are issued each year in the *Federal Register* by the Department of Health and Human Services. The guidelines are used for administrative purposes, such as determining financial eligibility for certain federal programs, such as WIC, SNAP, and Medicaid.¹³

WIC participant data are grouped by FPG threshold categories, as show in Figure 5. Annual household income falls below 185% of the FPG for almost all Iowa WIC participants. Income levels in 2020 were considerably lower than in 2018, possibly due to the COVID-19 pandemic or to the lower proportion of unreported income. In 2020, about one-third of women and infants and just over one-quarter of children had household incomes less than 51% of the FPG, contrasted with less than one-fifth of each group at that same level in 2018.

Figure 5. Federal Poverty Guideline Thresholds by WIC Participant Category, 2018 and 2020.



2019 U.S. Federal Poverty Guidelines

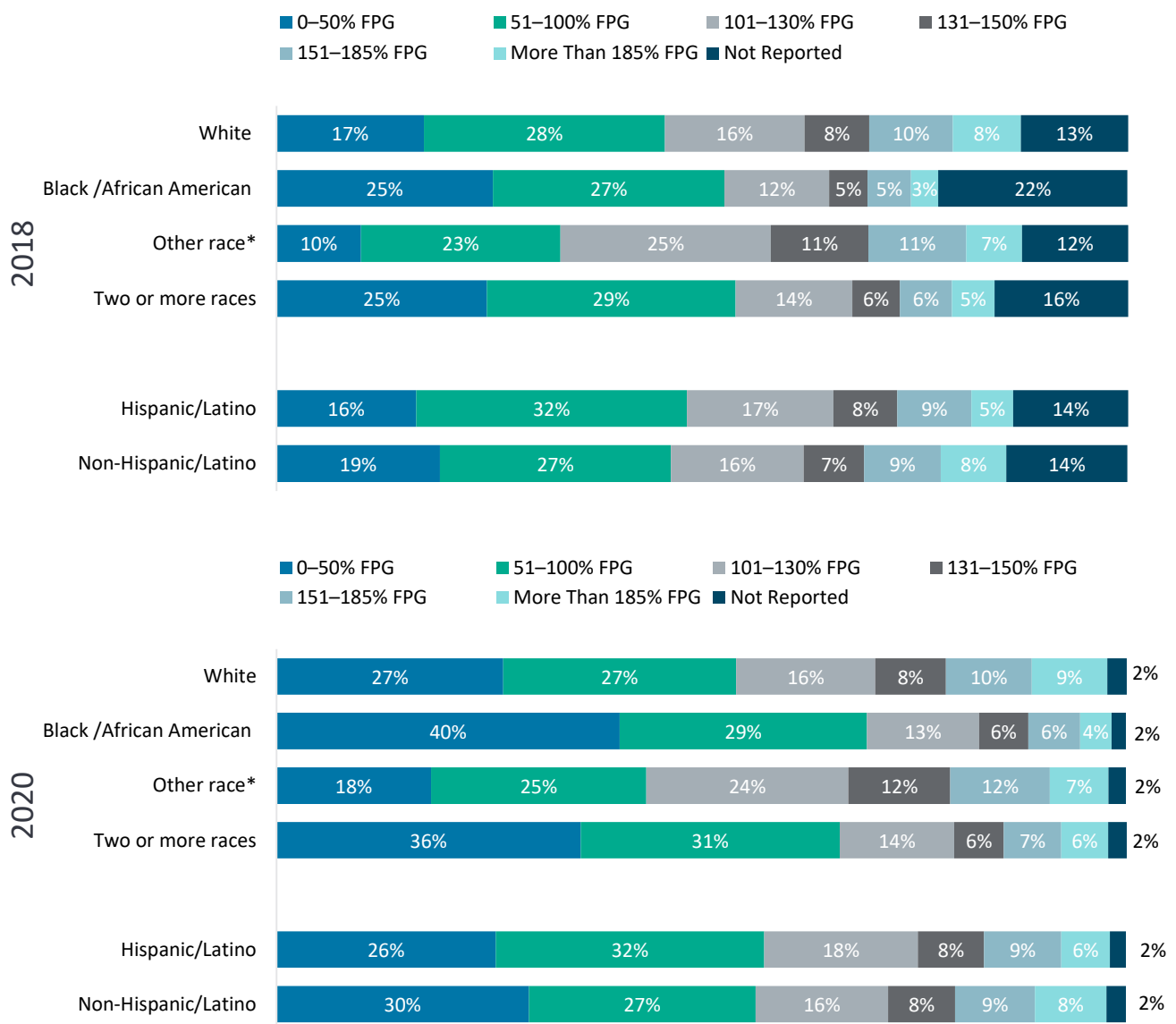
Persons in household	Poverty guideline
1	\$12,490
2	\$16,910
3	\$21,330
4	\$25,750
5	\$30,170
6	\$34,590
7	\$39,010
8	\$43,430

Note: For households with more than 8 persons, add \$4,420 for each additional person. These guidelines are for the 48 contiguous states and the District of Columbia, figures vary for Alaska and Hawaii.

In 2018, the average annual household income for WIC participants was \$26,141. In 2020, the average annual household income for WIC participants was \$24,946.

Figure 6 displays the percentage of WIC participants in each grouping of the FPG by race and ethnicity. As was shown by category, many more people fell into the lowest income category in 2020 than in 2018 across all groups, likely due to the COVID-19 pandemic. These results also show that there were income disparities between racial groups with Black or African American and multi-racial WIC participants much more likely to be in the lowest income grouping than White or Other races (American Indian/Alaskan Native, Asian, and Hawaiian/Pacific Islander). Hispanic and non-Hispanic participants were fairly similar across income categories.

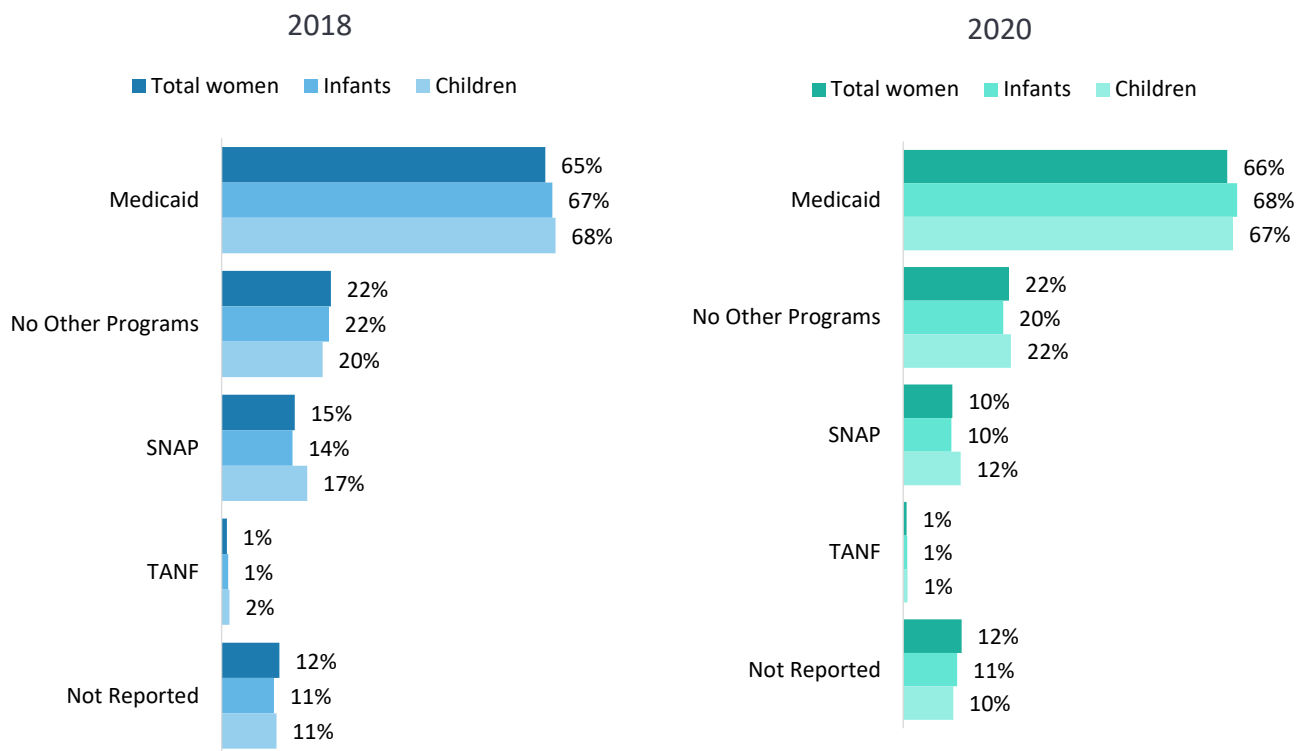
Figure 6. Federal Poverty Guideline Thresholds by Race and Ethnicity, 2018 and 2020.



*Other race includes American Indian/Alaskan Native, Asian, and Hawaiian/Pacific Islander.

Annual household incomes for most WIC participants fall below the 185% of Federal Poverty Guidelines, and therefore most participants qualify for WIC services based on income. Some individuals with household incomes greater than 185% of the poverty guidelines are qualified for other assistance programs, such as Medicaid or TANF, and therefore also qualify for WIC. Figure 7 displays the participation in other assistance programs by participant category. About two-thirds of WIC participants also participated in Medicaid across all groups and about one-fifth did not participate in any other program besides WIC. These rates were similar across racial and ethnic groups.

Figure 7. Participation in other assistance programs, by Participant Category, 2018 and 2020.



Note: Totals may add to more than 100% due to some participants indicating more than one program.



Nutrition Risk Factors

Women and children enrolling in the WIC Program must meet residential and income guidelines as well as undergo a nutrition assessment that includes a screening for nutrition risk criteria and collection of other relevant dietary, anthropometric, and health and social environment information.⁵ The goals of this assessment are to correctly identify participants' nutrition risks and to individualize the service and support provided by WIC. Program services are tailored to meet participant needs, including the provision of supplemental foods, nutrition education, breastfeeding promotion and support, and appropriate referrals to improve the nutrition, health, and development of program participants.¹⁴ Conducting a nutrition assessment with attention to the nutritional risks impacting the health of an individual and providing appropriate nutrition education is a unique feature of the WIC Program.

FNS develops WIC nutrition risk criteria through a work group called the Risk Identification and Selection Collaborative (RISC), which includes the National WIC Association, state and local WIC agency staff, and FNS staff. RISC conducts ongoing review and revision of the risk criteria to ensure criteria are based on scientific evidence, are practical for WIC application and related to WIC services. There are approximately 100 detailed criteria with applicable thresholds for determining nutritional risk. Federal regulations specify that all criteria used for certification, including nutritional risk criteria, must be documented and kept in the participant's file for review, audit, and evaluation purposes.

Nutrition risk is defined in WIC regulations as follows¹⁵:

- ▲ Detrimental or abnormal nutritional conditions detectable by biochemical or anthropometric measurements;
- ▲ Other documented nutritionally-related medical conditions;
- ▲ Dietary deficiencies that impair or endanger health; and
- ▲ Conditions that predispose persons to inadequate nutritional patterns or nutritionally related medical conditions, including, but not limited to, homelessness and migrancy.

WIC Risk Categories and Subcategories

Anthropometric

- Low weight-for-height/length
- High weight-for-height/length
- Short stature
- Inappropriate growth/weight gain pattern
- Low birthweight/premature birth
- Other anthropometric risks

Biochemical

- Hematocrit/hemoglobin below FNS criteria
- Other biochemical risks

Clinical, Health, Medical

- Pregnancy-induced conditions
- Delivery of low-birthweight/premature infant
- Prior stillbirth/fetal/neonatal death
- General obstetrical risks
- Nutrition-related risk conditions
- Substance abuse
- Other health risks

Dietary

- Failure to meet Dietary Guidelines for Americans
- Inappropriate nutrition practices

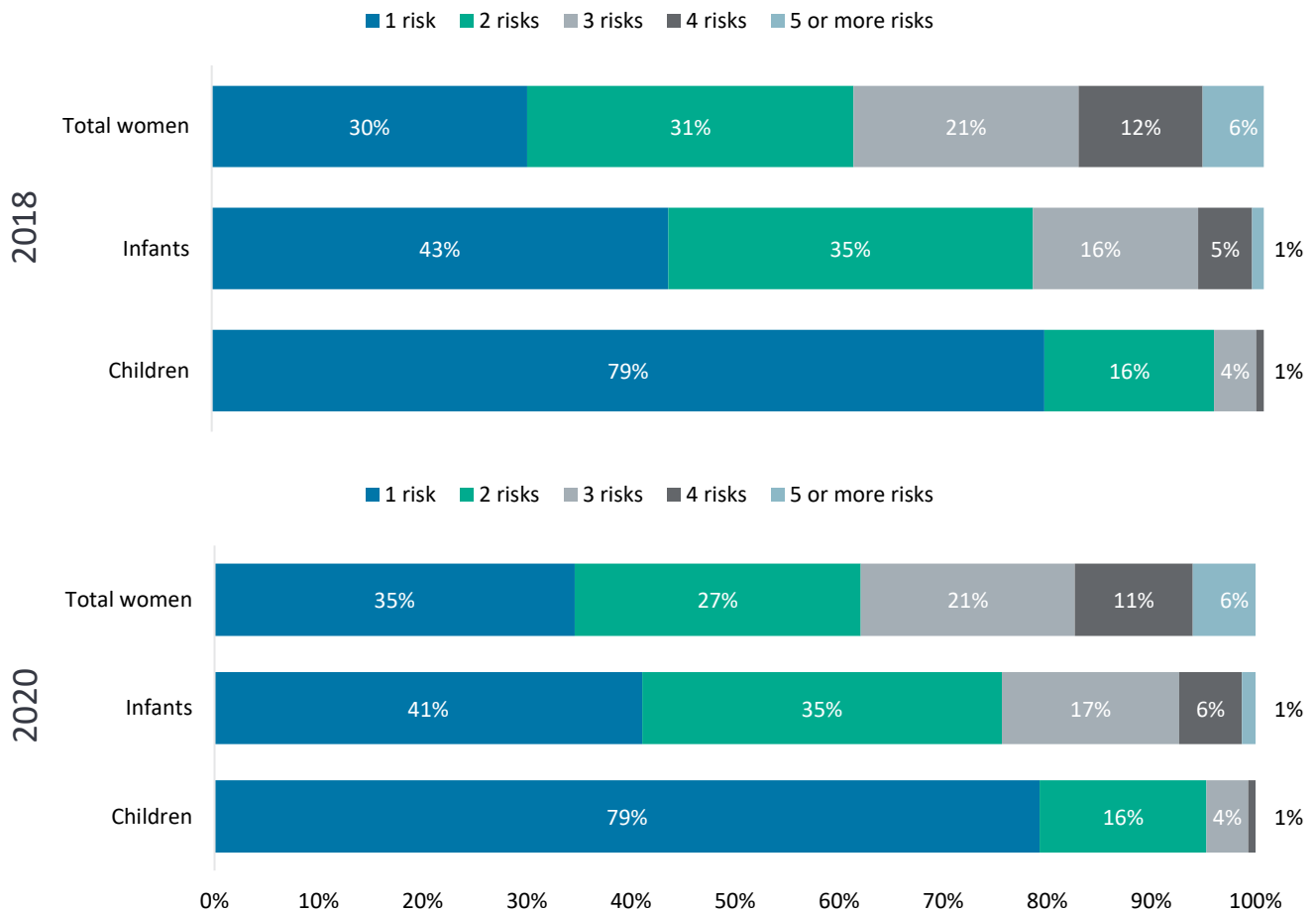
Other Risks

- Regression/transfer/presumptive eligibility
- Breastfeeding mother and infant dyad
- Infant of a WIC-eligible mother/mother at risk during pregnancy
- Homelessness/migrancy
- Other nutritional risks



About 40% of all Iowa WIC participants fell into more than one risk category; however, Figure 8 shows that children are much less likely than other participant categories to meet multiple risk criteria. In 2020, 21% of children met multiple criteria compared to 65% of women and over 59% of infants.

Figure 8. Number of Nutritional Risk Categories Met by WIC Participant Category, 2018 and 2020.



Most Frequent Nutritional Risk Factors

Women

- High weight-for-height – 55%
- Nutrition-related risk conditions – 33%
- Inappropriate growth/weight gain pattern - 25%
- General obstetrical risks - 24%

Infants

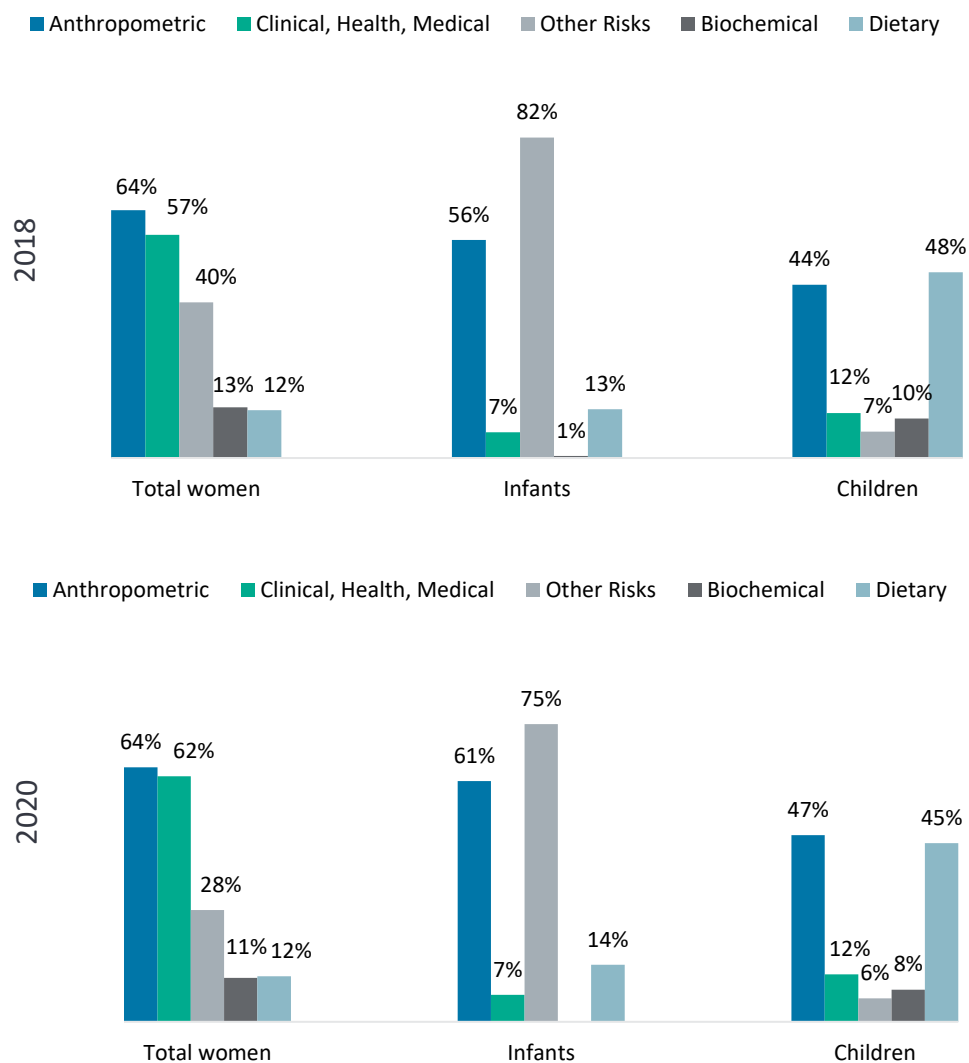
- Infant of a WIC-eligible mother/mother at risk during pregnancy– 73%
- High weight-for-length – 36%
- Low birthweight/premature birth- 19%

Children

- High weight-for-height – 30%
- Inappropriate nutrition practices – 23%
- Failure to meet Dietary Guidelines for Americans – 22%

The distribution of WIC participants within nutritional risk categories remained fairly constant from 2018 to 2020 (see Figure 9). For all participant types, anthropometric was one of the most frequent risk categories. Over 60% of women, around 60% of infants, and around 45% of children met this risk criteria in both 2018 and 2020. Over half of women also fell into the clinical, health, medical risk category, about half of children met dietary risk criteria, and over three-quarters of infants met other risk criteria (most often being an infant of a WIC-eligible mother or mother at risk during pregnancy). For more details about risk subcategories by participant type, see the sidebar.

Figure 9. Nutritional Risk Categories by WIC Participant Category, 2018 and 2020.



Note: Totals may add to more than 100% due to some participants meeting criteria for more than one risk category.

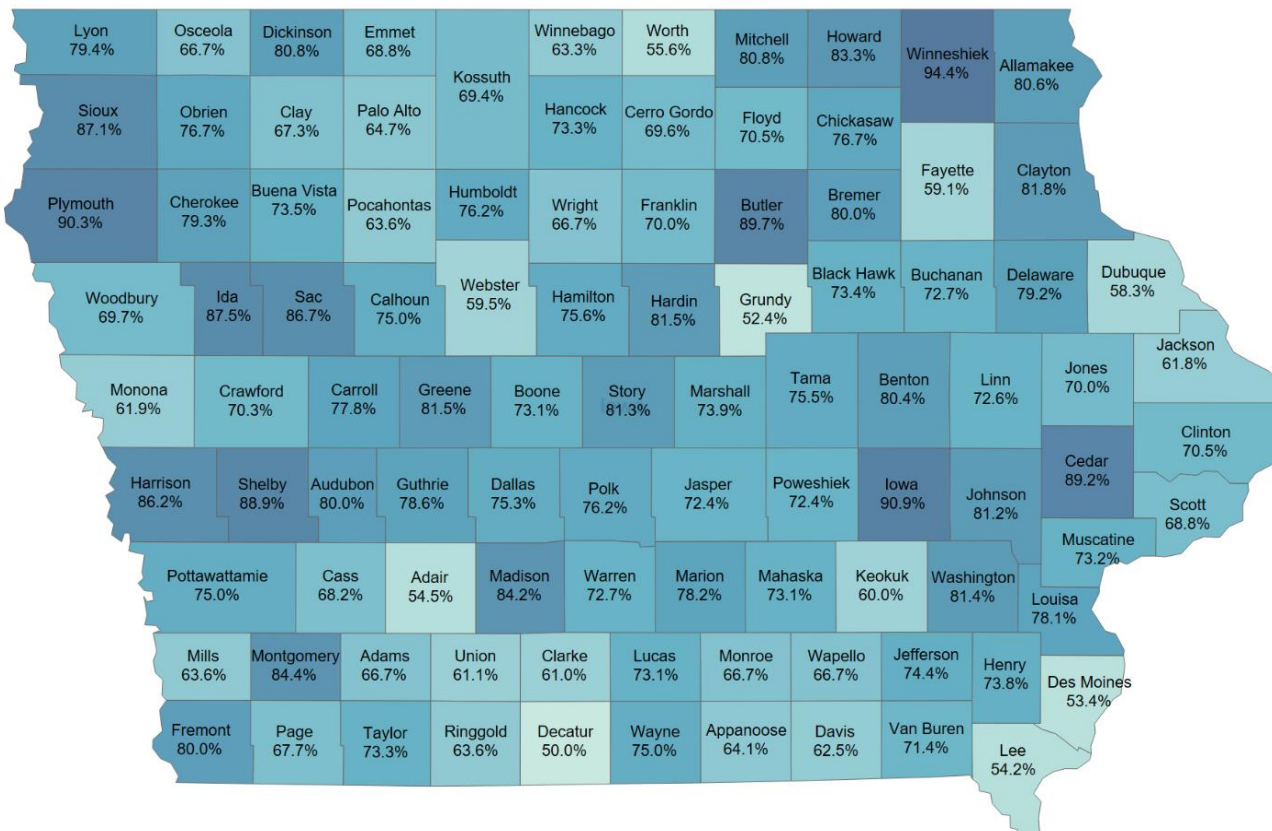
Breastfeeding Rates

Breastfeeding has long been recognized as a proven disease prevention strategy. The American Academy of Pediatrics recommends infants be exclusively breastfed for the first 6 months of life, with continued breastfeeding along with introducing appropriate complementary foods for 6 months to 1 year or longer.¹⁶ According to the Centers for Disease Control and Prevention, infants who are breastfed have reduced risks of asthma, obesity, type 1 diabetes, severe lower respiratory disease, ear infections, sudden infant death syndrome, and gastrointestinal infections (diarrhea/vomiting), and preterm infants have reduced risk of necrotizing enterocolitis. Benefits to the mother include reduced risk of high blood pressure, type 2 diabetes, ovarian cancer, and breast cancer.¹⁷

WIC Programs play a key role in promoting and supporting breastfeeding initiation and duration. Program services focus on supporting families in feeding decision-making, providing education through individual counseling and group classes, sponsoring peer-counselor programs and support groups, providing breast pumps, and providing additional foods for breastfeeding mothers.

Results in this section are from the WIC PC data files for 2018 and 2020, except where otherwise noted. In Iowa, 71.5% of WIC infants were ever breastfed in 2020, comparable to the national rate of 71.8%.¹⁸ Figure 10 shows breastfeeding rates by county from the Iowa WIC Data System, which range from 50.0% to 94.4%.

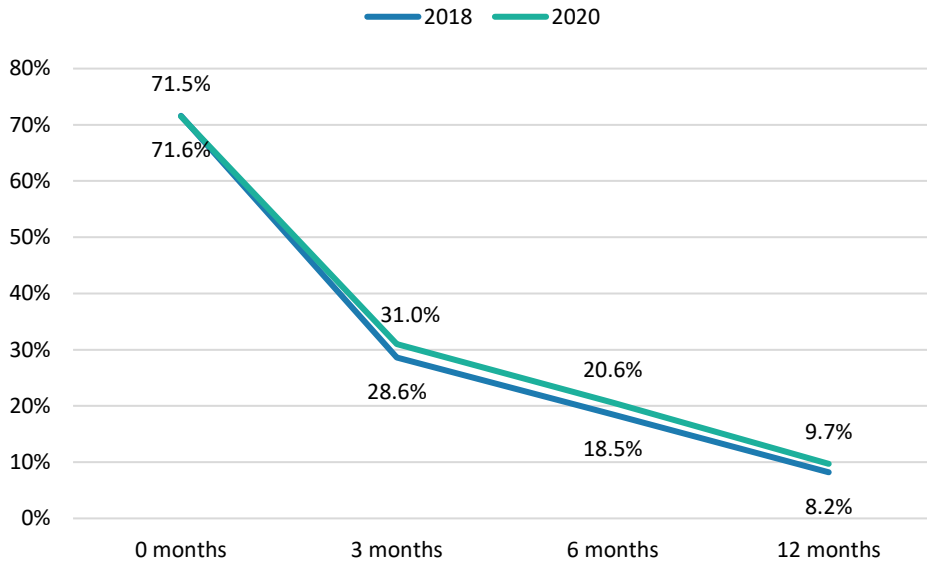
Figure 10. Percentage of WIC Infants Ever Breastfed by Iowa County, 2020.



Data Source: Iowa WIC Data System. Note: These results limited to infants born during SFY2020 or those infants with birthdates between the dates of July 1, 2019 and June 30, 2020. Darker colors indicate higher percentage of breastfed infants.

Figure 11 displays the overall breastfeeding rates by age of WIC infants in Iowa for 2018 and 2020. The rates were very similar for both years. Breastfeeding was initiated for about 72% of WIC infants; however, less than one third were still breastfeeding at 3 months of age and less than 10% by 12 months.

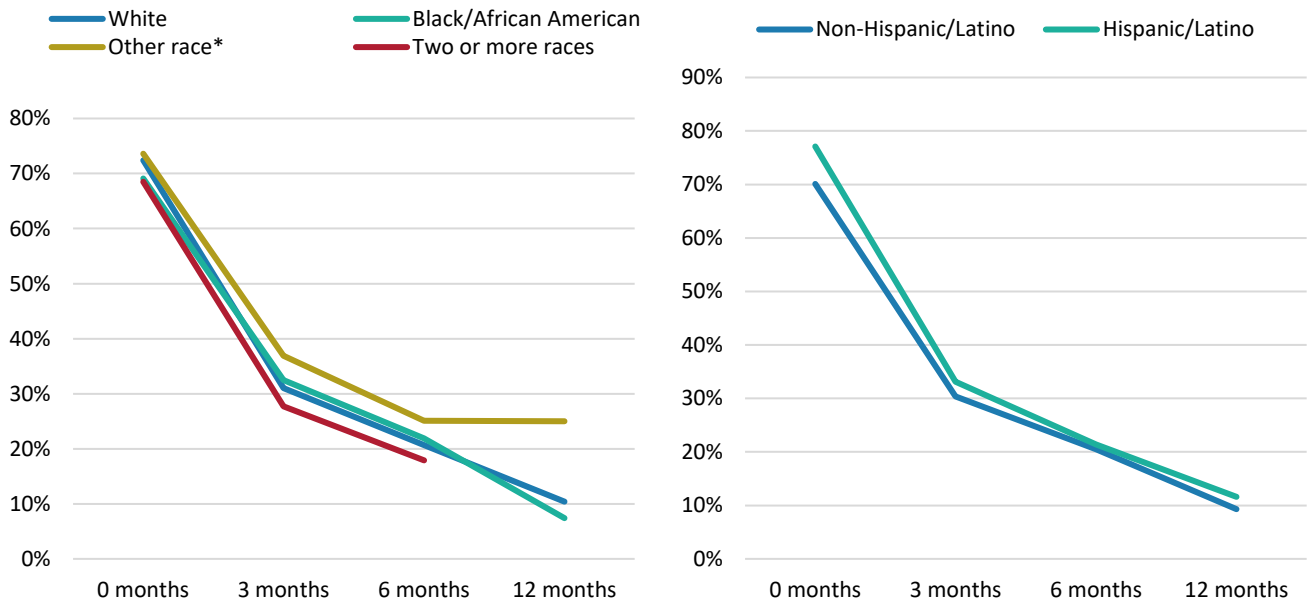
Figure 11. Breastfeeding Rates by Age of WIC Infants, 2018 and 2020.



72%
of Iowa infants
participating in WIC
initiated breastfeeding

Figure 12 shows that in 2020 breastfeeding rates were similar across race and ethnic groups; however, those identifying as American Indian/Alaskan Native, Asian, and Hawaiian/Pacific Islander had higher rates of breastfeeding at 12 months than other groups.

Figure 12. Breastfeeding Rates by Age of WIC Infants and Race and Ethnicity, 2020.



*Other race includes American Indian/Alaskan Native, Asian, and Hawaiian/Pacific Islander. Note: Twelve-month data were not available for participants of more than one race.

Summary and Conclusions

In 2020, there were 64,368 women, infants, and children in Iowa enrolled in WIC with over half of the participants being children ages 1-5 years. WIC coverage rates in Iowa are approximately 60%, indicating that 40% of those who are eligible for WIC services are not being reached. Furthermore, eligible infants and postpartum women are almost all being reached, but there are gaps particularly for older children (coverage rate of 19.8% by age 4) and pregnant women (coverage rate of 56.5%)¹⁹. Identifying strategies to engage hard to reach populations may be necessary. Retention strategies other states have employed include text messaging certification reminders; electronic portals for uploading certification documentation; and offering nutrition education through remote modes such as online classes and modules, mobile applications, and video telehealth or video chats (e.g., via Skype or Zoom).

The majority of WIC participants in Iowa identify as White and non-Hispanic or Latino; however, there is a higher proportion of Black and Hispanic populations participating in WIC than in the overall Iowa population. While income fell for all groups from 2018 to 2020 likely due to the pandemic, Black WIC participants were more likely than participants of other racial groups to fall into the lowest income group (0-50% of Federal Poverty Guidelines) in both years. Although it is unlikely the WIC Program alone can address racial disparities in income, the WIC Program can play an important role in improving health outcomes for populations of color and contribute to reducing health disparities for these groups. Iowa WIC may consider coordinating with other programs that serve low-income populations of color such as Medicaid and SNAP to develop data matching agreements and facilitated enrollment processes. In addition, the WIC Program can strengthen outreach and engagement efforts with these populations to ensure that all eligible participants engage in the WIC Program and receive all of the services and health benefits the program offers.

High weight was a frequent nutritional risk factor across all WIC participant categories. For women and children, nutritional risks were also fairly common. Among infants, the most frequent risk factor was an at-risk mother. Additional strategies to promote healthy eating and physical activity among the WIC-eligible population could decrease these risk factors.

Almost three-quarters of infants were ever breastfed in Iowa, similar to the national rate among WIC participants. This number drops off considerably by 3 to 6 months of age and by 12 months, fewer than 10% are still breastfeeding. Breastfeeding education and support may be beneficial to help Iowa reach the goal of increasing breastfeeding initiation and longevity in 2022.

Limitations

This report utilized aggregated data tables from the WIC database, therefore, we were only able to focus on one characteristic at a time during our analysis. Associations between variables could be analyzed in more detail with individual-level data. For example, evaluating redemption data by WIC participant characteristics to determine patterns by particular demographic groups. Further, availability of more detailed information at the county or CSA-level may also be helpful in planning for upcoming years.

Get Connected

To find out more information on the work IDPH is doing to improve the lives of WIC participants in Iowa, please visit the BNPA program website.

WIC: <https://idph.iowa.gov/WIC>



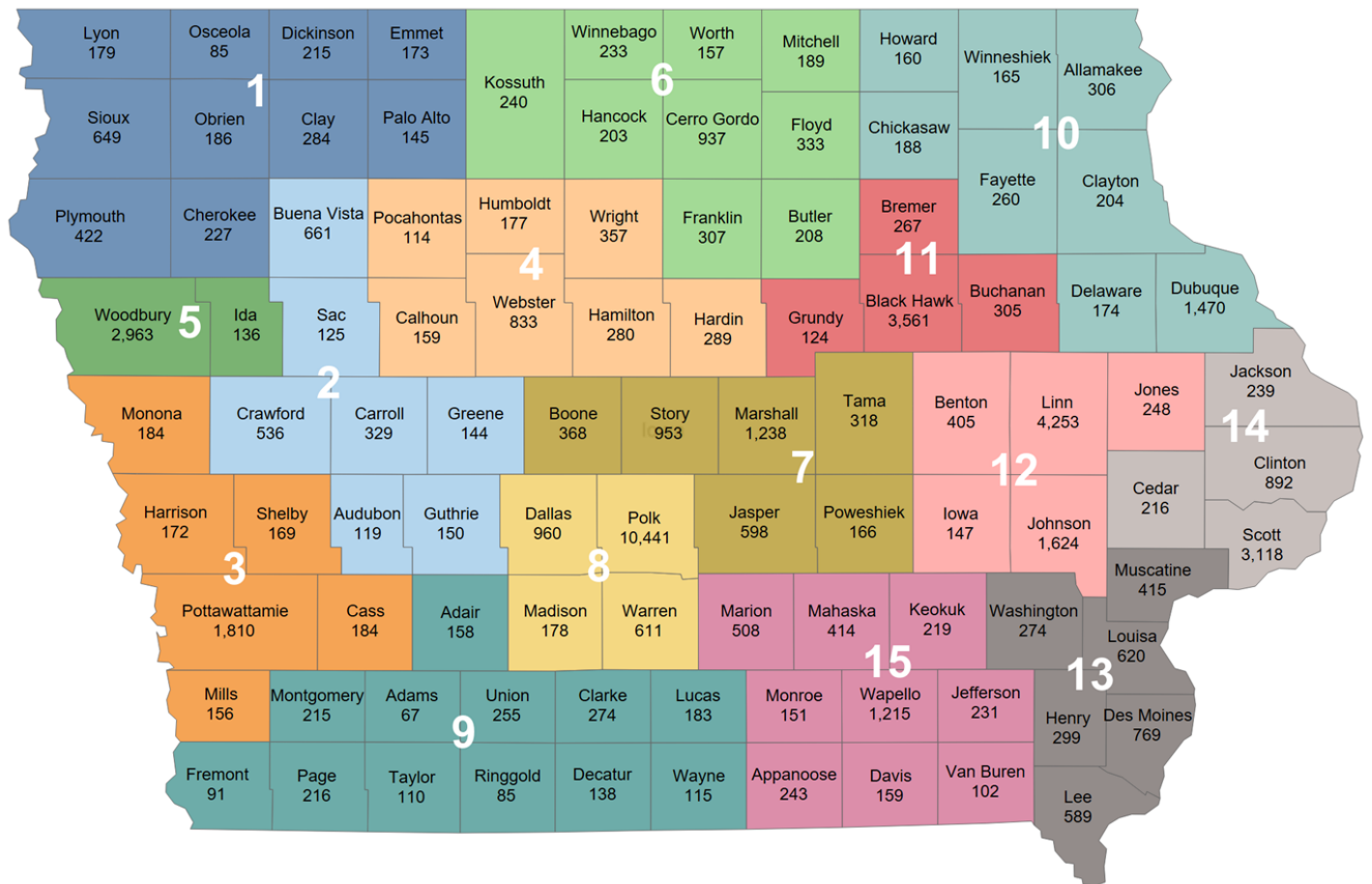
Appendix A: Collaborative Service Area Profiles

Overview

The Iowa Department of Public Health went through a process of data analysis and public input to develop a plan to best align and deliver services for WIC, Maternal, Child, and Adolescent Health (MCAH), I-Smile™, and 1st Five clients. Collaborative Service Areas (CSAs) were developed to allow for a more collaborative approach across all programs, thus addressing the needs of the people who will be receiving services and the infrastructure that enables them to be served. A CSA will be able to build stronger partnerships and make better use of resources, which will help to achieve improved health outcomes and provide consistency between programs.

Effective October 1, 2022, Iowa will have 15 CSAs that work together to serve the WIC population. This appendix will describe the demographics and breastfeeding rates of each CSA with WIC demographic and breastfeeding data from the Iowa WIC Data System. First, there will be an overview across all CSAs, followed by detailed profiles for each of the 15 CSAs. Figure 1 displays the counties in each CSA along with the number of WIC participants by county in 2020.

Figure 1. Number of WIC Participants by County and Iowa Collaborative Service Areas, 2020.



In Figure 2, the number of women, infants and children participating in WIC in 2020 are displayed by CSA. CSA 8 has the highest number of WIC participants, while CSA 9 has the fewest.

Figure 2. Number of WIC Participants by Category and CSA, 2020.

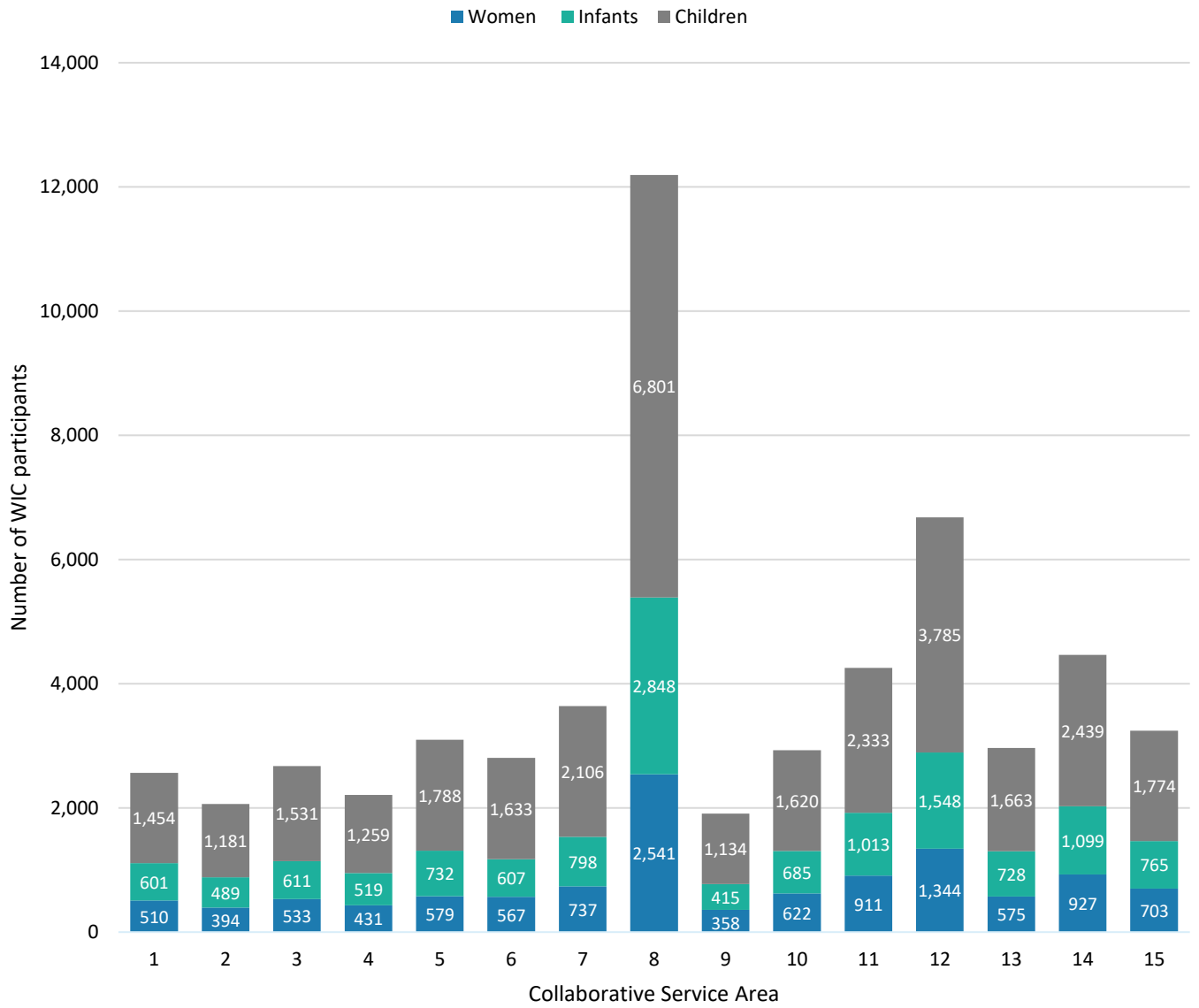
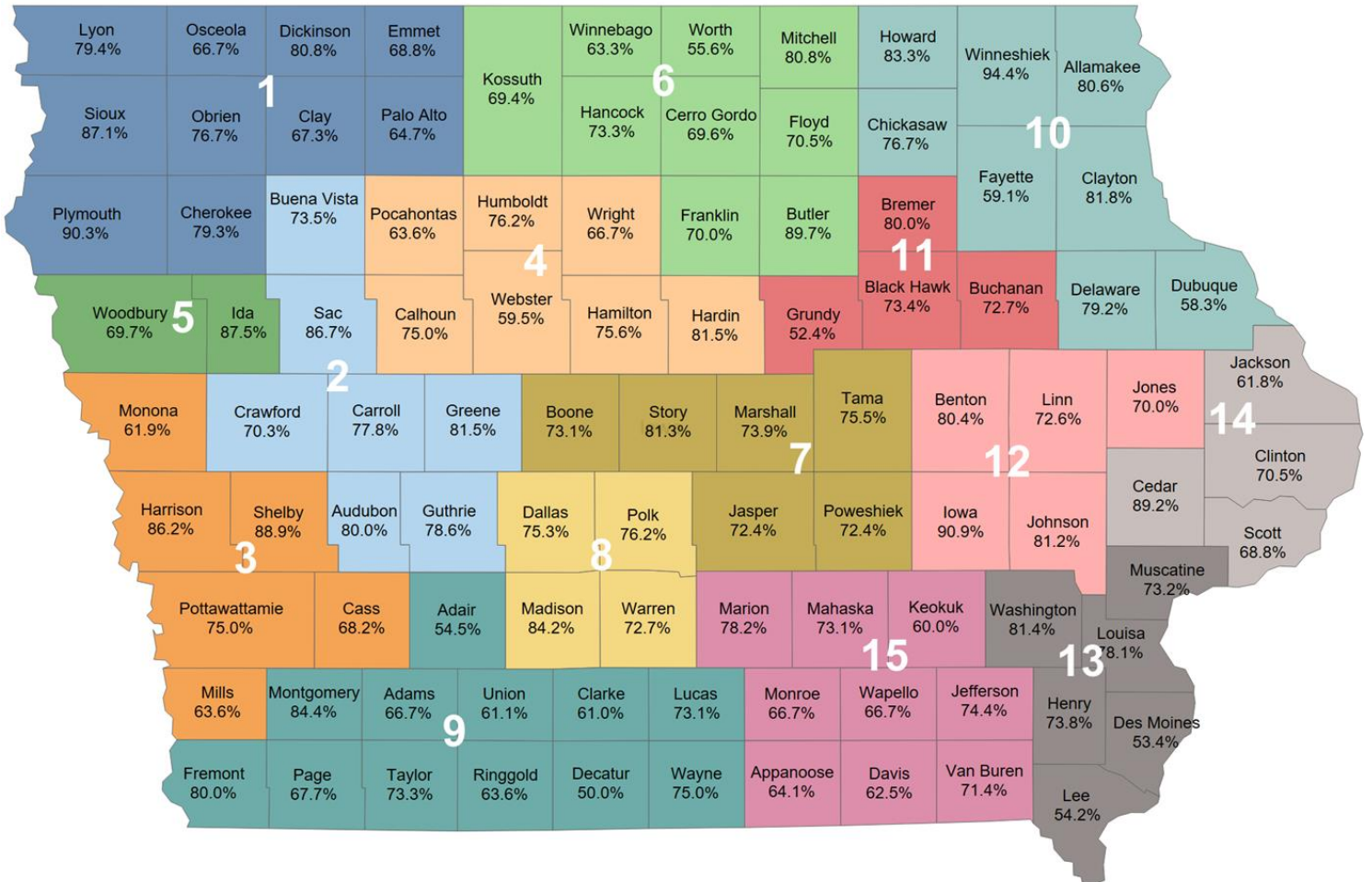


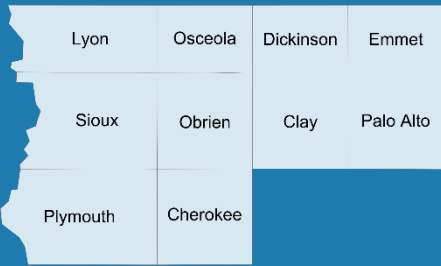
Figure 3 shows the percentage of infants participating in WIC in 2020 that were ever breastfed by county and CSA. Breastfeeding rates vary from 50.0% to 94.4% across Iowa.

Figure 3. Percentage of Infants Participating in WIC Ever Breastfed, by County and Collaborative Service Area, 2020.



CSA

1



Counties include:

- Cherokee
- Clay
- Dickinson
- Emmet
- Lyon
- Obrien
- Osceola
- Palo Alto
- Plymouth
- Sioux

2,565

WIC participants in 2020

CSA 1: Demographic Characteristics of WIC Participants

In 2020, there were 2,565 lowans enrolled in WIC in CSA 1, including 510 women, 601 infants and 1,454 children.

Figure 4. Number of WIC Participants in CSA 1 by Participant Category and County, 2020.

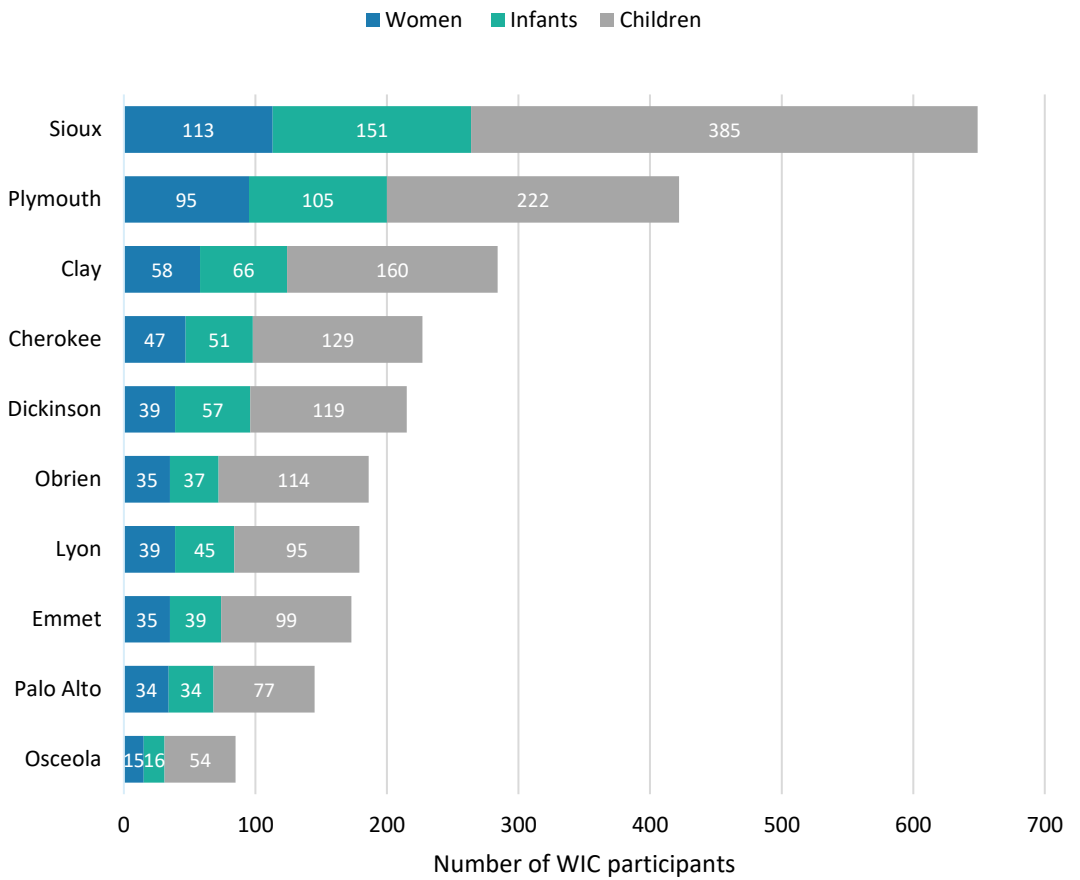


Figure 5. Percentage of WIC Participants in CSA 1 by Category, 2020.

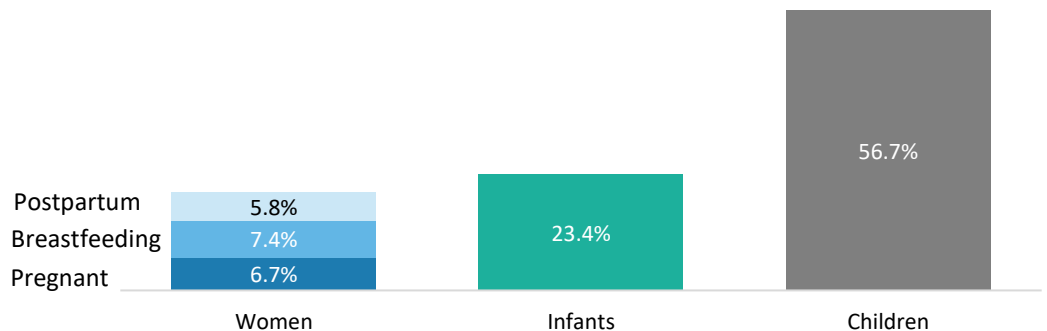
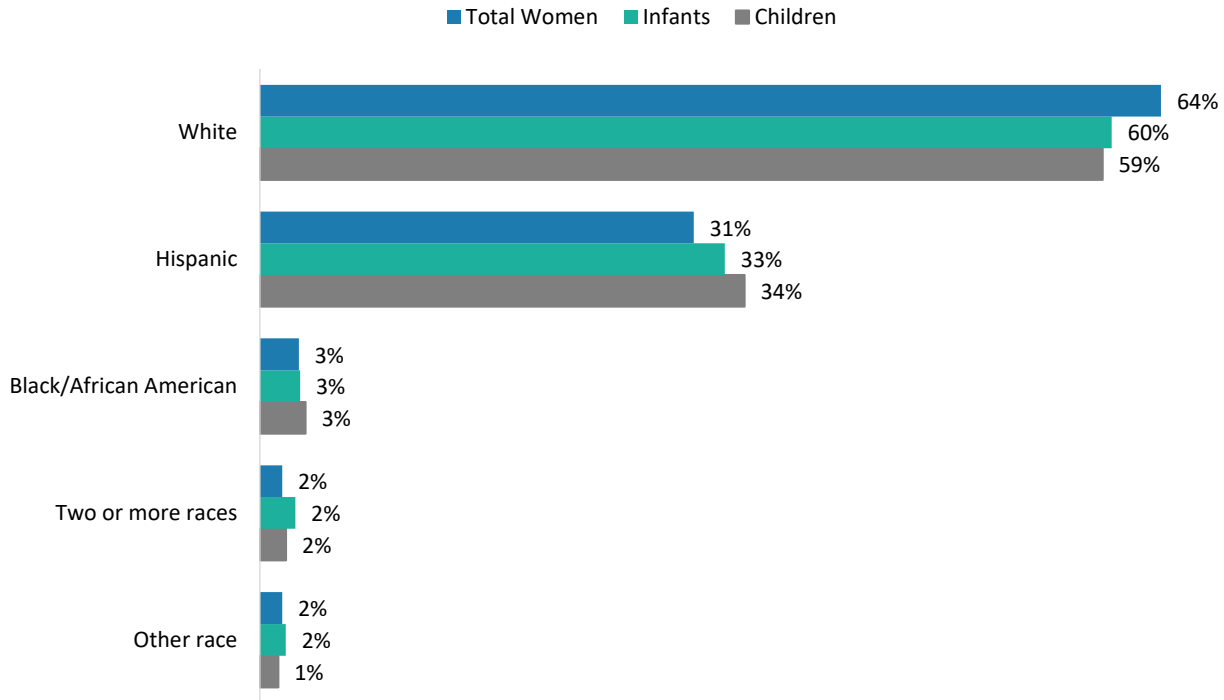


Figure 6. Race and Ethnicity of WIC Participants in CSA 1 by Category, 2020.



Note: In the demographic data for 2020, Hispanic was included with race and not as a separate ethnicity. Other race includes American Indian/Alaskan Native, Asian, and Hawaiian/Pacific Islander.

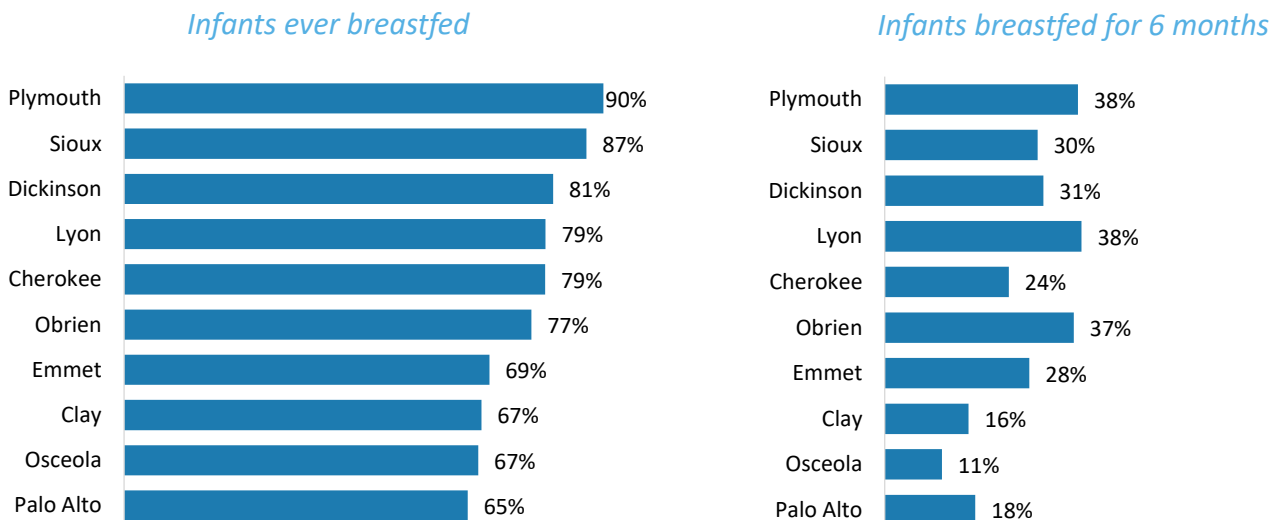
76%

of WIC-enrolled infants in CSA 1 initiated breastfeeding, on average

27%

of WIC-enrolled infants in CSA 1 were breastfed for at least 6 months, on average

Figure 7. Breastfeeding Rates in CSA 1 by County, 2020.



CSA 2: Demographic Characteristics of WIC Participants

In 2020, there were 2,064 lowans enrolled in WIC in CSA 2, including 394 women, 489 infants and 1,181 children.

Figure 8. Number of WIC Participants in CSA 2 by Participant Category and County, 2020.

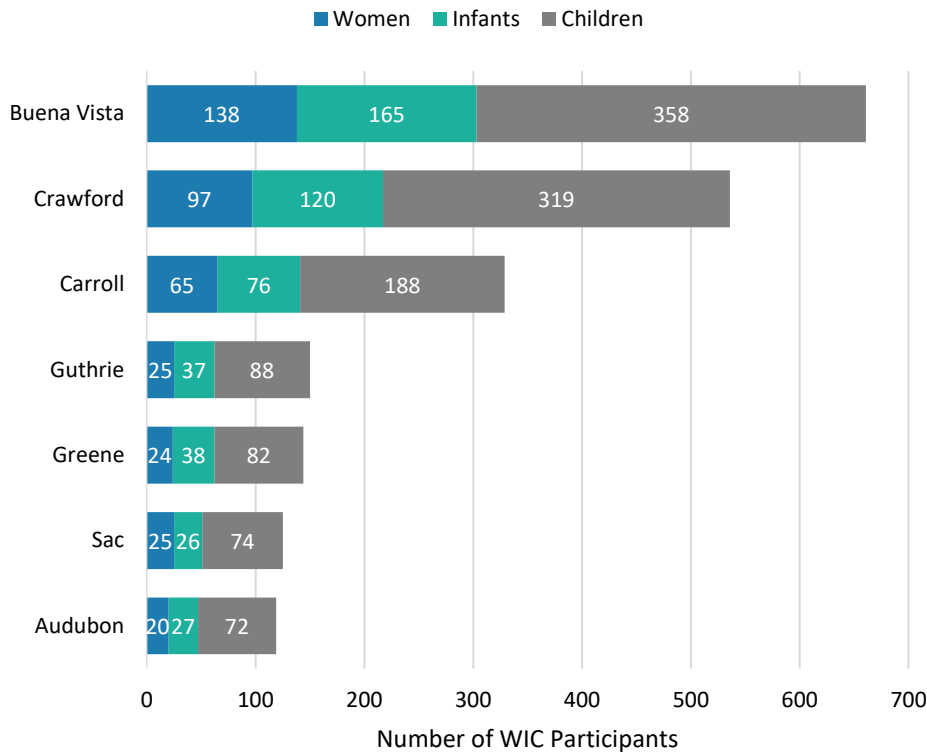
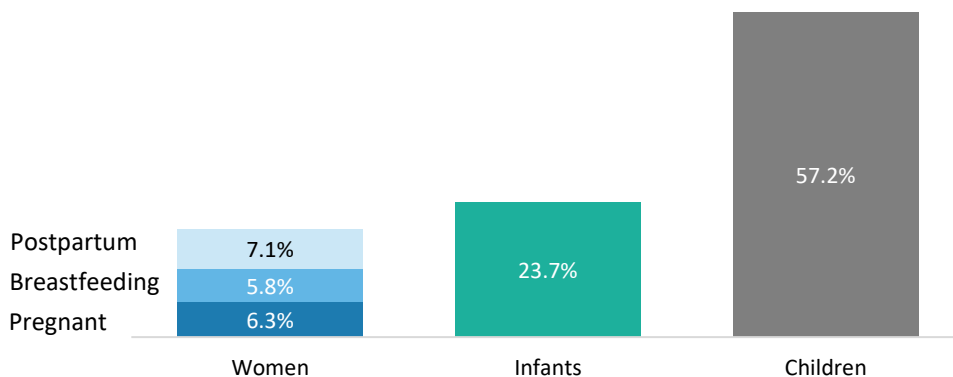
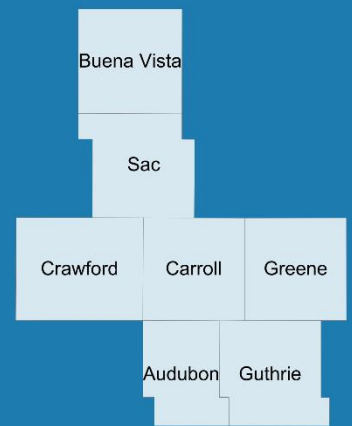


Figure 9. Percentage of WIC Participants in CSA 2 by Category, 2020.



CSA

2



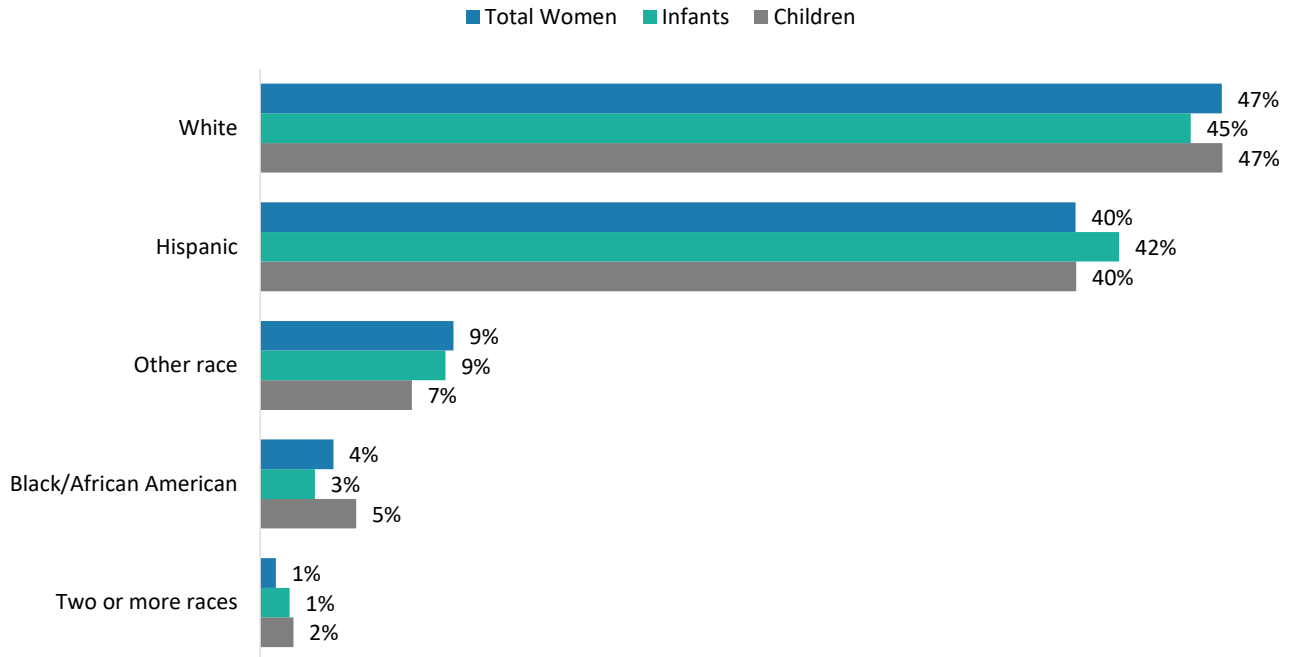
Counties include:

- Audubon
- Buena Vista
- Carroll
- Crawford
- Greene
- Guthrie
- Sac

2,064

WIC participants in 2020

Figure 10. Race and Ethnicity of WIC Participants in CSA 2 by Category, 2020.



Note: In the demographic data for 2020, Hispanic was included with race and not as a separate ethnicity. Other race includes American Indian/Alaskan Native, Asian, and Hawaiian/Pacific Islander.

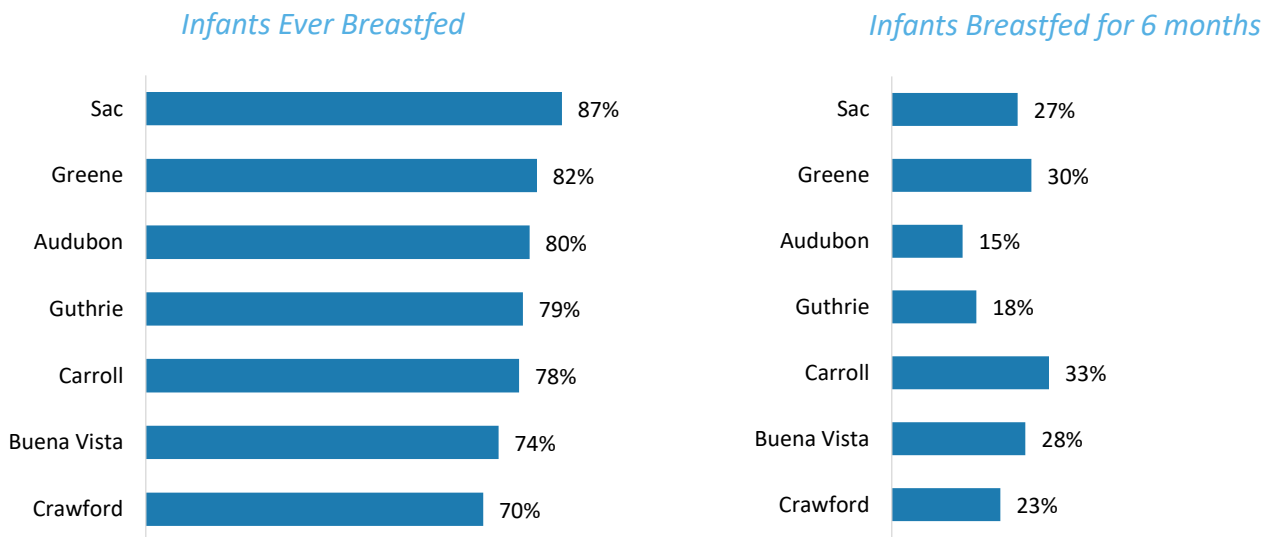
78%

of WIC-enrolled infants in CSA 2 initiated breastfeeding, on average

25%

of WIC-enrolled infants in CSA 2 were breastfed for at least 6 months, on average

Figure 11. Breastfeeding Rates in CSA 2 by County, 2020.



CSA 3: Demographic Characteristics of WIC Participants

In 2020, there were 2,675 lowans enrolled in WIC in CSA 3, including 533 women, 611 infants and 1,531 children.

Figure 12. Number of WIC Participants in CSA 3 by Participant Category and County, 2020.

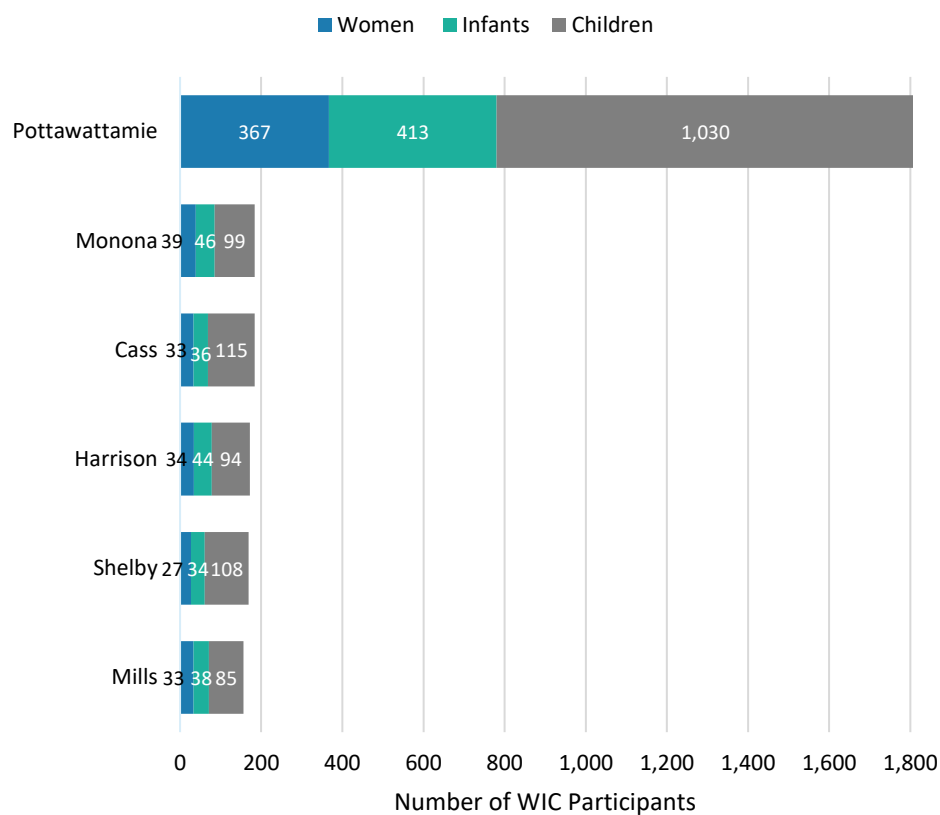
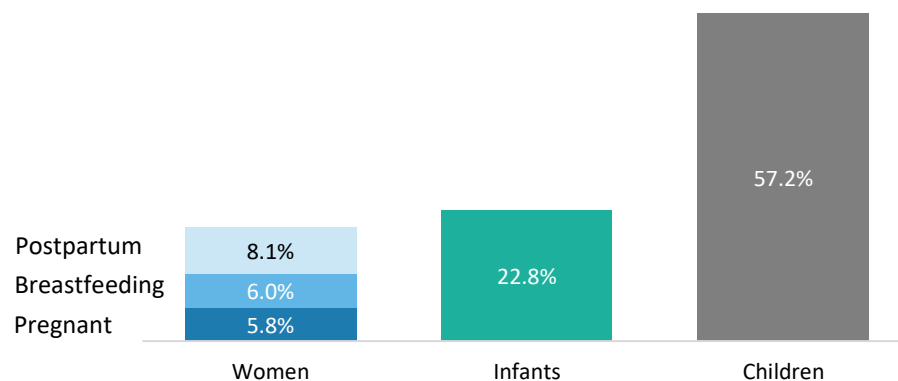


Figure 13. Percentage of WIC Participants in CSA 3 by Category, 2020.



CSA

3



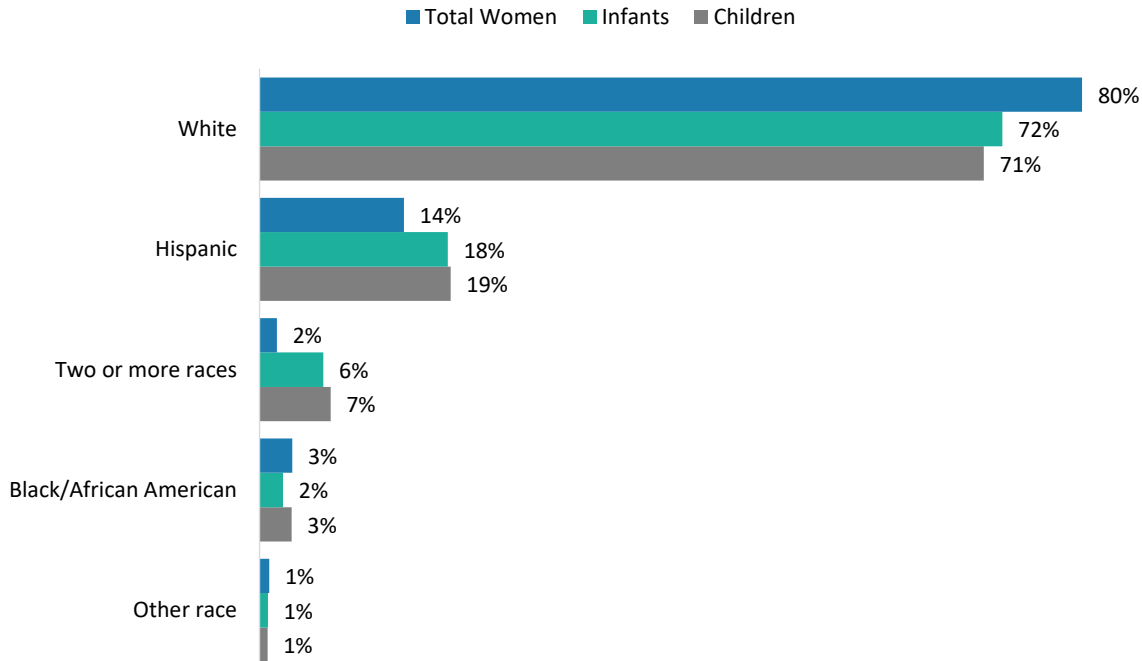
Counties include:

- Cass
- Harrison
- Mills
- Monona
- Pottawattamie
- Shelby

2,675

WIC participants in 2020

Figure 14. Race and Ethnicity of WIC Participants in CSA 3 by Category, 2020.



Note: In the demographic data for 2020, Hispanic was included with race and not as a separate ethnicity. Other race includes American Indian/Alaskan Native, Asian, and Hawaiian/Pacific Islander.

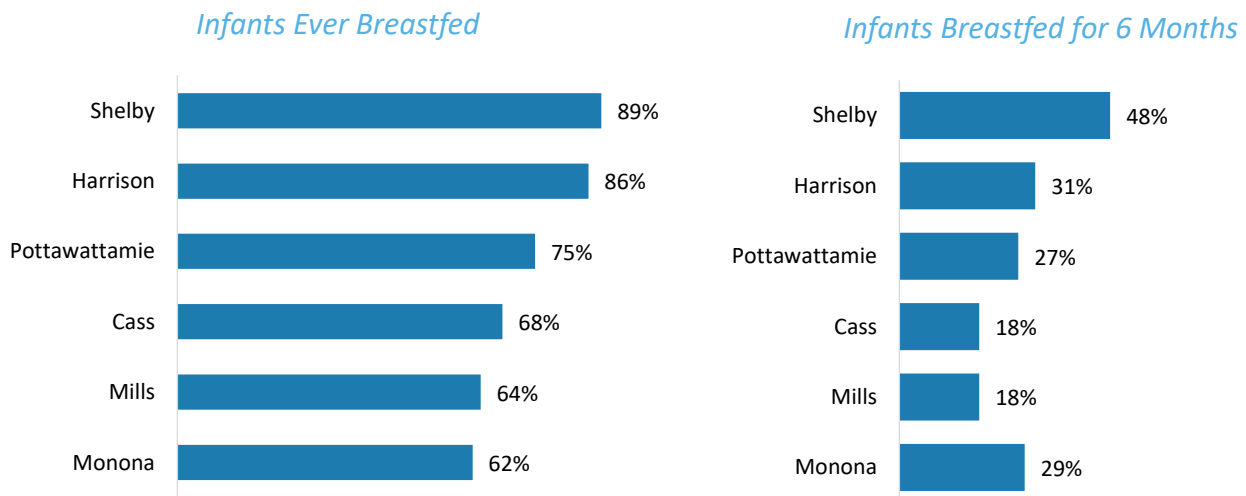
74%

of WIC-enrolled infants in CSA 3 initiated breastfeeding, on average

29%

of WIC-enrolled infants in CSA 3 were breastfed for at least 6 months, on average

Figure 15. Breastfeeding Rates in CSA 3 by County, 2020.



CSA 4: Demographic Characteristics of WIC Participants

In 2020, there were 2,209 lowans enrolled in WIC in CSA 4, including 431 women, 519 infants and 1,259 children.

Figure 16. Number of WIC Participants in CSA 4 by Participant Category and County, 2020.

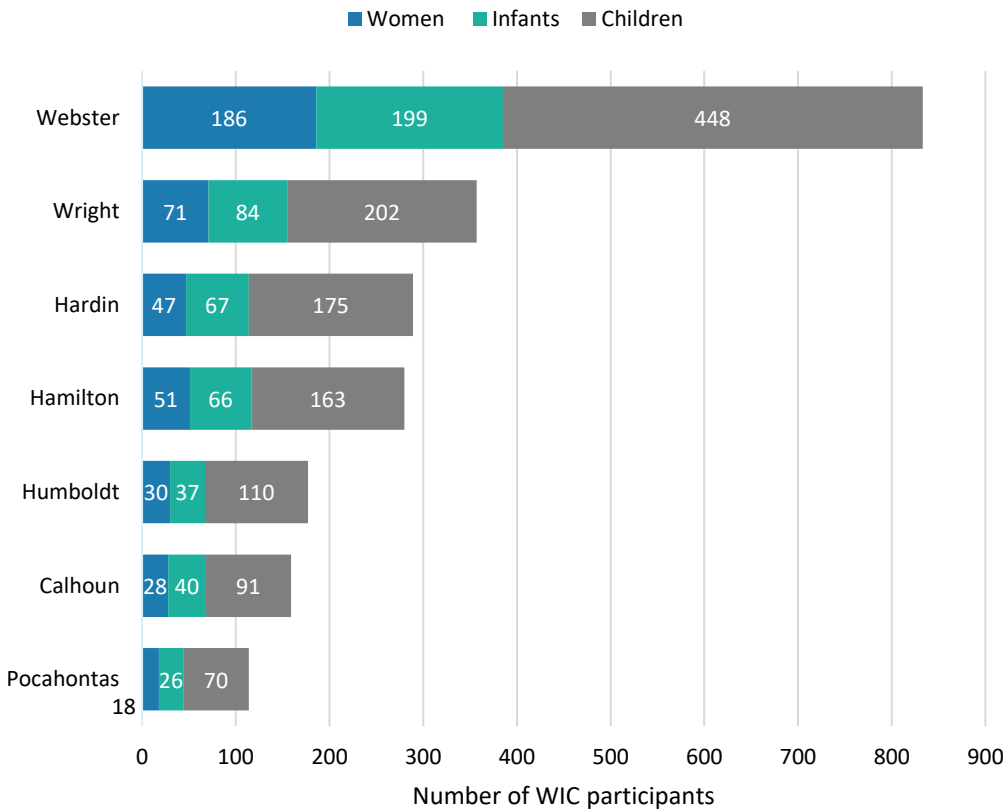
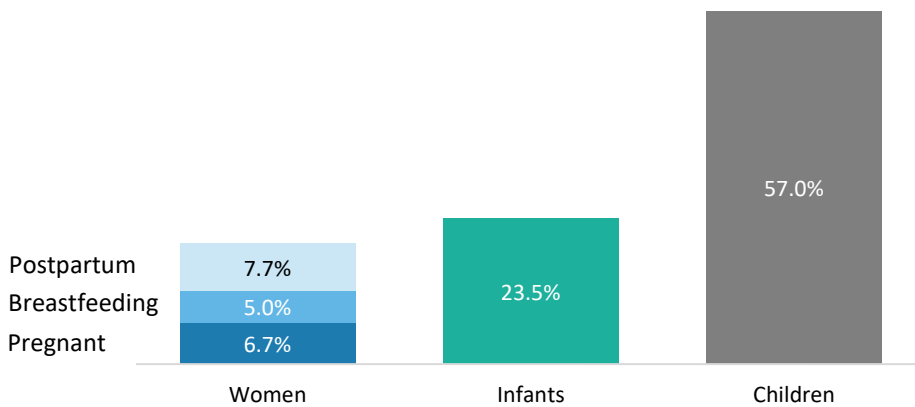
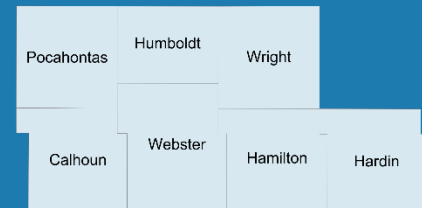


Figure 17. Percentage of WIC Participants in CSA 4 by Category, 2020.



CSA

4



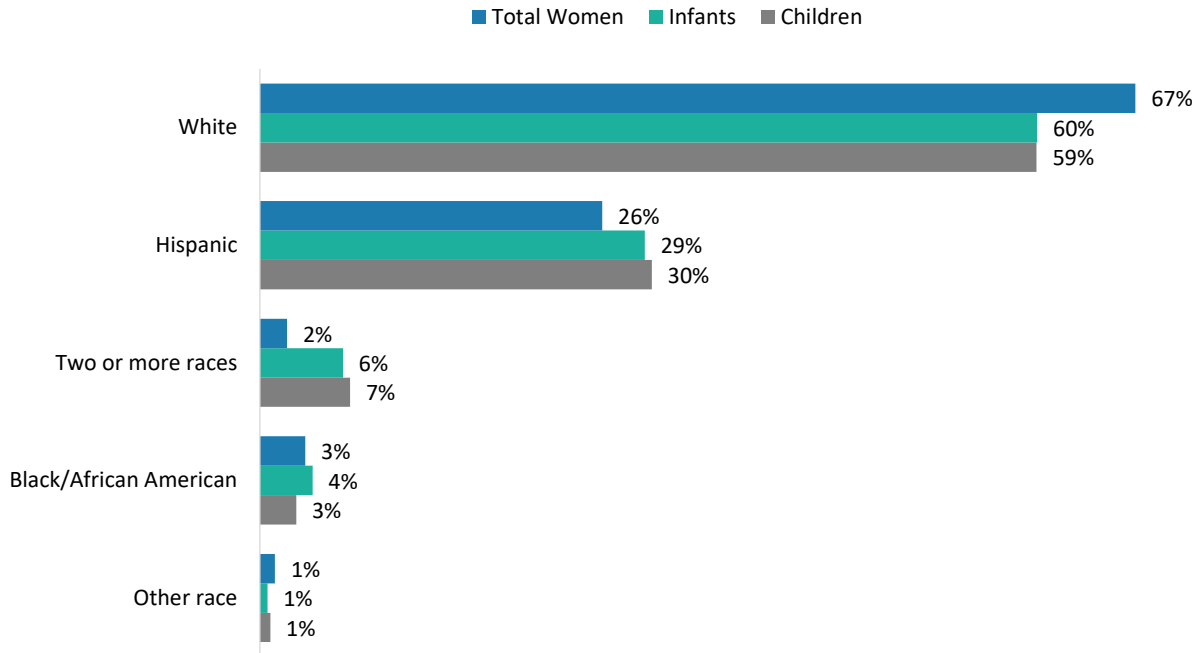
Counties include:

- Calhoun
- Hamilton
- Hardin
- Humboldt
- Pocahontas
- Webster
- Wright

2,209

WIC participants in 2020

Figure 18. Race and Ethnicity of WIC Participants in CSA 4 by Category, 2020.



Note: In the demographic data for 2020, Hispanic was included with race and not as a separate ethnicity. Other race includes American Indian/Alaskan Native, Asian, and Hawaiian/Pacific Islander.

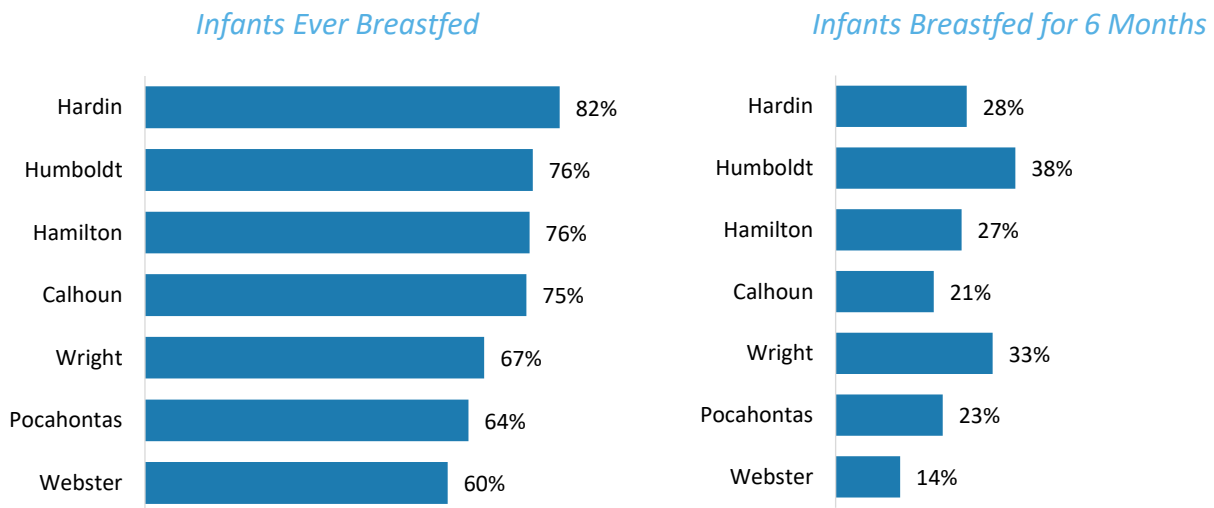
71%

of WIC-enrolled infants in CSA 4 initiated breastfeeding, on average

26%

of WIC-enrolled infants in CSA 4 were breastfed for at least 6 months, on average

Figure 19. Breastfeeding Rates in CSA 4 by County, 2020.



CSA 5: Demographic Characteristics of WIC Participants

In 2020, there were 3,099 lowans enrolled in WIC in CSA 5, including 579 women, 732 infants and 1,788 children.

Figure 20. Number of WIC Participants in CSA 5 by Participant Category and County, 2020.

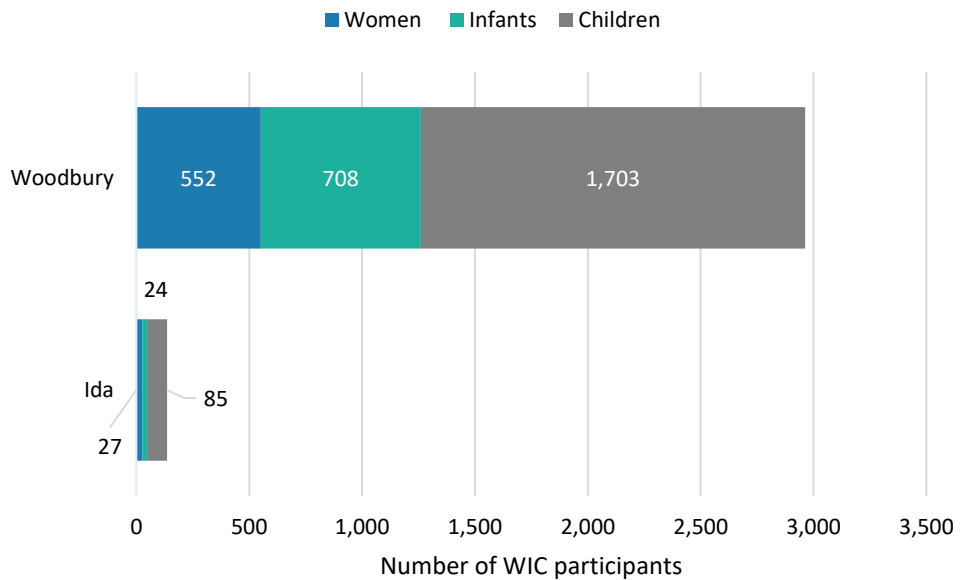
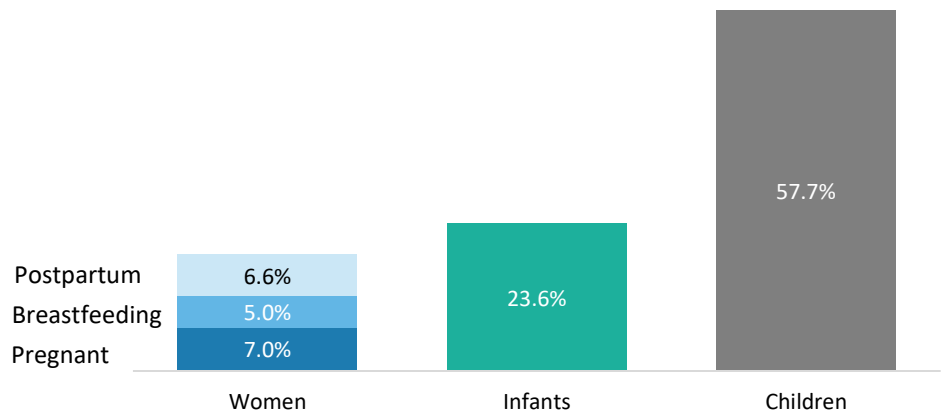
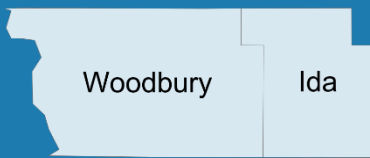


Figure 21. Percentage of WIC Participants in CSA 5 by Category, 2020.



CSA

5



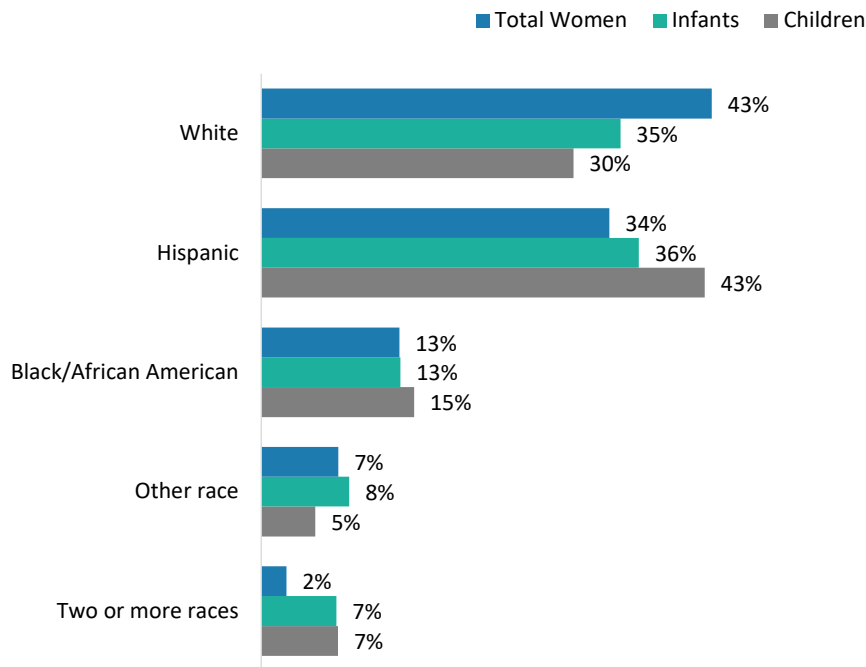
Counties include:

- Ida
- Woodbury

3,099

WIC participants in
2020

Figure 22. Race and Ethnicity of WIC Participants in CSA 5 by Category, 2020.



Note: In the demographic data for 2020, Hispanic was included with race and not as a separate ethnicity. Other race includes American Indian/Alaskan Native, Asian, and Hawaiian/Pacific Islander.

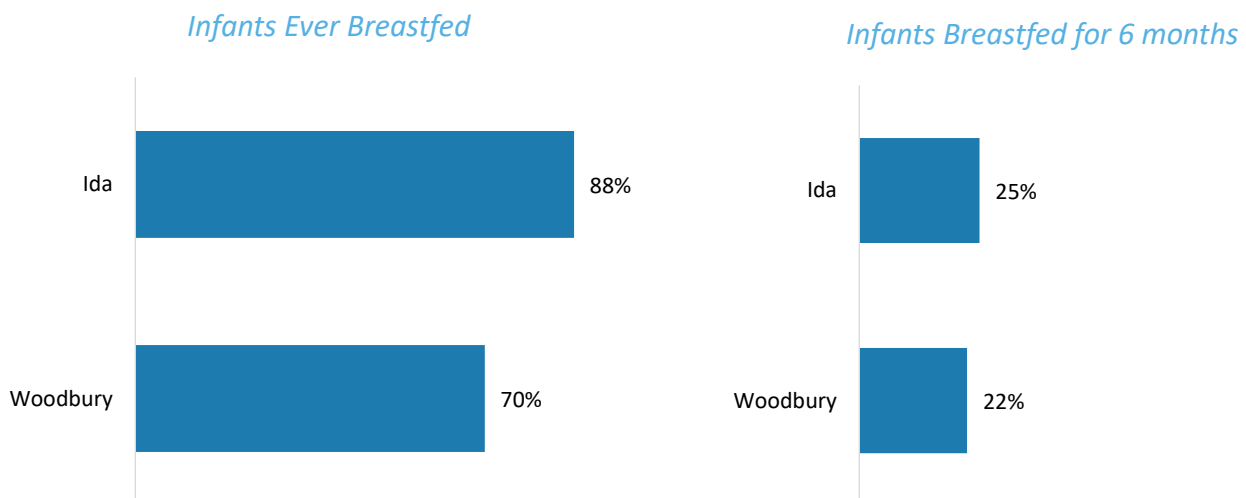
79%

of WIC-enrolled infants in CSA 5 initiated breastfeeding, on average

24%

of WIC-enrolled infants in CSA 5 were breastfed for at least 6 months, on average

Figure 23. Breastfeeding Rates in CSA 5 by County, 2020.



CSA 6: Demographic Characteristics of WIC Participants

In 2020, there were 2,807 lowans enrolled in WIC in CSA 6, including 567 women, 607 infants and 1,633 children.

Figure 24. Number of WIC Participants in CSA 6 by Participant Category and County, 2020.

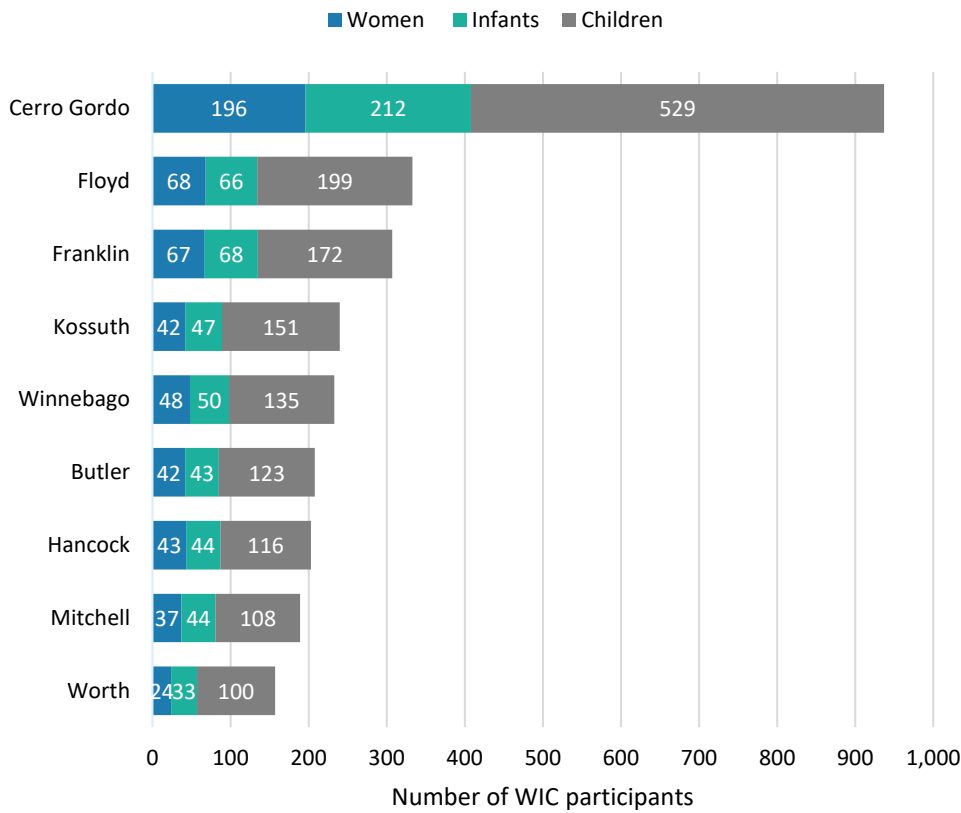
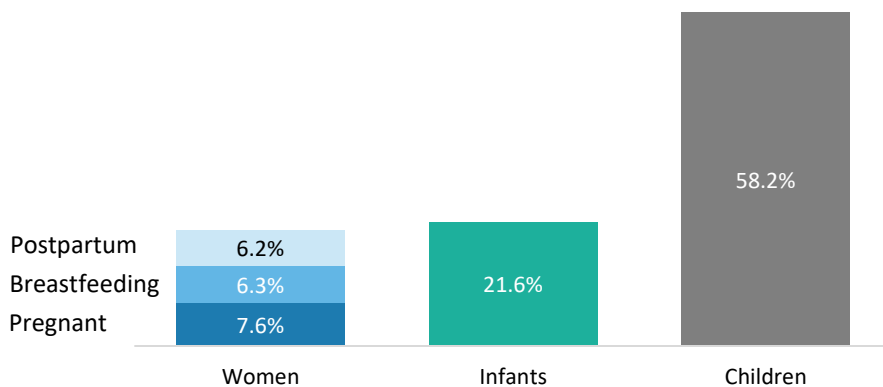


Figure 25. Percentage of WIC Participants in CSA 6 by Category, 2020.



CSA

6

Kossuth	Winnebago	Worth	Mitchell
	Hancock	Cerro Gordo	Floyd
		Franklin	Butler

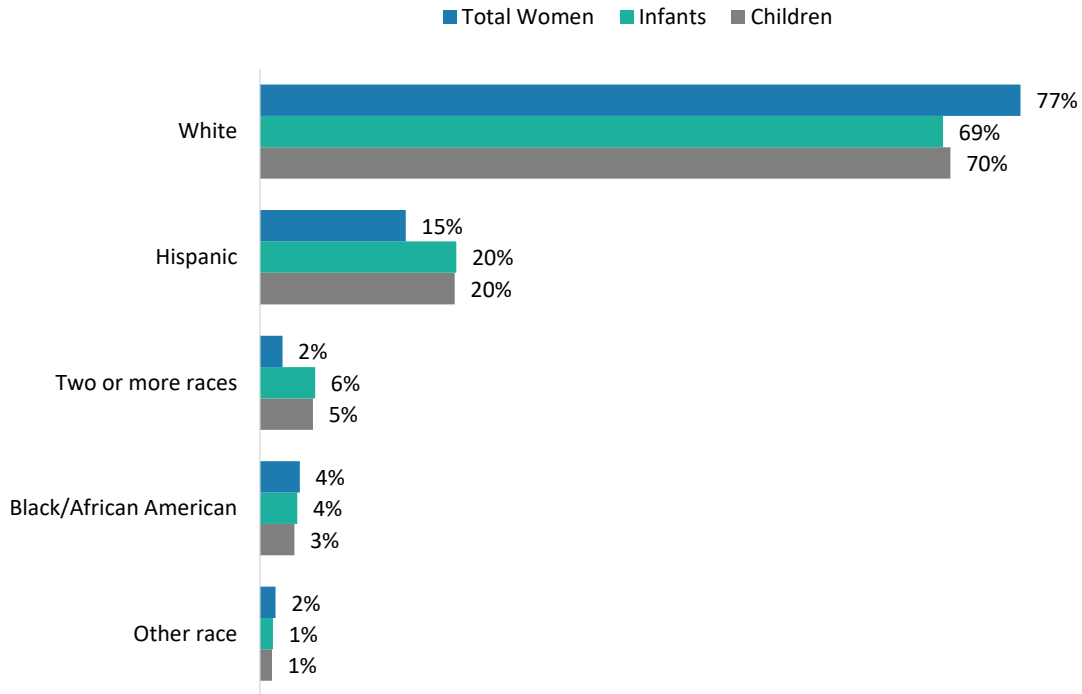
Counties include:

- Butler
- Cerro Gordo
- Floyd
- Franklin
- Hancock
- Kossuth
- Mitchell
- Winnebago
- Worth

2,807

WIC participants in 2020

Figure 26. Race and Ethnicity of WIC Participants in CSA 6 by Category, 2020.



Note: In the demographic data for 2020, Hispanic was included with race and not as a separate ethnicity. Other race includes American Indian/Alaskan Native, Asian, and Hawaiian/Pacific Islander.

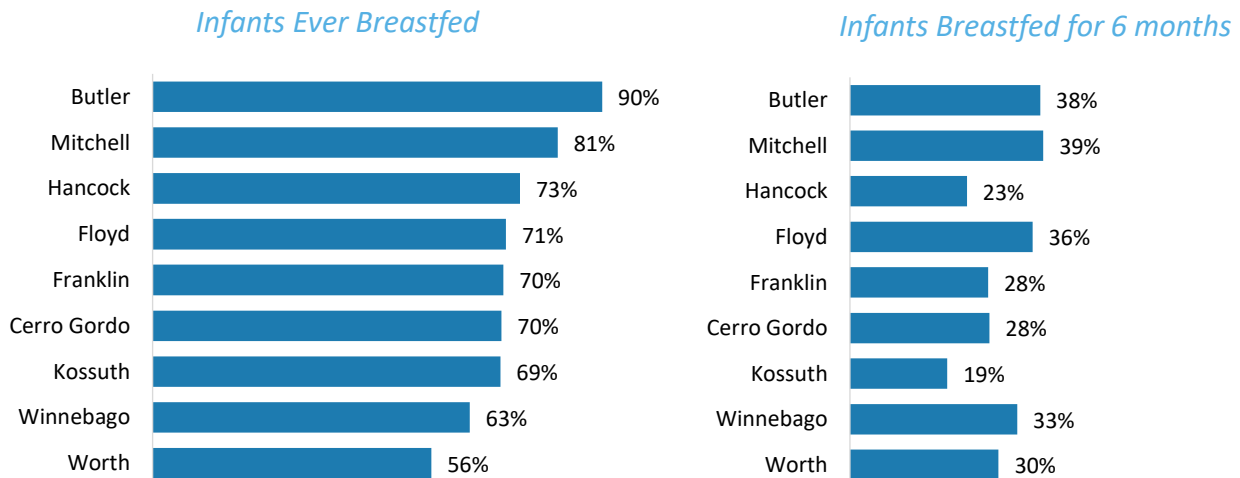
71%

of WIC-enrolled infants in CSA 6 initiated breastfeeding, on average

30%

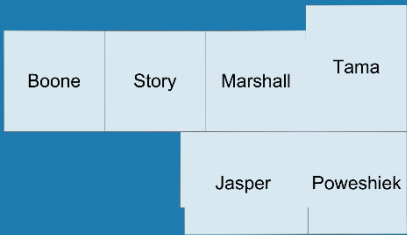
of WIC-enrolled infants in CSA 6 were breastfed for at least 6 months, on average

Figure 27. Breastfeeding Rates in CSA 6 by County, 2020.



CSA

7



Counties include:

- Boone
- Jasper
- Marshall
- Poweshiek
- Story
- Tama

3,641

WIC participants in 2020

CSA 7: Demographic Characteristics of WIC Participants

In 2020, there were 3,641 lowans enrolled in WIC in CSA 7, including 737 women, 798 infants and 2,106 children.

Figure 28. Number of WIC Participants in CSA 7 by Participant Category and County, 2020.

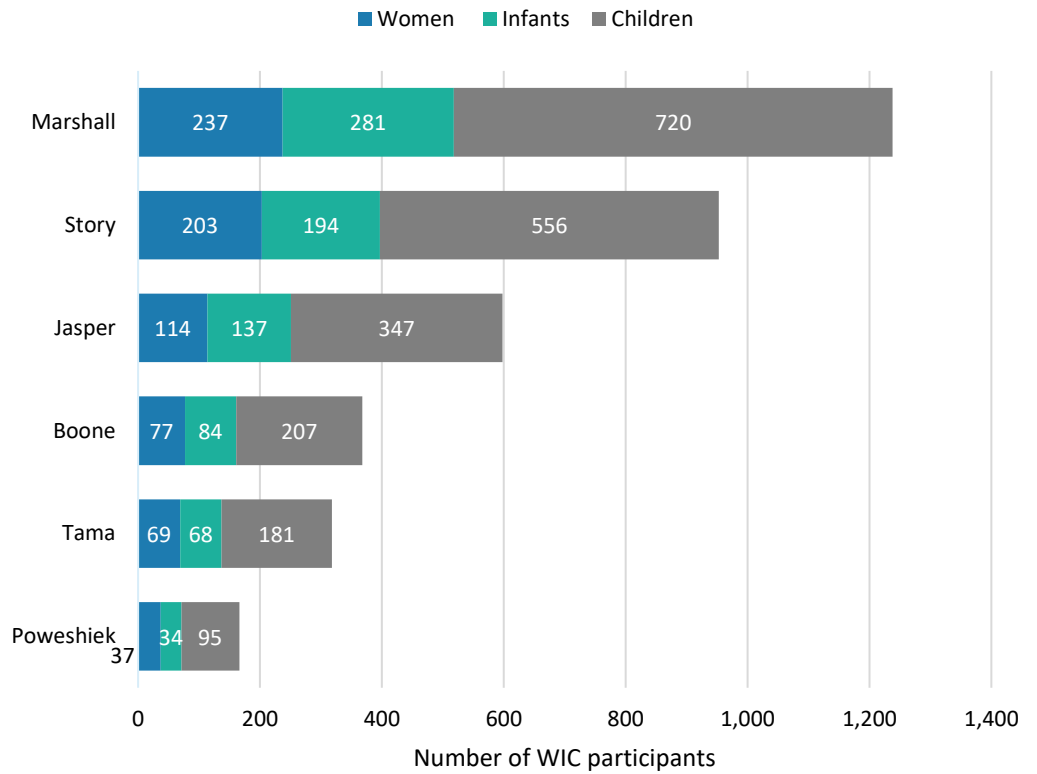


Figure 29. Percentage of WIC Participants in CSA 7 by Category, 2020.

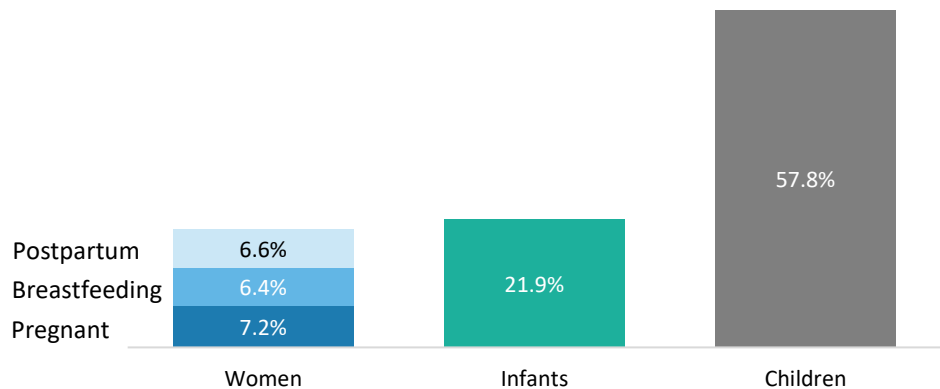
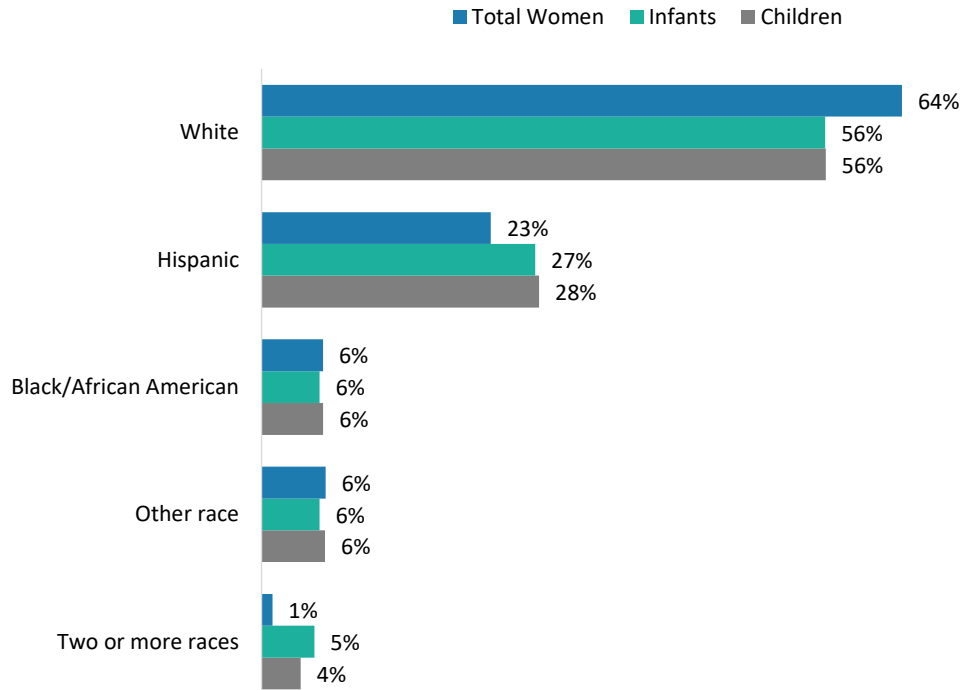


Figure 30. Race and Ethnicity of WIC Participants in CSA 7 by Category, 2020.



Note: In the demographic data for 2020, Hispanic was included with race and not as a separate ethnicity. Other race includes American Indian/Alaskan Native, Asian, and Hawaiian/Pacific Islander.

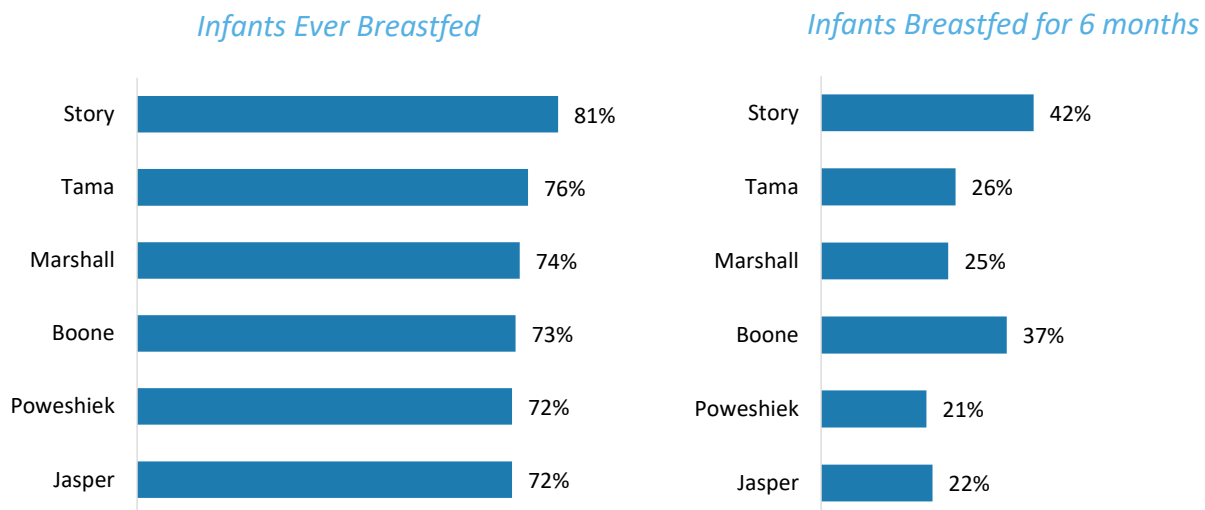
75%

of WIC-enrolled infants in CSA 7 initiated breastfeeding, on average

29%

of WIC-enrolled infants in CSA 7 were breastfed for at least 6 months, on average

Figure 31. Breastfeeding Rates in CSA 7 by County, 2020.



CSA 8: Demographic Characteristics of WIC Participants

In 2020, there were 12,190 lowans enrolled in WIC in CSA 8, including 2,541 women, 2,848 infants and 6,801 children.

Figure 32. Number of WIC Participants in CSA 8 by Participant Category and County, 2020.

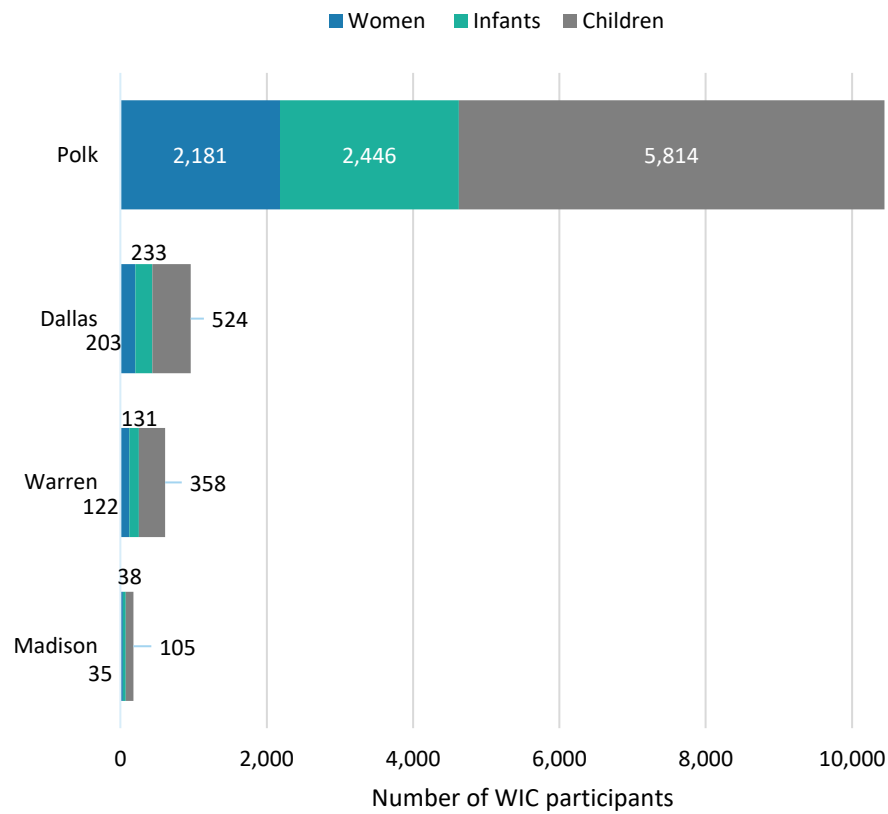
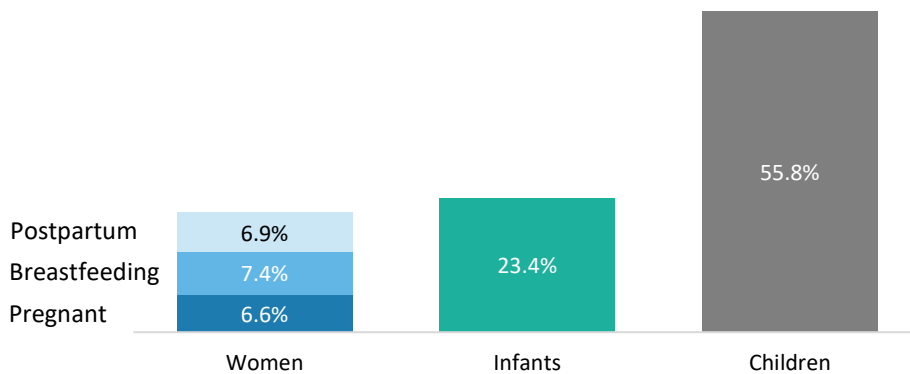
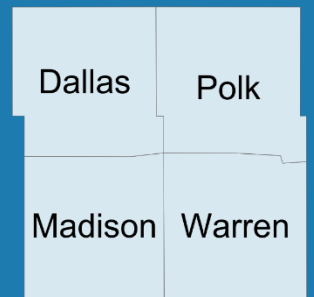


Figure 33. Percentage of WIC Participants in CSA 8 by Category, 2020.



CSA

8



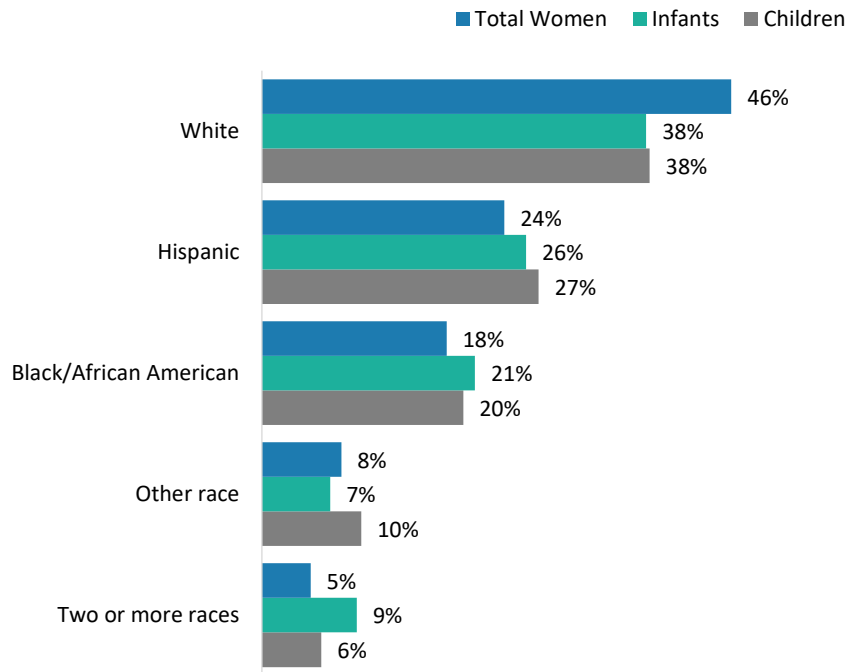
Counties include:

- Dallas
- Madison
- Polk
- Warren

12,190

WIC participants in 2020

Figure 34. Race and Ethnicity of WIC Participants in CSA 8 by Category, 2020.



Note: In the demographic data for 2020, Hispanic was included with race and not as a separate ethnicity. Other race includes American Indian/Alaskan Native, Asian, and Hawaiian/Pacific Islander.

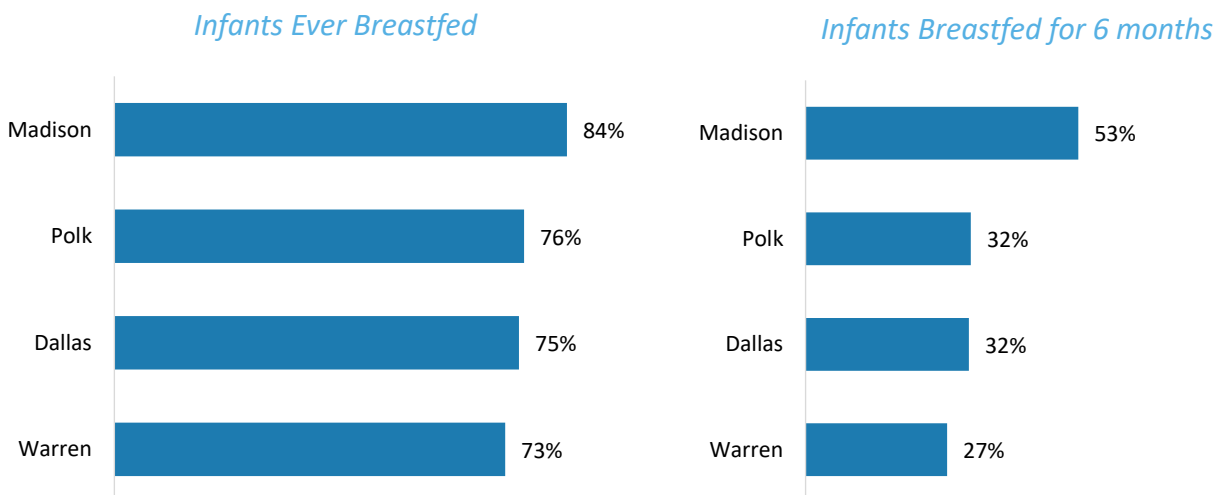
77%

of WIC-enrolled infants in CSA 8 initiated breastfeeding, on average

36%

of WIC-enrolled infants in CSA 8 were breastfed for at least 6 months, on average

Figure 35. Breastfeeding Rates in CSA 8 by County, 2020.



CSA 9: Demographic Characteristics of WIC Participants

In 2020, there were 1,907 lowans enrolled in WIC in CSA 9, including 358 women, 415 infants and 1,134 children.

Figure 36. Number of WIC Participants in CSA 9 by Participant Category and County, 2020.

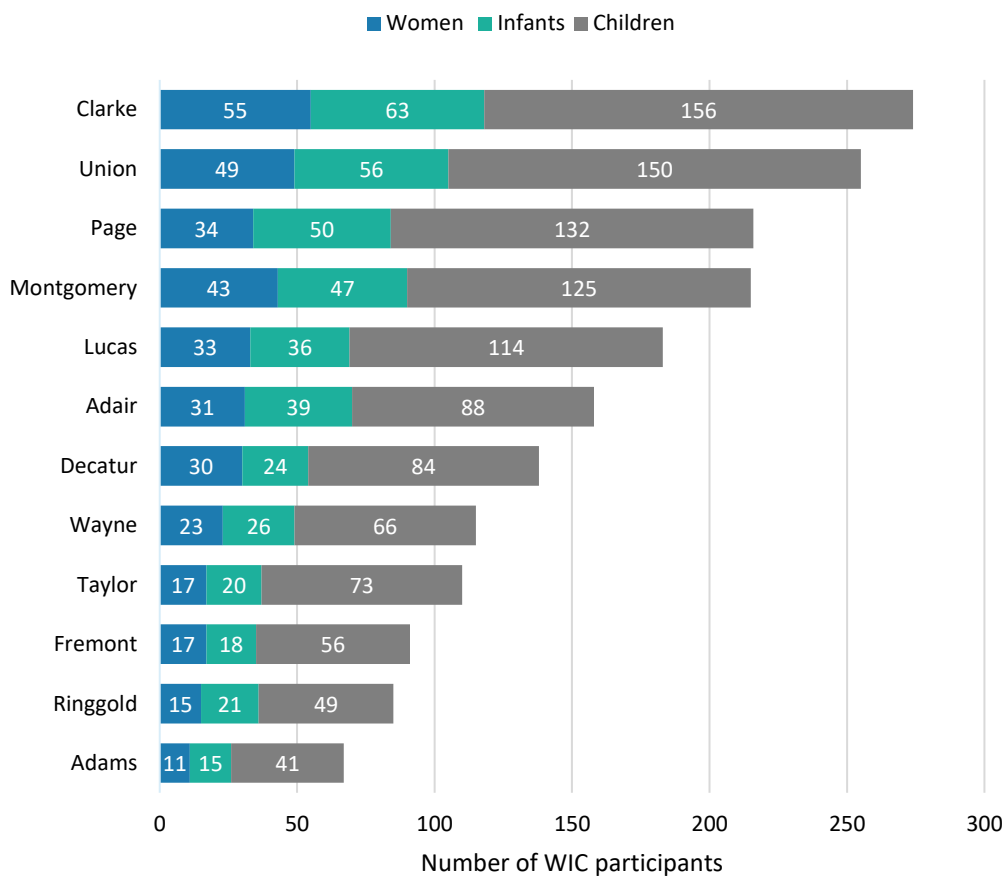
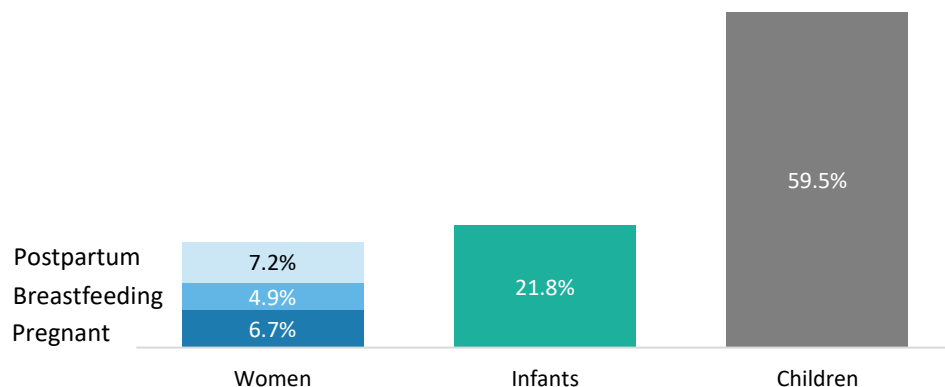


Figure 37. Percentage of WIC Participants in CSA 9 by Category, 2020.



CSA

9

Adair

Montgomery

Adams

Union

Clarke

Lucas

Fremont

Page

Taylor

Ringgold

Decatur

Wayne

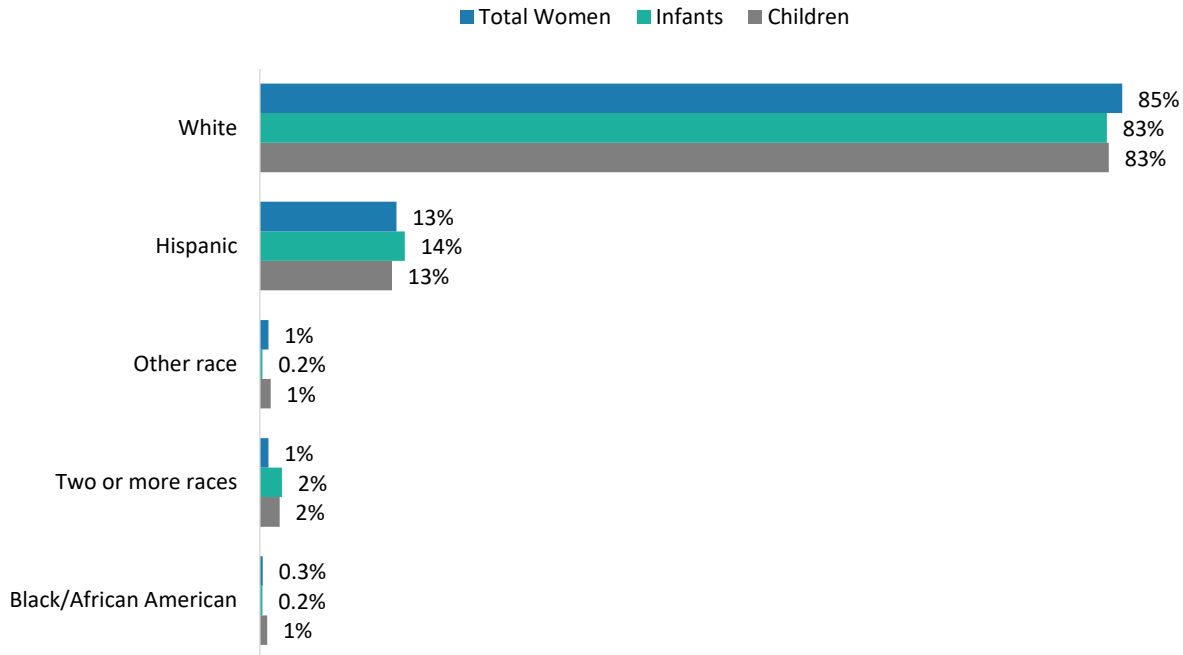
Counties include:

- Adair
- Adams
- Clarke
- Decatur
- Fremont
- Lucas
- Montgomery
- Page
- Ringgold
- Taylor
- Union
- Wayne

1,907

WIC participants in 2020

Figure 38. Race and Ethnicity of WIC Participants in CSA 9 by Category, 2020.



Note: In the demographic data for 2020, Hispanic was included with race and not as a separate ethnicity. Other race includes American Indian/Alaskan Native, Asian, and Hawaiian/Pacific Islander.

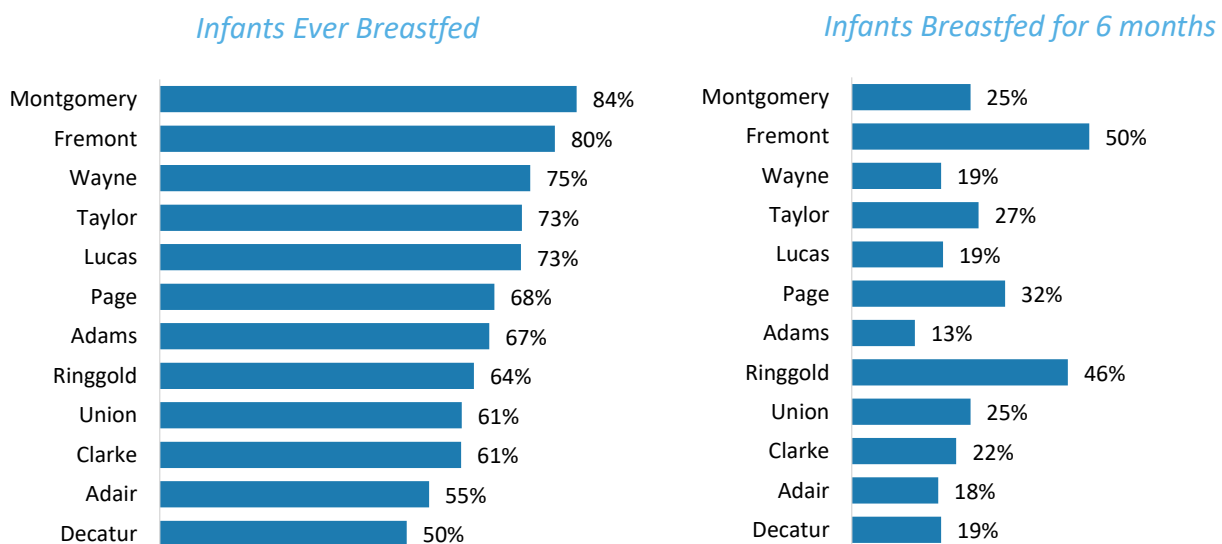
68%

of WIC-enrolled infants in CSA 9 initiated breastfeeding, on average

26%

of WIC-enrolled infants in CSA 9 were breastfed for at least 6 months, on average

Figure 39. Breastfeeding Rates in CSA 9 by County, 2020.



CSA 10: Demographic Characteristics of WIC Participants

In 2020, there were 2,927 lowans enrolled in WIC in CSA 10, including 622 women, 685 infants and 1,620 children.

Figure 40. Number of WIC Participants in CSA 10 by Participant Category and County, 2020.

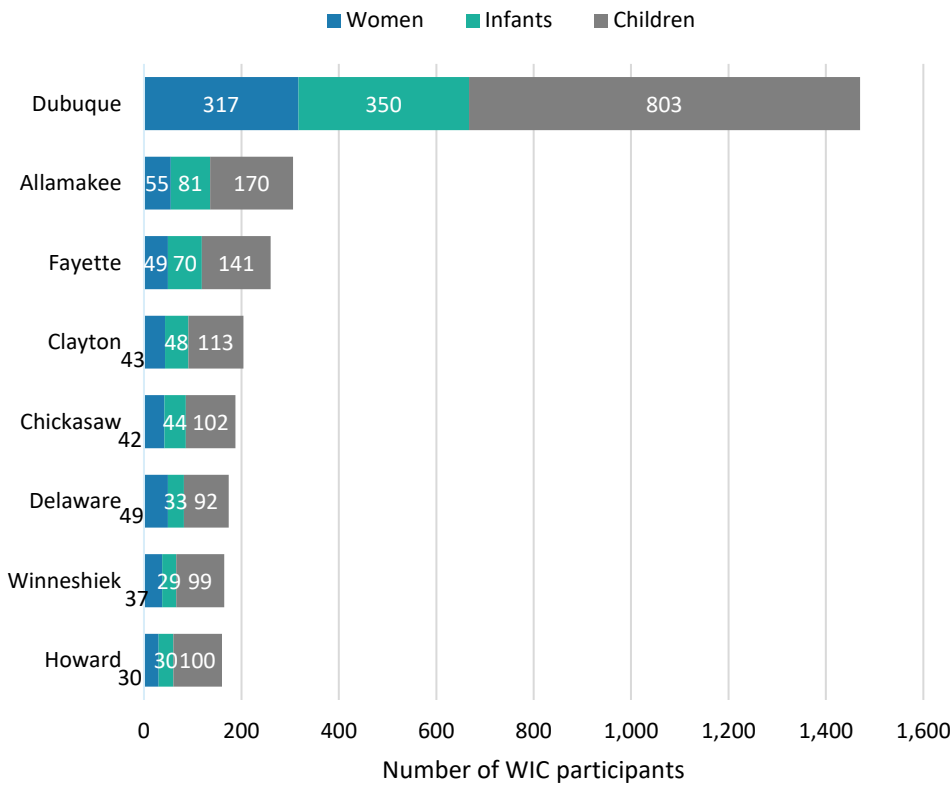
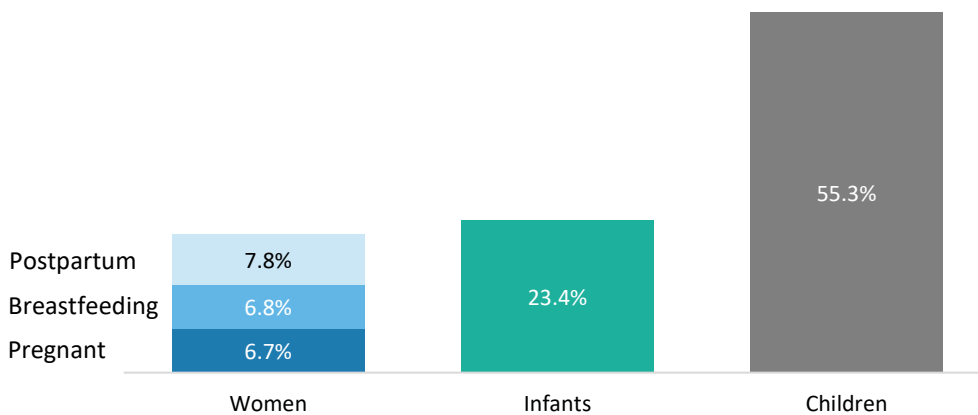
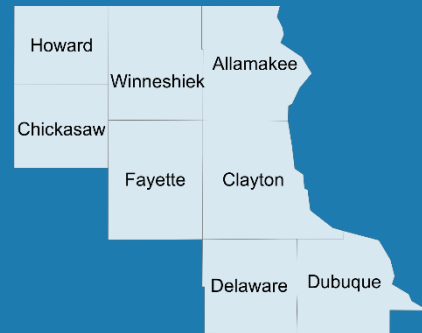


Figure 41. Percentage of WIC Participants in CSA 10 by Category, 2020.



CSA

10



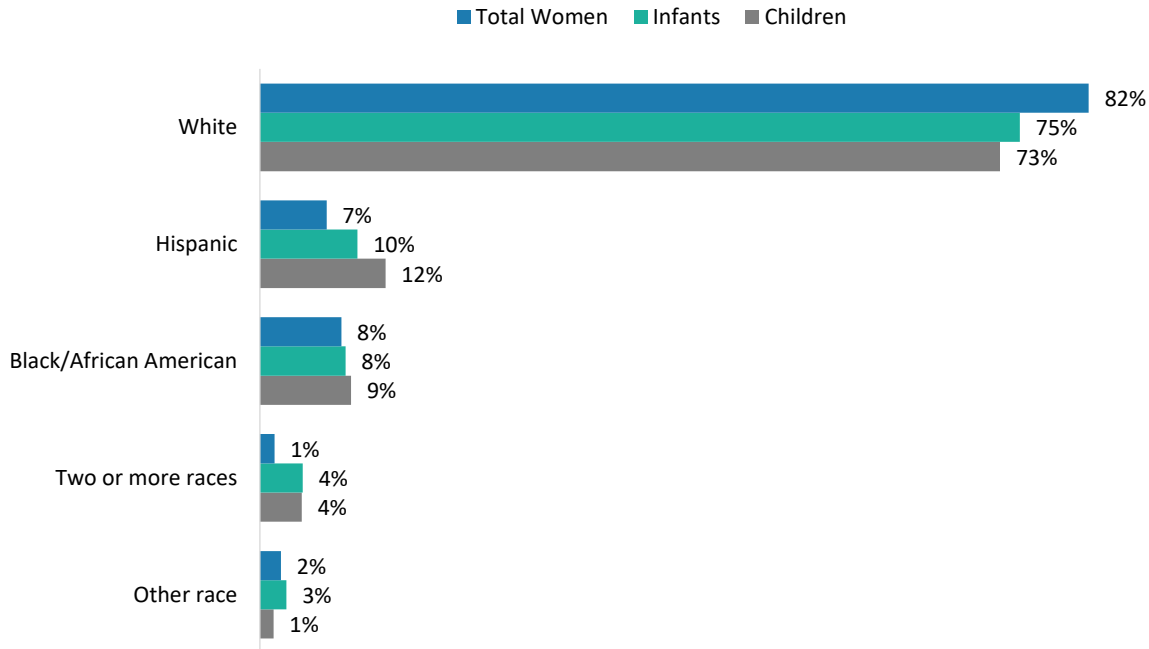
Counties include:

- Allamakee
- Chickasaw
- Clayton
- Delaware
- Dubuque
- Fayette
- Howard
- Winneshiek

2,927

WIC participants in 2020

Figure 42. Race and Ethnicity of WIC Participants in CSA 10 by Category, 2020.



Note: In the demographic data for 2020, Hispanic was included with race and not as a separate ethnicity. Other race includes American Indian/Alaskan Native, Asian, and Hawaiian/Pacific Islander.

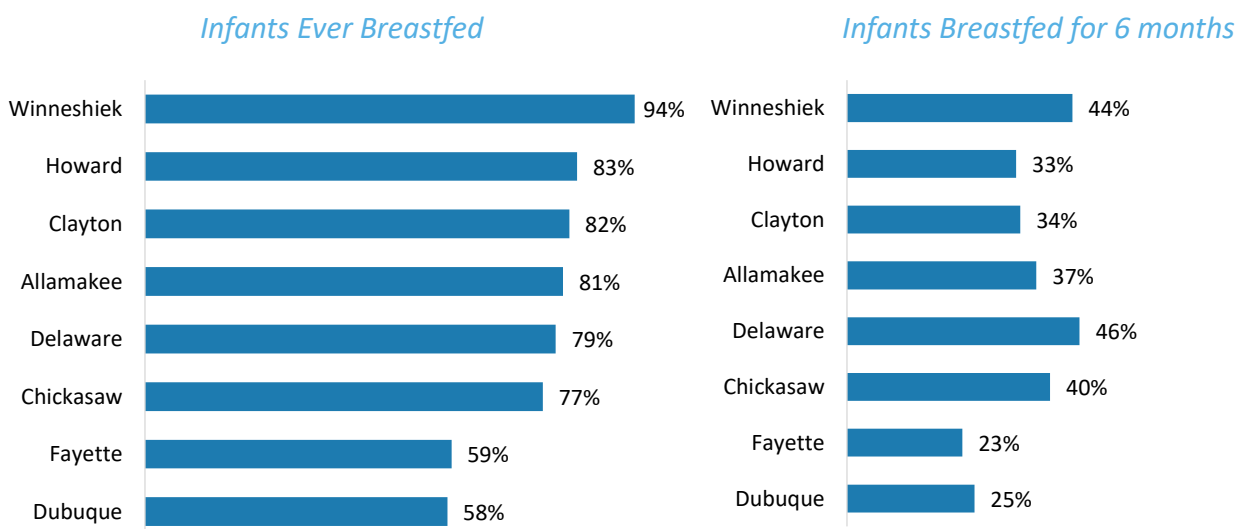
77%

of WIC-enrolled infants in CSA 10 initiated breastfeeding, on average

35%

of WIC-enrolled infants in CSA 10 were breastfed for at least 6 months, on average

Figure 43. Breastfeeding Rates in CSA 10 by County, 2020.



CSA 11: Demographic Characteristics of WIC Participants

In 2020, there were 4,257 lowans enrolled in WIC in CSA 11, including 911 women, 1,013 infants and 2,333 children.

Figure 44. Number of WIC Participants in CSA 11 by Participant Category and County, 2020.

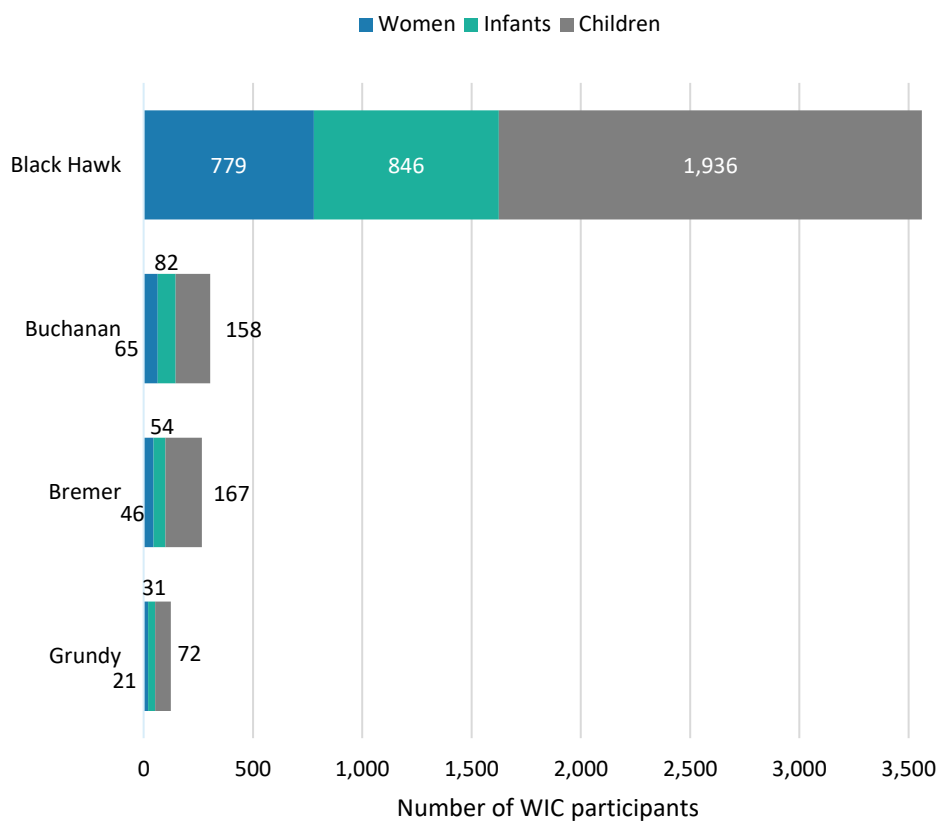
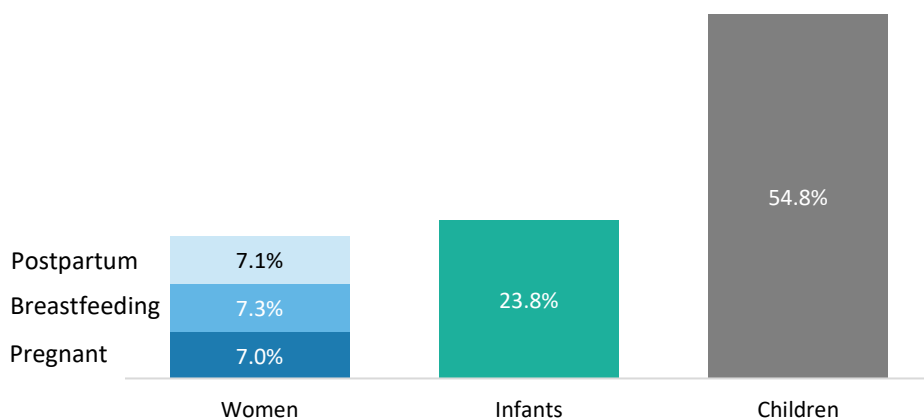


Figure 45. Percentage of WIC Participants in CSA 11 by Category, 2020.



CSA

11

Bremer

Black Hawk

Buchanan

Grundy

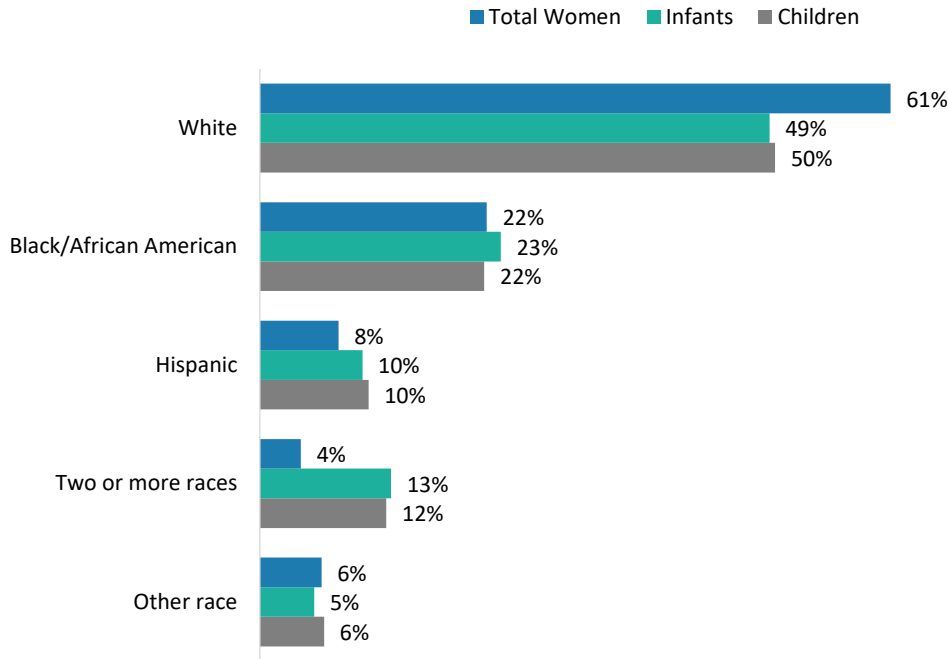
Counties include:

- Black Hawk
- Bremer
- Buchanan
- Grundy

4,257

WIC participants in 2020

Figure 46. Race and Ethnicity of WIC Participants in CSA 11 by Category, 2020.



Note: In the demographic data for 2020, Hispanic was included with race and not as a separate ethnicity. Other race includes American Indian/Alaskan Native, Asian, and Hawaiian/Pacific Islander.

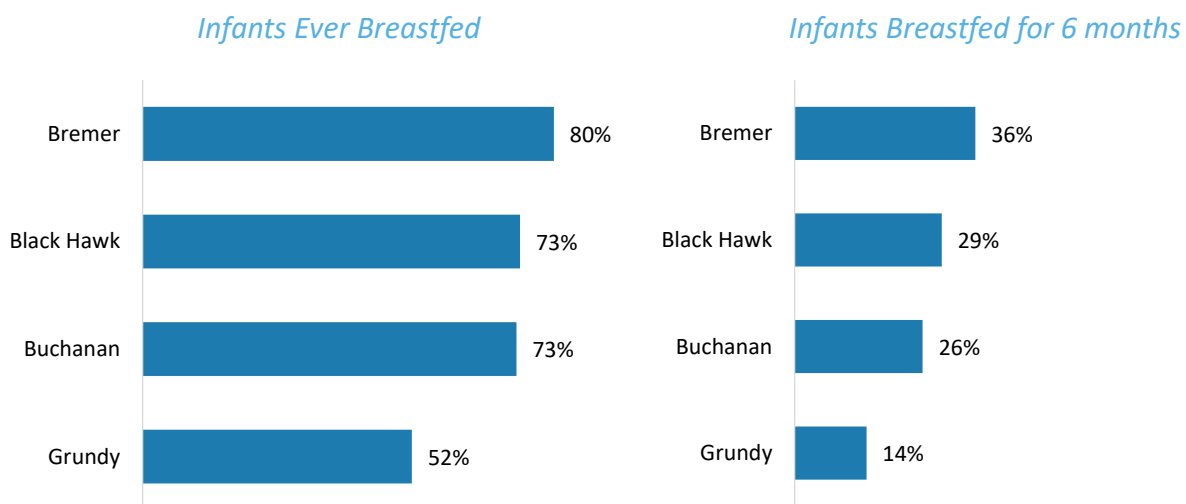
70%

of WIC-enrolled infants in CSA 11 initiated breastfeeding, on average

26%

of WIC-enrolled infants in CSA 11 were breastfed for at least 6 months, on average

Figure 47. Breastfeeding Rates in CSA 11 by County, 2020.



CSA 12: Demographic Characteristics of WIC Participants

In 2020, there were 6,677 lowans enrolled in WIC in CSA 12, including 1,344 women, 1,548 infants and 3,785 children.

Figure 48. Number of WIC Participants in CSA 12 by Participant Category and County, 2020.

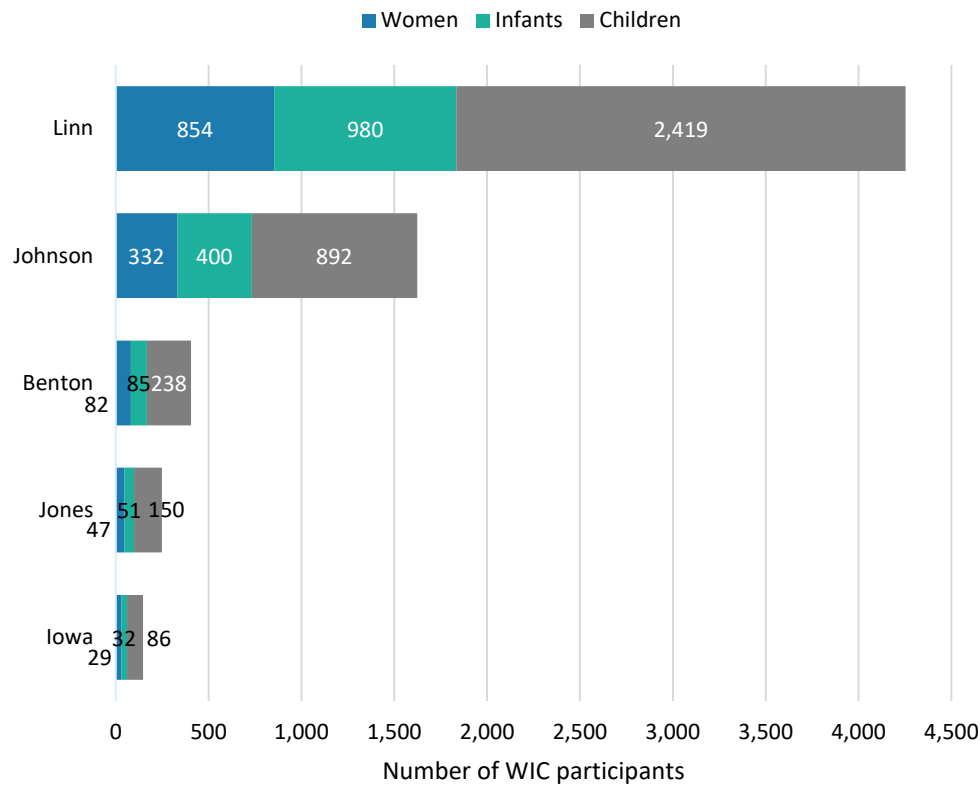
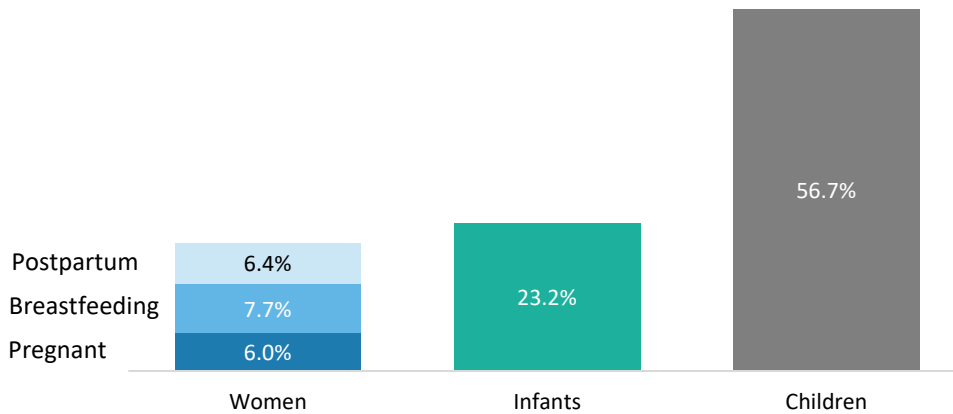
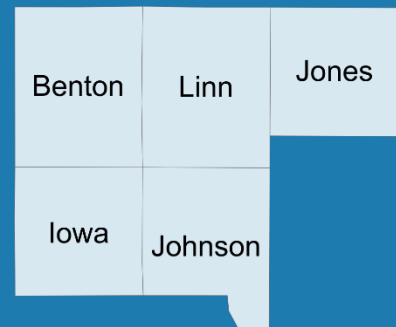


Figure 49. Percentage of WIC Participants in CSA 12 by Category, 2020.



CSA

12



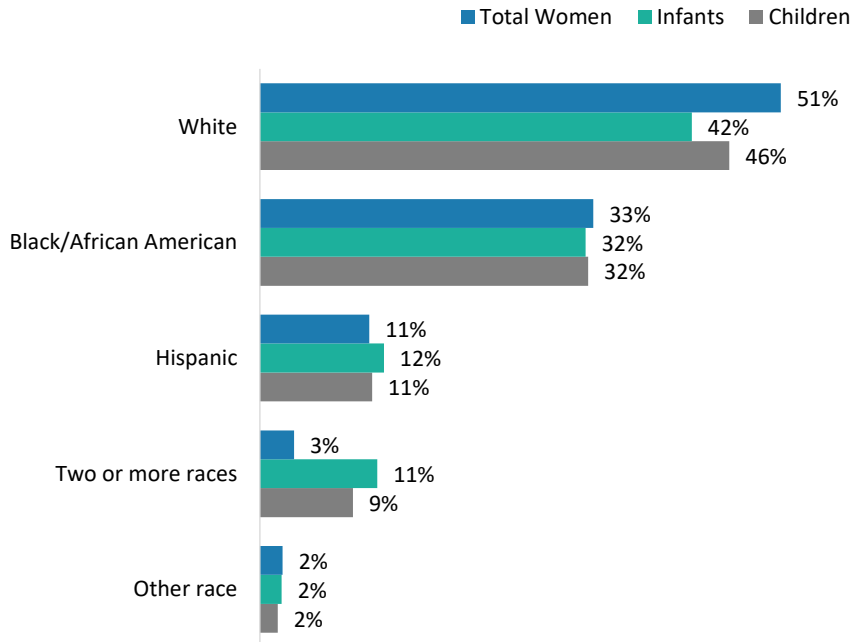
Counties include:

- Benton
- Iowa
- Johnson
- Jones
- Linn

6,677

WIC participants in 2020

Figure 50. Race and Ethnicity of WIC Participants in CSA 12 by Category, 2020.



Note: In the demographic data for 2020, Hispanic was included with race and not as a separate ethnicity. Other race includes American Indian/Alaskan Native, Asian, and Hawaiian/Pacific Islander.

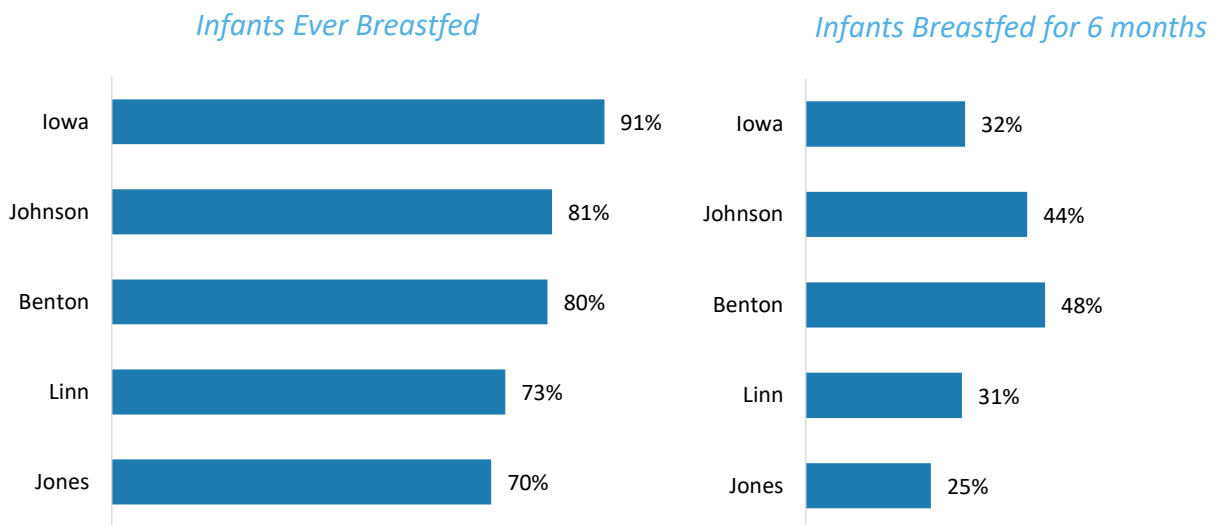
79%

of WIC-enrolled infants in CSA 12 initiated breastfeeding, on average

36%

of WIC-enrolled infants in CSA 12 were breastfed for at least 6 months, on average

Figure 51. Breastfeeding Rates in CSA 12 by County, 2020.



CSA 13: Demographic Characteristics of WIC Participants

In 2020, there were 2,966 lowans enrolled in WIC in CSA 13, including 575 women, 728 infants and 1,663 children.

Figure 52. Number of WIC Participants in CSA 13 by Participant Category and County, 2020.

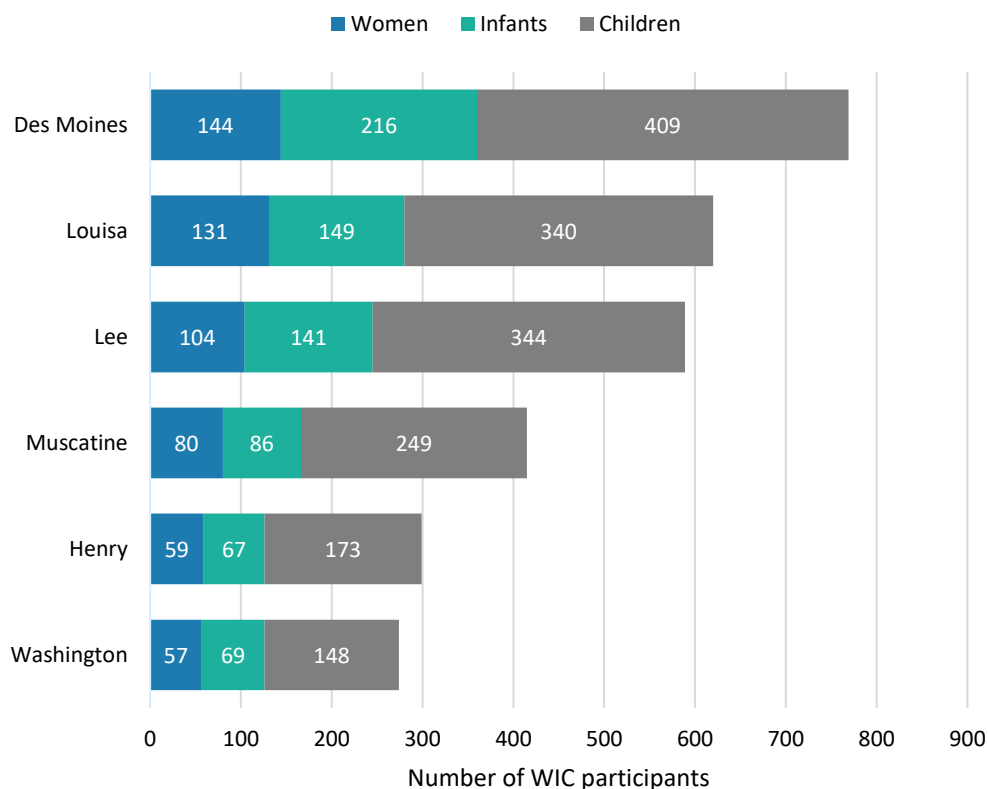
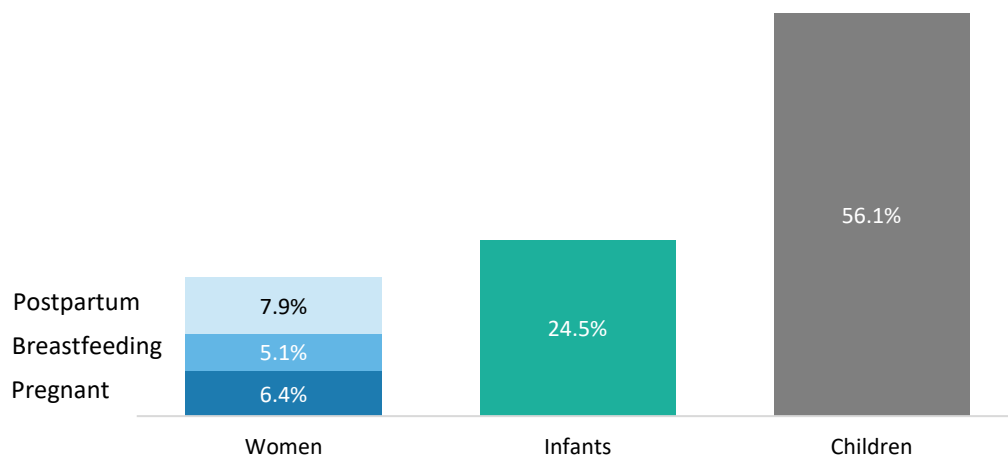


Figure 53. Percentage of WIC Participants in CSA 13 by Category, 2020.



CSA

13



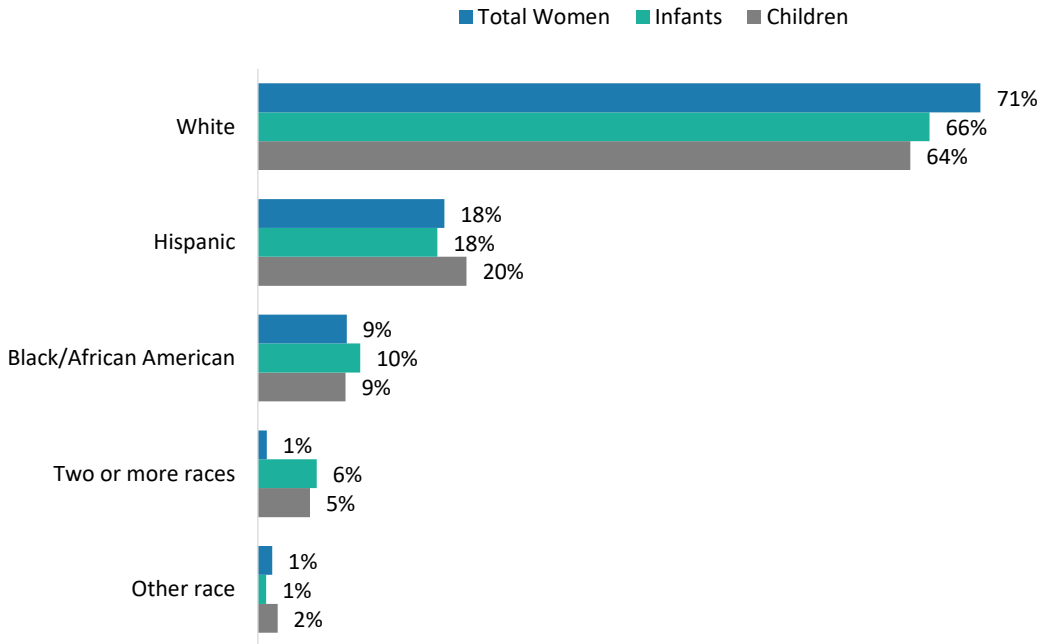
Counties include:

- Des Moines
- Henry
- Lee
- Louisa
- Muscatine
- Washington

2,966

WIC participants in
2020

Figure 54. Race and Ethnicity of WIC Participants in CSA 13 by Category, 2020.



Note: In the demographic data for 2020, Hispanic was included with race and not as a separate ethnicity. Other race includes American Indian/Alaskan Native, Asian, and Hawaiian/Pacific Islander.

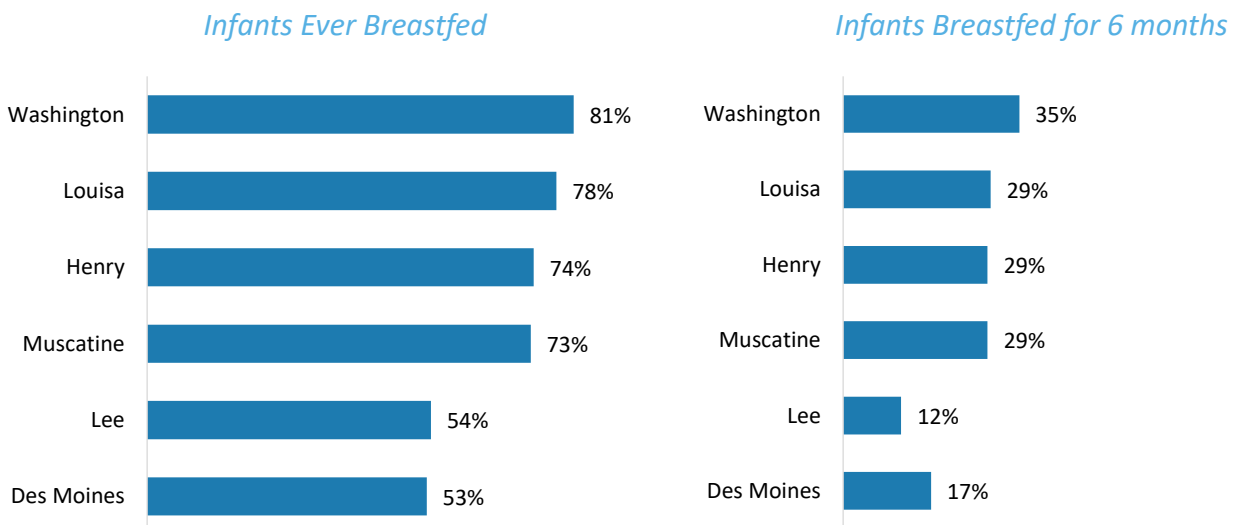
69%

of WIC-enrolled infants in CSA 13 initiated breastfeeding, on average

25%

of WIC-enrolled infants in CSA 13 were breastfed for at least 6 months, on average

Figure 55. Breastfeeding Rates in CSA 13 by County, 2020.



CSA 14: Demographic Characteristics of WIC Participants

In 2020, there were 4,465 lowans enrolled in WIC in CSA 14, including 927 women, 1,099 infants and 2,439 children.

Figure 56. Number of WIC Participants in CSA 14 by Participant Category and County, 2020.

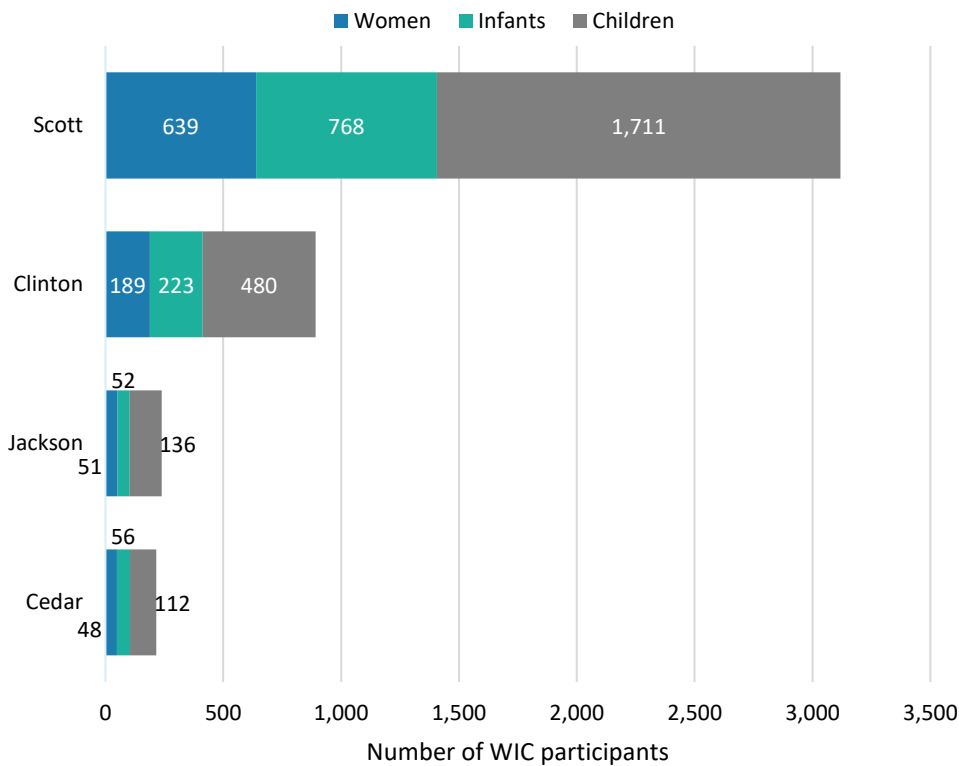
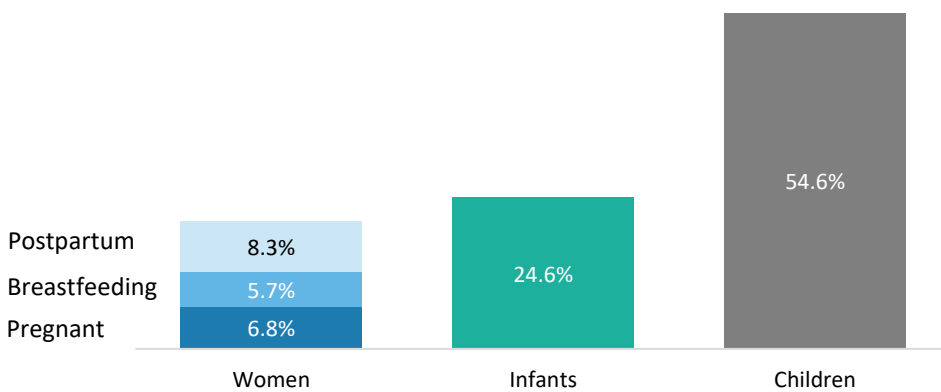


Figure 57. Percentage of WIC Participants in CSA 14 by Category, 2020.



CSA

14



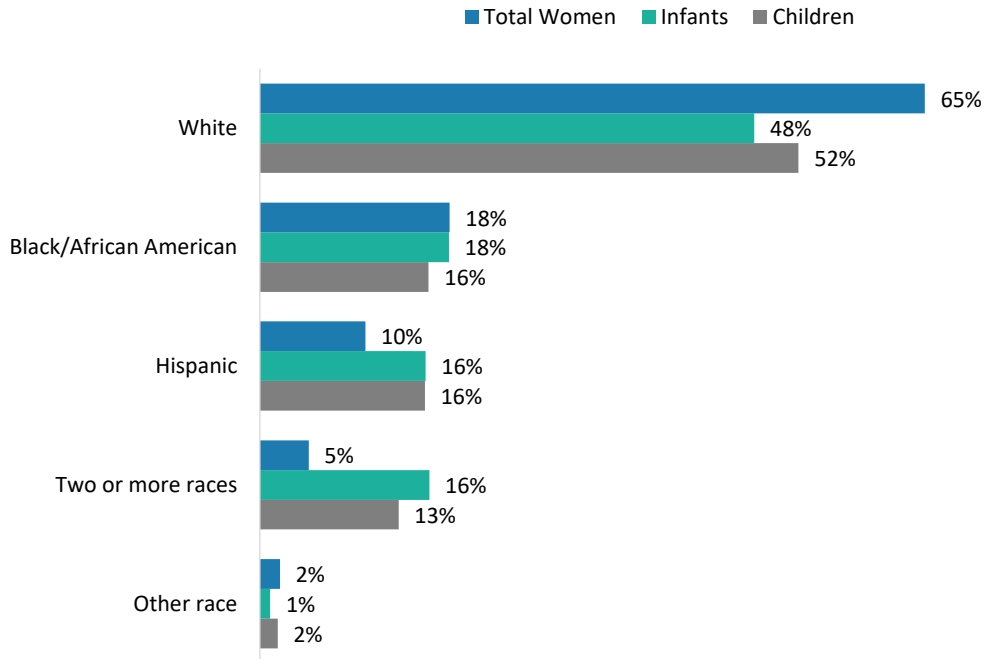
Counties include:

- Cedar
- Clinton
- Jackson
- Scott

4,465

WIC participants in 2020

Figure 58. Race and Ethnicity of WIC Participants in CSA 14 by Category, 2020.



Note: In the demographic data for 2020, Hispanic was included with race and not as a separate ethnicity. Other race includes American Indian/Alaskan Native, Asian, and Hawaiian/Pacific Islander.

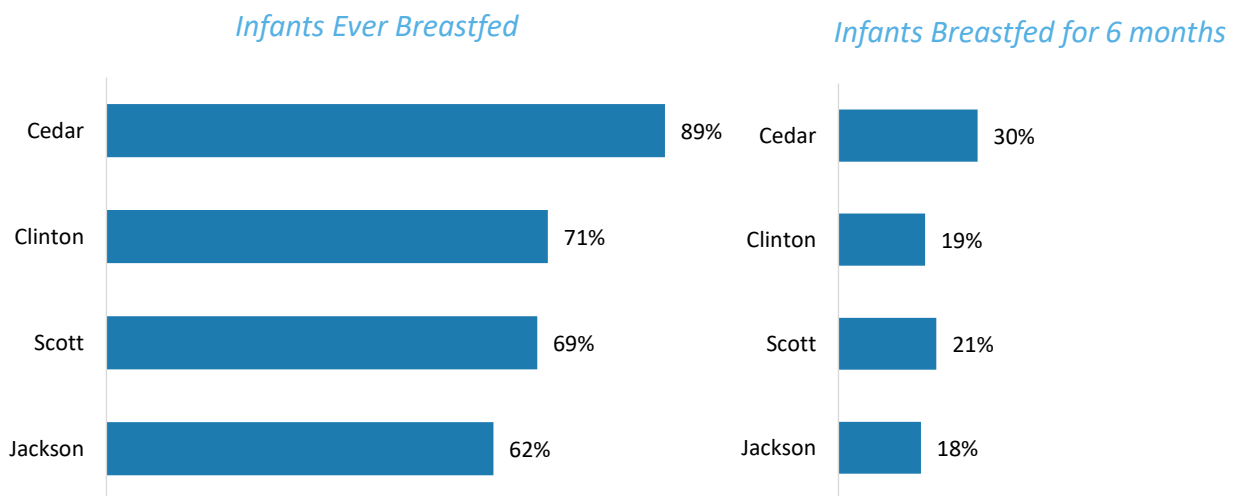
73%

of WIC-enrolled infants in CSA 14 initiated breastfeeding, on average

22%

of WIC-enrolled infants in CSA 14 were breastfed for at least 6 months, on average

Figure 59. Breastfeeding Rates in CSA 14 by County, 2020.



CSA 15: Demographic Characteristics of WIC Participants

In 2020, there were 3,242 lowans enrolled in WIC in CSA 15, including 703 women, 765 infants and 1,774 children.

Figure 60. Number of WIC Participants in CSA 15 by Participant Category and County, 2020.

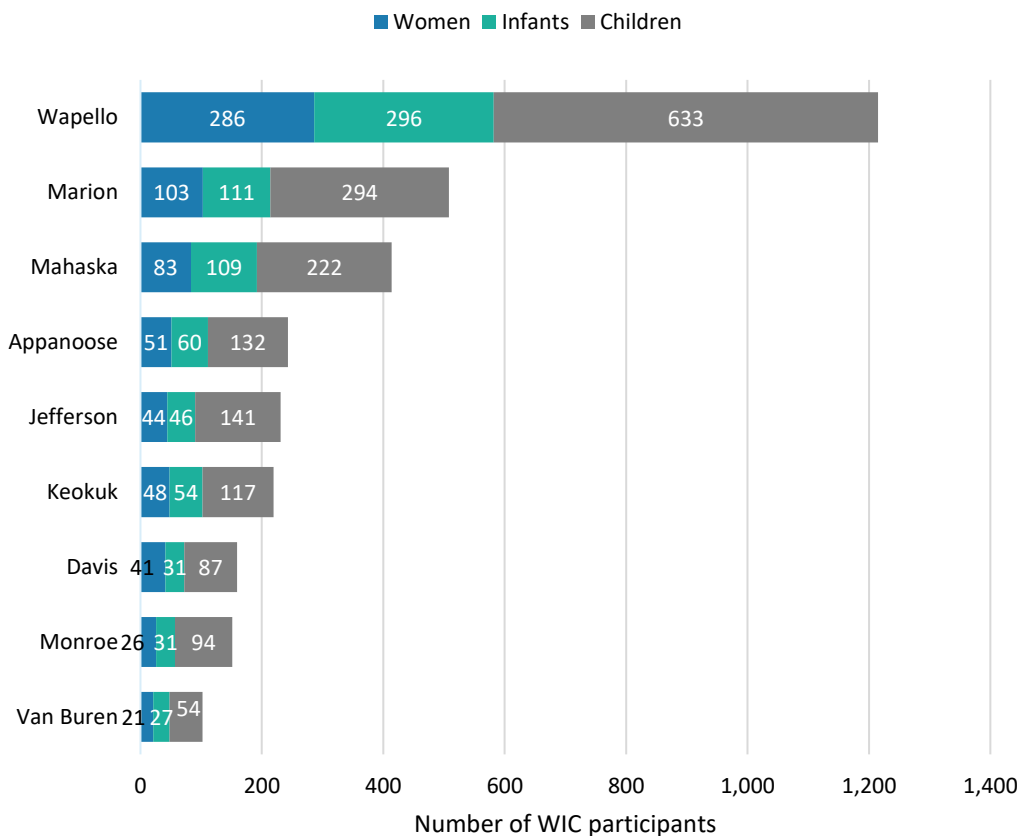
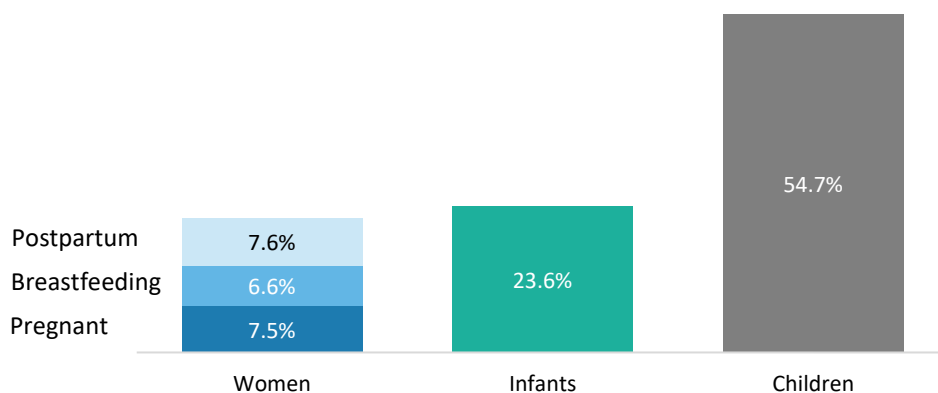


Figure 61. Percentage of WIC Participants in CSA 15 by Category, 2020.



CSA

15

Marion Mahaska Keokuk

Monroe Wapello Jefferson

Appanoose Davis Van Buren

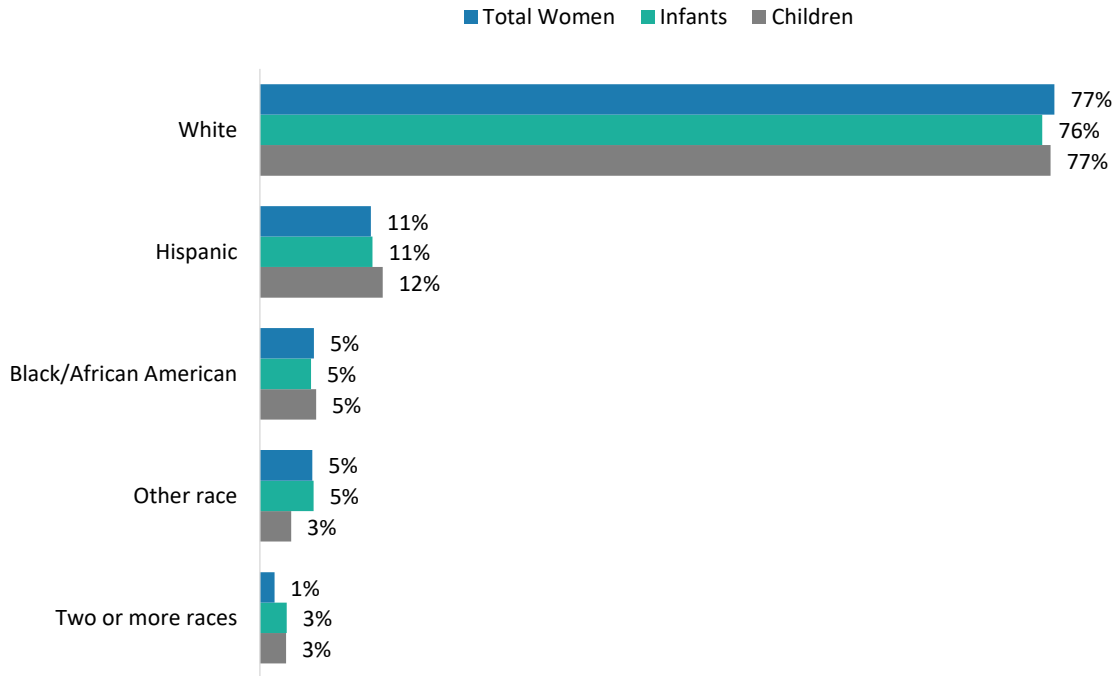
Counties include:

- Appanoose
- Davis
- Jefferson
- Keokuk
- Mahaska
- Marion
- Monroe
- Van Buren
- Wapello

3,242

WIC participants in
2020

Figure 62. Race and Ethnicity of WIC Participants in CSA 15 by Category, 2020.



Note: In the demographic data for 2020, Hispanic was included with race and not as a separate ethnicity. Other race includes American Indian/Alaskan Native, Asian, and Hawaiian/Pacific Islander.

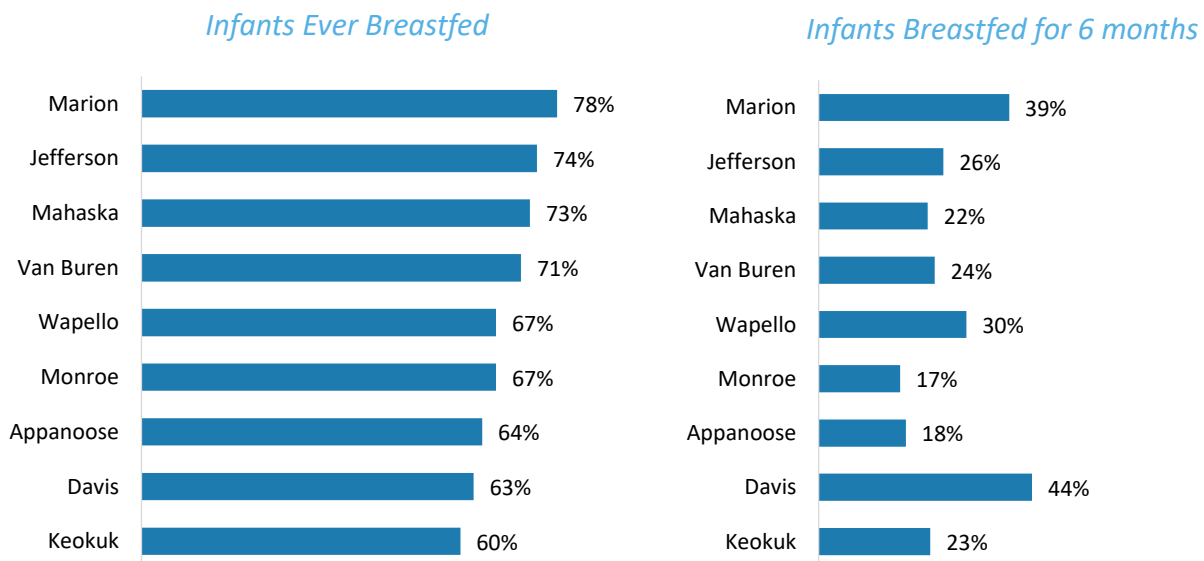
69%

of WIC-enrolled infants in CSA 15 initiated breastfeeding, on average

27%

of WIC-enrolled infants in CSA 15 were breastfed for at least 6 months, on average

Figure 63. Breastfeeding Rates in CSA 15 by County, 2020.



Appendix B: References

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- ⁸ Policy Basics: Special Supplemental Nutrition Program for Women, Infants, and Children. Center on Budget and Policy Priorities, <https://www.cbpp.org/research/food-assistance/special-supplemental-nutrition-program-for-women-infants-and-children>.
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- ¹⁰ Kline, N., Thorn, B., Bellows, D., Wroblewska, K., & Wilcox-Cook, E. (2020). *WIC Participant and Program Characteristics 2018*. Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service.
- ¹¹ Gray, KF. Mathieu, KM. *Volume I: National- and State-Level Estimates of WIC Eligibility and WIC Program Reach in 2018 with Updated Estimates for 2016 and 2017: Final Report*. Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Services.
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- ¹³ Federal Register. January 2020. Department of Health and Human Services Annual Update of the HHS Poverty Guidelines. Vol. 85, No. 12. Available at: <https://www.govinfo.gov/content/pkg/FR-2020-01-17/pdf/2020-00858.pdf>
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- ¹⁵ Code of Federal Regulations, Part 246, Special Supplemental Program for Women, Infants and Children. Available at: <https://www.ecfr.gov/current/title-7/subtitle-B/chapter-II/subchapter-A/part-246>.
- ¹⁶ American Academy of Pediatrics. (2012). Breastfeeding and the use of human milk. *Pediatrics*, 129(3), e827–e841. Accessed from <https://pediatrics.aappublications.org/content/129/3/e827>
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¹⁹ Gray, KF. Mathieu, KM. *Volume I: National- and State-Level Estimates of WIC Eligibility and WIC Program Reach in 2018 with Updated Estimates for 2016 and 2017: Final Report*. Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service.