WIC Participant and Program Characteristics 2020

***National Sample File for Public Use Codebook***



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Chapter 1. Overview

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he Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) was established in 1972 by an amendment to the Child Nutrition Act of 1966. WIC provides supplemental foods to pregnant, postpartum, and breastfeeding women; infants up to age 1 (the first birthday); and children up to age 5 (the fifth birthday). WIC is administered by the Food and Nutrition Service (FNS) of the U.S. Department of Agriculture.

In 1986 Congress enacted Public Laws 99­­–500 and 99–591 requiring a biennial report on WIC. In response to these requirements, FNS developed a prototype system that allows for the routine acquisition of information on WIC participants. Since 1992 State agencies have provided to FNS electronic copies of these data. FNS and the National WIC Association agreed on a set of data elements for the transfer of information. FNS also established a minimum standard dataset for reporting participation data. For each biennial reporting cycle, each WIC State agency is required to submit a participant-level dataset containing standardized information on individuals enrolled at WIC local agencies for the reference month of April.

The 2020 *Participant* and *Program Characteristics* (PC2020) is the 17th to be completed using the prototype PC reporting system. In April 2020, there were 89 State agencies: the 50 States, American Samoa, the District of Columbia, Guam, the Northern Mariana Islands, Puerto Rico, the U.S. Virgin Islands, and 33 Indian Tribal Organizations (ITOs).

This document describes the nationally representative sample datafiles produced for public use using PC2020 data (ana20pub.sas7bdat).

1. Participant Data

The *Guidance for State Agencies Providing Participant Data*, an explanation of the data format specifications for PC2020, was provided to all State agencies in December 2019. This guide specified 20 Minimum Data Set (MDS) items and 11 Supplemental Data Set (SDS) items to be reported on each WIC participant. Each State agency was required to submit all 20 MDS items and any SDS items it had collected. The information for each participant was from the most current WIC certification as of April 2020.

**State Agency Data Submissions.** PC2020 is a participant dataset consisting of 7,036,867 records. All State agencies provided data on a census of their WIC participants.[[1]](#footnote-2)

**Analytic Datasets.** The State agency files were combined to create a national participant file of approximately 7.0 million records, a census of WIC participants. A nationally representative sample of these WIC participants, selected by participant category, makes up the public use file.

As explained in detail in succeeding sections of this codebook, each entry in the public use national sample dataset contains all the MDS and SDS information submitted by the State agency except State agency, local agency, and case identification numbers, which were excluded to protect individual privacy. The file also contains constructed variables used for analytic purposes.

**National Sample Dataset.** A nationally representative sample was drawn from the PC2020 universe. The proportionate (or self-weighting) sample was drawn by WIC participant category: pregnant women, breastfeeding women, postpartum women, infants, and children. In this type of sample design, each WIC participant has the same probability of selection across all strata. Sampling weights are not needed when the data are analyzed. In a proportionate stratified sample, the largest stratum accounts for the greatest percentage of the analytic sample.

The national sample consists of 1 percent of the total number of participants, or 70,368 records. The distribution by category is 5,423 pregnant women, 6,163 breastfeeding women, 4,370 postpartum women, 16,999 infants, and 37,413 children.

1. Organization of Codebook

Chapter 2 provides summaries and variable dictionaries for the MDS and SDS items contained in the participant files. These variable dictionaries provide the name, description, and value range for each variable.

Appendix A presents racial-ethnic translations needed to interpret the data as originally submitted by State agencies (see variable description). Appendix B lists the State agencies that reported SDS items. Appendix C presents the Federal Poverty Guidelines published in the Federal Register for July 1, 2019, through June 30, 2020. This information is needed to interpret constructed (or calculated) variables that reported WIC participant income as a percentage of the Federal Poverty Guidelines. Appendix D presents sample SAS programs using the PC2020 participant data.

Chapter 2. Participant-Level Data

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or PC2020, State agencies provided data on all current WIC enrollees as of April 2020. Data were provided by 90 State agencies on the 7,036,902 women, infants, and children enrolled in WIC. The national sample dataset for public use contains a nationally representative sample of 70,368 records and are designed as self-weighting datasets. The sample design is a simple random sample, ensuring each participant an equal probability of selection.[[2]](#footnote-3) As a result, no sampling weights are necessary nor will be present in the national sample files.

The rest of this chapter presents detailed documentation on the MDS, SDS, and constructed variables in the PC2020 datafiles. For all variables, a blank indicates the data are missing because either the State agency did not report an item, or the value was out of range.

1. Minimum Data Set Variables and Definitions

For biennial PC reports, the term participant means a person on WIC master lists or listed in WIC operating files who was certified to receive WIC benefits in April 2020.

The data items reflect the participant's status for each item at the time of the most recent WIC certification as of April 2020.

The MDS data items are as follows:

**1. State Agency ID.** A unique number that permits linkage to the State agency where the participant was certified as eligible for WIC benefits. It is the first 7 digits of the 10-digit local agency code maintained by FNS in the WIC Local Agency Directory (WIC LAD)

**2a.** **Local Agency ID.** A unique number that permits linkage to the local agency where the participants was certified as eligible for WIC benefits. It is the last 3 digits of the 10-digit local agency code maintained by FNS in WIC LAD

**2b. Service Site ID.** A unique number that permits linkage to the service site where the participant was certified. For State agencies that submitted service site- or clinic-level data for WIC LAD, the Service Site ID appears in WIC LAD as the 3-digit code under Administering Agency

***Note:*** For PC2020, Service Site ID is not a substitute for Local Agency ID (item 2a)

**3. Case ID.** A unique record number for each participant that maintains individual privacy at the national level. This should not be the case number of the participant as listed in State-held files

**4. Date of Birth.** Month, day, and year of participant's birth reported in MMDDYYYY format

**5. Race/Ethnicity.** This categorization requires participants to be classified based on ethnicity as well as race. The two ethnic categories are Hispanic/Latino or Non-Hispanic/Latino. The five racial categories, as required by the Office of Management and Budget (OMB), are (1) American Indian or Alaska Native; (2) Asian; (3) Black or African American; (4) Native Hawaiian or Other Pacific Islander; or (5) White. One or more racial categories may be selected

States may report race/ethnicity using one of two formats:

* Yes/No for each of the categories, resulting in a six-digit code (1 = Yes; 2 = No)
* Three digits to represent key combinations of racial selections; the first digit represents ethnicity, and the last two represent race combinations

**6a. Certification Category.** The category—one of five possible categories—under which a person is certified as eligible for WIC benefits. These categories are (1) pregnant woman, (2) breastfeeding woman, (3) postpartum woman (not breastfeeding), (4) infant (younger than 12 months), and (5) child (12–59 months)

**6b-c. Expected Date of Delivery or Weeks Gestation.** For pregnant women, the projected date of delivery (MMDDYYYY format) or the number of weeks since the last menstrual period as determined at WIC certification

**7. Date of Certification.** The date the person was declared eligible for the most current WIC certification as of April 2020. Month, day, and year should be reported in MMDDYYYY format

**8. Sex.** For infants and children, male or female

**9. Risk Priority Code.** Participant priority level for WIC certification at the time of the most recent WIC certification as of April 2020

**10a-c. Participation in TANF, SNAP, Medicaid.** The participant's reported participation in Temporary Assistance for Needy Families (TANF), the Supplemental Nutrition Assistance Program (SNAP), or Medicaid at the time of the most recent WIC certification as of April 2020

**11. Migrant Status.** Participant migrant status according to the Federal WIC definition of a migrant farmworker (currently counted in the FNS 498 report)

**12. Number in Family or Economic Unit.** The number of individuals in the family or economic unit upon which WIC income eligibility was based

A self-declared number in the family or economic unit may be reported for participants whose income was not required to be determined as part of the WIC certification process. These participants include adjunctively income-eligible participants (as a result of TANF, SNAP, or Medicaid participation) and those participants deemed income-eligible under optional procedures available to the State agency in Federal WIC regulations, section 246.7(d)(2)(vi–viii) (means-tested programs identified by the State for automatic WIC income eligibility and the income eligibility of American Indian and instream migrant farmworker applicants)

**13a-c. Family or Economic Unit Income.** For individuals whose income is determined during the certification process, the income amount that was determined to qualify them for WIC during the most recent certification as of April 2020

FNS will convert income expressed in different measures (e.g., weekly, monthly, yearly) to annual amounts

For descriptive purposes only, for participants whose income was not required to be determined as part of the WIC certification process, the self-reported income at time of certification. These participants include adjunctively income-eligible participants and those individuals deemed eligible under optional procedures available to the State agency in Federal WIC regulations, section 246.7(d)(2)(vi–iii)

Zero should not be used to indicate income values that are missing or not available. Zero should indicate only an actual value of zero

***Note:*** Because of the large proportion of WIC participants who are adjunctively income-eligible, their income information is essential to describe income among the overall WIC population. State agencies are required to provide income information on those adjunctively eligible for WIC according to Federal WIC regulations, section 246.7

**14a-j. Nutritional Risks Present at Certification.** The highest priority nutritional risks present at the WIC certification current as of April 2020, up to a maximum of 10. Uniform coding is required in submissions from all States according to WIC Policy Memorandum 98-9

**15a-b. Hemoglobin or Hematocrit.** The value for the measure of hemoglobin or hematocrit to assess anemia status that applies to WIC certification current as of April 2020

**15c. Date of Hemoglobin or Hematocrit Test.** The month, day, and year hemoglobin or hematocrit measure was collected and reported in MMDDYYYY format. States must submit this information for all participants reporting a hematologic measure

**16a-b. Weight.** The participant’s weight measured according to the Centers for Disease Control and Prevention (CDC) nutrition surveillance program standards (nearest one-quarter pound). If weight is not collected in pounds and quarter pounds, weight may be reported in grams

**17a-b. Height.** The participant's height (or length) measured according to the CDC nutrition surveillance program standards (nearest one-eighth inch). If height is not collected in inches and eighth inches, height may be reported in centimeters

**18. Date of Height and Weight Measure.** The date of the height and weight measures that were used during the most recent WIC certification period as of April 2020 in MMDDYYYY format

**19a. Currently Breastfed.** For infants and children aged 6 through 13 months in April 2020, whether the participant was currently receiving breastmilk

**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

**19d. Date Breastfeeding Data Collected.** For infants and children aged 6 through 13 months in April 2020, the date on which breastfeeding status was reported in MMDDYYYY format

**20a-n. Food Codes.** States have the option of providing food data in a food package format or in an item-quantity format. The food package codes or item codes and quantities for all food prescribed for the participant during the month of April 2020

**20o. Food Package Type.** A code representing the food package descriptor. This descriptor uniquely represents the FNS food package number (I through VII), participant type, breastfeeding status, and (for infants and children only) age, associated with the reported food code(s) for that participant

Table 2.1. Minimum Data Set Variable Dictionary

| **Variable Name** | **Type** | **Description** | |
| --- | --- | --- | --- |
| PARTICID | Character | **Randomly Assigned Sample ID.** Unique identifier for each participant record | |
| REGION | Character | **FNS Region.** FNS region where participant’s local agency is located  1 = Northeast  2 = Mid-Atlantic  3 = Southeast  4 = Midwest  5 = Southwest  6 = Mountain Plains  7 = Western | |
| BDATE | Numeric | **Date of Birth.** Date of participant's birth Stored as a SAS date; format as desired | |
| CERT\_CAT | Numeric | **Certification Category.** One of five possible categories to which the person was assigned at the time of the most recent WIC certification as of April 2020. If updated since that certification and historical data are unavailable, the current certification category is acceptable  1 = Pregnant Woman  2 = Breastfeeding Woman  3 = Postpartum Woman, not breastfeeding  4 = Infant (younger than 12 months)  5 = Child (12–59 months) | |
| EDATE | Numeric | **Expected Date of Delivery.** Expected date of delivery for pregnant women. This item is used to determine trimester of pregnancy at certification. Stored as a SAS date; format as desired. State agencies may report either EDATE or GEST | |
| GEST | Numeric | **Weeks Gestation.** Number of weeks since pregnant woman’s last menstrual period. This item is used to determine trimester (first, second, or third) of pregnancy at certification. State agencies may report either EDATE or GEST | |
| CDATE | Numeric | **Date of Certification.** The date the participant was certified to receive WIC benefits for the current certification period as of April 2020. Stored as a SAS date; format as desired | |
| SEX | Numeric | **Sex.** Indication of sex (or gender)  1 = Male  2 = Female | |
| RISK\_PRI | Numeric | **Priority Level.** The participant's priority at the time of the most current WIC certification. If updated since certification, the current priority level is acceptable  1 = Priority I: Pregnant and breastfeeding women and infants, at nutritional risk as demonstrated by anthropometric or hematological assessment or by other documented nutritionally related medical conditions  2 = Priority II: Infants up to 6 months of age of mothers who participated in WIC during pregnancy, or whose mothers would have been eligible to participate under a Priority I documented medical condition. This priority may also be assigned to a breastfeeding mother of an infant who is classified as Priority II  3 = Priority III: Children at nutritional risk, as demonstrated by anthropometric or hematological assessment or other documented medical condition. Can also include high-risk postpartum women  4 = Priority IV: Pregnant and breastfeeding women and infants, at nutritional risk as demonstrated by inadequate dietary pattern. Can also include homeless and migrant pregnant and breastfeeding women and infants and high-risk postpartum women  5 = Priority V: Children at nutritional risk because of inadequate dietary pattern. Can also include homeless and migrant children and high-risk postpartum women  6 = Priority VI: Postpartum women, not breastfeeding, who are at nutritional risk based on either medical or dietary criteria unless assigned to higher priorities at State agency discretion. At State agency option, this priority can also include homeless and migrant postpartum women  7 = Priority VII: Previously certified participants likely to regress in nutritional status without continuation of supplemental foods. At State agency option, this priority can also include homeless and migrant participants | |
| TANF | Numeric | **Participation in TANF.** Did the participant receive TANF benefits?  1 = Yes  2 = No | |
| SNAP | Numeric | **Participation in SNAP.** Did the participant receive SNAP benefits?  1 = Yes  2 = No | |
| MEDICAID | Numeric | **Participation in Medicaid.** Did the participant receive Medicaid benefits?  1 = Yes  2 = No | |
| MIGRANT | Numeric | **Migrant Status.** Was any member of the family a migrant worker? According to Federal WIC regulations, section 2462, a migrant farmworker is an individual whose principal employment is in agriculture, on a seasonal basis, who has been so employed within the last 24 months, and who establishes, for the purposes of such employment, a temporary abode  1 = Yes  2 = No | |
| ECO\_UNIT | Numeric | **Number in Family or Economic Unit.** The number of individuals in the unit on which income eligibility for WIC was based. Numbers for some participants were self-declared. These participants included adjunctively income-eligible participants and those individuals deemed eligible under optional procedures available to the State agency in Federal WIC regulations, section 2467(d)(2)(vii) and (viii) | |
| INCOME | Numeric | **Family or Economic Unit Income.** For individuals whose income was determined during the certification process, the income amounts that were determined to qualify them for WIC. For participants whose incomes were not required to be determined for WIC certification, self-declared incomes were entered for descriptive purposes only. Self-declared income for these participants may have been entered in **dollar amounts** (INCOME) or **according to income ranges.** (INC\_ADJN). Some State agencies submitted both actual income and adjunctive income, in the form of income ranges, for all participants. In these instances, income in dollars superseded the income ranges. Income for participants for whom income values were reported only in ranges were calculated based on the midpoint of the range reported in the variable INC\_ADJN  Participants whose incomes were not required to be determined as part of WIC certification included adjunctively income-eligible participants and those individuals deemed income-eligible under optional procedures available to the State agency in Federal WIC regulations, section 2467(d)(2)(vii–viii)  For ITOs, which have opted to implement alternative income eligibility procedures as set forth in section 2467(d)(2)(viii) of the Federal WIC regulations, self-declared incomes may have been stated in dollars or selected from income codes | |
| INC\_PER | Numeric | **Income Period.** The time period covered by the amount described in the INCOME field (above)  1 = Weekly  2 = Monthly  3 = Biweekly (every 2 weeks)  4 = Annually | |
| INC\_ADJN | Numeric | **Adjunctive Income.** The self-declared income for the family/economic unit expressed in dollar ranges for any participant whose income was not required to be determined as part of the WIC certification process. Participants whose incomes were not required to be determined as part of this process included adjunctively income-eligible participants and those individuals deemed income-eligible under optional procedures available to the State agency in Federal WIC regulations, section 2467(d)(2)(vii, viii). Some State agencies submitted both actual income and adjunctive income, in the form of income ranges, for all participants. In these instances, income in dollars supersedes the income ranges | |
| **Monthly Code Annually**  $0–$99 1 $0–$1,199  $100–$199 2 $1,200–$2,399  $200–$299 3 $2,400–$3,599  $300–$399 4 $3,600–$4,799  $400–$499 5 $4,800–$5,999  $500–$599 6 $6,000–$7,199  $600–$699 7 $7,200–$8,399  $700–$799 8 $8,400–$9,599  $800–$899 9 $9,600–$10,799  $900–$999 10 $10,800–$11,999  $1,000–$1,099 11 $12,000–$13,199  $1,100–$1,199 12 $13,200–$14,399  $1,200–$1,299 13 $14,400–$15,599  $1,300–$1,399 14 $15,600–$16,799  $1,400–$1,499 15 $16,800–$17,999  $1,500–$1,599 16 $18,000–$19,199  $1,600–$1,699 17 $19,200–$20,399  $1,700–$1,799 18 $20,400–$21,599  $1,800–$1,899 19 $21,600–$22,799  $1,900–$1,999 20 $22,800–$23,999  $2,000–$2,099 21 $24,000–$25,199  $2,100–$2,199 22 $25,200–$26,399  $2,200–$2,299 23 $26,400–$27,599  $2,300–$2,399 24 $27,600–$28,799  $2,400–$2,499 25 $28,800–$29,999  $2,500–$2,599 26 $30,000–$31,199  $2,600–$2,699 27 $31,200–$32,399  $2,700–$2,799 28 $32,400–$33,599  $2,800–$2,899 29 $33,600–$34,799  $2,900–$2,999 30 $34,800–$35,999  $3,000–$3,099 31 $36,000–$37,199  $3,100–$3,199 32 $37,200–$38,399 | **Monthly Code Annually**  $3,200–$3,299 33 $38,400–$39,599  $3,300–$3,399 34 $39,600–$40,799  $3,400–$3,499 35 $40,800–$41,999  $3,500–$3,599 36 $42,000–$43,199  $3,600–$3,699 37 $43,200–$44,399  $3,700–$3,799 38 $44,400–$45,599  $3,800–$3,899 39 $45,600–$46,799  $3,900–$3,999 40 $46,800–$47,999  $4,000–$4,099 41 $48,000–$49,199  $4,100–$4,199 42 $49,200–$50,399  $4,200–$4,299 43 $50,400–$51,599  $4,300–$4,399 44 $51,600–$52,799  $4,400–$4,499 45 $52,800–$53,999  $4,500–$4,599 46 $54,000–$55,199  $4,600–$4,699 47 $55,200–$56,399  $4,700–$4,799 48 $56,400–$57,599  $4,800–$4,899 49 $57,600–$58,799  $4,900–$4,999 50 $58,800–$59,999  $5,000–$5,099 51 $60,000–$61,199  $5,100–$5,199 52 $62,000–$62,399  $5,200–$5,299 53 $62,400–$63,599  $5,300–$5,399 54 $63,600–$64,799  $5,400–$5,499 55 $64,800–$65,999  $5,500–$5,599 56 $66,000–$67,199  $5,600–$5,699 57 $67,200–$68,399  $5,700–$5,799 58 $68,400–$69,599  $5,800–$5,899 59 $69,600–$70,799  $5,900–$5,999 60 $70,800–$71,999  $6,000–$6,099 61 $72,000–$73,199  $6,100–$6,199 62 $73,200–$74,399  $6,200+ 63 $74,400+ |
| NAWD1-NAWD10 | Character | **Nutritional Risk Present at Certification** | |
| 100 Low Weight-for-Height  110 High Weight-for-Height  120 Short Stature  130 Inappropriate Growth/Weight Gain Pattern  140 Low Birth Weight/Premature Birth  150 Other Anthropometric Risk  200 Hematocrit or Hemoglobin Below FNS Standard  210 Other Biochemical Test Results That Indicate Nutritional Abnormality (e.g., elevated blood lead levels)  300 Pregnancy-Induced Conditions (e.g., hyperemesis gravidarum, (history of) gestational diabetes, history of preeclampsia)  310 Delivery of Low-Birthweight or Premature Infant  320 Prior Stillbirth, Fetal or Neonatal Death  330 General Obstetrical Risks (e.g., multiple fetus births, high parity and young age, closely spaced pregnancies) | 340 Nutrition-Related Risk Conditions (e.g., any nutrition-related chronic disease, genetic disorder, infectious disease, gastrointestinal disorders, drug nutrient interactions, pre-diabetes)  370 Substance Abuse (e.g., drugs, alcohol, tobacco)  380 Other Health Risk (e.g., fetal alcohol syndrome, dental problems)  400 Failure to Meet *Dietary Guidelines for Americans*  410 Inappropriate Nutrition Practices  500 Regression, Transfer (nutrition risk unknown), Presumptive Eligibility  600 Breastfeeding Mother and Infant Dyad  700 Infant of a WIC-Eligible Mother or Mother at Risk During Pregnancy  800 Homelessness/Migrancy  900 Other Nutritional Risks |
| HEMOGLOB | Numeric | **Hemoglobin.** Iron status test result. Reported in grams/dl (XX.Y) | |
| HEMACRIT | Numeric | **Hematocrit.** Iron status test result. Reported to the nearest 10th of a percent (XX.Y) | |
| BLDATE | Numeric | **Date of Blood Test.** Month, day, year blood measure was collected. Stored as a SAS date; format as desired | |
| WGHT | Numeric | **Weight.** The participant's weight in pounds. (State agencies were given the option to report either in English or metric units. All metric data were converted to English) | |
| HGHT | Numeric | **Height.** The participant's height (length) in inches. State agencies were given the option to report either in English or metric units. All metric data were converted to English) | |
| HDATE | Numeric | **Date of Height and Weight Measure.** The date on which the participant's height and weight were measured. Stored as a SAS date; format as desired | |
| CBRSTFED | Numeric | **Currently Breastfed.** For infants and children aged 6 to 13 months in April 2020, whether each participant was **currently** breastfed. (Some State agencies also report for other infants)  1 = Yes  2 = No | |
| EBRSTFED | Numeric | **Ever Breastfed.** For those not currently breastfeeding in April 2020, whether participant was **ever** breastfed. (Some State agencies also report for other infants)  1 = Yes  2 = No | |
| BRSTFED | Numeric | **Length of Time Breastfed.** For infants and children aged 6 to 13 months in April 2020 who were ever breastfed, the number of weeks each infant received breastmilk. (Some State agencies also report for other infants) | |
| BFDATE | Numeric | **Date of Most Recent Breastfeeding Response.** For infants and children aged 6 to 13 months in April 2020, the date on which breastfeeding status was collected. Stored as a SAS date; format as desired. (Some State agencies also report for other infants) | |
| FPACK1-FPACK14 | Character | **Food Packages.** The food package code(s) for the food package or food instruments prescribed for the participant during the month of April. These data are presented in the form originally submitted by State agencies | |
| ITEM1-ITEM14 | Character | **Food Item.** The food items prescribed for the participant during April 2020 | |
| QTY1-QTY14 | Character | **Food Quantity.** The quantity corresponding to each food item | |
| FP\_TYPE | Character | **Food Package Type.** The participant’s food package descriptor. This descriptor uniquely represents the participant’s FNS food package number (I through VII), participant type, breastfeeding status, and (for infants and children only) age  **Food Package Food Package**  **Type Descriptor Category**   1. I-FF-A Fully formula-fed infants (0–3.9 months) 2. I-FF-B Fully formula-fed infants (4–5.9 months) 3. I-BF/FF-A Partially breastfed infants (0–0.9 months) 4. I-BF/FF-B Partially breastfed infants (1–3.9 months) 5. I-BF/FF-C Partially breastfed infants (4–5.9 months) 6. I-BF-A Fully breastfed infants (0–3.9 months) 7. I-BF-B Fully breastfed infants (4–5.9 months) 8. II-FF Fully formula-fed infants (6–11.9 months) 9. II-BF/FF Partially breastfed infants (6–11.9 months) 10. II-BF Fully breastfed infants (6–11.9 months) 11. III I-FF-A Medical: Fully formula-fed infants (0–3.9 months) 12. III I-FF-B Medical: Fully formula-fed infants (4–5.9 months) 13. III I-BF/FF-A Medical: Partially breastfed infants (0–0.9 months) 14. III I-BF/FF-B Medical: Partially breastfed infants (1–3.9 months) 15. III I-BF/FF-C Medical: Partially breastfed infants (4–5.9 months) 16. III II-FF Medical: Fully formula-fed infants (6–11.9 months) 17. III II-BF/FF Medical: Partially breastfed infants (6–11.9 months) 18. III IV-A Medical: Children (1–1.9 years) 19. III IV-B Medical: Children (2–4.9 years) 20. III V Medical: Pregnant and partially breastfeeding women (up to 1 year postpartum) 21. III VI Medical: Nonbreastfeeding postpartum and partially (minimally) breastfeeding women (up to 6 months   postpartum)   1. III VII Medical: Fully breastfeeding women (up to 1 year postpartum) 2. IV-A Children (1–1.9 years) 3. IV-B Children (2–4.9 years) 4. V Pregnant and partially (mostly) breastfeeding women (up to 1 year postpartum) 5. VI Nonbreastfeeding postpartum and partially (minimally) breastfeeding women (up to 6 months postpartum) 6. VII Fully breastfeeding women; women partially (mostly) breastfeeding multiples; women pregnant with   multiples   1. N/A Partially (minimally) breastfeeding women (more than 6 months postpartum) | |

Table 2.2. Constructed Variables

| **Variable Name** | **Type** | **Description** | | |
| --- | --- | --- | --- | --- |
| HISP | Numeric | **Hispanic/Latino.** A person of Cuban, Mexican, Puerto Rican, Cuban, South or Central American, or other Spanish culture or origin, regardless of race. The term "Spanish origin," can be used in addition to "Hispanic or Latino"  0 = No  1 = Yes  2 = Missing | | |
| ASIAN | Numeric | **Asian.** A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam  0 = No  1 = Yes  2 = Missing | | |
| ASIAN\_ONLY | Numeric | **Asian Only.**  0 = Not only Asian  1 = Only Asian | | |
| BLACK | Numeric | **Black/African American.** A person having origins in any of the black racial groups of Africa. Terms such as "Haitian" or "Negro" can be used in addition to "Black or African American"  0 = No  1 = Yes  2 = Missing | | |
| BLACK\_ONLY | Numeric | **Black/African American Only.**  0 = Not only Black/African American  1 = Only Black/African American | | |
| HIPI | Numeric | **Native Hawaiian/Pacific Islander.** A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands  0 = No  1 = Yes  2 = Missing | | |
| HIPI\_ONLY | Numeric | **Native Hawaiian/Pacific Islander Only.**  0 = Not only Native Hawaiian/Pacific Islander  1 = Only Native Hawaiian/Pacific Islander | | |
| INDIAN | Numeric | **American Indian/Alaska Native.** A person having origins in any of the original peoples of North and South America (including Central America), and who maintains tribal affiliation or community attachment  0 = No  1 = Yes 2 = Missing | | |
| INDIAN\_ ONLY | Numeric | **American Indian/Alaska Native Only.**  0 = Not only American Indian/Alaska Native 1 = Only American Indian/Alaska Native | | |
| WHITE | Numeric | **White.** A person having origins in any of the original peoples of Europe, North Africa, or the Middle East  0 = No 1 = Yes 2 = Missing | | |
| WHITE\_ONLY | Numeric | **White Only.**  0 = Not only White 1 = Only White | | |
| MULTIPLE\_RACE | Numeric | **Two or More Races.** Participant indicated more than one race category. | | |
| NO\_RACE\_REPORTED | Numeric | **Race Not Reported.** Participant did not report any of the race categories | | |
| RACE5 | Numeric | **Race Recoded Into Pre-2006 Categories.** Each participant was classified into one of five racial/ethnic categories based on reported values of ORIGINAL\_RACE  1 = White (not of Hispanic/Latino origin): A person having origins in any of the original peoples of Europe, North Africa, or the Middle East  2 = Black (not of Hispanic/Latino origin): A person having origins in any of the Black racial groups of Africa  3 = Hispanic/Latino: A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin regardless of race  4 = American Indian or Alaska Native: A person having origins in any of the original peoples of North America, and who maintains cultural identification through tribal affiliation or community recognition (includes Aleuts and Eskimos)  5 = Asian or Pacific Islander: A person having origins in any of the original peoples of the Far East, the Indian Subcontinent, Southeast Asia, or the Pacific Islands. This area includes, for example, China, Japan, Korea, the Philippine Islands, and Samoa  A list of all ORIGINAL\_RACE codes and their category classifications appears in appendix A | | |
| A\_MONTHS | Numeric | **Infant's or Child's Age in Months.** Calculated from certification date (CDATE) and date of birth (BDATE) | | |
| A\_YEARS | Numeric | **Woman's Age in Years.** Calculated from certification date (CDATE) and date of birth (BDATE) | | |
| WTHTAGE | Numeric | **Age at Time of Height and Weight Measurement.** Calculated from date of height and weight measure (HDATE) and date of birth (BDATE). Infant's or child's age is reported in months; woman's age is reported in years | | |
| ANEMIA\_MONTHS | Numeric | **Infant/Child Age in Months at Hemoglobin or Hematocrit Test.** Calculated from date of hemoglobin or hematocrit test (BLDATE) and date of birth (BDATE). Infant's or child's age is reported in months | | |
| ANEMIA\_YEARS | Numeric | **Woman's Age in Years at Hemoglobin or Hematocrit Test.** Calculated from date of hemoglobin or hematocrit test (BLDATE) and date of birth (BDATE). Woman's age is reported in years | | |
| TRIMSTR | Numeric | **Trimester of Pregnancy at WIC certification.** Calculated from certification date (CDATE) and date of expected delivery (EDATE) or weeks gestation (GEST). Reported for pregnant women only | | |
| BTRIMSTR | Numeric | **Trimester of Pregnancy at Hemoglobin or Hematocrit Test.** Calculated from certification date (CDATE), date of expected delivery (EDATE) or weeks gestation (GEST), and hemoglobin or hematocrit test date (BLDATE). Reported for pregnant women only |
| ANUALINC | Numeric | **Annual Income.** Calculated from income (INCOME) and income period (INC\_PER) or adjunctive income range (INC\_ADJN). State agencies have the option to report income in either dollar amounts or ranges. Annual income for participants for whom income values are reported only in ranges are calculated based on the midpoint of the range reported in the variable INC\_ADJN | | |
| POVLEVEL | Numeric | **Percent of Poverty Level.** Calculated from household size (ECO\_UNIT) and income (INCOME) and income period (INC\_PER) or adjunctive income range (INC\_ADJN). Federal Poverty Guidelines for income appear in appendix C | | |
| MAX\_NAWD | Numeric | **Total Number of Nutritional Risks Reported.** Calculated from nutritional risks (NAWD1-10) | | |
| A\_HTAG | Numeric | **Height-to-Age Percentile (ranges).** Reported for infants and children. World Health Organization (WHO)a percentile was used for infants and children younger than 2 years of age; CDCb percentile was used for children aged 2 and older  1 = < 2.3rd percentile  2 = > 2.3rd percentile and < 5th percentile  3 = > 5th percentile and < 10th percentile  4 = > 10th percentile and < 90th percentile  5 = > 90th percentile and < 95th percentile  6 = > 95th percentile and < 97th percentile  7 = > 97th percentile  8 = Component variables missing or out-of-range values | | |
| A\_WTAG | Numeric | **Weight-to-Age Percentile (ranges).** Reported for infants and children. WHO percentile was used for infants and children younger than 2 years of age; CDC percentile was used for children aged 2 and older  1 = < 3rd percentile  2 = > 3rd percentile and < 5th percentile  3 = > 5th percentile and < 10th percentile  4 = > 10th percentile and < 90th percentile  5 = > 90th percentile and < 95th percentile  6 = > 95th percentile and < 97th percentile  7 = > 97th percentile  8 = Component variables missing or out-of-range values | | |
| A\_WTHT | Numeric | **Weight-to-Height Percentile (ranges).** Reported for infants and children. WHO percentile was used for infants and children younger than 2 years of age; CDC percentile was used for children aged 2 and older.  1 = < 2.3rd percentile  2 = > 2.3rd percentile and < 5th percentile  3 = > 5th percentile and < 10th percentile  4 = > 10th percentile and < 85th percentile  4.5 = > 85th percentile and < 90th percentile  5 = > 90th percentile and < 95th percentile  6 = > 95th percentile and < 97.7th percentile  7 = > 97.7th percentile  8 = Component variables missing or out-of-range values | | |
| P\_HTAG | Numeric | **Height-to-Age Percentile.** Reported for infants and children. WHO percentile was used for infants and children younger than 2 years of age; CDC percentile for children aged 2 and older | | |
| P\_WTAG | Numeric | **Weight-to-Age Percentile.** Reported for infants and children. WHO percentile was used for infants and children younger than 2 years of age; CDC percentile was used for children aged 2 and older | | |
| P\_WTHT | Numeric | **Weight-to-Height Percentile.** Reported for infants and children. WHO percentile was used for infants and children younger than 2 years of age; CDC percentile was used for children aged 2 and older | | |
| BMI | Numeric | **Body Mass Index.** Reported for children aged 2–5. Calculated from height and weight | | |
| BMIPCT | Numeric | **Body Mass Index Percentile.** Reported for children aged 2–5 | | |
| R\_BELOW | Numeric | **Blood Measure Below FNS Standard for Anemia (hemoglobin or hematocrit).**  2 = Blood measure not reported  1 = Yes  0 = No | | |
| BFED | Numeric | **Breastfeeding Status for Infants Aged 6–13 Months in April 2020.**  1 = Infant either currently breastfeeding or breastfed at some time  2 = Infant never breastfed  3 = Breastfeeding status not reported | | |
| DURWEEKS | Numeric | **Breastfeeding Duration in Weeks.** For infants aged 6–13 months in April 2020. For currently breastfeeding infants equals difference between date breastfeeding data collected (BFDATE) and birthdate (BDATE). For infants who had stopped breastfeeding by April 2020 equals length of time breastfed (BRSTFED) | | |
| SETINCFLAG | Numeric | **Income Editing Flag.** This variable identifies respondents for whom $0, $1, or low-dollar value income was set to missing at the State agency’s direction because the reported value was used as a proxy for missing income.  1 = Reported $0, $1, or low-dollar income was set to missing  0 = Income was not set to missing due to $0, $1, or low-dollar income inappropriately used as a proxy for missing income | | |
| MISSADJNFLAG | Numeric | **Missing Income Among Adjunctively Eligible Participants Flag.** This variable identifies participants who report participation in TANF, SNAP, or Medicaid with missing income data.  1 = Respondent reports participation in TANF, SNAP, or Medicaid and income is missing  2 = Respondent either does not report participation in TANF, SNAP, or Medicaid or has reported income | | |
| AGE\_BF\_FLAG\_6 | Numeric | **Breastfeeding Age Flag.** For infants aged 6–13 months in April 2020. PC2004 was the first PC study to expand the breastfeeding data age range from 7–11 months old to 6–13 months old  1 = 6–13 months old | | |
| AGE\_BF\_FLAG\_7 | Numeric | **Breastfeeding Age Flag.** For infants aged 6–13 months in April 2020. PC2004 was the first PC study to expand the breastfeeding data age range from 7–11 months old to 6–13 months old  1 = 7–11 months old | | |
| AGE\_BF\_FLAG\_9 | Numeric | **Breastfeeding Age Flag.** For infants aged 6–13 months in April 2020. PC2004 was the first PC study to expand the breastfeeding data age range from 7–11 months old to 6–13 months old  1 = 9–13 months old | | |
| AGE\_BF\_FLAG\_12 | Numeric | **Breastfeeding Age Flag.** For infants aged 6–13 months in April 2020. PC2004 was the first PC study to expand the breastfeeding data age range from 7–11 months old to 6–13 months old  1 = 12–13 months old | | |
| SCRIPTID | Numeric | **Food Prescription ID.** The linking identifier that is also on the food package data analytic file. Blank for ITOs, American Samoa, Guam, the Northern Mariana Islands, and the U.S. Virgin Islands | |

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

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

1. Supplemental Data Set Variables and Definitions

The data items that follow are part of the SDS. State agencies that collect these items should include them in April data submissions.

The data items reflect the participant's status for each item at the time of the most recent WIC certification as of April 2020.

The SDS data items are as follows:

**21. Date of First WIC Certification.** The date the participant was first certified for WIC in MMDDYYYY format. For pregnant, breastfeeding, and postpartum women, this applies to the current/most recent pregnancy and not to prior pregnancies

**22. Education Level.** For pregnant, breastfeeding, and postpartum women, the highest grade or year of school completed. For infants and children, the highest grade or year of school completed by mother or primary caretaker

**23. Number in Household in WIC.** The number of people in the participant's household receiving WIC benefits

**24. Date Previous Pregnancy Ended.** For pregnant women, the date the previous pregnancy ended in MMDDYYYY format

**25. Total Number of Pregnancies.** For pregnant women, the total number of times the woman has been pregnant, including this pregnancy; all live births; and any pregnancies resulting in miscarriage, abortion, or stillbirth

**26. Total Number of Live Births.** For pregnant women, the total number of babies born alive to this woman, including babies who may have died shortly after birth

**27a-b. Prepregnancy Weight.** For pregnant women only, the participant's weight immediately prior to pregnancy. Prepregnancy weight may be reported either in pounds and ounces or in grams

**28a-b. Weight Gain During Pregnancy.** For breastfeeding and postpartum women, the participant's weight gain during pregnancy as taken immediately at or prior to delivery. Weight gain during pregnancy may be reported in either pounds and ounces or in grams

**29a-b. Birth Weight.** For infants and children, the participant's weight at birth measured according to CDC nutrition surveillance program standards (pounds/ounces). Birth weight may be reported in either pounds and ounces or in grams

**30a-b. Birth Length.** For infants and children, the participant's length measured according to CDC nutrition surveillance program standards (nearest one-eighth inch). Birth length may be reported in either inches and one-eighth inches or in centimeters

**31. Participation in the Food Distribution on Indian Reservations Program.** The participant's reported participation in this program at the time of the most recent WIC certification as of April 2020

Table 2.3. Supplemental Data Set Variable Dictionary

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Type** | **Description** |
| FDATE | Numeric | **Date of First WIC Certification.** For pregnant, breastfeeding, and postpartum women, this item applies to the **current** or **most recent** pregnancy and not to prior pregnancies. Stored as a SAS date; format as desired |
| EDUC | Numeric | **Education Level.** Highest grade of school or year of college (13, 14, 15, 16...) completed by participant (or, for infants and children, by each mother/primary caretaker) |
| NUMONWIC | Numeric | **Number in Household on WIC.** The number of people in the participant's household (economic unit used for WIC certification) enrolled in WIC as of April 2020  ***Note:*** This number should be no greater than the number in the economic unit entered in Item 12 of the MDS. |
| PDATE | Numeric | **Date Previous Pregnancy Ended.** Reported for pregnant women. Stored as a SAS date; format as desired |
| TOTLPREG | Numeric | **Total Number of Pregnancies.** The total number of times the pregnant woman participant has been pregnant, including this pregnancy and any pregnancies resulting in birth, miscarriage, abortion, or stillbirth |
| TPREGLIV | Numeric | **Total Number of Live Births.** For pregnant women participants, the total number of babies born alive to the participant, including infants who may have died shortly after birth |
| PREGWHT | Numeric | **Prepregnancy Weight in Pounds.** The pregnant woman participant's weight immediately prior to pregnancy in pounds. (State agencies were given the option of reporting in English or metric units; all metric units were converted to English) |
| GAINWGHT | Numeric | **Weight Gain During Pregnancy in Pounds.** The participant's weight gain during pregnancy as taken at or immediately prior to delivery measured in pounds for postpartum and breastfeeding women only). (State agencies were given the option of reporting in English or metric units; all metric units were converted to English) |
| BIRTHWGT | Numeric | **Birth Weight in Pounds.** Infant’s or child's birth weight. (State agencies were given the option of reporting in English or metric units; all metric units were converted to English) |
| BIRTHHGT | Numeric | **Birth Length in Inches.** Infant’s or child's length at birth. (State agencies were given the option of reporting in English or metric units; all metric units were converted to English) |
| FDPIR | Numeric | **Participation in FDPIR.** Does the participant receive benefits through the Food Distribution Program on Indian Reservations?  1 = Yes  2 = No |

References

CDC. (2016a). *Growth chart training: A SAS program for the WHO growth charts (ages 0 to <2 years)* [Instructions and datafiles]. Retrieved from https://www.cdc.gov/nccdphp/dnpao/growthcharts/resources/sas-who.htm

CDC. (2016b). *Growth chart training: A SAS program for the 2000 CDC growth charts (ages 0 to <20 years)* [Instructions and datafiles]. Retrieved from https://www.cdc.gov/nccdphp/dnpao/growthcharts/resources/sas.htm

Appendix A. Racial-Ethnic Coding

T

he PC2020 report provides data on race and ethnicity collected according to the procedures required by OMB, which required two variables: (1) one to indicate whether the individual is Hispanic/Latino, and (2) one to indicate the racial category(ies). The five racial categories required by OMB are (1) American Indian or Alaska Native, (2) Asian, (3) Black or African American, (4) Native Hawaiian or Other Pacific Islander, and (5) White. Multiple racial identifications are permitted.

State agencies had two ways to report ethnicity and race:

* Standard three-digit codes representing key combinations of multiple racial/ethnic selections with the first digit representing ethnicity and the last two digits representing race
* Yes/no data entries that result in a six-digit code with a one representing “yes” and a zero representing “no” for each of six ethnic and racial categories: Hispanic/Latino, American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, and White.

PC studies from the years 2004 and earlier used a five-category classification that combined racial and ethnic information through which participants were identified as White, Black, Hispanic, Native American/Alaska Native, or Asian/Pacific Islander. Because the multiple-race/ethnicity categories described earlier in this appendix differ significantly from the five-category classification used for PC2004 and earlier, explicit comparison across years is not possible. To allow for some reasonably informative comparisons, the study team mapped the multiple-race/ethnicity data collected since 2004 into the five mutually exclusive, collectively exhaustive groups used in prior PC years. The two reported ethnicity and race variables were mapped into the five-category classification using the following method:

* For **ITOs**, the study team used racial and ethnic variables prioritized in this order: American Indian/Alaska Native, Hispanic/Latino, Black, Asian/Pacific Islander, White.
* For **American Samoa, Guam, and the Northern Mariana Islands,** the team used racial and ethnic variables prioritized in this order: Asian/Pacific Islander, Hispanic, Black, Asian, American Indian, White.
* For **all other State agencies**, the team used racial and ethnic variables prioritized in this order: Hispanic, Black, American Indian/Alaska Native, Asian/Pacific Islander, White.

In other words, the study team took an approach that gave first priority to maximizing (1) the number of participants in ITOs that were classified as American Indians and (2) the number of participants in American Samoa, Guam, and the Northern Mariana Islands that were classified as Pacific Islanders; second priority to maximizing the numbers classified as Hispanic/Latino in all States and ITOs; and third and fourth priorities, respectively, to maximizing the numbers classified as Blacks and Asians. For example, the unusual person who reported all races and Hispanic/Latino ethnicity would, in Guam, be deemed a Pacific Islander; in an ITO, an American Indian; and in Ohio, Hispanic/Latino.

Table B.1 lists the descriptions for all the possible racial and ethnic combinations. The table shows the three- and six-digit codes (ORIGINAL\_RACE variable) corresponding to these descriptions. It also shows how the categories were mapped into the five-category classification scheme used in prior PC reports.

Table A.1. Translation of Multiple Racial/Ethnic Codes Into Single Codes

| **ORIGINAL\_RACE** | | **Description** | **RACE5** | | |
| --- | --- | --- | --- | --- | --- |
| **Three-Digit** | **Six-Digit** | **States, DC, PR, and VI** | **ITOs** | **Other Pacific Islands** |
| 101 | 110000 | American Indian or Alaskan Native, Hispanic/Latino | 3 | 4 | 3 |
| 201 | 010000 | American Indian or Alaskan Native, Non-Hispanic/Latino | 4 | 4 | 4 |
| 102 | 101000 | Asian, Hispanic/Latino | 3 | 3 | 3 |
| 202 | 001000 | Asian, Non-Hispanic/Latino | 5 | 5 | 5 |
| 103 | 100100 | Black or African American, Hispanic/Latino | 3 | 3 | 3 |
| 203 | 000100 | Black or African American, Non-Hispanic/Latino | 2 | 2 | 2 |
| 104 | 100010 | Native Hawaiian or Other Pacific Islander, Hispanic/Latino | 3 | 3 | 5 |
| 204 | 000010 | Native Hawaiian, Non-Hispanic/Latino | 5 | 5 | 5 |
| 105 | 100001 | White, Hispanic/Latino | 3 | 3 | 3 |
| 205 | 000001 | White, Non-Hispanic/Latino | 1 | 1 | 1 |
| 106 | 110001 | American Indian or Alaskan Native; White; Hispanic/Latino | 3 | 4 | 3 |
| 206 | 010001 | American Indian or Alaskan Native; White; Non-Hispanic/Latino | 4 | 4 | 4 |
| 107 | 101001 | Asian; White; Hispanic/Latino | 3 | 3 | 3 |
| 207 | 001001 | Asian; White; Non-Hispanic/Latino | 5 | 5 | 5 |
| 108 | 100101 | Black or African American; White; Hispanic/Latino | 3 | 3 | 3 |
| 208 | 000101 | Black or African American; White; Non-Hispanic/Latino | 2 | 2 | 2 |
| 109 | 110100 | American Indian or Alaskan Native; Black or African American; Hispanic/Latino | 3 | 4 | 3 |
| 209 | 010100 | American Indian or Alaskan Native; Black or African American; Non-Hispanic/Latino | 2 | 4 | 2 |
| 110 | 111000 | American Indian or Alaskan Native; Asian; Hispanic/Latino | 3 | 4 | 3 |
| 210 | 011000 | American Indian or Alaskan Native; Asian; Non-Hispanic/Latino | 4 | 4 | 5 |
| 111 | 110010 | American Indian or Alaskan Native; Native Hawaiian or Other Pacific Islander; Hispanic/Latino | 3 | 4 | 5 |
| 211 | 010010 | American Indian or Alaskan Native; Native Hawaiian or Other Pacific Islander; Non-Hispanic/Latino | 4 | 4 | 5 |
| 112 | 101100 | Asian; Black; Hispanic/Latino | 3 | 3 | 3 |
| 212 | 001100 | Asian; Black; Non-Hispanic/Latino | 2 | 2 | 2 |
| 113 | 101010 | Asian; Native Hawaiian or Other Pacific Islander; Hispanic/Latino | 3 | 3 | 5 |
| 213 | 001010 | Asian; Native Hawaiian or Other Pacific Islander; Non-Hispanic/Latino | 5 | 5 | 5 |
| 114 | 100110 | Black; Native Hawaiian or Other Pacific Islander; Hispanic/Latino | 3 | 3 | 5 |
| 214 | 000110 | Black; Native Hawaiian or Other Pacific Islander; Non-Hispanic/Latino | 2 | 2 | 5 |
| 115 | 100011 | Native Hawaiian or Other Pacific Islander; White; Hispanic/Latino | 3 | 3 | 5 |
| 215 | 000011 | Native Hawaiian or Other Pacific Islander; White; Non-Hispanic/Latino | 5 | 5 | 5 |
| 116 | 111100 | American Indian or Alaskan Native; Asian; Black; Hispanic/Latino | 3 | 4 | 3 |
| 216 | 011100 | American Indian or Alaskan Native; Asian; Black; Non-Hispanic/Latino | 2 | 4 | 2 |
| 117 | 111010 | American Indian or Alaskan Native; Asian; Native Hawaiian or Other Pacific Islander; Hispanic/Latino | 3 | 4 | 5 |
| 217 | 011010 | American Indian or Alaskan Native; Asian; Native Hawaiian or Other Pacific Islander; Non-Hispanic/Latino | 4 | 4 | 5 |
| 118 | 111001 | American Indian or Alaskan Native; Asian; White; Hispanic/Latino | 3 | 4 | 3 |
| 218 | 011001 | American Indian or Alaskan Native; Asian; White; Non-Hispanic/Latino | 4 | 4 | 5 |
| 119 | 110110 | American Indian or Alaskan Native; Black; Native Hawaiian or Other Pacific Islander; Hispanic/Latino | 3 | 4 | 5 |
| 219 | 010110 | American Indian or Alaskan Native; Black; Native Hawaiian or Other Pacific Islander; Non-Hispanic/Latino | 2 | 4 | 5 |
| 120 | 110101 | American Indian or Alaskan Native; Black; White; Hispanic/Latino | 3 | 4 | 3 |
| 220 | 010101 | American Indian or Alaskan Native; Black; White; Non-Hispanic/Latino | 2 | 4 | 2 |
| 121 | 110011 | American Indian or Alaskan Native; Native Hawaiian or Other Pacific Islander; White; Hispanic/Latino | 3 | 4 | 5 |
| 221 | 010011 | American Indian or Alaskan Native; Native Hawaiian or Other Pacific Islander; White; Non-Hispanic/Latino | 4 | 4 | 5 |
| 122 | 101110 | Asian; Black; Native Hawaiian or Other Pacific Islander; Hispanic/Latino | 3 | 3 | 5 |
| 222 | 001110 | Asian; Black; Native Hawaiian or Other Pacific Islander; Non-Hispanic/Latino | 2 | 2 | 5 |
| 123 | 101101 | Asian, Black; White; Hispanic/Latino | 3 | 3 | 3 |
| 223 | 001101 | Asian, Black; White; Non-Hispanic/Latino | 2 | 2 | 2 |
| 124 | 101011 | Asian; Native Hawaiian or Other Pacific Islander; White; Hispanic/Latino | 3 | 3 | 5 |
| 224 | 001011 | Asian; Native Hawaiian or Other Pacific Islander; White; Non-Hispanic/Latino | 5 | 5 | 5 |
| 125 | 100111 | Black; Native Hawaiian or Other Pacific Islander; White; Hispanic/Latino | 3 | 3 | 5 |
| 225 | 000111 | Black; Native Hawaiian or Other Pacific Islander; White; Non-Hispanic/Latino | 2 | 2 | 5 |
| 126 | 111110 | American Indian or Alaskan Native; Asian; Black; Native Hawaiian or Other Pacific Islander; Hispanic/Latino | 3 | 4 | 5 |
| 226 | 011110 | American Indian or Alaskan Native; Asian; Black; Native Hawaiian or Other Pacific Islander; Non-Hispanic/Latino | 2 | 4 | 5 |
| 127 | 111101 | American Indian or Alaskan Native; Asian; Black; White; Hispanic/Latino | 3 | 4 | 3 |
| 227 | 011101 | American Indian or Alaskan Native; Asian; Black; White; Non-Hispanic/Latino | 2 | 4 | 2 |
| 128 | 111011 | American Indian or Alaskan Native; Asian; Native Hawaiian or Other Pacific Islander; White; Hispanic/Latino | 3 | 4 | 5 |
| 228 | 011011 | American Indian or Alaskan Native; Asian; Native Hawaiian or Other Pacific Islander; White; Non-Hispanic/Latino | 4 | 4 | 5 |
| 129 | 110111 | American Indian or Alaskan Native; Black; Native Hawaiian or Other Pacific Islander; White; Hispanic/Latino | 3 | 4 | 5 |
| 229 | 010111 | American Indian or Alaskan Native; Black; Native Hawaiian or Other Pacific Islander; White; Non-Hispanic/Latino | 2 | 4 | 5 |
| 130 | 101111 | Asian; Black; Native Hawaiian or Other Pacific Islander; White; Hispanic/Latino | 3 | 3 | 5 |
| 230 | 001111 | Asian; Black; Native Hawaiian or Other Pacific Islander; White; Non-Hispanic/Latino | 2 | 2 | 5 |
| 131 | 111111 | American Indian or Alaskan Native; Asian; Black; Native Hawaiian or Other Pacific Islander; White; Hispanic/Latino | 3 | 4 | 5 |
| 231 | 011111 | American Indian or Alaskan Native; Asian; Black; Native Hawaiian or Other Pacific Islander; White; Non-Hispanic/Latino | 2 | 4 | 5 |

Appendix B. List of State Agencies Reporting  
Supplemental **Data Set Items**

| **Region** | **State Agencies** | |
| --- | --- | --- |
| Mid-Atlantic | * Delaware * District of Columbia * Maryland * New Jersey | * Pennsylvania * Virginia * West Virginia |
| Midwest | * Illinois * Indiana * Iowa * Michigan | * Minnesota * Ohio * Wisconsin |
| Mountain Plains | * Colorado * Kansas * Missouri * Montana * Nebraska * North Dakota * South Dakota * Wyoming * Cheyenne River Sioux Tribe (SD) | * Eastern Shoshone Tribe (WY) * Northern Arapaho Tribe (WY) * Omaha Nation (NE) * Rosebud Sioux Tribe (SD) * Santee Sioux Nation (NE) * Standing Rock Sioux Tribe (ND) * Three Affiliated Tribes (ND) * Ute Mountain Ute Tribe (CO) * Winnebago Tribe (NE) |
| Northeast | * Connecticut * Maine * Massachusetts * New Hampshire * New York | * Rhode Island * Vermont * U.S. Virgin Islands * Indian Township Passamaquoddy Reservation (ME) * Pleasant Point Passamaquoddy Reservation (ME) |
| Southeast | * Alabama * Florida * Georgia * Mississippi * North Carolina | * South Carolina * Tennessee * Eastern Band of Cherokee Indians (NC) * Mississippi Band of Choctaw Indians |
| Southwest | * Arizona * Arkansas * Louisiana * New Mexico * Oklahoma * Texas * Utah * Acoma, Canoncito, Laguna (NM) * Cherokee Nation (OK) * Chickasaw Nation (OK) * Choctaw Nation (OK) * Citizen Potawatomi Nation (OK) * Eight Northern Indian Pueblos Council (NM) | * Five Sandoval Indian Pueblos (NM) * Inter Tribal Council of Arizona * Inter-Tribal Council of Oklahoma * Muscogee Creek Nation (OK) * Navajo Nation (AZ) * Osage Nation (OK) * Otoe-Missouria Tribe (OK) * Pueblo of Isleta (NM) * Pueblo of San Felipe (NM) * Pueblo of Zuni (NM) * Santo Domingo Pueblo (NM) * Wichita, Caddo, Delaware (OK) |
| Western | * Alaska * Hawaii * Idaho * Nevada * Oregon | * American Samoa * Guam * Northern Mariana Islands * Inter-Tribal Council of Nevada |

Note

Not all State agencies that provided at least one SDS item provided all SDS items. The following four State agencies did not report any sufficient SDS data to be included in the PC2020 report: California, Kentucky, Puerto Rico, and Washington.

Appendix C. Poverty Income Guidelines

Table C.1. Federal Poverty Guidelines for the Contiguous United States

|  |  |
| --- | --- |
| **No. of Individuals in Family/Household** | **Federal 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 families/households with more than eight individuals, add $4,420 for each additional person.

Table C.2. Federal Poverty Guidelines for Alaska

|  |  |
| --- | --- |
| **No. of Individuals in Family/Household** | **Federal Poverty Guideline** |
| 1 | $15,600 |
| 2 | $21,130 |
| 3 | $26,660 |
| 4 | $32,190 |
| 5 | $37,720 |
| 6 | $43,250 |
| 7 | $48,780 |
| 8 | $54,310 |

Note

For families/households with more than eight individuals, add $5,530 for each additional person.

Table C.3. Federal Poverty Guidelines for Hawaii

|  |  |
| --- | --- |
| **No. of Individuals in Family/Household** | **Federal Poverty Guideline** |
| 1 | $14,380 |
| 2 | $19,460 |
| 3 | $24,540 |
| 4 | $29,620 |
| 5 | $34,700 |
| 6 | $39,780 |
| 7 | $44,860 |
| 8 | $49,940 |

Note

For families/households with more than eight individuals, add $5,080 for each additional person.

Appendix D. Sample SAS Programs

T

his appendix provides sample programs for use with the PC2020 data (census data as well as the national sample file). These programs can be used as templates to build other programs customized for specific tasks; they use basic SAS procedures for processing, summarizing, and displaying data.

\*\*\*\*\* Example #1:

\* - processing the state participant files

\* - FREQ procedure

\* - FORMAT procedure and FORMAT statement;

\* Define the format ;

**proc** **format** ;

value catfmt

**1** = 'Pregnant Women'

**2** = 'Breastfeeding Women'

**3** = 'Postpartum Women'

**4** = 'Infants'

**5** = 'Children'

;

value sexfmt

**1** = 'Male'

**2** = 'Female'

;

**run** ;

\* Identify the path where SAS datafiles are stored ;

libname data 'j:\mydata' ;

options ps=**55** ls=**78** formchar='|----|+|---+=|-/\<>';

\* List the 3-digit state codes. ;

**%macro** ***stlist*** ;

acl crs ebc eni iar int inv isl itc kee mbc nav nii oma omt

pot ppr psf san saw sdt sen srs tat ute wcd zun osn mcn nar

\_as \_ak \_ct \_pa \_al \_ar \_az \_co \_tx \_dc \_de \_fl \_ga tee \_hi

\_ia \_id \_il \_in \_ks \_ky \_la \_ma \_md \_me \_mi \_mn \_mo \_mt \_nc

\_nd \_ne \_nh \_nj \_nm \_nv \_ny \_oh \_ok \_or \_ca \_pr \_ri \_sc \_sd

\_tn \_ut \_va \_vi \_vt \_wa \_wi \_wv \_wy

\_ms taw rst sho \_gu nmi

**%mend** stlist ;

\* Loop through the participant files and select only the desired

records and keep only the necessary variables ;

**%macro** ***runit*** ;

%do i = **1** %to **90** ;

%let st = %scan(%stlist,&i) ;

data &st ;

set data.pc16\_&st (keep = cert\_cat sex) ;

\* Select non-women only ;

if cert\_cat in (**4**,**5**) ;

run ;

\* Each iteration of the loop adds the next state to ALLSTATES ;

proc append base=allstates data=&st ;

run ;

%end ;

**%mend** runit ;

\* Call the macro ;

%***runit***

\* At this point in the program the dataset has been prepared. Now

the user can proceed with analysis or further processing of the data. ;

**proc** **freq** data=allstates ;

table cert\_cat \* sex / missing ;

format

cert\_cat catfmt.

sex sexfmt.

;

title1 'Distribution of SEX variable for infants and children' ;

title2 'Data: Records selected from all participant files' ;

**run** ;

\*\*\*\*\* Example #2:

\* - FORMAT procedure and FORMAT statement

\* - CHART procedure ;

\* Identify the path where SAS datafiles are stored;

libname data 'j:\mydata' ;

options ps=**55** ls=**78** formchar='|----|+|---+=|-/\<>';

**proc** **format** ;

value catfmt

**1** = 'Pregnant Women'

**2** = 'Breastfeeding Women'

**3** = 'Postpartum Women'

**4** = 'Infants'

**5** = 'Children'

;

**run** ;

\* Produce the chart: One bar per certification category (percentage) ;

**proc** **chart** data=data.ana20pub (keep=cert\_cat) ;

vbar cert\_cat /type=percent discrete;

format cert\_cat catfmt. ;

**run** ;

\*\*\*\*\* Example #3:

\* - FORMAT procedure and FORMAT statement

\* - SORT, UNIVARIATE, PRINT and FREQ procedures;

\* Identify the path where SAS datafiles are stored;

libname data 'j:\mydata' ;

options ps=**55** ls=**78** formchar='|----|+|---+=|-/\<>';

**proc** **format** ;

value cat

**1** = 'Pregnant Women'

**2** = 'Breastfeeding Women'

**3** = 'Postpartum Women'

**4** = 'Infants'

**5** = 'Children'

;

value povcat

**0** -< **0.5** ='0'

**0.5** -< **50.5** ='1-50'

**50.5** -< **100.5** ='51-100'

**100.5** -< **130.5** ='101-130'

**130.5** -< **150.5** ='131-150'

**150.5** -< **185.5** ='151-185'

**185.5** -< **200.5** ='186-200'

**200.5** -< **225.5** ='201-225'

**225.5** -< **250.5** ='226-250'

**250.5** - high ='Over 250'

;

**run** ;

**proc** **sort** data=data.ana20pub (keep=cert\_cat anualinc) out=tmp ;

by cert\_cat ;

**run** ;

\* Means and medians of yearly income by certification category ;

\* Use an output dataset (1 record per BY variable value which

\* contains statistics for each) to control the appearance of output ;

**proc** **univariate** data=tmp noprint ;

by cert\_cat ;

var anualinc ;

output out=stats mean=mean median=median ;

**run** ;

**proc** **print** data=stats label ;

format mean median dollar10.2 cert\_cat cat. ;

label

mean='Mean annual income'

median='Median annual income'

;

**run** ;

\* Cross-tab of percent of poverty level (in ranges) by

certification category ;

**proc** **freq** data=data.ana20pub (keep=povlevel cert\_cat) ;

table povlevel \* cert\_cat ;

format povlevel povcat. cert\_cat cat. ;

**run** ;

\*\*\*\*\* Example #4:

\* - FORMAT procedure and FORMAT statement

\* - SORT, UNIVARIATE, PRINT and FREQ procedures

\* - ODS statements;

\* Identify the path where SAS datafiles are stored ;

libname data 'j:\mydata' ;

options ps=**55** ls=**78** formchar='|----|+|---+=|-/\<>';

**proc** **format** ;

value povcat

**0** -< **0.5** ='0'

**0.5** -< **50.5** ='1-50'

**50.5** -< **100.5** ='51-100'

**100.5** -< **130.5** ='101-130'

**130.5** -< **150.5** ='131-150'

**150.5** -< **185.5** ='151-185'

**185.5** -< **200.5** ='186-200'

**200.5** -< **225.5** ='201-225'

**225.5** -< **250.5** ='226-250'

**250.5** - high ='Over 250'

;

value sexfmt

**1** = 'Male'

**2** = 'Female'

;

**run** ;

**proc** **sort** data=data.ana20pub (keep=sex anualinc cert\_cat) out=tmp ;

where cert\_cat=**5** ;

by sex ;

**run** ;

\* Means and medians of yearly income by gender for children only ;

\* Use an output dataset to control the appearance of output ;

**proc** **univariate** data=tmp noprint ;

by sex ;

var anualinc ;

output out=stats mean=mean median=median ;

**run** ;

\* Send output to an HTML file ;

ods html file = '.\my\_results.html' ;

**proc** **print** data=stats label ;

format mean median dollar10.2 sex sexfmt. ;

label

mean='Mean annual income'

median='Median annual income'

;

**run** ;

ods html close ;

1. The study team weighted data for Colorado, Iowa, and Montana because they submitted data with duplicate records. The total number of participants, as defined in the PC2020 data, is 7,036,902. [↑](#footnote-ref-2)
2. Sampling will be performed using PROC SURVEYSELECT in SAS. The SIZE option will be used to accommodate weighting of Colorado, Iowa, and Montana’s data. This would apply a slightly higher probability of selection for participants in these State agencies only. [↑](#footnote-ref-3)