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WIC Participant and Program Characteristics 1998

United State Department of Agriculture

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The 1998 study of WIC participant and program characteristics must be dedicated to our friends and colleagues in State and local WIC agencies. They provide all of the data presented in this report and its appendices. We gratefully and humbly acknowledge their cooperation and commend the diligence of the WIC Program in creating and maintaining viable, practical client information systems.

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EXECUTIVE SUMMARY

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) is administered by the Food and Nutrition Service (FNS) of the US Department of Agriculture (USDA). The WIC Program provides a combination of direct nutritional supplementation, nutrition education and counseling, and increased access to health care and social service providers for pregnant, breastfeeding, and postpartum women; infants; and children up to the age of five years. WIC seeks to improve fetal development and reduce the incidence of low birthweight, short gestation, and anemia through intervention during the prenatal period. Infants and children who are at nutritional or health risk receive food supplements, nutrition education, and access to health care services to maintain and improve their health and development.

To receive WIC benefits, an individual must be categorically eligible; that is, the person must be a pregnant, breastfeeding, or postpartum woman; an infant up to the age of one year; or a child aged one through four years. In addition, each applicant must be found to be income eligible and at nutritional risk. Eligible applicants receive supplemental food usually in the form of vouchers or checks which allow them to obtain specific types of food (milk, juice, cereal, for example) from participating retail grocers.

The WIC Program was established in 1972 by an amendment to the Child Nutrition Act of 1966. WIC has greatly expanded since its inception, and, in April 1998, WIC enrolled approximately eight million participants at an annual cost of about four billion dollars.

Since 1988, FNS has produced biennial reports on current participant and program characteristics in the WIC Program for general program monitoring as well as for managing the information needs of the program. FNS uses this regularly updated WIC program information to estimate budgets, identify needs for research, and review current and proposed WIC policies and procedures. The biennial reports include:

- Information on the income and nutritional risk characteristics of WIC participants.
- Data on WIC program participation for migrant farm worker families.
- Other information on WIC participation that is deemed appropriate by the Secretary of Agriculture.

This publication is the seventh report in the series of studies on WIC participants and program characteristics.

The 1998 Study

The 1998 study of WIC program and participant characteristics (PC98), like PC92, PC94, and PC96, is substantially different from earlier efforts to collect data on WIC participants. PC98 employs the prototype reporting system which was developed by FNS for the 1992 study and which routinizes compilation of participant information from State WIC agencies. Earlier FNS studies of the WIC Program—in 1984 (PC84), 1988 (PC88), and 1990 (PC90)—were based on nationally representative samples of

WIC participants and programs. PC98, like PC92, PC94, and PC96, contains information on a near-census of WIC participants in April 1998.

Participant Records. The current system for reporting participant data is based on the automated transfer of an agreed-upon set of data elements. State WIC agencies download routinely collected information which is on their existing automated client and management information systems. State and local WIC staff use these data to certify applicant eligibility for WIC benefits and to issue food vouchers and checks. This Minimum Data Set (MDS), which consists of twenty items, was developed by FNS working with the Information Committee of the National Association of WIC Directors (NAWD).

For the month of April 1998, each State WIC agency submitted MDS data on a census of its WIC participants. In April of 1998, there were eighty-eight State WIC agencies: the fifty States, the District of Columbia, Guam, Puerto Rico, American Samoa, and the American Virgin Islands, along with thirty-three Indian Tribal Organizations (ITOs). All eighty-eight WIC agencies provided data for PC98.

The State-maintained automated information systems from which PC98 data are drawn do not always contain complete information on every individual enrolled in the WIC Program. Unreported PC98 data may be unavailable for a variety of reasons which may indicate that participants in any of the not-reported categories may be different from those individuals with data reported. Assumptions regarding missing data vary by the nature of the variable and by the category of WIC participant. To account for these anomalies, a uniform strategy has been adopted for preparing all tables in this report. Data not reported are included in the calculation of percentage distributions for each characteristic. While including missing data in the denominators for all calculations tends to place estimates for each characteristic at a lower bound, this approach has allowed consistent presentation of tabulations throughout the report. Further, it assures that all information needed to calculate upper-bound estimates is readily available in every table. Caution should be used in comparing results across groups; missing data must always be considered in gauging differences between, among, or across groups or categories of WIC participants.

Summary of State Programs. The 1998 study, like earlier studies, included a survey of State WIC agencies which obtained information on WIC program characteristics. This survey was conducted by mail, with telephone followup. Data were collected on State WIC operating policies and procedures for income determination, food package tailoring, food instrument issuance, and average monthly food package costs by participant category.

All of the eighty-eight State WIC agencies operating in April 1998 completed questionnaires. Since 1992, little change has occurred in WIC program operations and procedures.

Summary of Local Programs. PC98, like PC96, included a mail survey of local WIC agencies. The PC 98 sample is longitudinal, that is, PC98 surveyed the same agencies as did PC96. For the 1998 survey, the longitudinal sample was supplemented with a

sample of agencies that came into existence after the 1996 sample was selected. Data for April 1, 1998, were obtained on such topics as sponsoring agencies, nutrition education practices, breastfeeding promotion and education, and referral practices. Most (96 percent) sampled agencies completed their SLPs; PC98 reports information from 460 local WIC agencies.

The 1998 WIC Program

In 1998, WIC services were delivered in the fifty States, the District of Columbia, Puerto Rico, Guam, American Samoa, and the American Virgin Islands as well as by thirty-three Indian Tribal Organizations. These eighty-eight State WIC agencies operated 2,203 local WIC agencies where staff delivered WIC services at about nine thousand service sites. The ten largest States—California, Florida, Georgia, Illinois, Michigan, New York, North Carolina, Ohio, Pennsylvania, and Texas—served more than half (57 percent) of all WIC participants. In fact, one-third of WIC participants can be found in three states—California, New York, and Texas. This proportion has grown steadily since 1992 when one-quarter of all participants were in these states.

Participant Characteristics in 1998

In April 1998, 8,042,758 women, infants, and children were enrolled in the WIC Program—a 4 percent increase over WIC enrollment reported in 1996. The rate of growth between 1996 and 1998 was substantially smaller than the 20 percent growth in enrollment that occurred between 1992 and 1994 and the 12 percent growth that occurred between 1994 and 1996.

While approximately 8 million participants were enrolled in WIC during April 1998, fewer participants—approximately 7.4 million—actually picked up or cashed their vouchers. Thus, monthly participation figures are about eight percent less than monthly enrollment figures. A similar pattern was observed in PC92, PC94 and PC96.

Half (51.2 percent) of WIC participants are children. Infants account for 25.5 percent and women 23.3 percent. The PC98 and PC96 distributions are similar. However, betweeen 1992 and 1996, the proportion of children served by WIC increased (from 47.5 percent to 51.4 percent) and the proportion of infants decreased (from 30.1 percent to 25.7 percent). This shift may reflect increased funding which has allowed WIC agencies to expand their caseloads and serve lower priority children.

Women were further divided into pregnant (11.1 percent of all participants), breastfeeding (4.8 percent of all participants), and postpartum (7.3 percent of all participants). The percentage of breastfeeding women has risen from 4.0 percent in 1994 to 4.3 percent in 1996 to 4.8 percent in 1998. See Exhibit E.1.

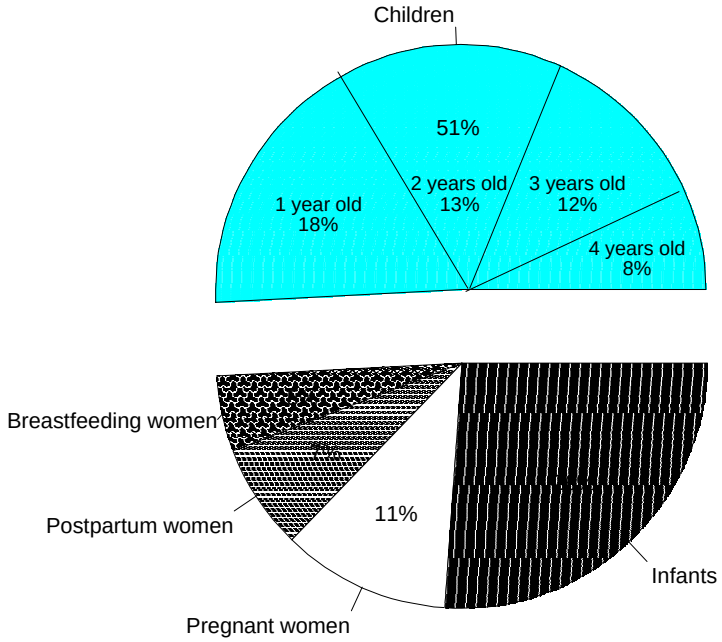
Most (83 percent) of the pregnant women participating in WIC are between the ages of 18 and 34 as are 85 percent of breastfeeding and 84 percent of postpartum women. Only 9 percent of women WIC clients are aged seventeen or younger. Most (88 percent) infant WIC participants are certified for WIC benefits during their first three months of life. Child participation decreases as age increases—36 percent of child participants are one year of age and only 16 percent are four years of age.

In 1998, more pregnant WIC participants enrolled in the program during their first than second trimesters, with 46.6 percent in the first trimester and 37.8 in the second. Only

11.8 enrolled in the third trimester. These percentages are similar to those reported in 1996. Between 1992 and 1996, enrollment in the first trimester increased by approximately 10 percentage points.

Exhibit E.1

Distribution of Individuals Enrolled in the WIC Program April 1998



Race and Ethnicity. In the 1998 study, as in previous studies, whites made up the largest percentage of WIC participants (39.2 percent), followed by Hispanics (32.3 percent), blacks (22.9 percent), Asian or Pacific Islanders (3.2 percent), and American Indian or Alaskan Natives (1.5 percent). Race/ethnicity data were reported for 99 percent of WIC participants. The ethnic composition of the WIC program has been changing steadily since 1992; the percentage of Hispanic WIC enrollees has risen, while percentages of black and white (non-Hispanic) enrollees has decreased.

Household Size. The mean household size of WIC participants in April 1998 was 3.9. Average size has remained stable since 1992, through some fluctuations have occurred within participant categories over time. Overall, as in 1996, information on household size was reported for about 99 percent of WIC participants.

Income. Among WIC participants reporting some income, the average annualized income of families/economic units of persons enrolled in the WIC Program in April

1998 was $12,479 an increase of $1,671 (16 percent) since 1996. Across participant categories, breastfeeding women reported the highest average income at $13,607; postpartum women exhibited the lowest average income at $11,532. These findings replicate PC92, PC94, and PC96 results. As in 1988, 1990, 1992, 1994, and 1996, black WIC enrollees displayed the lowest average income—$9,593 for families or economic units. As they did in previous PC studies, Asian or Pacific Islander participants had the highest average annualized income at $14,272. Findings about income must be interpreted with caution given the proportion of unreported information. For PC98, income cannot be calculated for 15 percent of WIC enrollees.

Participation in Other Programs. WIC legislation allows income eligibility requirements to be met by participation in means-tested programs such as the Medicaid, Food Stamp, and Transitional Assistance to Needy Families (TANF) Programs. In 1998, 57 percent of WIC participants received benefits from at least one other public assistance program. With regard to participation in each program, 48 percent of WIC clients received Medicaid benefits; 27 percent participated in the Food Stamp Program; and 17 percent of WIC participants reported receiving TANF benefits. Only 15 percent participated in all three programs, receiving Medicaid, food stamp, and AFDC benefits. Such data were not reported for 10.5 percent of 1998 WIC enrollees.

Reported participation in TANF, food stamps, and Medicaid decreased substantially between 1996 and 1998. This observed decline among WIC enrollees mirrors overall trends in the programs since passage of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996.

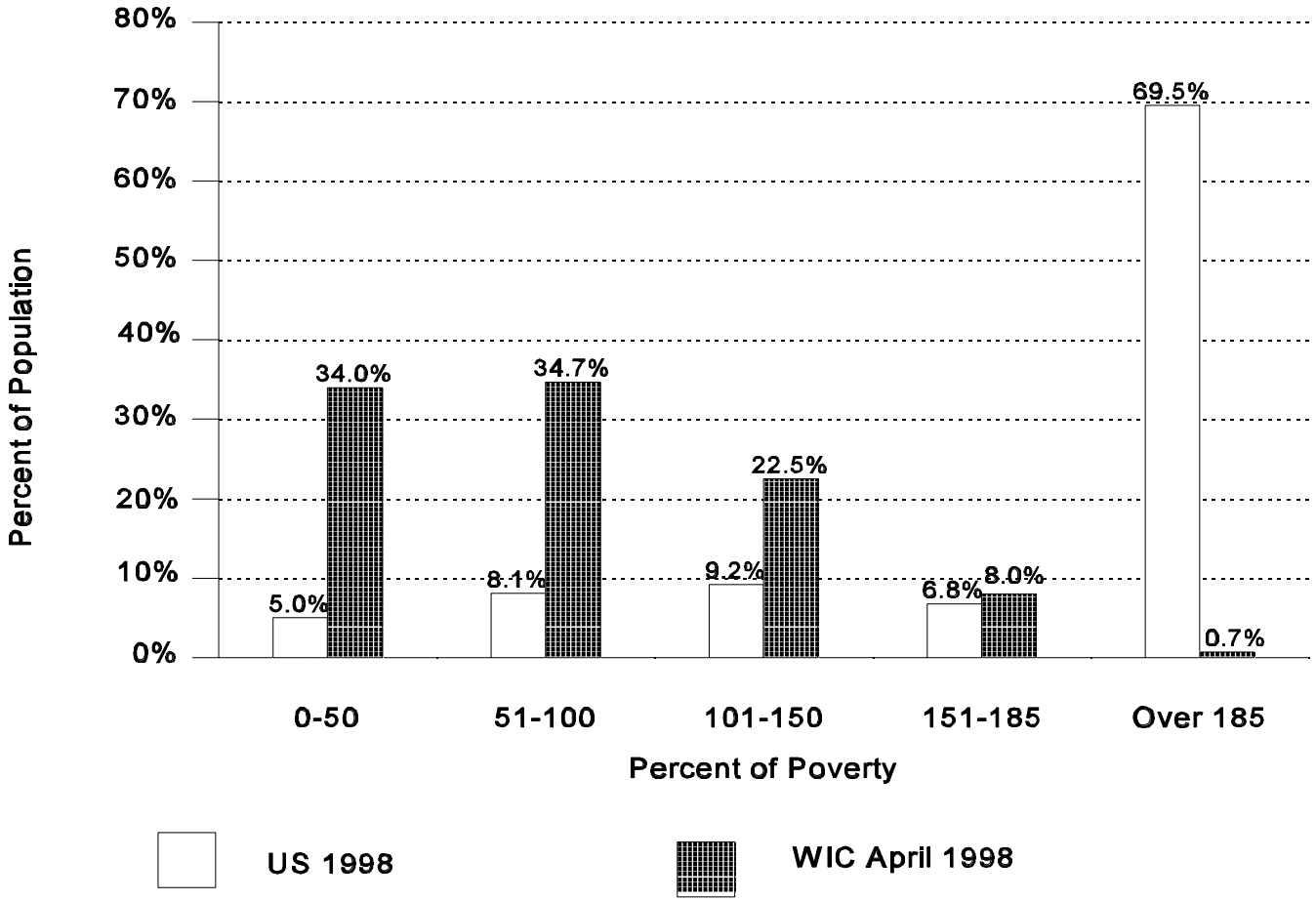
These estimates of reported participation in other programs may well represent a lower bound. At certification, staff in local WIC agencies provide information on other programs so that some WIC clients apply for these benefits after they are certified to receive WIC benefits and after this information on program participation is recorded.

Poverty Status. Compared with the general US population, the WIC population is distinctly poor, with two-thirds of WIC participants at or below the poverty line, compared to 13 percent of the general population. The sharp contrast between WIC clients and the general population can be seen in Exhibit E.2 which compares the poverty status of WIC participants reporting income to the general US population. More detailed figures appear in Chapter Four of this report.

Nutritional Risk. For PC98, States could report up to three nutritional risks for each participant. For women, general obstetrical risks and inadequate or inappropriate nutrient intake were the predominant risks reported. Children showed inappropriate or inadequate nutrient intake and anthropometric risks (low weight for height, for example) as their most frequently recorded risks. Three-quarters of WIC infants were recorded at risk due, at least in part, to the WIC-eligibility of their mothers or because

Exhibit E.2

Comparison of Poverty Levels of WIC Participants Reporting Income to Persons in the US Population



their mothers were at risk during pregnancy. At least one nutritional risk was reported for 99.5 percent of WIC enrollees in April 1998.

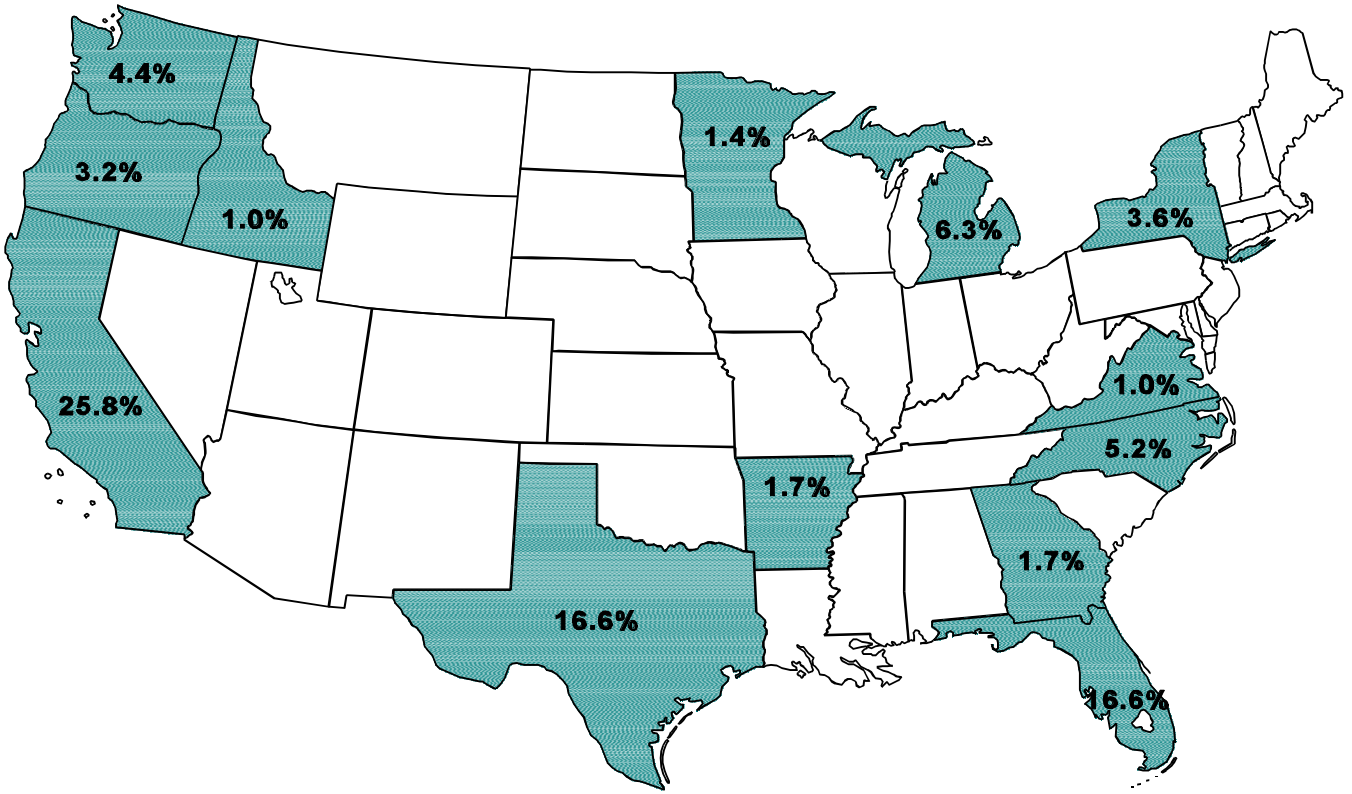
Breastfeeding Rates. Beginning with PC98, States were required to submit data on breastfeeding initiation and duration for infants aged seven to eleven months old in April 1998. The PC98 benchmark estimate is based on data from 63 State WIC agencies, which represent 85 percent of all seven-to-eleven-month old infants. In these States reporting breastfeeding data, 42 percent of infants aged seven to eleven months are currently breastfed or were breastfed at some time.

Food Package Data. For the first time in April 1998, States were required to provide food prescription data as part of the WIC Minimum Data Set (MDS). Due to the complexity of analyzing widely varying coding systems among the eighty-eight State WIC agencies, this report does not contain analyses of these food package data. An addendum to this report is planned to address food prescriptions.

Migrant Status. Of particular interest is the participation of migrant farmworkers in the WIC Program. Exhibit E.3 shows migrant participation across the States. In April 1998, there were 53,158 migrant WIC participants identified on State WIC enrollment files. Migrant WIC participants make up less than 1 percent of the population receiving WIC services. More than half of these participants were enrolled in the WIC Program in California, Florida, and Texas. Migrant women enrollees in WIC tend to be older than the general WIC population; this population also reports lower incomes. Average income in the non-migrant WIC population is higher than incomes reported by migrant farmworker WIC enrollees. However, the gap decreased between 1996 and 1998—non-migrant income was 12 percent higher than migrant income in 1996 and only 6 percent higher in 1998. For PC98, State WIC agencies reported information on migrant status for 99 percent of US WIC participants.

Exhibit E.3

Distribution of Migrant Farmworker WIC Participants by State
April 1998



Note

Percentages are based on total migrant WIC participation. States with less than 1 percent of the total WIC migrant population are not shown.

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A list of exhibits for each appendix appears at the beginning of the appendix.

1. INTRODUCTION

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) was created in 1972 and is administered by the Food and Nutrition Service (FNS) of the US Department of Agriculture (USDA). WIC was established to counteract the negative effects of poverty on prenatal and pediatric health and provides a combination of direct nutritional supplementation, nutrition education and counseling, and increased access to health care and social service providers for pregnant, breastfeeding, and postpartum women; infants; and children up to the age of five years. By intervening during the prenatal period, WIC seeks to improve fetal development and reduce the incidence of low birthweight, short gestation, and anemia. Infants and children who are at nutritional or health risk can receive food supplements, nutrition education, and access to health care to maintain and improve their health and development.

The WIC Program was established in 1972 by an amendment to the Child Nutrition Act of 1966. WIC has vastly expanded since its inception, and, in April 1998, WIC served approximately eight million participants at an annual cost of about four billion dollars.

Since 1988, FNS has produced biennial reports on current participant and program characteristics in the WIC Program for general program monitoring as well as for managing the information needs of the program. FNS uses this regularly updated WIC program information to estimate budgets, identify needs for research, and review current and proposed WIC policies and procedures. The biennial reports include:

- Information on the income and nutritional risk characteristics of WIC participants.
- Data on WIC program participation for migrant farm worker families.
- Other information on WIC participation that is deemed appropriate by the Secretary of Agriculture.

For purposes of the biennial reports, a WIC participant is defined as a person who is certified to receive WIC benefits in April, including individuals who do not claim or use the food instruments issued during the time period.

Program Operations

WIC services are delivered in each of the fifty States, American Samoa, the District of Columbia, Guam, Puerto Rico, and the American Virgin Islands. Additionally, in 1998, thirty-three Indian tribal organizations (ITOs) served as State WIC agencies. Approximately 2,200 local agencies (defined as the organizations one level below State WIC agencies) provide services to participants at approximately 9,000 service sites. Exhibit 1.1 presents information on the number of local service delivery agencies operated by the eighty-eight State WIC agencies. Ten States serve more than half (57 percent) of all WIC participants. Two of these States—California and Texas—provide services to 25 percent of WIC participants.

Exhibit 1.1

Distribution of Local WIC Agencies and WIC Participants by State

State	Number of Local Agencies	Percent of All Local Agencies	Percent of US WIC Participants
Northeast			
Connecticut	21	0.95%	0.74%
Maine	11	0.50	0.33
Massachusetts	35	1.59	1.63
New Hampshire	9	0.41	0.23
New York	100	4.54	6.61
Rhode Island	14	0.64	0.29
Vermont	12	0.54	0.20
Indian Township (ME)	1	0.05	0.00*
Pleasant Point (ME)	1	0.05	0.00*
Seneca Nation (NY)	1	0.05	0.00*
Mid-Atlantic			
Delaware	15	0.68	0.20
District of Columbia	5	0.23	0.22
Maryland	18	0.82	1.20
New Jersey	19	0.86	1.85
Pennsylvania	25	1.13	3.20
Puerto Rico	7	0.32	2.71
Virginia	35	1.59	2.02
Virgin Islands	1	0.05	0.10
West Virginia	8	0.36	0.68
Southeast			
Alabama	67	3.04	1.46
Florida	48	2.18	5.00
Georgia	21	0.95	3.32
Kentucky	55	2.50	1.58
Mississippi	23	1.04	1.34
North Carolina	85	3.86	2.78
South Carolina	16	0.73	1.50
Tennessee	14	0.64	2.03
Eastern Band—Cherokee (NC)	1	0.05	0.01
Mississippi Choctaw	1	0.05	0.01
Midwest			
Illinois	94	4.27	3.45
Indiana	55	2.50	1.88
Michigan	52	2.36	3.04
Minnesota	70	3.18	1.23
Ohio	76	3.45	3.20
Wisconsin	69	3.13	1.43
Southwest			
Arkansas	75	3.40	1.13
Louisiana	131	5.95	1.73
New Mexico	93	4.22	0.84
Oklahoma	23	1.04	1.11
Texas	90	4.09	9.19
ACL (NM)	1	0.05	0.01
Cherokee Nation (OK)	1	0.05	0.09
Chickasaw Nation (OK)	1	0.05	0.04

Notes

The estimate of local WIC agencies is derived from State enrollment files containing identifiers for local agencies charged with administering WIC services.
*Indicates agencies serving less than 0.01 percent of US WIC.

Exhibit 1.1 (continued)

Distribution of Local WIC Agencies and WIC Participants by State

State	Number of Local Agencies	Percent of All Local Agencies	Percent of US WIC Participants
Southwest (continued)			
Choctaw Nation (OK)	1	0.05%	0.03%
Citizen—Potawatomi (OK)	1	0.05	0.02
Eight Northern Pueblos (NM)	1	0.05	0.00*
Five Sandoval Pueblos (NM)	1	0.05	0.00*
ITC—Oklahoma	1	0.05	0.00*
Muscogee Creek Nation (OK)	1	0.05	0.01
Osage Nation (OK)	1	0.05	0.01
Otoe-Missouria (OK)	1	0.05	0.01
Pueblo of Isleta (NM)	1	0.05	0.01
Pueblo of San Felipe (NM)	1	0.05	0.00*
Pueblo of Zuñi (NM)	1	0.05	0.01
Sac and Fox Nation (OK)	1	0.05	0.00*
Santo Domingo (NM)	1	0.05	0.00*
WCD (OK)	1	0.05	0.03
Mountain Plains			
Colorado	40	1.82	1.07
Iowa	20	0.91	0.81
Kansas	36	1.63	0.66
Missouri	120	5.45	1.89
Montana	40	1.82	0.27
Nebraska	14	0.64	0.39
North Dakota	27	1.23	0.18
South Dakota	64	2.91	0.24
Utah	15	0.68	0.73
Wyoming	17	0.77	0.14
Cheyenne River Sioux (SD)	1	0.05	0.01
Omaha-Santee Sioux (NE)	1	0.05	0.01
Rosebud Sioux (SD)	1	0.05	0.02
Shoshone-Arapahoe (WY)	1	0.05	0.01
Standing Rock Sioux (ND)	1	0.05	0.01
Three Affiliated (ND)	1	0.05	0.01
Ute Mountain Ute (CO)	1	0.05	0.00*
Winnebego (NE)	1	0.05	0.00*
Western			
Alaska	17	0.77	0.30
American Samoa	1	0.05	0.08
Arizona	18	0.82	1.56
California	84	3.81	16.75
Guam	1	0.05	0.07
Hawaii	18	0.82	0.49
Idaho	9	0.41	0.43
Nevada	5	0.23	0.59
Oregon	34	1.54	1.15
Washington	72	3.27	2.04
ITC—Arizona	11	0.50	0.12
ITC—Nevada	1	0.05	0.01
Navajo Nation (AZ)	17	0.77	0.20
Total	2203	100.00%	100.00%

Notes

The estimate of local WIC agencies is derived from State enrollment files containing identifiers for local agencies charged with administering WIC services.
*Indicates agencies serving less than 0.01 percent of US WIC.

At the federal level, FNS and its seven regional offices provide cash grants to State WIC agencies for program administration and operations; issue regulations and monitor compliance with these regulations; provide technical assistance to States, and conduct studies of program operation and performance. State WIC agencies set nutritional risk eligibility standards, allocate funds to local WIC sponsoring agencies, monitor compliance with federal and State regulations, and provide technical assistance to local WIC agency staff. Virtually all local WIC service providers are health agencies. (See Exhibit 1.2.)[1] State (36 percent) and county (36 percent) health departments account for almost three-quarters of all WIC sponsors. WIC sponsors also include private or non-profit agencies (10 percent), and community action agencies (5 percent). The funds received by local WIC agencies are used to provide federally specified supplemental foods to WIC participants and to pay administrative costs, including the costs of certifying applicants as eligible and counseling WIC participants on nutritional issues. About half of local WIC agencies in the PC98 survey report they provide WIC services within a county. (See Exhibit 1.3.)

Since 1987, State agencies have negotiated rebates provided by manufacturers of infant formula and juice. These rebates are used by State and local WIC agencies to provide WIC services to larger numbers of eligible individuals.

Participant Benefits

WIC seeks to improve the health of program participants by providing nutritious food and nutrition education as adjuncts to good health care. The benefits provided by WIC are briefly described below.

- **Food Packages**. Food, food vouchers, or food checks are distributed to participants to provide specific nutrients known to be lacking in the diets of target populations. FNS regulations specify WIC food packages that are designed for different categories of participants. These packages contain foods that are good sources of specific nutrients—protein, iron, calcium, and vitamins A and C. Content of infant food packages is grounded in the developmental needs of infants as well as in pediatric recommendations on infant feeding. Other food packages incorporate into their contents the recommended eating patterns for preschool children and the special additional nutritional requirements of pregnant and breastfeeding women.

  Most States operate retail food delivery systems where WIC clients receive food instruments to purchase their supplemental foods at participating local grocery stores. These checks or vouchers are "food-specific," in that they can be used only for food prescribed by health or nutrition professionals at local WIC agencies. These food items are specified on each WIC food instrument. In a few geographic areas, food is delivered to participant homes, or participants pick up food at specified distribution points. A small

[1]Information on local agencies is drawn from the PC98 survey of local WIC agencies which is described later in this chapter. Respondents were permitted multiple responses so percentages do not add to 100 percent.

Exhibit 1.2

Sponsors of Local WIC Agencies

Organizational Sponsor	Percent of Local Agencies[a]	Percent of Participants[a]
State health agency	36.1% (2.21)	23.5% (3.09)
District health agency	5.0 (1.19)	7.9 (2.43)
Multi-county agency	2.9 (0.94)	1.6 (0.94)
County health agency	35.6 (2.51)	30.9 (4.73)
Municipal health agency	3.0 (0.99)	9.5 (3.10)
Community health agency	8.7 (1.58)	5.5 (1.98)
Community action agency	4.6 (1.19)	3.8 (1.65)
Indian health agency	1.5 (0.71)	0.3 (0.20)
Indian agency	3.6 (2.73)	1.2 (0.89)
Public hospital	1.8 (1.73)	2.9 (3.89)
Private voluntary hospital	0.9 (0.52)	0.9 (0.83)
Private proprietary hospital	0.3 (0.29)	0.1 (0.12)
Private/non-profit agency	9.9 (1.72)	18.8 (3.91)
Other	0.6 (1.69)	2.4 (7.43)
Not reported	12.8 (1.85)	8.8 (2.33)

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[a]Columns do not sum to 100 percent because respondents were permitted multiple responses.

Exhibit 1.3

Geographic Areas Served by Local WIC Agencies

Service Area	Percent of Local Agencies	Percent of Participants
A single neighborhood	0.0% (0.00)	0.0% (0.00)
A group of neighborhoods	3.2 (1.02)	3.5 (2.70)
A city	5.0 (1.24)	10.5 (3.77)
A portion of one county (or parish)	5.3 (1.15)	6.0 (2.05)
One county (or parish)	48.5 (2.68)	44.1 (4.97)
Portions of several counties	5.2 (1.34)	6.3 (1.14)
Multiple counties or parishes	8.6 (1.47)	10.4 (2.98)
A State-designated health district . . .		
covering 1-3 counties	7.6 (1.48)	5.5 (1.68)
covering 4-6 counties	2.2 (0.78)	1.8 (1.16)
covering 7-9 counties	0.3 (0.37)	0.1 (0.16)
covering 10 or more counties	1.3 (0.69)	3.4 (2.07)
Special populations throughout the State	0.9 (0.59)	0.5 (0.46)
The entire State[a]	0.7 (0.51)	0.2 (0.15)
Other	1.4 (2.81)	1.3 (1.06)
Not reported	9.9 (1.90)	6.4 (2.08)
Total	100.0%	100.0%

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

number of States operate both retail and direct delivery systems.

During the past decade, States began considering electronic benefit transfer (EBT) of WIC benefits. Wyoming tested the feasibility of EBT in the WIC Program and is in the process of rolling out an electronic system for WIC and food stamps. Ohio is also in the process of adding WIC to its food stamp EBT system. The application of electronic benefits to WIC is hampered by the need to match purchased food items with WIC food package prescriptions. Automating this task is complicated and expensive and requires electronic connections which do not normally exist in retailer scanning and payment systems. Integrated circuit chips embedded in plastic cards (smart cards) are offering WIC a new solution to traditional paper-based food prescriptions.

- **Nutrition Education and Counseling**. Nutrition education plays a crucial role in the WIC Program and is viewed as an essential benefit directed toward achieving positive changes in participant knowledge, attitude, and behavior about food consumption. FNS regulations require WIC service agencies to offer to participants at least two nutrition education sessions during each—usually six-month—certification period. Participants may be counseled in one-on-one settings; attend group classes; or view films, slide-tape presentations, or videos on a variety of health and nutrition-related topics. In recent years, WIC has emphasized the value of breastfeeding and spent substantial funds to promote breastfeeding.

- **Access to Health Care and Social Services**. Each WIC agency is charged with assisting WIC participants to obtain and use preventive health care services. Through either the provision of on-site health services or referral to other agencies, the WIC Program serves as a link between the participant and an appropriate health-care provider or system.

  Since 1978, most local WIC agencies have referred clients to a variety of social services, including welfare, child support and child care services, and substance abuse counseling. Coordination between WIC and social service programs has increased since 1989 when Federal law created adjunctive eligibility for WIC benefits based on eligibility for other programs. During 1998, most local WIC agencies provided information on other social services such as the Food Stamp Program, Medicaid, Transitional Aid to Needy Families (TANF), substance abuse counseling and treatment, and other programs providing services needed by WIC clients. The degree to which local WIC agencies actively facilitate such access varies with the type of local sponsoring agency

and the nature of the service site at which WIC benefits are delivered.

Eligibility for WIC Benefits

Eligibility for receipt of WIC benefits is based on three factors: categorical eligibility; income eligibility; and nutritional risk. First, a participant must be a member of certain categorically eligible groups: women during pregnancy and up to the first six weeks after delivery; women up to one year postpartum if breastfeeding or up to six months postpartum if not breastfeeding; infants up to one year old; and children aged one through four years.

Second, a participant must be income-eligible. The income limit for eligibility is set by each State agency. However, this income limit may not exceed 185 percent or be less than 100 percent of the Department of Health and Human Services (HHS) poverty income guidelines, which are based on household size. As of July, 1997 at the 185-percent threshold, a person from a family of four, living within the forty-eight contiguous States, with an annual household income of $29,693 or less would be income-eligible for WIC benefits[2]. All States WIC agencies, except Guam, set WIC income eligibility at 185 percent of poverty, as of April 1998.

States are also permitted to establish standards and procedures for verifying and documenting income. Some States require paystubs; others allow applicants to self-declare income. FNS regulations allow a WIC service provider to conclude that a participant is adjunctively income-eligible for WIC benefits through documentation of his/her participation in another means-tested program such as Medicaid, TANF, or food stamps.

Finally, each WIC participant must be determined to be at nutritional risk based on a medical and/or nutritional assessment by a competent professional authority such as a physician, nutritionist, nurse, or other health professional or paraprofessional. At a minimum, height (or length) and weight are measured and, with the exception of infants under six months, a hematological test (generally a hemoglobin) is administered to assess nutritional status. Federal program regulations allow State and local agencies to develop appropriate screening systems to assess nutritional risk. According to program regulations, risk can be indicated by such factors as abnormal weight gain during pregnancy, a history of high-risk pregnancies, low birthweight, stunted growth, low weight, obesity, anemia, or an inadequate dietary pattern. Beginning in 1999, a national set of nutritional criteria was established. However, in 1998, no single national set of nutritional criteria existed. Therefore, WIC eligibility could vary with location. Individuals who are adjunctively income-eligible for WIC because of participation in other qualifying means-tested programs must also be determined to be at nutritional risk to receive benefits.

Program Participation

The WIC Program must operate within annual funding levels established by appropriation law. The number of participants served each year depends on total funds available as well as on FNS allocation of these funds to individual States. For each local agency, a maximum caseload is determined based on the agency's funding level and predicted caseload turnover. When a local WIC agency reaches this maximum participation level within available funding, a system of priorities is followed in

[2]The 1997 guidelines, in effect until June 1998, were used to determine income eligibility for most WIC participants enrolled in April 1998.

allocating caseload "slots" to eligible applicants. Some agencies maintain waiting lists of eligible applicants and, as WIC openings become available, fill them from their waiting lists.

To assist State and local WIC providers with service provision, FNS has defined seven priority levels, based on applicant categorical status and type of nutritional risk condition. In general, the purpose of the existing priority system is to give precedence to medically based nutritional risks over risks based only on inadequate diet. Detailed information on priorities is presented in Chapter Seven.

Previous Studies of WIC Participant and Program Characteristics

FNS has completed six previous studies of WIC participant and program characteristics. In 1984 (PC84), 1988 (PC88), and 1990 (PC90), FNS and its contractors conducted studies using nationally representative samples of WIC participants. Data were obtained through mail surveys of State and local WIC agencies; record abstractions at local WIC service sites; and, in PC88, interviews with participants and followup data collection on food instrument pickup.

PC84, conducted for FNS by Ebon Research Systems, collected data from twenty-eight State agencies, 204 local agencies, 356 service sites, and 6,444 participant records. Major findings addressed:

- The distribution of participants by participant category, by priority, and by income.
- The nutritional risks of WIC participants.
- State and local WIC agency coordination with health and social service programs.
- The methods, frequency, and types of nutrition education provided to WIC participants.

PC88, the second study of WIC participant and program characteristics, was conducted by Research Triangle Institute. For this study, staff in State and local WIC agencies collected data and interviewed a nationally representative sample of approximately 7,000 WIC clients. A six-month followup data collection effort determined the rate of actual pickup of WIC food instruments. State and local WIC agencies were surveyed to gather information on WIC Program operations. PC88 reported on:

- The distribution of participants by participant category, by priority, by participation in other programs, and by family income.
- The nutritional risks of WIC participants.
- State and local policies and agency coordination with health and social service programs.
- Food package prescriptions.

PC90 served as a transitional study which built on the PC84 and PC88 research designs while minimizing sample size to conserve research expenditures. A goal for PC90, and

all future studies of WIC participant characteristics, was limiting burden on State WIC agencies to encourage continuing biennial participation in the WIC reporting system. For PC90, field researchers from Abt Associates abstracted data from a nationally representative sample of 2,343 participant records. All State WIC agencies were surveyed to obtain information on WIC Program operations.

The methodology used for PC98 was first developed for the 1992 study. The 1992 study of WIC participant and program characteristics (PC92) was substantially different from earlier studies with regard to collecting data on WIC participation. FNS developed a prototype reporting system which allows acquisition of all participation data through the automated transfer of an agreed-upon set of data elements. State WIC agencies download, to diskettes, magnetic tapes, or CD-ROMs, routinely collected information from their existing automated client and management information systems. State and local WIC staff obtain these data to certify applicant eligibility for WIC benefits, to guide nutrition education, and to issue food instruments. This Minimum Data Set (MDS) was developed by FNS working with the Information Committee of the National Association of WIC Directors (NAWD) and the Centers for Disease Control and Prevention (CDC). The MDS, which consists of twenty items, appears in Exhibit 1.4.

The methodology developed for PC92 was successfully applied in 1994, 1996, and again in 1998. Two PC98 changes are the mandatory reporting of breastfeeding data and the inclusion of food package codes in the MDS.

For PC96, States were *asked* to report information on breastfeeding (if their management information systems contained the data) and forty-two States provided sufficient data to compute individual State estimates. National estimates could not be calculated because of the large amount of unreported data. Reporting of breastfeeding data improved significantly in PC98, though States continued to have some difficulty. Sixty-three States, representing approximately 85 percent of all infants, reported sufficient data to calculate a national estimate of breastfeeding initiation. Only individual State estimates of breastfeeding duration could be calculated due to the large amount of unreported data on this variable.

Food package codes describe the contents of food packages or food prescriptions issued to WIC participants during the month of April 1998. All States were able to provide this information and national estimates are calculated.

The 1998 Study of WIC Participant and Program Characteristics

For the reference month of April 1998, each State WIC agency submitted MDS data on a census of its WIC participants. The final PC98 dataset encompasses information on all individuals enrolled in the WIC Program as of the reference month. Enrollment is defined as individuals certified to receive WIC benefits for specific time periods, including individuals who did not claim or use the food instruments issued during those time periods. Many studies of the WIC Program have reported participation measured by the numbers of individuals who received and cashed food instruments during designated time periods. Similarly, FNS administrative data on WIC participation are based on voucher redemption. Comparing April 1998 redemption data (7,418,120 participants) with April 1998 enrollment data (8,042,758 enrollees) suggests that approximately 92 percent of WIC enrollees pick up and spend their monthly benefits. PC96 findings were similar.

Exhibit 1.4
Minimum Data Set Variables and Definitions

For biennial reports on WIC participant and program characteristics, the term "participant" means a person on WIC master lists or a person listed in WIC operating files who is certified to receive WIC benefits in April 1998.

The data items **should reflect the participant's status on each item at the time of the most recent WIC Program certification as of April 1998.** However, as a convenience to State agencies that do not maintain historical files and that update the information in their automated systems during certification periods, current information that is on the file for each participant in April 1998 will be accepted.

1.	**State Agency ID**	A unique number that permits linkage to the WIC State agency where the participant was certified.
2.	**Local Agency ID**	A unique number that permits linkage to the local agency where the participant was certified as eligible for WIC benefits.
	or	
	Service Site ID	A unique number that permits linkage to the service site where certified. Either local agency ID or service site ID may be reported according to the level the State Agency feels appropriate. At a minimum, State agencies must provide agency names and addresses for each ID provided on their files.
3.	**Case ID**	A unique record number for each participant which maintains individual privacy at the national level.
	General Instructions	Participant or Case IDs for each participant should continue to maintain individual privacy at the national level. States are requested to generate these IDs in the same manner that was applied for PC92 to allow longitudinal tracking of participant characteristics. This task can be accomplished by applying the PC92 algorithm to construction of PC98 participant IDs.
4.	**Date of Birth**	Month, day, and year of participant's birth reported in MMDDYYYY format.
5.	**Race/Ethnicity**	The classification of the participant into one of the five (5) racial/ethnic categories: white; black; Hispanic; American Indian or Alaskan Native; or Asian or Pacific Islander. The ethnic categories, white and black, include only those persons who are not of Hispanic origin.
6a.	**Certification Category**	The category—one of five (5) possible categories—under which a person is certified as eligible for WIC benefits: pregnant woman; breastfeeding woman; postpartum woman (not breastfeeding); infant (under 12 months); or 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 Program certification.

Exhibit 1.4 (continued)

7.	**Date of Certification**	The date the person was declared eligible for the most current WIC Program certification as of April 1998. Month, day, and year should be reported in MMDDYYYY format.
8.	**Sex**	For infants and children, male or female.
9.	**Priority Level**	Participant priority level for WIC Program certification at the time of the most recent WIC Program certification as of April 1998.
10a-c.	**Participation in TANF/AFDC, Food Stamps, Medicaid**	The participant's reported participation in each of these programs at the time of the most recent WIC Program certification as of April 1998.
11.	**Migrant Status**	Participant migrant status according to the federal WIC Program definition of a migrant farmworker (currently counted in the FNS 498 report).
12.	**Number in Family or Economic Unit**	The number of persons 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.
13a-c.	**Family or Economic Unit Income**	1. For persons for whom income is determined during the certification process, the income amount that was determined to qualify them for the WIC Program during the most recent certification as of April 1998. FNS will convert income expressed in different measures (weekly, monthly, yearly, etc.) to annual amounts. 2. For descriptive purposes only, for participants whose income was **not** required to be determined as part of the WIC Program certification process, the self-reported income at time of certification. These participants include adjunctively income-eligible participants (due to TANF, Food Stamp Program, 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 Program income eligibility, income eligibility of Indian and instream migrant farmworker applicants). Zero should not be used to indicate income values that are missing or not available. **Zero should indicate only an actual value of zero.**

Exhibit 1.4 (continued)

14a-c.	**Nutritional Risks Present at Certification**	The three highest priority nutritional risks present at the WIC Program certification current in April 1998.
15a-b.	**Hemoglobin *or* Hematocrit**	That value for the measure of iron status that applies to the WIC Program certification current in April 1998. It is assumed that the measure was collected within sixty (60) days of the certification date.
16a-b.	**Weight**	The participant's weight measured according to the CDC nutrition surveillance program standards [nearest one-quarter (¼) 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 (**c**) 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 Program certification period as of April 1998 in MMDDYYYY format.
19a.	**Currently Breastfed**	For infant participants between the ages of seven and eleven months in April 1998, whether or not the participant is **currently** receiving breastmilk.
19b.	**Ever Breastfed**	For infants between the ages of seven and eleven months in April 1998, whether or not the infant was **ever** breastfed.
19c.	**Length of Time Breastfed**	For infants between the ages of seven and eleven months in April 1998, the number of weeks the infant received breastmilk.
19d.	**Date Breastfeeding Data Collected**	For infants between the ages of seven and eleven months in April 1998, the date on which breastfeeding status was reported in MMDDYYYY format.
20a-j.	**Food Packages**	The food package code(s) for the WIC food package or for all food instruments prescribed for the participant during the month of April 1998.

In April 1998, there were eighty-eight State WIC agencies: the fifty States, American Samoa, the District of Columbia, Guam, Puerto Rico, and the American Virgin Islands, along with thirty-three Indian Tribal Organizations (ITOs). PC98 data were submitted by 100 percent of State WIC agencies, and all agencies reported on censuses of their WIC participants. PC98 describes more than 8 million individuals certified as eligible for WIC benefits in April 1998. Actual WIC enrollment by State is mapped in Exhibit 1.5.

The State-maintained automated information systems that are the sources of data for PC98 do not always contain complete information on every individual enrolled in the WIC Program. To account for this anomaly, all of the tables in this publication include columns or rows labeled *not reported*. These figures indicate the numbers and percentages of WIC participants for whom States could not provide information on specific items.

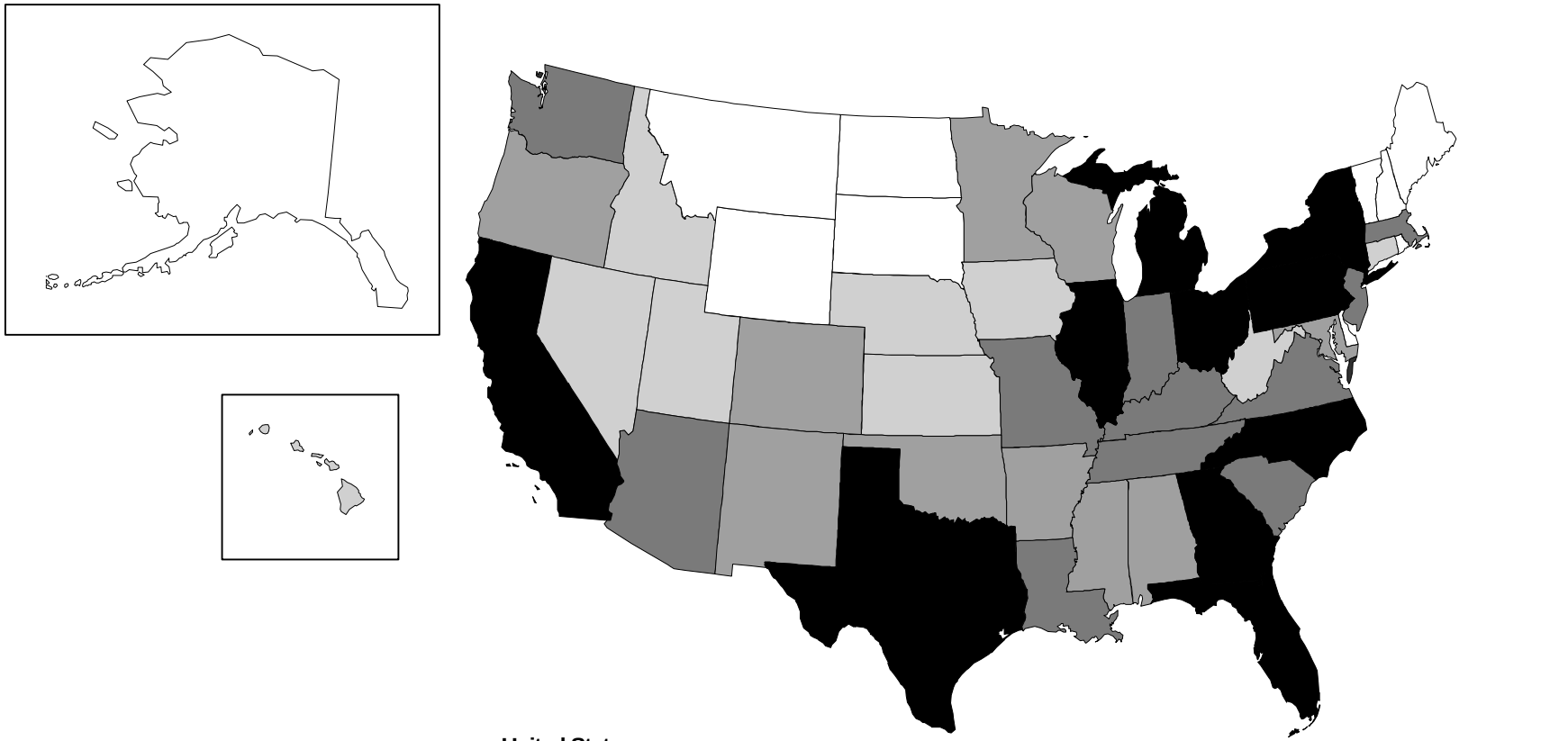
Most State agencies provided information on each MDS item— with the exception of breastfeeding data—for each participant. However, unreported data should be addressed for several other items. PC98 contains data on participation in other programs for about 90 percent of the participants in the database, a decrease of 5 percentage points from 1996. Data on income were submitted for 85 percent of the 8 million WIC participants. The decline in income reported between PC96 and PC98—from 90 to 85 percent—can be primarily attributed to a large decrease in income reporting for the State of Texas. In PC96, Texas reported income for 86 percent of its WIC participants; in PC98 Texas reported income for only 40 percent of WIC. Income reporting for migrant households showed a larger decrease (84 percent to 22 percent) than did nonmigrant household reporting (87 percent to 41 percent). Five other State WIC agencies—Florida, Indiana, Michigan, Virginia, and Mississippi Band of Choctaw Indians—also affected the income reporting rate by providing income data for under 70 percent of their WIC participants. All these States, except Florida, had similar difficulties reporting income data in 1996. In addition, in some instances, information on blood measurements may be absent from a State database. WIC regulations permit clinics to dispense with blood tests for infants under six months of age, as well as for children within normal ranges at their most recent prior certifications.

PC98 data may be unreported for a variety of reasons, some of which may indicate that participants in the not-reported category may be different from those individuals with data reported. As noted above, assumptions regarding missing data vary by the nature of the variable and by WIC participant category. To account for these anomalies, a uniform strategy has been adopted for preparing all tables in this report. Data not reported are included in the calculation of percentage distributions for each characteristic. While including missing data in the denominators for all calculations tends to place estimates for each characteristic at a lower bound, this approach has allowed consistent presentation of tabulations throughout the report. Further, it assures that all information needed to calculate upper-bound estimates is readily available in every table. Caution should be used in comparing results across groups; missing data must always be considered in gauging differences among groups or categories of WIC participants.

The specifications for the 1998 study of WIC participant and program characteristics included a sixteen-item Supplemental Data Set (SDS). Included in this dataset are such items as birthweight, birth length, and source of prenatal care (Exhibit 1.6). Sixty-three

Exhibit 1.5

WIC Enrollment, April 1998



United States
WIC Enrollment by State

220,000	to	1,350,000	(10)
120,000	to	220,000	(11)
70,000	to	120,000	(10)
30,000	to	70,000	(9)
10,000	to	30,000	(10)

ITOs included in State totals.
Fewer than 10,000 not shown on map.

Exhibit 1.6
Supplemental Data Set Variables and Definitions

For biennial reports on WIC participant and program characteristics, the term participant means a person on WIC master lists or a person listed in WIC operating files who is certified to receive WIC benefits in April 1998.

The data items should **reflect the participant's status on each item at the time of the most recent WIC Program certification as of April 1998.** However, as a convenience to State agencies that do not maintain historical files and that update the information in their automated systems during certification periods, current information that is on the file for each participant in April 1998 will be accepted.

21.	**Date of First WIC Certification**	Date the participant was first certified for the WIC Program 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.	**Source of Prenatal Care**	For pregnant, breastfeeding and postpartum women, source of care for current/most recent pregnancy.
25.	**Date When Prenatal Care Began**	For pregnant, breastfeeding and postpartum women, the date when prenatal care began for the most recent pregnancy in MMDDYYYY format.
26.	**Date Previous Pregnancy Ended**	For pregnant women, the date that the previous pregnancy ended in MMDDYYYY format.
27.	**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.
28.	**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.

Exhibit 1.6 (continued)

29a-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.
30a-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.
31a-b.	**Birth Weight**	For infants and children, the participant's weight at birth measured according to CDC nutrition surveillance program standards (lbs/ounces). Birth weight may be reported **in either** pounds and ounces, **or** in grams.
32a-b.	**Birth Length**	For infants and children, the participant's length measured according to CDC nutrition surveillance program standards (nearest **c** inches). Birth length may be reported **in either** inches and eighth inches, **or** in centimeters.
33.	**Date of Last Routine Checkup or Immunization**	Month, day, and year of the last routine check-up or immunization for infants and children reported in MMDDYYYY format.
34.	**Length of Time Mother on WIC During Pregnancy**	For infant participants, the length of time mother was on WIC during this infant's prenatal period.
The following items may be reported at the discretion of individual States.		
35.	**Erythrocyte Protoporphyrin**	That value for the measure of iron status that applies to the WIC Program certification current in April 1998.
36.	**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 Program certification as of April 1998.

(75 percent) provided some SDS data for PC98—an increase from PC96 when fifty-five States provided some data.[3] For PC98, eleven SDS items were reported by at least half of the 63 States reporting SDS data. No States reported every SDS item for every participant. The most frequently reported SDS item was birthweight, submitted by sixty State agencies. The limited amount and incompleteness of SDS data preclude computation of national estimates. Appendix F of this report presents a series of tables reporting State-level data for those States submitting SDS information. A list of State agencies supplying SDS data is also included in the appendix.

PC98 Summary of State Programs

The 1998 study, like earlier studies, included a survey of State WIC agencies to obtain information on WIC program characteristics. For PC98, each State WIC agency was mailed a computer-generated paper copy of its responses to the PC96 Summary of State Programs (SSP). State respondents were asked to confirm or revise their 1996 responses. A copy of the Summary of State Programs (SSP) appears in Appendix A. Data were collected on:

- Operating policies and procedures of State WIC agencies with regard to income determination, food package tailoring, and food instrument issuance.
- Average monthly food package costs by participant category.
- Nutritional risk criteria established by State WIC agencies including standards for hemoglobin and hematocrit values as well as methods for obtaining dietary intake information.

All of the eighty-eight State WIC agencies operating in April 1998 completed questionnaires. Each of the eighty-eight reporting agencies provided information on every item in the questionnaire.

PC98 Summary of Local Programs

PC98, like PC96, included a mail survey of local WIC agencies. The purpose was to obtain information on local-level WIC programs and services. In PC98, the Summary of Local Programs (SLP), was mailed to a representative sample of 422 WIC agencies. A copy of the SLP appears in Appendix A. Data were collected on:

- Sponsoring agencies and service areas
- WIC services
- Allocation of WIC funds
- Income verification and documentation policies
- Outreach activities
- Recording nutritional risks
- Nutrition education practices
- Breastfeeding promotion and education
- Languages available
- Referral procedures to health and social services
- Clinic accessibility
- Adequacy of staff and physical space.

[3]The two largest States—California and Texas—did not report any SDA data, which limits the completeness of SDS reporting.

The PC98 local agency sample is longitudinal, that is, PC98 surveyed the same agencies as did PC96. For the 1998 survey, this longitudinal sample was supplemented with a sample of agencies that came into existence after the PC96 sample was selected. The local agency survey uses a proportionate-stratified random design. Stratifying variables included FNS region, size of local agency, percent of participants receiving TANF, percent of participants below the poverty level, percent Hispanic participants, and nutritional risk priorities. Stratification helps to ensure the "representativeness" of the sample. In addition, the twenty-six largest local agencies in the US were included in the sample with certainty. These agencies represent only 1 percent of all local WIC agencies, but they account for about 20 percent of total WIC participants. Given this latter statistic, we wanted to ensure that these agencies were included in the sample. The remaining local agencies were randomly selected within each stratum. This design is appropriate because the objectives of the analysis are computing both local agency and participant-weighted local agency estimates.

A large number (407 or 96 percent) of local agencies completed their SLPs. In this report, PC98 survey responses are supplemented by fifty-three additional surveys from the National Survey of WIC Participants and Their Local Agencies (NSWP). The NSWP, conducted by Abt, used a questionnaire identical to PC98 and also referenced local agency operations in April 1998. Including these surveys increases the precision of PC98 local agency analyses.[4] Because information on local WIC is based on responses from a sample of local WIC agencies, these findings are estimates. Unlike the PC98 participant findings, these results do not represent a census of local WIC agencies. Responses are weighted to reflect the universe of local WIC agencies. Standard errors are calculated for all estimates and are presented in the tables.

Organization of This Report

Chapters Two through Nine contain tabular presentations which display PC98 data on WIC participants and programs. Tables are accompanied by limited text which is provided only to explain WIC procedures or to distinguish changes in the characteristics of WIC programs and participants that have occurred over time. Chapter Two presents information on overall participation in the WIC Program as well as information on WIC food packages and their costs. In Chapter Three, demographic data on WIC participants are reported. Chapter Four offers information on State procedures for determining income eligibility along with participation data on receipt of benefits from programs other than WIC, household size, average annual income, and percent of poverty of WIC households. Chapters Five and Six provide information on nutritional risk, nutrition education at the local level, and breastfeeding. Chapter Seven describes WIC priority groups while Chapter Eight contains information on migrant WIC participants. Finally, Chapter Nine describes services in local WIC agencies.

[4]The PC98 and NSWP samples were drawn independently and can be combined, with appropriate adjustments to statistical weights, to yield a larger analytic sample. PC98 included several questions on anemia screening and maintenance of ineligible applicant records not included in the NSWP.

2. OVERVIEW OF WIC PARTICIPATION AND FOOD PACKAGE COSTS

During April 1998, there were 8,042,758 individuals enrolled in the WIC Program. (See Exhibit 2.1.) Enrollment is defined as individuals certified to receive WIC benefits in April 1998, including individuals who did not claim or use the food instruments issued. This differs from the participation measure used in FNS administrative data which is based on voucher redemption. Between 1992 and 1994, the number of participants increased by 20 percent; participation then increased another 12 percent between 1994 and 1996. While the number of WIC participants grew between 1996 and 1998, the rate of increase (3.8 percent) was much lower than in previous years. In most regions of the country, total WIC enrollment remained essentially the same. The 3.8 percent increase in the number of WIC participants nationwide can be primarily attributed to increases in the Western states, where the net increase between 1996 and 1998 amounted to 13.1 percent. California alone accounted for 58 percent of the national enrollment increase.

Following trends observed in previous years, there were some minor changes in the distributions of WIC enrollment across participant categories between 1996 and 1998. The proportion of pregnant women declined from 13.6 percent in 1992 to 12.0 percent in 1994 and 11.3 percent in 1996. By 1998, this percentage had dropped to 11.1 percent. The proportion of infant enrollees has fallen from 30.1 percent in 1992 to 25.5 percent in 1998, while children now account for 51.2 percent of all WIC participants—up from 47.5 percent in 1992. These changes are due in part to the increased funding that has enabled States to serve more lower-priority individuals. They may also be the result of income shifts (financial eligibility), changes in the numbers of eligibles who apply, or the declining national birthrate. The proportion of breastfeeding women rose steadily between 1992 and 1998. Between 1992 and 1994, this percentage increased from 3.6 percent to 4.0 percent; it then rose to 4.3 percent in 1996 and to 4.8 percent in 1998.

Food Packages Issuance

Seven food packages are defined by federal WIC regulations: two for infants which are age-dependent; one for children or women with special dietary needs; one for children aged one through four years; one for pregnant and breastfeeding women; one for non-breastfeeding postpartum women; and an enhanced package for breastfeeding women. FNS specifies the maximum amount of food allowed in each package; State and local agencies may tailor food packages to achieve administrative efficiencies or to meet the nutritional needs of individual WIC clients. Administrative adjustments to WIC food packages include specifying package size, brand, or form. Nutritional tailoring often focuses on specifying a form of infant formula or changing food types to address the specific nutritional risks of individual participants. Exhibits 2.2 and 2.3 provide information on food package tailoring practices reported by States. No substantial changes in these practices were reported between 1996 and 1998.

Most WIC participants receive food instruments (either vouchers or checks for use in retail grocery stores) that contain information on type and amount of food and may include information on maximum allowable cost. A food instrument is designated a voucher or check to indicate the State's redemption process. States determine the

Exhibit 2.1

Distribution of WIC Participants by Participant Category in 1996 and 1998

Participant Category	Number of Participants 1996	Numbers of Participants 1998	Percent Change 1996-1998
Women			
Pregnant women	877,747	892,674	+1.7%
Breastfeeding women	330,176	389,391	+17.9
Postpartum women	567,913	591,049	+4.1
Total women	1,775,837	1,873,115	+5.5
Infants	1,988,789	2,048,625	+3.0
Children	3,982,815	4,121,016	+3.5
US WIC	7,747,441	8,042,758	3.8

Distribution of WIC Participants by Participant Category 1992, 1994, 1996, 1998

	Percent of Total WIC Participants			
Participant Category	**1992**	**1994**	**1996**	**1998**
Women				
Pregnant women	13.6%	12.0%	11.3%	11.1%
Breastfeeding women	3.6	4.0	4.3	4.8
Postpartum women	5.2	7.2	7.3	7.3
Total women	22.4	23.1	22.9	23.3
Infants	30.1	26.9	25.7	25.5
Children	47.5	50.2	51.4	51.2
US WIC	5,754,003	6,907,849	7,747,441	8,042,758

Note

For the biennial PC reports, participants are defined as persons on WIC master lists who are certified to receive WIC benefits in April 1998, including individuals who do not claim or use their food instruments. This differs from FNS administrative data in which participants are defined as individuals who pick up or redeem their food vouchers.

Exhibit 2.2

Food Package Adjustment and Tailoring Practices Used by States

Adjustment/Tailoring Practices	State Agencies	
	Number	Percent
Only use maximum allowable federal food package	1	1.1
Adjustment for administrative efficiency	87	98.9
Brands of food are designated or disallowed	71	80.7
Size of food container is designated	76	86.4
Specific form of food (within a food group) is specified	69	78.4
Certain food types (from within a food category) are eliminated	29	33.0
Other methods (such as adding special foods)	11	12.5
Tailoring for participant nutritional needs	86	97.7
Type of milk is specified (to reduce fat, lactose, or calories)	68	77.3
Type of cheese is specified (to reduce fat)	25	28.4
Type of cereal is specified (to reduce sucrose)	10	11.4
Specific forms of formula are specified (ready-to-feed or powdered formula)	82	93.2
Amounts of certain food types are reduced (to reduce calories or nutrient intake for weight control)	43	48.9
Amounts of certain food types are reduced (to meet age-related needs)	48	54.5
Amounts of milk and juice are reduced	13	14.8
Quantity of eggs is reduced (to reduce cholesterol)	17	19.3
A specific form of food is specified for the convenience of the participant (powdered milk, juice concentrate)	72	81.8
Other methods (such as adjustments for food allergies)	22	25.0

Notes

Responses are not mutually exclusive, so percentages do not sum to 100 percent. Percentages are based on the number (88) of reporting State WIC agencies.

WIC food instruments list specific foods up to maximum amounts for each month as defined in federal WIC regulations.

Exhibit 2.3

Food Package Tailoring Practices and Use of Standard Food Instruments

Standardized Instruments and Tailoring	State Agencies	
	Number	Percent
Standard food packages are available for specific categories of participants	43	48.9%
Standard food instruments can be selected or combined to create food packages for participants	8	9.1
Standard food instruments can be tailored by marking choices or amounts of food types directly on each food instrument	28	31.8
Standard food packages or food instruments are ***not*** used. Each food package prescription is individualized	8	9.1
Other methods of food tailoring[a]	1	1.1
Total State WIC agencies	88	100.0%

Notes

WIC food instruments list specific foods up to maximum amounts for each month as defined in federal WIC regulations.

[a]For more information on other methods of food tailoring, see Exhibit B2.3 in Appendix B.

frequency of issuance for these food instruments, which are generally produced using automated information systems at standard intervals. In most States, WIC participants pick up food instruments at local WIC service sites. Information on State and local agency issuance appears in Exhibit 2.4 and Exhibit 2.5, respectively.

A majority of State WIC agencies use the same food instrument issuance frequency for all participant categories—89 percent of State WIC agencies report using the same issuance frequency for all non-high-risk participants; 53 percent report using the same issuance frequency for high-risk participants. Among the 36 percent of State WIC agencies where variation exists only for high-risk participants, more frequent food issuance is used.

Most State WIC agencies offer either monthly or bimonthly issuance, with a higher proportion using monthly issuance for at least one participant category. States are more likely to use monthly issuance for high-risk participants, pregnant women and breastfeeding women. Non-breastfeeding postpartum women, infants and children are more likely to receive food instruments on a bimonthly basis. The trend toward bimonthly issuance, observed in previous years, has continued, as has the increase in the number of states distributing food packages every three months. Less frequent issuance is seen by many States as administratively efficient and less burdensome for WIC participants. Local agencies report more frequent use of bimonthly and trimonthly issuance than do State agencies, indicating that local agencies are concentrated in States with less frequent issuance (see Exhibit 2.5).

State-by-State information for Exhibits 2.1 through 2.4 appears in Appendix B of this report.

Almost all local WIC agencies require clients to pick up their food instruments in person; 89 percent do not routinely mail instruments to any participants (see Exhibit 2.6). Among the small percentage of agencies that do routinely mail food instruments, most do not verify receipt (see Exhibit 2.7).

Food Packages Costs

Information on costs of prescribed food packages for April 1998 is presented in Exhibit 2.8. Costs by participant category are reported by State WIC agencies. Data on average costs for all WIC participants are FY 1998 close-out food package costs from the FNS national data bank. Regional estimates of average costs were calculated using the average cost for each State weighted by the number of participants in the State. The highest average cost before rebates appears in the Northeast region, and the lowest average food package cost before rebates occurs in the Mountain Plains. Taking into account rebates received by State WIC agencies, highest average costs appear in the Mid-Atlantic region and lowest average costs occur in the Southwest. (See Exhibit 2.9.)

Exhibit 2.4

Frequency of WIC Food Instrument Issuance Among State WIC Agencies

Issuance Patterns	Issuance Frequency									
	One month		Two months		Three months		Other		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Participant Category										
Pregnant women	37	42.1%	31	35.2%	19	21.6%	1[b]	1.1%	88	100.0%
Breastfeeding women	34	38.6	33	37.5	20	22.7	1[b]	1.1	88	100.0
Postpartum women	28	31.8	39	44.3	20	22.7	1[b]	1.1	88	100.0
Infants	30	34.1	37	42.1	20	22.7	1[b]	1.1	88	100.0
Children	28	31.8	39	44.3	20	22.7	1[b]	1.1	88	100.0
High-risk	65	73.9	37	42.1	14	15.9	1[c]	1.1	[a]	[a]

Note

[a]Responses for high-risk participants are not mutually exclusive, so row percentages do not sum to 100 percent. Percentages are based on the number (88) of reporting State WIC agencies.
[b]In Georgia, one-half of the local agencies issue benefits on a monthly basis and one-half issue benefits on a bimonthly basis.
[c] In Texas, food package issuance for high-risk participants is "highly variable."

Exhibit 2.5

Frequency of Food Instrument Issuance in Local WIC Agencies

Participant Category	Issuance Frequency					
	One month	Two months	Three months	Other	Not Reported	Total
	Percent of Local Agencies					
Pregnant women	32.9% (2.19)	35.7% (2.44)	27.7% (2.10)	1.0% (0.55)	2.8% (0.94)	100.0%
Breastfeeding women	22.3 (2.11)	41.6 (2.46)	31.0 (2.09)	1.1 (0.56)	4.0 (0.98)	100.0%
Postpartum women	16.9 (1.96)	44.4 (2.53)	34.4 (2.15)	1.0 (0.56)	3.3 (0.97)	100.0%
Infants	20.2 (2.10)	44.9 (2.56)	30.0 (2.18)	1.1 (0.56)	3.8 (1.05)	100.0%
Children	15.0 (1.83)	44.4 (2.42)	37.2 (2.12)	0.5 (0.39)	2.9 (0.94)	100.0%
High-risk	66.7 (2.55)	34.9 (2.54)	18.6 (1.92)	1.8 (0.70)	4.6 (1.20)	[a]

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[a]Responses for high-risk participants are not mutually exclusive, so row percentages do not sum to 100 percent.

Exhibit 2.6

Frequency of Mailing Food Instruments in Local WIC Agencies

Participant Category	Do not routinely mail to any participants	Mail Instruments				Not Reported
		Every month	Every two months	Every three months	Do not mail to participant category	
	Percent of Local Agencies[a]					
Pregnant women	89.1% (1.57)	3.2% (1.05)	2.3% (0.90)	1.2% (0.56)	0.3% (0.30)	4.1% (1.70)
Breastfeeding women	89.1 (1.57)	3.2 (1.05)	2.4 (0.90)	1.2 (0.56)	0.3 (0.30)	4.1 (1.70)
Postpartum women	89.1 (1.57)	3.1 (1.04)	2.3 (0.90)	1.2 (0.56)	0.4 (0.32)	4.1 (1.70)
Infants	89.1 (1.57)	3.3 (1.09)	2.4 (0.90)	1.0 (0.53)	0.3 (0.20)	4.1 (1.70)
Children	89.1 (1.57)	3.2 (1.05)	2.3 (0.90)	1.2 (0.56)	0.3 (0.30)	4.1 (1.70)
All high-risk participants	89.1 (1.57)	1.6 (0.72)	1.9 (0.84)	1.3 (0.64)	0.5 (0.30)	5.6 (1.55)
Certain high-risk participants	89.1 (1.57)	2.0 (0.81)	1.6 (0.88)	0.5 (0.37)	0.4 (0.28)	6.4 (1.16)
Other	89.1 (1.57)	1.8 (0.77)	0.6 (0.37)	0.0 (0.00)	0.0 (0.00)	8.7 (1.52)

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[a]Rows may not sum to 100 percent because respondents were permitted multiple responses to frequency of instrument mailing.

Exhibit 2.7

Verification of Food Instrument Receipt by Local Agencies

Verification Procedures	Percent of Local Agencies
Do not mail food instruments	89.1% (1.57)
Do not verify receipt of mailed instruments	6.6 (1.34)
Instruments mailed via registered mail with return receipt	1.4 (0.65)
Verify receipt with telephone call	0.6 (0.42)
Other method of verification	1.6 (0.90)
Not reported	0.6 (0.39)

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

Exhibit 2.8

Estimated Average Cost of Food Packages by Participant Category, Region, and State for Geographic State WIC Agencies

Region/State	Outlays in Dollars for April 1998								
	All Women	Pregnant Women	Breastfeeding Women	Postpartum Women	All Infants Before Rebates	All Infants After Rebates	Children	Average for All WIC Participants Before Rebate	Average for All WIC Participants After Rebate
US WIC									
Mean								$47.03	$31.76
Northeast									
Mean								48.81	33.22
Connecticut	N/A	N/A	N/A	N/A	N/A	N/A	N/A	47.70	32.86
Maine	N/A	N/A	N/A	N/A	N/A	N/A	N/A	39.29	26.41
Massachusetts	$32.90	$36.53	$38.01	$23.34	$77.18	$13.76	$32.12	42.15	27.10
New Hampshire	N/A	N/A	N/A	N/A	N/A	N/A	N/A	39.83	25.92
New York	44.85	N/A	N/A	N/A	89.63	24.24	39.73	52.14	35.58
Rhode Island	32.80	35.14	40.42	26.33	82.02	19.29	33.52	44.72	29.15
Vermont	49.82[a]	49.88[a]	51.06[a]	37.82[a]	15.05[a]	15.05[a,b]	52.38[a]	33.38	33.38[b]
Indian Township (ME)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	42.80	42.80[b]
Pleasant Point (ME)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	45.34	45.34[b]
Seneca Nation (NY)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	43.15	28.79
Mid-Atlantic									
Mean								48.74	35.08
Delaware	N/A	N/A	N/A	N/A	N/A	N/A	N/A	46.02	29.41
District of Columbia	39.46	90.76	33.71	18.73	91.23	21.52	38.64	53.84	33.91
Maryland	N/A	N/A	N/A	N/A	N/A	N/A	N/A	49.91	30.86
New Jersey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	42.34	31.92
Pennsylvania	34.37	36.49	40.49	30.85	82.61	21.26	36.21	45.26	32.58
Puerto Rico	N/A	N/A	N/A	N/A	N/A	N/A	N/A	58.94	45.68
Virginia	N/A	N/A	N/A	N/A	N/A	N/A	N/A	46.89	32.55
Virgin Islands	N/A	N/A	N/A	N/A	N/A	N/A	N/A	58.45	46.78
West Virginia	N/A	N/A	N/A	N/A	N/A	N/A	N/A	42.65	27.93

Notes

Food package costs by participant category provided by State WIC agencies. Average costs for all participants are FY1998 close-out food package costs from FNS national data bank.
N/A = Not available.
[a]Estimated average monthly cost.
[b]Agency does not receive rebates.

Exhibit 2.8 (continued)

Estimated Average Cost of Food Packages by Participant Category, Region, and State for Geographic State WIC Agencies

	Outlays in Dollars for April 1998								
Region/State	**All Women**	**Pregnant Women**	**Breastfeeding Women**	**Postpartum Women**	**All Infants Before Rebates**	**All Infants After Rebates**	**Children**	**Average for All WIC Participants Before Rebate**	**Average for All WIC Participants After Rebate**
Southeast									
Mean								$46.09	$30.66
Alabama	$42.92[a]	N/A	N/A	N/A	$92.90[a]	$32.84[a]	$40.68[a]	52.05	33.45
Florida	37.76	$39.31	$40.98	$32.51	90.35	27.26	35.60	50.12	32.93
Georgia	36.34[a]	31.62[a]	32.19[a]	21.32[a]	91.47[a]	34.24[a]	30.73[a]	45.08	29.92
Kentucky	31.70	34.57	34.57	25.96	132.70	53.67	32.53	44.74	30.39
Mississippi	N/A	N/A	N/A	N/A	N/A	N/A	N/A	29.41	29.41[b]
North Carolina	30.97	33.96	37.94	23.50	83.60	21.57	30.61	44.89	28.06
South Carolina	N/A	N/A	N/A	N/A	N/A	N/A	N/A	45.91	27.52
Tennessee	36.29	39.29	46.74	29.31	100.37	27.24	36.70	47.68	31.36
Eastern Band-Cherokee (NC)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	35.91	35.91[b]
Mississippi Choctaw	24.52[a]	24.30[a]	34.64[a]	14.63[a]	14.12[a]	14.12[a,b]	23.90[a]	24.95	24.95[b]
Midwest									
Mean								46.80	30.17
Illinois	N/A	N/A	N/A	N/A	N/A	N/A	N/A	52.67	33.40
Indiana	36.76	40.06	40.06	32.11	97.84	15.71	34.26	46.91	29.79
Michigan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	47.42	31.23
Minnesota	N/A	N/A	N/A	N/A	N/A	N/A	N/A	44.57	30.38
Ohio	27.88	30.35	32.65	22.48	78.19	48.17	28.68	42.38	26.12
Wisconsin	36.37	40.24	40.24	30.72	103.55	26.60	33.62	44.68	30.60

Notes

Food package costs by participant category provided by State WIC agencies. Average costs for all participants are FY1998 close-out food package costs from FNS national data bank.
N/A = Not available.
[a]Estimated average monthly cost.
[b]Agency does not receive rebates.

Exhibit 2.8 (continued)

Estimated Average Cost of Food Packages by Participant Category, Region, and State for Geographic State WIC Agencies

	Outlays in Dollars for April 1998								
Region/State	**All Women**	**Pregnant Women**	**Breastfeeding Women**	**Postpartum Women**	**All Infants Before Rebates**	**All Infants After Rebates**	**Children**	**Average for All WIC Participants Before Rebate**	**Average for All WIC Participants After Rebate**
Southwest									
Mean								$45.48	$27.73
Arkansas	$33.04[a]	$35.07[a]	$37.55[a]	$28.15[a]	$98.71[a]	$29.49[a]	$31.49[a]	49.37	30.92
LouisiaN/A	43.18	45.48	44.95	36.80	102.64[a]	31.70[a]	41.40	55.06	34.09
New Mexico	N/A	N/A	N/A	N/A	N/A	N/A	N/A	42.45	29.85
Oklahoma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	42.80	25.77
Texas	28.80[a]	30.77[a]	32.70[a]	24.11[a]	84.18[a]	14.18[a]	30.04[a]	43.72	25.98
ACL WIC (NM)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	36.20	36.20[b]
Cherokee Nation (OK)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	44.05	29.46
Chickasaw Nation (OK)	33.82	40.34	39.35	33.50	94.51	20.63	23.52	46.57	31.30
Choctaw Nation (OK)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	47.70	38.76
Citizen-Potawatomi (OK)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	50.27	37.79
Eight Northern Pueblos (NM)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	39.59	39.59[b]
Five Sandoval Pueblos (NM)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	44.38	40.66
ITC-Oklahoma	N/A	N/A	N/A	N/A	N/A	N/A	N/A	43.64	36.00
Muscogee Creek Nation (OK)	39.65[a]	37.41[a]	50.89[a]	30.66[a]	98.42[a]	39.03[a]	41.63[a]	45.42	38.66
Osage Nation (OK)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	36.91	36.91[b]
Otoe-Missouria (OK)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	39.17	32.87
Pueblo of Isleta (NM)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	35.52	35.52[b]
Pueblo of San Felipe (NM)	39.73	37.96	43.78	32.31	43.38	43.38[b]	35.28	37.42	37.42[b]
Pueblo of Zuñi (NM)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	44.11	40.86
Sac and Fox Nation (OK)	16.72[a]	20.62[a]	12.23[a]	17.30[a]	97.95[a]	92.83[a]	17.51[a]	46.39	39.63
Santo Domingo (NM)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	43.09	43.09[b]
WCD (OK)	29.17	29.87	38.88	21.96	93.61	52.43	29.50	48.30	36.21

Notes

Food package costs by participant category provided by State WIC agencies. Average costs for all participants are FY1998 close-out food package costs from FNS national data bank.
N/A = Not available.
[a]Estimated average monthly cost.
[b]Agency does not receive rebates.

Exhibit 2.8 (continued)

Estimated Average Cost of Food Packages by Participant Category, Region, and State for Geographic State WIC Agencies

Region/State	Outlays in Dollars for April 1998								
	All Women	Pregnant Women	Breastfeeding Women	Postpartum Women	All Infants Before Rebates	All Infants After Rebates	Children	Average for All WIC Participants Before Rebate	Average for All WIC Participants After Rebate
Mountain Plains									
Mean								$43.13	$30.63
Colorado	$35.49	$35.17	$41.19	$28.66	$72.92	$46.37	$34.88	44.11	31.29
Iowa	29.82[a]	32.38[a]	34.25[a]	24.20[a]	83.44[a]	35.56[a]	31.20[a]	42.46	29.66
Kansas	31.00	33.05	35.58	25.37	88.88	N/A	31.88	44.47	29.88
Missouri	41.94[a]	46.53[a]	46.53[a]	35.52[a]	84.95[a]	10.24[a]	41.39[a]	42.45	31.27
Montana	N/A	N/A	N/A	N/A	N/A	N/A	N/A	41.20	29.55
Nebraska	31.74	33.60	37.23	26.22	87.16	25.70	33.31	46.29	30.85
North Dakota	37.04	38.80	41.85	27.94	86.73	32.73	32.08	45.09	34.13
South Dakota	N/A	N/A	N/A	N/A	N/A	N/A	N/A	39.73	27.27
Utah	44.64[a]	43.34[a]	51.15[a]	36.82[a]	104.80[a]	17.16[a]	40.67[a]	42.70	29.94
Wyoming	50.85[a]	49.42[a]	59.85[a]	43.28[a]	59.05[a]	9.34[a]	44.88[a]	40.06	28.56
Cheyenne River Sioux (SD)	30.94	29.93	32.92	29.97	86.37	86.37[b]	31.66	51.03	51.03[b]
Omaha-Santee Sioux (NE)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	47.05	47.05[b]
Rosebud Sioux (SD)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	48.03	39.15
Shoshone-Arapahoe (WY)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	43.33	38.50
Standing Rock Sioux (ND)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	49.67	41.31
Three Affiliated (ND)	42.93	43.95	44.73	39.99	101.37	85.67	40.11	52.76	49.14
Ute Mountain Ute (CO)	30.57	26.45	28.47	36.81	69.87	69.87[b]	30.91	40.70	40.70[b]
Winnebego (NE)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	46.79	46.79[b]

Notes

Food package costs by participant category provided by State WIC agencies. Average costs for all participants are FY1998 close-out food package costs from FNS national data bank.
N/A = Not available.
[a]Estimated average monthly cost.
[b]Agency does not receive rebates.

Exhibit 2.8 (continued)

Estimated Average Cost of Food Packages by Participant Category, Region, and State for Geographic State WIC Agencies

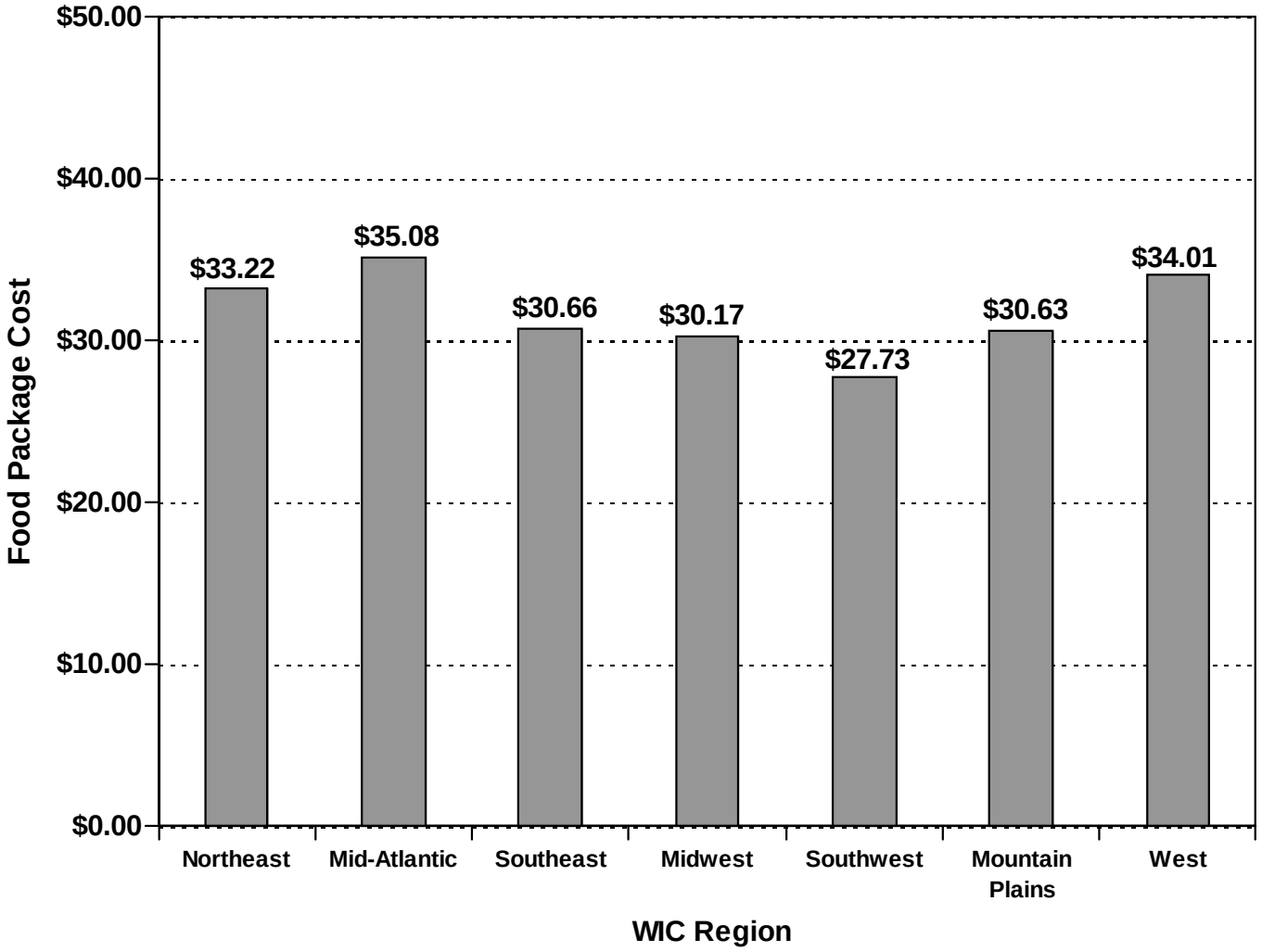
	Outlays in Dollars for April 1998								
Region/State	**All Women**	**Pregnant Women**	**Breastfeeding Women**	**Postpartum Women**	**All Infants Before Rebates**	**All Infants After Rebates**	**Children**	**Average for All WIC Participants Before Rebate**	**Average for All WIC Participants After Rebate**
Western									
Mean								$48.30	$34.01
Alaska	N/A	N/A	N/A	N/A	N/A	N/A	N/A	50.45	39.77
American Samoa	$59.24	$59.52	$59.65	N/A	$76.58	$64.98	$57.48	60.27	53.80
Arizona	40.55[a]	43.74[a]	43.74[a]	$34.18[a]	95.63[a]	17.32[a]	39.76[a]	48.64	31.03
California	43.65	45.35	47.59	42.37	82.76	20.43	38.56	48.82	34.30
Guam	N/A	N/A	N/A	N/A	N/A	N/A	N/A	66.03	49.21
Hawaii	43.50[a]	45.00[a]	45.00[a]	40.00[a]	103.50[a]	50.00[a]	43.00[a]	58.08	45.64
Idaho	N/A	N/A	N/A	N/A	N/A	N/A	N/A	39.09	26.64
Nevada	N/A	N/A	N/A	N/A	N/A	N/A	N/A	45.71	29.08
Oregon	42.33	N/A	N/A	N/A	86.70	9.97	36.63	42.10	30.74
Washington	N/A	N/A	N/A	N/A	N/A	N/A	N/A	45.63	32.53
ITC-Arizona	41.48	44.05	44.05	36.19	98.85	20.94	41.89	42.80	29.95
ITC-Nevada	N/A	N/A	N/A	N/A	N/A	N/A	N/A	45.56	34.60
Navajo Nation (AZ)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	57.73	48.02

Notes

Food package costs by participant category provided by State WIC agencies. Average costs for all participants are FY1998 close-out food package costs from FNS national data bank.
N/A = Not available.
[a]Estimated average monthly cost.
[b]Agency does not receive rebates.

Exhibit 2.9

Estimated Average Food Package Costs After Rebate by Region



3. DEMOGRAPHICS OF WIC PARTICIPANTS

Demographic items in the Minimum Data Set are age, trimester of enrollment during pregnancy, and race/ethnicity of WIC enrollees in April 1998. These data are displayed in Exhibits 3.1 through 3.7.

For PC98, States reported age data on 99 percent of women, infants, and children enrolled in the WIC Program. Across 1992, 1994, 1996, and 1998, there were virtually no changes in the age distribution of WIC women. Most WIC women (84 percent) are between the ages of eighteen and thirty-four. While the age distributions for pregnant and postpartum women are similar, breastfeeding women appear to be older, with 11 percent over thirty-four years of age. Almost 90 percent of all WIC infants fall into the zero-to-three-month-old age group at time of certification in 1998. The clustering of infants in the zero-to-three-month-old category has increased steadily since 1992 when 76 percent of infants were less than three months old at certification. Between 1992 and 1996, the age distribution of children showed slight shifts to the older ages. During that period, enrollment of children three years or older increased by eight percentage points from 30 percent to 38 percent. The age distribution of children in 1998 was similar to the 1996 distribution.

In 1998, more pregnant WIC participants enrolled in the program during their first than second trimesters, with 46.6 percent in the first trimester and 37.8 percent in the second. Only 11.8 percent enrolled in the third trimester. These percentages are similar to those reported in 1996. Data to calculate trimester of enrollment were reported for 96.2 percent of pregnant WIC enrollees. A change between PC92/PC94 and PC96/PC98 is the increase in data reported. For earlier PCs, information on trimester of enrollment was not reported for 10 percent of pregnant women. Because such data were unavailable for a large proportion of pregnant WIC clients in 1992 and 1994, estimates for these years should be seen as lower bounds.[1] The overall increase in first-trimester enrollments may indicate that WIC's outreach to pregnant women and promotion of early prenatal enrollment are successful efforts.

The Western region, driven by California, has experienced the largest increase in WIC participants in every period since 1992. Enrollment grew from approximately 800,000 in 1992 to almost 2,000,000 in 1998. As a result of this rapid growth, the Western region's share of WIC participants increased steadily from 14.3 percent of total participants in 1992 to 18.2 percent in 1994, 21.8 percent in 1996 and to 23.8 percent in 1998. Enrollment has grown in all other regions since 1992, though at a lower rate than in the Western region.

Between 1996 and 1998, the Western region was the only region that experienced substantial growth in enrollment. WIC enrollment in the Southwest and Mountain Plains actually decreased slightly between 1996 and 1998. Enrollment was essentially stable in the remaining regions over the last two years. Within all regions,

[1] If we assume that the distribution was the same for participants with missing data, enrollment in the first trimester was 37.0 percent in 1992, 43.4 percent in 1994, 47.0 percent in 1996, and 48.4 percent in 1998.

Exhibit 3.1

Distribution of Age of WIC Participants at Certification by WIC Participant Category 1994, 1996, 1998

Participant Category and Age at Certification	1994	1996	1998
	Percent by participant category		
Pregnant women	823,604	877,747	892,674
Under 15 years	1.0%	0.9%	0.8%
15 - 17 years	11.2	10.7	10.1
18 - 34 years	81.7	82.3	83.1
35 or more years	5.0	5.4	5.8
Age not reported	1.0	0.7	0.2
Breastfeeding women	275,158	330,176	389,391
Under 15 years	0.2%	0.2%	0.2%
15 - 17 years	4.0	4.2	4.1
18 - 34 years	83.7	84.9	84.6
35 or more years	9.6	10.5	10.7
Age not reported	2.5	0.2	0.5
Postpartum women	491,998	567,913	591,049
Under 15 years	0.7%	0.6%	0.5%
15 - 17 years	9.6	9.7	8.9
18 - 34 years	83.0	83.5	83.9
35 or more years	5.1	5.8	6.0
Age not reported	1.6	0.4	0.6
Total women	1,590,762	1,775,837	1,873,115
Under 15 years	0.8%	0.7%	0.6%
15 - 17 years	9.5	9.2	8.5
18 - 34 years	82.5	83.2	83.7
35 or more years	5.8	6.5	6.9
Age not reported	1.5	0.5	0.4
Infants[a]	1,852,455	1,988,789	2,048,625
0 - 3 months	84.2%	86.1%	88.4%
4 - 5 months	3.1	3.3	2.7
6 - 8 months	7.2	7.3	6.3
9 - 11 months	2.6	3.1	2.4
Age not reported	3.0	0.2	0.2
Children[b]	3,464,631	3,982,815	4,121,016
1 year	40.0%	35.7%	35.6%
2 years	24.6	25.9	25.1
3 years	19.9	22.5	22.3
4 years	12.7	15.6	16.2
Age not reported	2.9	0.2	0.8
US WIC	6,907,848	7,747,441	8,042,758

Notes

[a] An infant is defined as a participant who, at certification, is under one year of age and who would be classified as a child at the age of 366 days.

[b] In 1998, about 3.2 percent of one-year-old children are eleven-month-old infants who have been recertified as children; about 0.1 percent of WIC participants who are classified as infants are participants who are older than 366 days. In 1996, these figures were 7.8 percent and 0.2 percent, respectively. In 1994, they were 12.8 percent and 0.1 percent, respectively.

Exhibit 3.2

Distribution of Pregnant Women WIC Participants by Trimester of Enrollment
1994, 1996, 1998

	1994		1996		1998	
Trimester of Enrollment	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
First trimester	320,085	38.9%	400,023	45.6%	415,983	46.6%
Second trimester	330,020	40.1	357,785	40.8	337,089	37.8
Third trimester	88,370	10.7	94,583	10.8	105,452	11.8
Trimester not reported	85,128	10.3	25,355	2.9	34,148	3.8
Total pregnant women	823,604	100.0%	877,747	100.0%	892,674	100.0%

Exhibit 3.3

Distribution of WIC Participants by Region
1994, 1996, 1998

	1994		1996		1998	
Region	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Northeast	780,779	11.3%	800,630	10.3%	808,228	10.0%
Mid-Atlantic	931,463	13.5	976,845	12.6	979,446	12.2
Southeast	1,348,329	19.5	1,474,359	19.0	1,531,268	19.0
Midwest	1,091,716	15.8	1,130,068	14.6	1,143,477	14.2
Southwest	987,720	14.3	1,153,862	14.9	1,149,662	14.3
Mountain Plains	511,977	7.4	520,548	6.7	517,839	6.4
Western	1,255,861	18.2	1,691,128	21.8	1,912,837	23.8
US WIC	6,907,848	100.0%	7,747,441	100.0%	8,042,758	100.0%

Exhibit 3.4

Distribution of Racial and Ethnic Characteristics of WIC Participants by Participant Category

Racial or Ethnic Characteristics	Pregnant Women	Breastfeeding Women	Postpartum Women	Total Women	Infants	Children	Total WIC Participants
	Percent by participant category						
American Indian or Alaskan Native	1.4%	1.5%	1.2%	1.4%	1.3%	1.7%	1.5%
Asian or Pacific Islander	2.8	3.4	3.1	3.0	3.1	3.4	3.2
Black (non-Hispanic)	21.7	14.9	25.2	21.4	24.3	22.9	22.9
Hispanic	30.4	42.2	25.4	31.2	30.4	33.7	32.3
White (non-Hispanic)	43.0	36.9	44.1	42.1	39.8	37.7	39.2
Race or ethnicity not reported	0.8	1.0	1.0	0.9	1.0	0.7	0.8
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
US WIC	892,674	389,391	591,049	1,873,115	2,048,625	4,121,016	8,042,758

Exhibit 3.5
WIC Participation by Race/Ethnicity

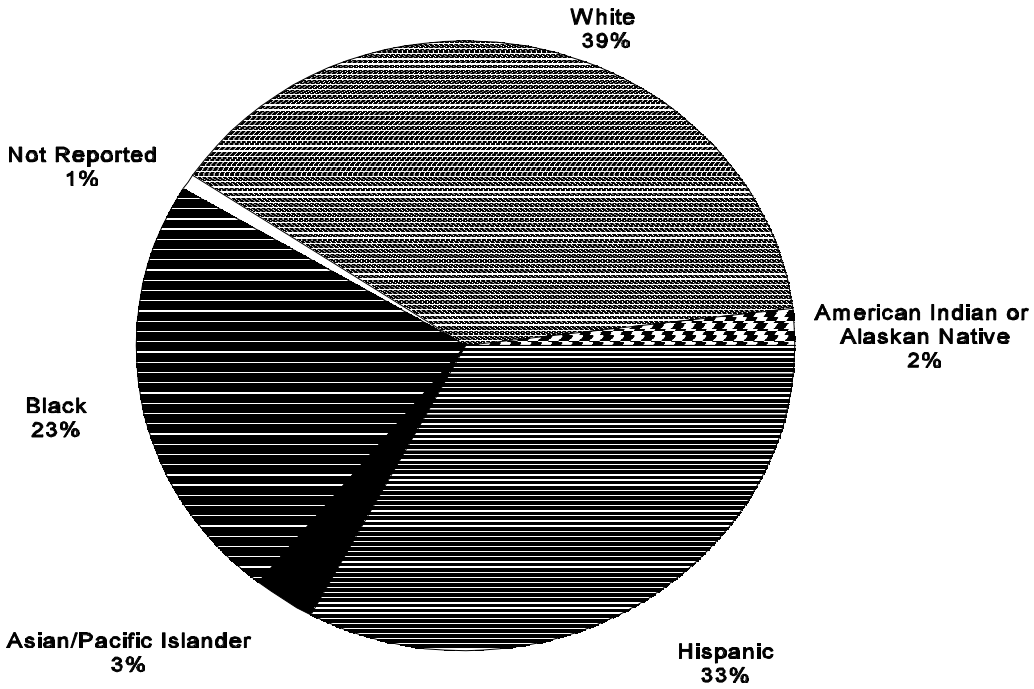


Exhibit 3.6

Distribution of Racial and Ethnic Characteristics of WIC Women, Infants, and Children 1994, 1996, 1998

Racial or Ethnic Characteristic	Women			Infants			Children			Total WIC		
	1994	1996	1998	1994	1996	1998	1994	1996	1998	1994	1996	1998
American Indian or Alaskan Native	1.5%	1.4%	1.4%	1.5%	1.4%	1.3%	1.9%	1.8%	1.7%	1.7%	1.6%	1.5%
Asian or Pacific Islander	2.7	2.7	3.0	2.8	2.8	3.1	2.4	2.9	3.4	2.6	2.9	3.2
Black (non-Hispanic)	22.4	21.1	21.4	26.3	24.6	24.3	26.3	24.2	22.9	25.4	23.6	22.9
Hispanic	28.0	31.1	31.2	27.9	29.5	30.4	24.2	31.4	33.7	26.1	30.9	32.3
White (non-Hispanic)	44.5	43.0	42.1	40.8	40.7	39.8	42.8	39.1	37.7	42.7	40.4	39.2
Race or ethnicity not reported	0.9	0.6	0.9	0.8	0.9	1.0	2.3	0.6	0.7	1.6	0.7	0.8
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
US WIC	1,590,762	1,775,837	1,873,115	1,852,455	1,988,789	2,048,625	3,464,631	3,982,815	4,121,016	6,907,848	7,747,441	8,042,758

Exhibit 3.7

Distribution of Racial and Ethnic Characteristics of WIC Participants by Region

Region	American Indian or Alaskan Native	Asian or Pacific Islander	Black (non-Hispanic)	Hispanic	White (non-Hispanic)	Race or Ethnicity Not Reported	Total WIC	
	Percent by region						Percent	Number
Northeast	0.4%	4.7%	24.8%	28.9%	38.7%	2.4%	100.0%	808,228
Mid-Atlantic	0.2	1.7	27.3	33.2	37.4	0.2	100.0	979,446
Southeast	0.5	1.0	40.3	10.9	47.1	0.2	100.0	1,531,268
Midwest	0.8	2.3	27.7	12.2	56.0	1.1	100.0	1,143,477
Southwest	2.2	1.1	20.0	46.7	29.1	0.9	100.0	1,149,662
Mountain Plains	4.0	1.5	11.6	15.1	66.9	0.9	100.0	517,839
Western	2.8	7.5	7.9	58.4	22.7	0.8	100.0	1,912,837
US WIC	1.5%	3.2%	22.9%	32.3%	39.2%	0.8%	100.0%	
Number of Participants	121,139	260,036	1,842,107	2,596,165	3,155,604	67,704		8,042,758

many States experienced a levelling off or a small decline in enrollment between 1996 and 1998.

In 1998, 39.2 percent of all WIC participants were white, 32.3 percent were Hispanic, and 22.9 percent were black (Exhibit 3.4). The remaining 5.6 percent of WIC participants were comprised of American Indians, Alaskan Natives, and Asians. In general, the ethnic composition in different certification categories is similar to the overall distribution. The one notable exception is that breastfeeding women are disproportionately Hispanic (42.2 percent). Similar findings were reported in 1992, 1994, and 1996. Blacks, in contrast, represent a disproportionately low percentage (25.4 percent) of breastfeeding women, though their share has increased over time.

The ethnic composition of the WIC program has been changing steadily since 1992; the percentage of Hispanic WIC enrollees has risen, while percentages of black and white (non-Hispanic) enrollees have decreased. Hispanic enrollment increased by 9 percentage points across the nation between 1992 and 1996, from 23 percent to 32 percent of total WIC participants. Actual enrollment doubled, from 1.3 million to 2.6 million individuals. The largest increases occurred in the Western region. Hispanic WIC enrollees in the Western region increased, from approximately 400,000 in 1992 to over 1 million in 1998—a 175 percent increase. Between 1996 and 1998, Hispanic enrollment continued to grow, though at a smaller rate than reported in previous PCs. While partially attributable to improved reporting of racial/ethnic data in the Western region, this substantial increase may reflect WIC outreach to non-English-speaking populations. It may also reflect national demographic trends. The Bureau of the Census estimates that the Hispanic population resident in the US has increased from 9.5 percent of the population in 1992 to 11.2 percent of the population in 1998, so the number of Hispanic residents rose from 24.2 million in 1992 to 30.2 million in 1998.

Black enrollment, as a fraction of total enrollment, decreased by almost five percentage points between 1992 and 1998. Between 1996 and 1998, black enrollment decreased by nearly one percentage point. This decrease was seen in the Southeast, Midwest, and Mountain Plains regions. Similar findings were reported in PC96 and PC94, though the decrease was seen in more regions. In absolute terms, numbers of black (non-Hispanic) WIC participants have increased by about 13,000 participants since 1996 and by 244,000 since 1992.

White enrollment, as a fraction of total enrollment, decreased by five percentage points since 1992. Between 1996 and 1998, enrollment decreased by one percentage point, with the largest declines occurring in the Mid-Atlantic, Mountain Plains, Midwest, and Southwest regions. Actual numbers of white enrollees increased from 2.5 million in 1992 to 2.9 million in 1994, then to 3.2 million in 1996 and to 3.1 million in 1998.

Between 1994 and 1998, the proportion of Asians/Pacific Islanders enrolled in the WIC program shows virtually no change. The proportion of Asians enrolled in the program did, however, increase slightly between 1992 and 1994. The total number of Asian/Pacific Islander WIC participants, however, increased by almost 20 percent nationally, from about 220,000 in 1996 to over 260,000 in 1998. The largest increase can be seen in the Western region, where the number of Asian enrollees has increased by about 25 percent (or 30,000 participants) since 1996.

While American Indian or Alaskan Native enrollment also appears proportionally unchanged at the national level since 1992, there are regional variations. American Indian or Alaskan Native WIC enrollees in the Midwest increased, from 7,910 participants in 1996 to 9,148 in 1998—a 16 percent increase. American Indian or Alaskan Native WIC enrollees in the Southeast region decreased, from 8,846 participants in 1996 to 7,656 in 1998—a 13 percent decrease.

4. INCOME OF WIC PARTICIPANTS

Federal regulations require categorically eligible WIC applicants to meet income eligibility standards set by State WIC agencies. Income limits set by the States may not exceed 185 percent or be less than 100 percent of the Department of Health and Human Services (HHS) poverty income guidelines, which are based on household size. As of July 1997, at the 185-percent threshold, a person from a family of four with an annual household income of $29,693 or less is income-eligible for the WIC Program.[1]

In 1990, State WIC agencies were required to establish procedures for determining an applicant adjunctively or automatically income eligible for WIC benefits if the individual could document participation in such means-tested programs as the Temporary Assistance to Needy Families (TANF)[2], Food Stamp, or Medicaid Programs. WIC regulations also allow States to extend automatic WIC income eligibility to individuals who participate in other State-selected, means-tested programs which apply income eligibility guidelines that are in congruence with State regulations on WIC income. Exhibit 4.1 displays information reported by States on their use of means-tested programs to determine WIC income eligibility. As of April 1998, all State agencies except American Samoa and Puerto Rico apply TANF, food stamp, and Medicaid participation to determine WIC income eligibility. American Samoa does not participate in these other means-tested programs. Puerto Rico does not participate in the Food Stamp Program, but TANF and Medicaid recipients are adjunctively eligible for WIC. The percentages of States using participation in Supplemental Security Income, Free or Reduced-Price National School Lunch Program, or other means-tested programs to establish adjunctive eligibility increased between 1990 and 1994 but appear to have leveled off and remained steady between 1994 and 1998.

Legislation enacted in October 1998 requires WIC applicants (except in limited circumstances) to present documentation of family income at certification for those individuals who are not adjunctively income eligible. However, for the data collection period reflected in this report, States were permitted to establish requirements for documenting and verifying income. Such documentation could range from a paystub to self-declaration. State-reported information on income documentation appears in Exhibit 4.2. Income documentation procedures in local WIC agencies are reported in Exhibit 4.3. One half of State WIC agencies require WIC applicants to document income, as compared with approximately 40 percent in 1992, 1994, and 1996. In an additional 14 percent of States, documentation of income may be required by local WIC agencies. A review of income documentation policies in local WIC agencies indicates that 51 percent of all agencies require proof of income, a decline of nine percentage points since 1996. About 55 percent of all WIC participants are affected by these policies and must document income before being certified for benefits, compared to 62 percent in 1996. Types of documentation

[1]Poverty guidelines established in July 1997 were in effect through June 1998 and thus cover most of the period for which WIC participants active in April 1998 were certified.

[2]Formerly Aid to Families with Dependent Children (AFDC).

Exhibit 4.1

Means-Tested Programs Used to Determine WIC Income Eligibility

	State Agencies						Local Agencies
	1994		1996		1998		1998
Program	Number	Percent[b]	Number	Percent[b]	Number	Percent[b]	Percent[a,b]
Adjunctive Income Eligibility							
TANF (formerly AFDC)[c,d]	73	86.9%	87	98.9%	87	98.9%	83.8% (1.81)
Food Stamp Program[c]	74	88.1	86	97.7	86	97.7	83.6 (0.00)
Medicaid[c]	77	91.7	87	98.9	87	98.9	96.3 (1.02)
Automatic Income Eligibility							
Supplemental Security Income	22	26.2%	20	22.7%	20	22.7%	34.3% (2.45)
Free or Reduced-Price NSLP meals	21	25.0	17	19.3	17	19.3	13.2 (1.67)
Head Start	[e]		[e]		6	6.8	9.1 (1.37)
General Assistance	[e]		[e]		4	4.5	16.5 (1.83)
Low Income Energy Assistance	[e]		[e]		1	1.1	3.8 (1.01)
Food Distribution Programs on Indian Reservations (FDPIR)	[e]		[e]		25	28.4	9.9 (1.65)
Other Programs[f]	18	21.4	31	35.2	12	13.6	4.1 (1.14)
No Programs Reported	2	2.4%	1	1.1%	1	1.1%	0.3% (0.27)

Notes

[a]Standard errors are in parentheses.

[b]Responses are not mutually exclusive, so percentages do not sum to 100 percent. For State agency data, percentages are based on the number of reporting State WIC agencies. In all three years, the response rate for the Summary of State programs was 100 percent; 88 agencies reported in 1996 and 1998, and 84 agencies reported in 1994. A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs; responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[c]Because American Samoa does not participate in TANF, FSP, or Medicaid; and Puerto Rico does not participate in the FSP, these programs cannot be used to determine WIC eligibility in these locations.

[d]Prior to the 1998 survey, this response option was labeled "AFDC or ADC."

[e]Prior to the 1998 survey, Head Start, General Assistance, Low-Income Energy Assistance and Food Distribution Programs on Indian Reservations were not pre-printed on State questionnaires. Where reported by States, these programs were included under "Other Programs" for 1994 and 1996.

[f]For more information on other programs used to determine WIC income eligibility and for State-by-State information, see Exhibit C4.1 in Appendix C.

Exhibit 4.2

Income Documentation and Verification Policy

Documentation Verification and Requirements[a]	State Agencies	
	Number	Percent
Income documentation required	44	50.0%
Applicant self-declares income for economic unit	25	28.4
In some cases local agencies have discretion with regard to income documentation	12	13.6
Income documentation preferred in all cases but not required	7	8.0
Total State WIC agencies	88	100.0%

Note

[a]Reflects requirements in April 1998, prior to the October 1998 legislation affecting income documentation.

Exhibit 4.3

Determining Eligibility in Local WIC Agencies

Process	Percent of Local Agencies	Percent of Participants
Documentation Requirements		
Income documentation required	51.4% (2.30)	55.4% (4.38)
Applicant self-declares income for economic unit	28.4 (2.26)	19.4 (3.53)
Documentation preferred, but not required	16.3 (1.85)	21.8 (2.86)
Other	3.8 (1.14)	3.3 (2.44)
Not reported	0.0 (0.00)	0.1 (0.00)
Total	100.0%	100.0%
Types of documentation accepted at all service delivery sites[a,b]		
Paystub	87.7% (0.00)	91.5% (0.00)
W-2	80.2 (2.10)	85.8 (3.37)
Proof of certification for program providing adjunct eligibility	81.9 (1.87)	88.6 (2.91)
Letter from employer	72.1 (2.26)	84.1 (3.19)
Tax forms	81.1 (0.00)	84.9 (0.00)
Other	17.5 (1.90)	24.1 (4.68)
Not reported	7.4 (1.38)	6.4 (2.76)

Exhibit 4.3 (continued)

Determining Eligibility in Local WIC Agencies

Process	Percent of Local Agencies	Percent of Participants
Income Documentation Procedures		
State WIC agency establishes procedures	82.2% (2.00)	79.8% (4.28)
State WIC agency provides general guidelines and local agency establishes procedures	15.6 (1.89)	18.2 (4.28)
Local agency establishes procedures	1.4 (0.69)	0.6 (0.41)
Other	0.2 (0.19)	0.1 (0.09)
Not reported	0.7 (0.38)	1.4 (0.12)
Total	100.0%	100.0%

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[a]Columns do not sum to 100 percent because respondents were permitted multiple responses.

[b]Some agencies that do not require documentation of income reported the types of documentation they accept.

accepted include paystubs, W-2 forms, letters from employers, and proof of certification in programs providing adjunctive eligibility. Approximately one-quarter of States and 28 percent of local agencies allow applicants to self-declare income. In comparison, one-third of State agencies allowed self-declaration of income in 1992, 1994, and 1996. Forty percent of local agencies allowed self-declaration of income in 1996.

State-level tables containing information on means-tested programs and income documentation appear in Appendix C.

The reported 1998 participation of WIC clients in other programs appears in Exhibit 4.4. Reported participation in TANF, food stamps, and Medicaid decreased substantially between 1996 and 1998 after having remained fairly constant between 1992 and 1996. In 1998, 57 percent of WIC recipients for whom other program participation is reported, were receiving benefits from at least one other public assistance program at time of WIC certification. This figure is down 5 percentage points from the 62 percent of WIC recipients who were receiving any public assistance benefits in 1996. Just under one half (48 percent) of WIC clients received Medicaid benefits in 1998, a 7 percentage point decline from 1996. The percent of WIC recipients reporting participation in the Food Stamp Program declined from 36 percent in 1996 to 27 percent in 1998, a 9 percentage point drop. Only 17 percent of WIC participants reported receiving TANF benefits, a decline of 8 percentage points from 1996. Fifteen percent of WIC recipients participated in all three programs, receiving TANF, food stamps, and Medicaid benefits, as compared to 22 percent in 1996. The observed decline in TANF, food stamp, and Medicaid participation among WIC enrollees mirrors overall trends in these programs since passage of the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996.

States reported program participation information for 89.5 percent of WIC enrollees, down from 94.8 percent in 1996. Estimates of program participation represent a lower bound because of missing information and because the data are recorded at time of certification. Staff in local WIC service sites refer WIC enrollees to other programs, and any subsequent enrollment is not captured in the estimates presented here.

Income and Poverty

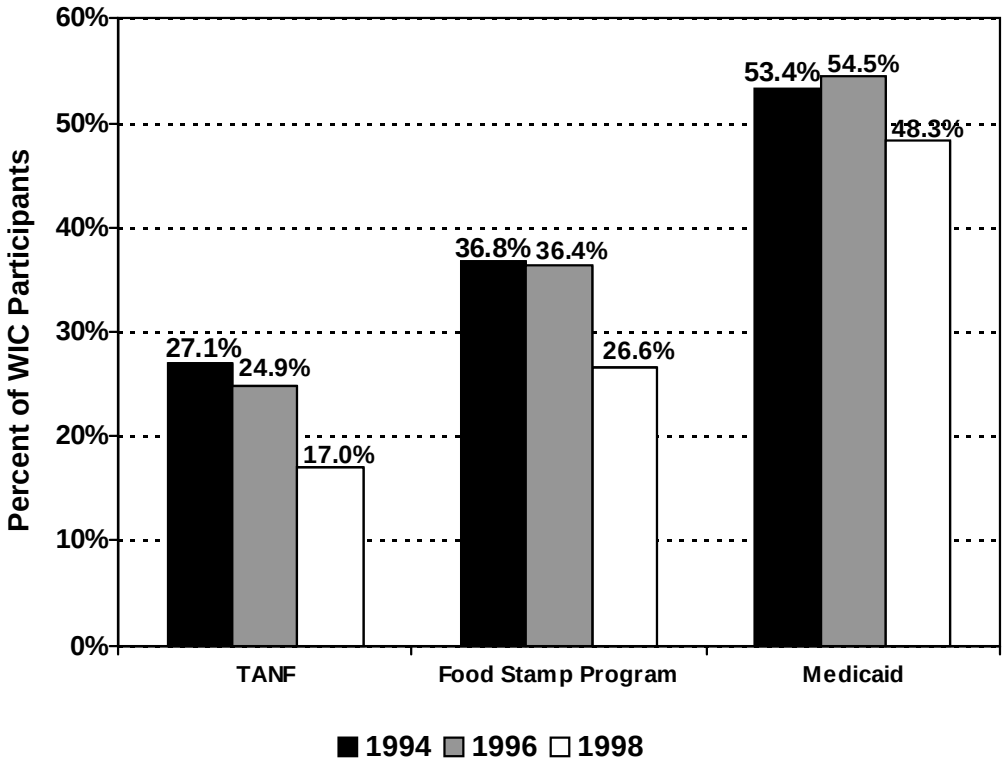
For the 1998 WIC participants and program characteristics study, State agencies were asked to report for each person enrolled in WIC during April 1998, the size and income of her/his family or economic unit. Household size is reported for nearly all (99 percent) households. However, income is reported for only 85 percent of WIC households in April 1998. Income reporting declined somewhat from 1996 when income information was available for 90 percent of all households. States with income missing for over 30 percent of their WIC participants include Florida, Illinois, Indiana, Maine, Texas, and Virginia. The increase in percent not reporting income in 1998 was primarily driven by changes in Texas, which had income data missing for 59.4 percent of its population in 1998 as compared with 13.6 in 1996.[3] For some applicants, States reported "actual" income—that is, the figures provided by WIC applicants. For some applicants determined adjunctively income eligible, States indicated income ranges. In these cases, midpoints of income ranges were

[3]Texas did not report income data for adjunctively eligible participants in PC98. Income is reported only for non-adjunctively eligible participants.

Exhibit 4.4

Number and Percent of WIC Participants with Reported Participation in Other Programs at Certification

Reported receiving benefits from...	Number	Percent of US WIC
Temporary Assistance to Needy Families (TANF), Food Stamp, and Medicaid Programs	1,208,763	15.0%
TANF and Food Stamp Programs	35,924	0.4
TANF and Medicaid Programs	104,455	1.3
Food Stamp and Medicaid Programs	716,527	8.9
TANF only	21,113	0.3
Food Stamp Program only	179,287	2.2
Medicaid Program only	1,858,431	23.1
Do not participate in other programs	3,076,828	38.3
Not reported	841,430	10.5
US WIC	8,042,758	100.0%



Notes

Not reported indicates the number and percentage of participants for whom no data regarding participation in Medicaid, AFDC, and Food Stamps are reported.

Most Indian Tribal Organizations (ITOs) participate in the Food Distribution Program on Indian Reservations (FDPIR). Although PC98 data specifications permitted Indian WIC programs to report FDPIR participation, only fourteen of 33 ITOs (representing half of all participants in ITO WIC programs) chose to report these data. Of the 30,525 individuals for whom these data were reported, only 6.4 percent participate in the FDPIR program.

Exhibit 4.5

Distribution of the Size of Families or Economic Units of WIC Participants by Participant Category

Size of Family or Economic Unit	Pregnant Women			Breastfeeding Women			Postpartum Women			Total Women		
	Percent by category											
	1994	1996	1998	1994	1996	1998	1994	1996	1998	1994	1996	1998
1 person[a]	17.8%	11.3%	9.2%	0.0%	0.0%	0.0%	4.2%	1.5%	1.2%	10.5%	6.1%	4.7%
2 persons	26.5	23.8	23.9	15.6	13.1	11.9	19.5	18.2	16.9	22.5	20.0	19.2
3 persons	25.0	26.9	27.9	27.1	29.3	29.4	29.4	30.2	30.3	26.7	28.4	29.0
4 persons	15.1	18.7	19.8	22.1	25.3	26.1	22.6	24.1	25.2	18.6	21.7	22.8
5 persons	7.7	9.9	10.2	13.6	15.8	16.5	12.2	13.2	13.9	10.1	12.1	12.7
6 or more persons	6.9	8.0	8.1	16.5	14.3	14.4	10.9	10.9	11.0	9.8	10.1	10.3
Size not reported	0.7	1.1	0.7	4.9	1.9	1.3	0.8	1.5	1.2	1.5	1.4	1.0
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
US WIC	823,604	877,747	892,674	275,158	330,176	389,391	491,998	567,913	591,049	1,590,762	1,775,837	1,873,115
Mean	3.0	3.2	3.3	4.6	4.0	4.0	3.7	3.7	3.8	3.5	3.5	3.6

Size of Family or Economic Unit	Infants			Children			Total WIC		
	Percent by category								
	1994	1996	1998	1994	1996	1998	1994	1996	1998
1 person[a]	1.7%	1.2%	1.4%	2.2%	1.3%	1.3%	4.0%	2.3%	2.1%
2 persons	16.3	16.0	14.8	11.9	11.5	11.3	15.5	14.6	14.0
3 persons	29.7	30.1	30.1	24.3	24.0	24.0	26.3	26.5	26.7
4 persons	24.6	25.1	25.8	27.0	28.5	28.9	24.4	26.1	26.7
5 persons	14.1	14.3	14.8	16.8	17.8	18.2	14.5	15.6	16.0
6 or more persons	12.1	11.9	12.1	16.5	15.3	15.2	13.8	13.2	13.2
Size not reported	1.1	1.2	0.8	0.9	1.3	0.9	1.1	1.3	0.9
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
US WIC	1,852,455	1,988,789	2,048,625	3,464,631	3,982,815	4,121,016	6,907,848	7,747,441	8,042,758
Mean	3.8	3.8	3.8	4.4	4.1	4.1	4.0	3.9	3.9

Notes

Calculations in this table are based on all families or economic units reporting size. Units reporting zero members are included in the size-not-reported category.

[a] Mothers who miscarry, mothers of infants assigned to foster care, and infants and children assigned to foster care may be reported as one-person economic units.

Exhibit 4.6

Mean and Median Annualized Family or Economic Unit Income of WIC Participants by Participant Category

	Pregnant Women	Breastfeeding Women	Postpartum Women	Total Women	Infants	Children	Total WIC
Average (mean) income	$12,012	$13,607	$11,532	$12,205	$12,007	$12,814	$12,479
Median income	$11,052	$12,984	$10,400	$11,400	$10,920	$11,752	$11,440
Percent with income reported	82.0%	83.8%	79.6%	81.6%	78.2%	85.3%	82.7%
Percent with income reported as zero[a]	4.2	2.9	2.8	3.5	4.2	1.7	2.8
Percent with income not reported[b]	13.8	13.3	17.6	14.9	17.6	12.9	14.6
US WIC	892,674	389,391	591,050	1,873,116	2,048,626	4,121,017	8,042,758

Notes

State and local WIC agencies may collect data on weekly, monthly, or annual incomes. For reporting and analysis, annualized incomes have been computed.

Also note that income calculations include only those participants for whom State WIC agencies reported data on income, income period, and size of economic unit.

In 1998, a State WIC agency could report actual income for a participant or could report an income range. Both types of data are included in the calculations of mean and median incomes.

[a] Zero incomes are reported separately and excluded from mean and median calculations. In some reporting agencies, zero may be used to indicate missing information or adjunctive eligibility. PC98 cannot, therefore, distinguish between households with missing income information and households reporting zero income.

[b] Not reported indicates the percentage of participants by participant category for whom no data on income, income period, or size of economic unit are reported.

Exhibit 4.7

Average Annualized Family or Economic Unit Income of WIC Participants by Participant Category and Racial or Ethnic Characteristics

Racial or Ethnic Characteristic	Pregnant Women	Breastfeeding Women	Postpartum Women	Total Women	Infants	Children	Total Participants
American Indian or Alaskan Native							
Average (mean) income	$12,172	$12,907	$11,678	$12,222	$12,131	$13,089	$12,699
Median income	$11,040	$12,000	$10,400	$11,076	$10,836	$11,988	$11,440
Percent with income reported	80.5%	84.5%	78.8%	81.0%	80.0%	84.5%	82.7%
Percent with income reported as zero[a]	4.1	2.2	3.2	3.4	3.7	1.9	2.6
Percent with income not reported[b]	15.4	13.3	17.9	15.6	16.3	13.7	14.7
Number of WIC Participants	12,506	5,996	6,940	25,442	27,656	68,041	121,140
Asian or Pacific Islander							
Average (mean) income	$13,662	$14,354	$13,995	$13,939	$13,846	$14,584	$14,272
Median income	$12,600	$13,200	$12,960	$12,960	$12,672	$13,130	$13,000
Percent with income reported	83.5%	87.2%	86.6%	85.4%	83.4%	90.5%	87.6%
Percent with income reported as zero[a]	4.1	3.3	2.4	3.4	4.1	1.7	2.7
Percent with income not reported[b]	12.4	9.5	10.9	11.2	12.5	7.9	9.8
Number of WIC Participants	24,914	13,425	18,600	56,940	64,400	138,697	260,037
Black (non-Hispanic)							
Average (mean) income	$9,467	$10,972	$8,623	$9,378	$9,053	$9,941	$9,593
Median income	$7,823	$9,540	$6,444	$7,560	$6,780	$8,076	$7,752
Percent with income reported	79.2%	81.0%	79.1%	79.4%	76.5%	83.6%	80.8%
Percent with income reported as zero[a]	5.1	3.8	2.8	4.1	4.6	1.9	3.1
Percent with income not reported[b]	15.7	15.2	18.1	16.5	18.9	14.5	16.1
Number of WIC Participants	194,038	58,120	149,043	401,202	498,190	942,716	1,842,107
Hispanic							
Average (mean) income	$12,142	$12,884	$11,752	$12,264	$12,006	$12,359	$12,259
Median income	$11,520	$12,220	$10,920	$11,752	$11,400	$11,628	$11,580
Percent with income reported	80.7%	83.2%	75.8%	80.1%	74.7%	82.9%	80.3%
Percent with income reported as zero[a]	4.2	3	3	3.6	4.9	1.7	2.9
Percent with income not reported[b]	15.1	13.8	21.1	16.3	20.4	15.4	16.8
Number of WIC Participants	271,086	164,307	149,931	585,324	622,187	1,388,655	2,596,166

Exhibit 4.7 (continued)

Average Annualized Family or Economic Unit Income of WIC Participants by Participant Category and Racial or Ethnic Characteristics

Racial or Ethnic Characteristic	Pregnant Women	Breastfeeding Women	Postpartum Women	Total Women	Infants	Children	Total Participants
White (non-Hispanic)							
Average (mean) income	$13,029	$15,379	$12,803	$13,393	$13,552	$14,668	$14,080
Median income	$12,132	$15,000	$12,048	$12,636	$13,056	$13,992	$13,434
Percent with income reported	84.5%	85.8%	82.4%	84.0%	81.8%	88.4%	85.6%
Percent with income reported as zero[a]	3.6	2.3	2.6	3	3.2	1.6	2.4
Percent with income not reported[b]	11.9	11.9	15.1	12.9	15	10	12
Number of WIC Participants	383,421	143,711	260,523	787,656	814,779	1,553,170	3,155,604
Ethnicity not reported							
Average (mean) income	$11,405	$13,349	$13,115	$12,405	$11,592	$13,041	$12,439
Median income	$10,392	$12,480	$12,384	$11,424	$10,400	$11,960	$11,180
Percent with income reported	67.3%	66.5%	49.4%	60.6%	69.5%	72.2%	68.5%
Percent with income reported as zero[a]	12.2	5.7	4.8	8	9	4.8	6.9
Percent with income not reported[b]	20.4	27.7	45.9	31.4	21.5	23	24.5
Number of WIC Participants	6,709	3,832	6,012	16,553	21,413	29,738	67,704

Notes

State and local WIC agencies may collect data on weekly, monthly, or annual incomes. For reporting and analysis, annualized incomes have been computed.

Also note that income calculations include only those participants for whom State WIC agencies reported data on income, income period, and size of economic unit.

In 1998, a State WIC agency could report actual income for a participant or could report an income range. Both types of data are included in the calculations of mean and median incomes.

[a] Zero incomes are reported separately and excluded from mean and median calculations. In some reporting agencies, zero may be used to indicate missing information or adjunctive eligibility. PC98 cannot, therefore, distinguish between households with missing income information and households reporting zero income.

[b] Not reported indicates the percentage of participants by participant category for whom no data on income, income period, or size of economic unit are reported.

Exhibit 4.8

Distribution of Percent of Poverty Level of WIC Participants by Participant Category

Percent of Poverty Level	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women		Infants		Children		Total WIC	
	Percent	Cumulative Percent	Percent	Cumulative Percent	Percent	Cumulative Percent	Percent	Cumulative Percent	Percent	Cumulative Percent	Percent	Cumulative Percent	Percent	Cumulative Percent
	Percent by participant category													
0 - 50	24.8%	24.8%	23.0%	23.0%	31.0%	31.0%	26.4%	26.4%	28.6%	28.6%	28.7%	28.7%	28.1%	28.1%
51 - 100	27.4	52.1	32.2	55.2	25.4	56.3	27.7	54.1	26.1	54.7	30.4	59.1	28.7	56.8
101 - 130	12.9	65.0	13.9	69.1	11.2	67.6	12.6	66.7	11.6	66.3	12.8	71.9	12.5	69.3
131 - 150	7.0	72.0	6.9	76.1	5.5	73.1	6.5	73.2	5.5	71.8	6.2	78.1	6.1	75.4
151 - 185	8.8	80.8	7.1	83.2	5.9	79.0	7.6	80.7	5.8	77.7	6.6	84.8	6.6	82.0
186 - 200	0.5	81.3	0.3	83.5	0.3	79.3	0.4	81.1	0.2	77.9	0.3	85.0	0.3	82.3
201 - 225	0.3	81.6	0.1	83.6	0.2	79.4	0.2	81.3	0.1	78.0	0.1	85.2	0.2	82.5
226 - 250	0.2	81.8	0.1	83.7	0.1	79.5	0.1	81.5	0.1	78.1	0.1	85.2	0.1	82.5
Over 250	0.2	82.0	0.1	83.8	0.1	79.6	0.2	81.6	0.1	78.2	0.1	85.3	0.1	82.7
Income reported as zero[a]	4.2	86.2	2.9	86.7	2.8	82.4	3.5	85.1	4.2	82.4	1.7	87.1	2.8	85.4
Not reported[b]	13.8	100.0	13.3	100.0	17.6	100.0	14.9	100.0	17.6	100.0	12.9	100.0	14.6	100.0
US WIC	892,674		389,391		591,050		1,873,116		2,048,626		4,121,017		8,042,758	

Notes

Poverty level calculations are based on income, income period, and household size as reported by State WIC agencies.

[a] Zero incomes are reported separately and excluded from these income calculations. In some reporting agencies, zero may be used to indicate missing information or adjunctive eligibility. PC98 cannot, therefore, distinguish between households with missing income information and households reporting zero income.

[b] Not reported indicates the percentage of participants by participant category for whom no data on income, income period, or size of economic unit are reported.

Exhibit 4.9

Distribution of Percent of Poverty Level of WIC Participants by Participant Category and Racial or Ethnic Characteristics

	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women		Infants		Children		Total WIC	
Percent of Poverty Level	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**
American Indian or Alaskan Native														
0 - 50	27.7%	27.7%	30.4%	30.4%	33.3%	33.3%	29.9%	29.9%	31.9%	31.9%	30.3%	30.3%	30.6%	30.6%
51 - 100	27.0	54.7	31.1	61.6	26.2	59.5	27.8	57.6	28.1	60.0	31.5	61.8	29.9	60.5
101 - 130	11.4	66.2	11.5	73.1	9.8	69.3	11.0	68.7	10.2	70.3	11.8	73.6	11.3	71.8
131 - 150	6.1	72.3	5.4	78.5	4.4	73.7	5.5	74.1	4.7	75.0	5.2	78.7	5.1	76.9
151 - 185	7.4	79.6	5.4	83.8	4.5	78.2	6.1	80.2	4.4	79.4	5.2	83.9	5.2	82.1
186 - 200	0.4	80.0	0.3	84.1	0.3	78.5	0.3	80.6	0.2	79.7	0.3	84.2	0.3	82.4
201 - 225	0.3	80.3	0.1	84.2	0.1	78.6	0.2	80.7	0.1	79.8	0.1	84.3	0.1	82.5
226 - 250	0.1	80.4	0.2	84.4	0.1	78.7	0.1	80.9	0.1	79.9	0.1	84.4	0.1	82.6
Over 250	0.2	80.5	0.1	84.5	0.2	78.8	0.1	81.0	0.1	80.0	0.1	84.5	0.1	82.7
Income reported as zero[a]	4.1	84.6	2.2	86.7	3.2	82.1	3.4	84.4	3.7	83.7	1.9	86.3	2.6	85.3
Not reported[b]	15.4	100.0	13.3	100.0	17.9	100.0	15.6	100.0	16.3	100.0	13.7	100.0	14.7	100.0
Total WIC	12,506		5,996		6,940		25,442		27,656		68,041		121,140	
Asian or Pacific Islander														
0 - 50	20.2%	20.2%	21.9%	21.9%	24.7%	24.7%	22.1%	22.1%	24.6%	24.6%	28.1%	28.1%	25.9%	25.9%
51 - 100	29.5	49.7	32.1	54.0	32.4	57.0	31.1	53.1	30.7	55.3	35.3	63.4	33.2	59.1
101 - 130	14.2	63.9	15.4	69.4	14.0	71.1	14.4	67.6	13.5	68.7	13.0	76.4	13.4	72.6
131 - 150	7.9	71.8	8.4	77.9	7.4	78.5	7.9	75.4	7.0	75.7	6.5	82.9	6.9	79.5
151 - 185	11.0	82.8	8.8	86.6	7.6	86.1	9.4	84.8	7.2	82.9	7.1	90	7.6	87.1
186 - 200	0.3	83.1	0.2	86.8	0.2	86.3	0.2	85.1	0.2	83.1	0.2	90.2	0.2	87.3
201 - 225	0.2	83.4	0.2	87.0	0.1	86.4	0.2	85.2	0.1	83.2	0.1	90.3	0.1	87.4
226 - 250	0.1	83.4	0.1	87.1	0.1	86.5	0.1	85.3	0.1	83.3	0.1	90.4	0.1	87.5
Over 250	0.1	83.5	0.1	87.2	0.1	86.6	0.1	85.4	0.1	83.4	0.1	90.5	0.1	87.6
Income reported as zero[a]	4.1	87.6	3.3	90.5	2.4	89.1	3.4	88.8	4.1	87.5	1.7	92.1	2.7	90.2
Not reported[b]	12.4	100.0	9.5	100.0	10.9	100.0	11.2	100.0	12.5	100.0	7.9	100.0	9.8	100.0
Total WIC	24,914		13,425		18,600		56,940		64,400		138,697		260,037	

Exhibit 4.9 (continued)

Distribution of Percent of Poverty Level of WIC Participants by Participant Category and Racial or Ethnic Characteristics

	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women		Infants		Children		Total WIC	
Percent of Poverty Level	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**
Black (non-Hispanic)														
0 - 50	34.4%	34.4%	34.4%	34.4%	44.6%	44.6%	38.2%	38.2%	41.5%	41.5%	39.9%	39.9%	40.0%	40.0%
51 - 100	23.5	57.9	24.8	59.2	19.9	64.5	22.3	60.5	19.7	61.2	25.6	65.5	23.3	63.2
101 - 130	10.0	67.8	10.5	69.7	7.5	72.0	9.1	69.6	8.2	69.4	9.8	75.2	9.2	72.4
131 - 150	4.9	72.7	5.6	75.3	3.5	75.5	4.5	74.1	3.5	72.9	4.2	79.4	4.1	76.5
151 - 185	5.7	78.4	5.3	80.6	3.3	78.7	4.7	78.8	3.3	76.1	3.8	83.2	3.9	80.3
186 - 200	0.3	78.8	0.2	80.8	0.2	78.9	0.3	79.1	0.1	76.3	0.2	83.4	0.2	80.5
201 - 225	0.2	79.0	0.1	80.9	0.1	79.0	0.1	79.2	0.1	76.3	0.1	83.5	0.1	80.6
226 - 250	0.1	79.1	0.0	80.9	0.0	79.0	0.1	79.3	0.0	76.4	0.1	83.5	0.1	80.7
Over 250	0.2	79.2	0.1	81.0	0.1	79.1	0.1	79.4	0.1	76.5	0.1	83.6	0.1	80.8
Income reported as zero[a]	5.1	84.3	3.8	84.8	2.8	81.9	4.1	83.5	4.6	81.1	1.9	85.5	3.1	83.9
Not reported[b]	15.7	100.0	15.2	100.0	18.1	100.0	16.5	100.0	18.9	100.0	14.5	100.0	16.1	100.0
Total WIC	194,038		58,120		149,043		401,202		498,190		942,716		1,842,107	
Hispanic														
0 - 50	21.8%	21.8%	21.9%	21.9%	26.6%	26.6%	23.1%	23.1%	24.6%	24.6%	27.7%	27.7%	25.9%	25.9%
51 - 100	32.0	53.8	39.7	61.6	30.5	57.1	33.8	56.8	32.1	56.8	34.9	62.6	34.0	59.9
101 - 130	12.9	66.6	12.4	73.9	10.3	67.4	12.1	68.9	10.0	66.8	11.2	73.8	11.1	71.0
131 - 150	6.1	72.8	4.7	78.6	4.1	71.5	5.2	74.1	3.9	70.7	4.5	78.3	4.5	75.5
151 - 185	7.5	80.3	4.4	83.0	4.1	75.6	5.7	79.8	3.8	74.5	4.4	82.7	4.6	80.1
186 - 200	0.2	80.5	0.1	83.1	0.1	75.7	0.1	80.0	0.1	74.6	0.1	82.8	0.1	80.2
201 - 225	0.1	80.5	0.1	83.2	0.1	75.7	0.1	80.0	0.0	74.6	0.0	82.9	0.1	80.3
226 - 250	0.0	80.6	0.0	83.2	0.0	75.8	0.0	80.1	0.0	74.7	0.0	82.9	0.0	80.3
Over 250	0.1	80.7	0.0	83.2	0.0	75.8	0.1	80.1	0.0	74.7	0.0	82.9	0.0	80.3
Income reported as zero[a]	4.2	84.9	3.0	86.2	3.0	78.9	3.6	83.7	4.9	79.6	1.7	84.6	2.9	83.2
Not reported[b]	15.1	100.0	13.8	100.0	21.1	100.0	16.3	100.0	20.4	100.0	15.4	100.0	16.8	100.0
Total WIC	271,086		164,307		149,931		585,324		622,187		1,388,655		2,596,166	

Exhibit 4.9 (continued)

Distribution of Percent of Poverty Level of WIC Participants by Participant Category and Racial or Ethnic Characteristics

	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women		Infants		Children		Total WIC	
Percent of Poverty Level	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**
White (non-Hispanic)														
0 - 50	22.3%	22.3%	19.6%	19.6%	26.4%	26.4%	23.2%	23.2%	24.1%	24.1%	22.9%	22.9%	23.3%	23.3%
51 - 100	26.0	48.3	27.0	46.6	25.2	51.6	25.9	49.1	25.0	49.2	28.8	51.7	27.1	50.4
101 - 130	14.4	62.7	17.1	63.7	13.9	65.4	14.7	63.8	14.8	64.0	16.2	67.9	15.5	65.8
131 - 150	8.6	71.3	10.0	73.7	7.4	72.9	8.5	72.2	7.9	71.8	9.0	76.9	8.6	74.4
151 - 185	11.3	82.6	11.0	84.7	8.4	81.3	10.3	82.5	8.9	80.7	10.4	87.3	10.0	84.4
186 - 200	0.8	83.4	0.5	85.2	0.5	81.7	0.6	83.2	0.4	81.2	0.5	87.8	0.5	84.9
201 - 225	0.5	83.9	0.3	85.5	0.3	82.0	0.4	83.6	0.3	81.4	0.3	88.1	0.3	85.2
226 - 250	0.3	84.2	0.1	85.6	0.2	82.2	0.2	83.8	0.2	81.6	0.1	88.2	0.2	85.4
Over 250	0.3	84.5	0.2	85.8	0.2	82.4	0.3	84.0	0.2	81.8	0.2	88.4	0.2	85.6
Income reported as zero[a]	3.6	88.1	2.3	88.1	2.6	84.9	3.0	87.1	3.2	85.0	1.6	90.0	2.4	88.0
Not reported[b]	11.9	100.0	11.9	100.0	15.1	100.0	12.9	100.0	15.0	100.0	10.0	100.0	12.0	100.0
Total WIC	383,421		143,711		260,523		787,656		814,779		1,553,170		3,155,604	
Racial data not reported														
0 - 50	21.2%	21.2%	19.0%	19.0%	15.4%	15.4%	18.6%	18.6%	26.1%	26.1%	24.2%	24.2%	23.4%	23.4%
51 - 100	24.5	45.6	24.1	43.1	17.0	32.3	21.7	40.2	23.9	50.0	24.9	49.1	23.8	47.2
101 - 130	10.5	56.1	11.9	55.1	7.9	40.2	9.9	50.1	9.9	59.9	11.5	60.6	10.6	57.8
131 - 150	5.8	61.9	6.0	61.1	4.0	44.2	5.2	55.3	4.8	64.7	5.6	66.2	5.3	63.1
151 - 185	5.1	67.0	5.0	66.0	5.0	49.3	5.1	60.3	4.3	69.0	5.6	71.8	5.1	68.1
186 - 200	0.1	67.1	0.2	66.3	0.0	49.3	0.1	60.5	0.1	69.2	0.2	72.0	0.1	68.3
201 - 225	0.1	67.2	0.0	66.3	0.0	49.3	0.0	60.5	0.1	69.3	0.1	72.1	0.1	68.4
226 - 250	0.1	67.3	0.1	66.3	0.0	49.3	0.1	60.5	0.1	69.3	0.0	72.1	0.0	68.4
Over 250	0.0	67.3	0.2	66.5	0.0	49.4	0.1	60.6	0.2	69.5	0.1	72.2	0.1	68.5
Income reported as zero[a]	12.2	79.6	5.7	72.3	4.8	54.1	8.0	68.6	9.0	78.5	4.8	77.0	6.9	75.5
Not reported[b]	20.4	100.0	27.7	100.0	45.9	100.0	31.4	100.0	21.5	100.0	23.0	100.0	24.5	100.0
Total WIC	6,709		3,832		6,012		16,553		21,413		29,738		67,704	

Notes

Poverty level calculations are based on income, income period, and household size as reported by State WIC agencies.

[a] Zero incomes are reported separately and excluded from these income calculations. In some reporting agencies, zero may be used to indicate missing information or adjunctive eligibility. PC98 cannot, therefore, distinguish between households with missing income information and households reporting zero income.

[b] Not reported indicates the percentage of participants by participant category for whom no data on income, income period, or size of economic unit are reported.

Exhibit 4.10

Distribution of Percent of Poverty Level at Certification for WIC Participants Reporting No Other Benefit Receipt[a]

Percent of Poverty Level	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women		Infants		Children		Total WIC	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Percent by participant category													
0 - 50	55,277	14.1%	22,798	12.9%	30,328	15.6%	108,402	14.2%	150,926	18.0%	196,524	13.3%	455,852	14.8%
51-100	113,702	29.1	60,149	34.0	58,487	30.2	232,339	30.5	247,221	29.5	487,153	33.0	966,714	31.4
101-130	67,428	17.2	33,935	19.2	35,981	18.6	137,344	18.0	136,745	16.3	296,396	20.1	570,485	18.5
131-150	41,485	10.6	19,124	10.8	20,520	10.6	81,129	10.7	75,740	9.0	173,196	11.7	330,065	10.7
151-185	56,788	14.5	20,763	11.8	23,850	12.3	101,401	13.3	86,038	10.3	201,386	13.6	388,825	12.6
186-200	1,937	0.5	456	0.3	525	0.3	2,918	0.4	1,757	0.2	4,458	0.3	9,133	0.3
201-225	1,254	0.3	177	0.1	205	0.1	1,637	0.2	730	0.1	1,755	0.1	4,121	0.1
226-250	506	0.1	75	0.0	109	0.1	690	0.1	322	0.0	694	0.0	1,706	0.1
Over 250	485	0.1	140	0.1	185	0.1	809	0.1	687	0.1	1,154	0.1	2,650	0.1
Income reported as zero[b]	29,285	7.5	9,593	5.4	11,957	6.2	50,835	6.7	60,787	7.2	53,570	3.6	165,192	5.4
Not reported[c]	22,824	5.8	9,490	5.4	11,653	6.0	43,967	5.8	78,095	9.3	60,024	4.1	182,086	5.9
Total WIC	390,971	100.0%	176,700	100.0%	193,801	100.0%	761,471	100.0%	839,047	100.0%	1,476,309	100.0%	3,076,827	100.0%

Notes

[a] This table excludes individuals for whom no data regarding participation in TANF, Food Stamps, and Medicaid are reported.

[b] Zero incomes are reported separately and excluded from these income calculations. In some reporting agencies, zero may be used to indicate missing information or adjunctive eligibility. PC98 cannot, therefore, distinguish between households with missing income information and households reporting zero income.

[c] Not reported indicates the percentage of participants by participant category for whom no data on income, income period, or size of economic unit are reported.

Exhibit 4.11

Comparison of Poverty Levels of WIC Participants to Persons in the US Population in 1998

Percent of Poverty Level	General US Population[a] 1998	Persons in US Families[a] 1998	Persons in US Families with Children Under Six Years[a] 1998	US WIC[b] 1998	US WIC Reporting[b] Income 1998
0 - 50	5.0%	4.9%	9.7%	28.1%	34.0%
51 - 100	8.1	7.4	11.6	28.7	34.7
101 - 130	5.4	4.9	7.1	12.5	15.1
131 - 150	3.8	3.5	4.4	6.1	7.4
151 - 185	6.8	6.5	8.1	6.6	8.0
186 - 200	2.8	2.8	3.0	0.3	0.3
Over 200	66.7	69.1	54.6	0.4	0.4
Income reported as zero[c]	1.4	1.0	1.7	2.8	N/A
Not reported[d]	N/A	N/A	N/A	14.6	N/A
Total	268,480,000	226,809,000	69,825,000	8,042,758	6,649,144

Notes

N/A indicates not applicable.

[a] Source: March 1998 *Current Population Survey.*
Current Population Survey poverty levels reflect respondents' 1997 incomes.

[b] WIC participant poverty level calculations are based on income, income period, and household size as reported by State WIC agencies. Figures in this table represent a count of individual WIC participants.

[c] Zero incomes are reported separately and excluded from these income calculations. In some reporting agencies, zero may be used to indicate missing information or adjunctive eligibility. PC98 cannot, therefore, distinguish between households with missing income information and households reporting zero income.

[d] Not reported indicates the percentage of participants for whom no data on income, income period, or size of economic unit are reported.

assigned as household income. Both types of data have been combined to compute average annualized income and to calculate percent of poverty.

Footnotes on tables indicate that, in some States, individuals were reported to have zero incomes. While available income data from all States have been included in this analysis, these zeroes are always tabulated separately because some States use zero to indicate missing data or adjunctive eligibility.

Exhibits 4.6 through 4.11 present data on the income and poverty status of WIC participants during 1998. The mean and median incomes of WIC enrollees remain low.

Average family (economic unit) size has remained about 4.0 persons (Exhibit 4.5) since 1992, though some fluctuations occurred within participant categories over time. In general, the size distribution of households was similar in 1996 and 1998. The one exception is that the number of pregnant women living in one-person households declined from 11 percent in 1996 to 9 percent in 1998. This continued a trend reported in PC96 when the percent of pregnant women in one-person households declined by 7 percentage points from PC94. Some of this observed decline is presumably attributable to revised WIC policy which allows States to count pregnant women as two-person households.

Approximately 1.4 percent of infants and children and 1.2 percent of postpartum women are classified as residing in one-person households. These categories include children placed in foster care and mothers who miscarry or whose infants are placed in foster care.

Exhibits 4.6 and 4.7 present mean and median incomes by participant and ethnic categories. Data to calculate mean and median income were not reported for 14.6 percent of WIC enrollees and are reported as zero for an additional 2.8 percent of US WIC. The incomes of WIC participants increased substantially between 1996 and 1998. For the 85.4 percent of WIC enrollees with income data, average family/economic unit income across all categories was $12,479 in April 1998, a 15.5 percent (or $1,671) increase from 1996. Median income in 1998 shows a 19.2 percent increase over 1996. The incomes of WIC enrollees in all participant and all ethnic categories have increased. There were, however, few changes in the relative positions of different groups since 1992. The highest average income continues to be reported for breastfeeding women. Across ethnic categories, Asian or Pacific Islanders reported the highest incomes while Black participants reported the lowest incomes. Hispanic participants experienced the largest percentage increase between 1996 and 1998.

Poverty Status

In Exhibits 4.8 and 4.9, information is presented on percent of poverty level by participant category and by race/ethnicity.[4] Despite the substantial increase in average income, WIC participants remain relatively poor. Almost 70 percent of participants reported incomes at or below 130 percent of poverty, while 57 percent reported incomes at or below the poverty level. Although WIC participants remain in the country's lowest income categories, since 1994, the data show a decrease in the percent of WIC participants with incomes below 50 percent of poverty. The

[4]Exhibit C4.8 in Appendix C presents data on poverty level by participant category for 1992, 1994, 1996, and 1998

Exhibit 4.5

Distribution of the Size of Families or Economic Units of WIC Participants by Participant Category

Size of Family or Economic Unit	Pregnant Women			Breastfeeding Women			Postpartum Women			Total Women		
	Percent by category											
	1994	1996	1998	1994	1996	1998	1994	1996	1998	1994	1996	1998
1 person[a]	17.8%	11.3%	9.2%	0.0%	0.0%	0.0%	4.2%	1.5%	1.2%	10.5%	6.1%	4.7%
2 persons	26.5	23.8	23.9	15.6	13.1	11.9	19.5	18.2	16.9	22.5	20.0	19.2
3 persons	25.0	26.9	27.9	27.1	29.3	29.4	29.4	30.2	30.3	26.7	28.4	29.0
4 persons	15.1	18.7	19.8	22.1	25.3	26.1	22.6	24.1	25.2	18.6	21.7	22.8
5 persons	7.7	9.9	10.2	13.6	15.8	16.5	12.2	13.2	13.9	10.1	12.1	12.7
6 or more persons	6.9	8.0	8.1	16.5	14.3	14.4	10.9	10.9	11.0	9.8	10.1	10.3
Size not reported	0.7	1.1	0.7	4.9	1.9	1.3	0.8	1.5	1.2	1.5	1.4	1.0
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
US WIC	823,604	877,747	892,674	275,158	330,176	389,391	491,998	567,913	591,049	1,590,762	1,775,837	1,873,115
Mean	3.0	3.2	3.3	4.6	4.0	4.0	3.7	3.7	3.8	3.5	3.5	3.6

Size of Family or Economic Unit	Infants			Children			Total WIC		
	Percent by category								
	1994	1996	1998	1994	1996	1998	1994	1996	1998
1 person[a]	1.7%	1.2%	1.4%	2.2%	1.3%	1.3%	4.0%	2.3%	2.1%
2 persons	16.3	16.0	14.8	11.9	11.5	11.3	15.5	14.6	14.0
3 persons	29.7	30.1	30.1	24.3	24.0	24.0	26.3	26.5	26.7
4 persons	24.6	25.1	25.8	27.0	28.5	28.9	24.4	26.1	26.7
5 persons	14.1	14.3	14.8	16.8	17.8	18.2	14.5	15.6	16.0
6 or more persons	12.1	11.9	12.1	16.5	15.3	15.2	13.8	13.2	13.2
Size not reported	1.1	1.2	0.8	0.9	1.3	0.9	1.1	1.3	0.9
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
US WIC	1,852,455	1,988,789	2,048,625	3,464,631	3,982,815	4,121,016	6,907,848	7,747,441	8,042,758
Mean	3.8	3.8	3.8	4.4	4.1	4.1	4.0	3.9	3.9

Notes

Calculations in this table are based on all families or economic units reporting size. Units reporting zero members are included in the size-not-reported category.

[a] Mothers who miscarry, mothers of infants assigned to foster care, and infants and children assigned to foster care may be reported as one-person economic units.

Exhibit 4.6

Mean and Median Annualized Family or Economic Unit Income of WIC Participants by Participant Category

	Pregnant Women	Breastfeeding Women	Postpartum Women	Total Women	Infants	Children	Total WIC
Average (mean) income	$12,012	$13,607	$11,532	$12,205	$12,007	$12,814	$12,479
Median income	$11,052	$12,984	$10,400	$11,400	$10,920	$11,752	$11,440
Percent with income reported	82.0%	83.8%	79.6%	81.6%	78.2%	85.3%	82.7%
Percent with income reported as zero[a]	4.2	2.9	2.8	3.5	4.2	1.7	2.8
Percent with income not reported[b]	13.8	13.3	17.6	14.9	17.6	12.9	14.6
US WIC	892,674	389,391	591,050	1,873,116	2,048,626	4,121,017	8,042,758

Notes

State and local WIC agencies may collect data on weekly, monthly, or annual incomes. For reporting and analysis, annualized incomes have been computed.

Also note that income calculations include only those participants for whom State WIC agencies reported data on income, income period, and size of economic unit.

In 1998, a State WIC agency could report actual income for a participant or could report an income range. Both types of data are included in the calculations of mean and median incomes.

[a] Zero incomes are reported separately and excluded from mean and median calculations. In some reporting agencies, zero may be used to indicate missing information or adjunctive eligibility. PC98 cannot, therefore, distinguish between households with missing income information and households reporting zero income.

[b] Not reported indicates the percentage of participants by participant category for whom no data on income, income period, or size of economic unit are reported.

Exhibit 4.7

Average Annualized Family or Economic Unit Income of WIC Participants by Participant Category and Racial or Ethnic Characteristics

Racial or Ethnic Characteristic	Pregnant Women	Breastfeeding Women	Postpartum Women	Total Women	Infants	Children	Total Participants
American Indian or Alaskan Native							
Average (mean) income	$12,172	$12,907	$11,678	$12,222	$12,131	$13,089	$12,699
Median income	$11,040	$12,000	$10,400	$11,076	$10,836	$11,988	$11,440
Percent with income reported	80.5%	84.5%	78.8%	81.0%	80.0%	84.5%	82.7%
Percent with income reported as zero[a]	4.1	2.2	3.2	3.4	3.7	1.9	2.6
Percent with income not reported[b]	15.4	13.3	17.9	15.6	16.3	13.7	14.7
Number of WIC Participants	12,506	5,996	6,940	25,442	27,656	68,041	121,140
Asian or Pacific Islander							
Average (mean) income	$13,662	$14,354	$13,995	$13,939	$13,846	$14,584	$14,272
Median income	$12,600	$13,200	$12,960	$12,960	$12,672	$13,130	$13,000
Percent with income reported	83.5%	87.2%	86.6%	85.4%	83.4%	90.5%	87.6%
Percent with income reported as zero[a]	4.1	3.3	2.4	3.4	4.1	1.7	2.7
Percent with income not reported[b]	12.4	9.5	10.9	11.2	12.5	7.9	9.8
Number of WIC Participants	24,914	13,425	18,600	56,940	64,400	138,697	260,037
Black (non-Hispanic)							
Average (mean) income	$9,467	$10,972	$8,623	$9,378	$9,053	$9,941	$9,593
Median income	$7,823	$9,540	$6,444	$7,560	$6,780	$8,076	$7,752
Percent with income reported	79.2%	81.0%	79.1%	79.4%	76.5%	83.6%	80.8%
Percent with income reported as zero[a]	5.1	3.8	2.8	4.1	4.6	1.9	3.1
Percent with income not reported[b]	15.7	15.2	18.1	16.5	18.9	14.5	16.1
Number of WIC Participants	194,038	58,120	149,043	401,202	498,190	942,716	1,842,107
Hispanic							
Average (mean) income	$12,142	$12,884	$11,752	$12,264	$12,006	$12,359	$12,259
Median income	$11,520	$12,220	$10,920	$11,752	$11,400	$11,628	$11,580
Percent with income reported	80.7%	83.2%	75.8%	80.1%	74.7%	82.9%	80.3%
Percent with income reported as zero[a]	4.2	3	3	3.6	4.9	1.7	2.9
Percent with income not reported[b]	15.1	13.8	21.1	16.3	20.4	15.4	16.8
Number of WIC Participants	271,086	164,307	149,931	585,324	622,187	1,388,655	2,596,166

Exhibit 4.7 (continued)

Average Annualized Family or Economic Unit Income of WIC Participants by Participant Category and Racial or Ethnic Characteristics

Racial or Ethnic Characteristic	Pregnant Women	Breastfeeding Women	Postpartum Women	Total Women	Infants	Children	Total Participants
White (non-Hispanic)							
Average (mean) income	$13,029	$15,379	$12,803	$13,393	$13,552	$14,668	$14,080
Median income	$12,132	$15,000	$12,048	$12,636	$13,056	$13,992	$13,434
Percent with income reported	84.5%	85.8%	82.4%	84.0%	81.8%	88.4%	85.6%
Percent with income reported as zero[a]	3.6	2.3	2.6	3	3.2	1.6	2.4
Percent with income not reported[b]	11.9	11.9	15.1	12.9	15	10	12
Number of WIC Participants	383,421	143,711	260,523	787,656	814,779	1,553,170	3,155,604
Ethnicity not reported							
Average (mean) income	$11,405	$13,349	$13,115	$12,405	$11,592	$13,041	$12,439
Median income	$10,392	$12,480	$12,384	$11,424	$10,400	$11,960	$11,180
Percent with income reported	67.3%	66.5%	49.4%	60.6%	69.5%	72.2%	68.5%
Percent with income reported as zero[a]	12.2	5.7	4.8	8	9	4.8	6.9
Percent with income not reported[b]	20.4	27.7	45.9	31.4	21.5	23	24.5
Number of WIC Participants	6,709	3,832	6,012	16,553	21,413	29,738	67,704

Notes

State and local WIC agencies may collect data on weekly, monthly, or annual incomes. For reporting and analysis, annualized incomes have been computed.

Also note that income calculations include only those participants for whom State WIC agencies reported data on income, income period, and size of economic unit.

In 1998, a State WIC agency could report actual income for a participant or could report an income range. Both types of data are included in the calculations of mean and median incomes.

[a] Zero incomes are reported separately and excluded from mean and median calculations. In some reporting agencies, zero may be used to indicate missing information or adjunctive eligibility. PC98 cannot, therefore, distinguish between households with missing income information and households reporting zero income.

[b] Not reported indicates the percentage of participants by participant category for whom no data on income, income period, or size of economic unit are reported.

Exhibit 4.8

Distribution of Percent of Poverty Level of WIC Participants by Participant Category

Percent of Poverty Level	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women		Infants		Children		Total WIC	
	Percent	Cumulative Percent	Percent	Cumulative Percent	Percent	Cumulative Percent	Percent	Cumulative Percent	Percent	Cumulative Percent	Percent	Cumulative Percent	Percent	Cumulative Percent
	Percent by participant category													
0 - 50	24.8%	24.8%	23.0%	23.0%	31.0%	31.0%	26.4%	26.4%	28.6%	28.6%	28.7%	28.7%	28.1%	28.1%
51 - 100	27.4	52.1	32.2	55.2	25.4	56.3	27.7	54.1	26.1	54.7	30.4	59.1	28.7	56.8
101 - 130	12.9	65.0	13.9	69.1	11.2	67.6	12.6	66.7	11.6	66.3	12.8	71.9	12.5	69.3
131 - 150	7.0	72.0	6.9	76.1	5.5	73.1	6.5	73.2	5.5	71.8	6.2	78.1	6.1	75.4
151 - 185	8.8	80.8	7.1	83.2	5.9	79.0	7.6	80.7	5.8	77.7	6.6	84.8	6.6	82.0
186 - 200	0.5	81.3	0.3	83.5	0.3	79.3	0.4	81.1	0.2	77.9	0.3	85.0	0.3	82.3
201 - 225	0.3	81.6	0.1	83.6	0.2	79.4	0.2	81.3	0.1	78.0	0.1	85.2	0.2	82.5
226 - 250	0.2	81.8	0.1	83.7	0.1	79.5	0.1	81.5	0.1	78.1	0.1	85.2	0.1	82.5
Over 250	0.2	82.0	0.1	83.8	0.1	79.6	0.2	81.6	0.1	78.2	0.1	85.3	0.1	82.7
Income reported as zero[a]	4.2	86.2	2.9	86.7	2.8	82.4	3.5	85.1	4.2	82.4	1.7	87.1	2.8	85.4
Not reported[b]	13.8	100.0	13.3	100.0	17.6	100.0	14.9	100.0	17.6	100.0	12.9	100.0	14.6	100.0
US WIC	892,674		389,391		591,050		1,873,116		2,048,626		4,121,017		8,042,758	

Notes

Poverty level calculations are based on income, income period, and household size as reported by State WIC agencies.

[a] Zero incomes are reported separately and excluded from these income calculations. In some reporting agencies, zero may be used to indicate missing information or adjunctive eligibility. PC98 cannot, therefore, distinguish between households with missing income information and households reporting zero income.

[b] Not reported indicates the percentage of participants by participant category for whom no data on income, income period, or size of economic unit are reported.

Exhibit 4.9

Distribution of Percent of Poverty Level of WIC Participants by Participant Category and Racial or Ethnic Characteristics

	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women		Infants		Children		Total WIC	
Percent of Poverty Level	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**
American Indian or Alaskan Native														
0 - 50	27.7%	27.7%	30.4%	30.4%	33.3%	33.3%	29.9%	29.9%	31.9%	31.9%	30.3%	30.3%	30.6%	30.6%
51 - 100	27.0	54.7	31.1	61.6	26.2	59.5	27.8	57.6	28.1	60.0	31.5	61.8	29.9	60.5
101 - 130	11.4	66.2	11.5	73.1	9.8	69.3	11.0	68.7	10.2	70.3	11.8	73.6	11.3	71.8
131 - 150	6.1	72.3	5.4	78.5	4.4	73.7	5.5	74.1	4.7	75.0	5.2	78.7	5.1	76.9
151 - 185	7.4	79.6	5.4	83.8	4.5	78.2	6.1	80.2	4.4	79.4	5.2	83.9	5.2	82.1
186 - 200	0.4	80.0	0.3	84.1	0.3	78.5	0.3	80.6	0.2	79.7	0.3	84.2	0.3	82.4
201 - 225	0.3	80.3	0.1	84.2	0.1	78.6	0.2	80.7	0.1	79.8	0.1	84.3	0.1	82.5
226 - 250	0.1	80.4	0.2	84.4	0.1	78.7	0.1	80.9	0.1	79.9	0.1	84.4	0.1	82.6
Over 250	0.2	80.5	0.1	84.5	0.2	78.8	0.1	81.0	0.1	80.0	0.1	84.5	0.1	82.7
Income reported as zero[a]	4.1	84.6	2.2	86.7	3.2	82.1	3.4	84.4	3.7	83.7	1.9	86.3	2.6	85.3
Not reported[b]	15.4	100.0	13.3	100.0	17.9	100.0	15.6	100.0	16.3	100.0	13.7	100.0	14.7	100.0
Total WIC	12,506		5,996		6,940		25,442		27,656		68,041		121,140	
Asian or Pacific Islander														
0 - 50	20.2%	20.2%	21.9%	21.9%	24.7%	24.7%	22.1%	22.1%	24.6%	24.6%	28.1%	28.1%	25.9%	25.9%
51 - 100	29.5	49.7	32.1	54.0	32.4	57.0	31.1	53.1	30.7	55.3	35.3	63.4	33.2	59.1
101 - 130	14.2	63.9	15.4	69.4	14.0	71.1	14.4	67.6	13.5	68.7	13.0	76.4	13.4	72.6
131 - 150	7.9	71.8	8.4	77.9	7.4	78.5	7.9	75.4	7.0	75.7	6.5	82.9	6.9	79.5
151 - 185	11.0	82.8	8.8	86.6	7.6	86.1	9.4	84.8	7.2	82.9	7.1	90	7.6	87.1
186 - 200	0.3	83.1	0.2	86.8	0.2	86.3	0.2	85.1	0.2	83.1	0.2	90.2	0.2	87.3
201 - 225	0.2	83.4	0.2	87.0	0.1	86.4	0.2	85.2	0.1	83.2	0.1	90.3	0.1	87.4
226 - 250	0.1	83.4	0.1	87.1	0.1	86.5	0.1	85.3	0.1	83.3	0.1	90.4	0.1	87.5
Over 250	0.1	83.5	0.1	87.2	0.1	86.6	0.1	85.4	0.1	83.4	0.1	90.5	0.1	87.6
Income reported as zero[a]	4.1	87.6	3.3	90.5	2.4	89.1	3.4	88.8	4.1	87.5	1.7	92.1	2.7	90.2
Not reported[b]	12.4	100.0	9.5	100.0	10.9	100.0	11.2	100.0	12.5	100.0	7.9	100.0	9.8	100.0
Total WIC	24,914		13,425		18,600		56,940		64,400		138,697		260,037	

Exhibit 4.9 (continued)

Distribution of Percent of Poverty Level of WIC Participants by Participant Category and Racial or Ethnic Characteristics

	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women		Infants		Children		Total WIC	
Percent of Poverty Level	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**
Black (non-Hispanic)														
0 - 50	34.4%	34.4%	34.4%	34.4%	44.6%	44.6%	38.2%	38.2%	41.5%	41.5%	39.9%	39.9%	40.0%	40.0%
51 - 100	23.5	57.9	24.8	59.2	19.9	64.5	22.3	60.5	19.7	61.2	25.6	65.5	23.3	63.2
101 - 130	10.0	67.8	10.5	69.7	7.5	72.0	9.1	69.6	8.2	69.4	9.8	75.2	9.2	72.4
131 - 150	4.9	72.7	5.6	75.3	3.5	75.5	4.5	74.1	3.5	72.9	4.2	79.4	4.1	76.5
151 - 185	5.7	78.4	5.3	80.6	3.3	78.7	4.7	78.8	3.3	76.1	3.8	83.2	3.9	80.3
186 - 200	0.3	78.8	0.2	80.8	0.2	78.9	0.3	79.1	0.1	76.3	0.2	83.4	0.2	80.5
201 - 225	0.2	79.0	0.1	80.9	0.1	79.0	0.1	79.2	0.1	76.3	0.1	83.5	0.1	80.6
226 - 250	0.1	79.1	0.0	80.9	0.0	79.0	0.1	79.3	0.0	76.4	0.1	83.5	0.1	80.7
Over 250	0.2	79.2	0.1	81.0	0.1	79.1	0.1	79.4	0.1	76.5	0.1	83.6	0.1	80.8
Income reported as zero[a]	5.1	84.3	3.8	84.8	2.8	81.9	4.1	83.5	4.6	81.1	1.9	85.5	3.1	83.9
Not reported[b]	15.7	100.0	15.2	100.0	18.1	100.0	16.5	100.0	18.9	100.0	14.5	100.0	16.1	100.0
Total WIC	194,038		58,120		149,043		401,202		498,190		942,716		1,842,107	
Hispanic														
0 - 50	21.8%	21.8%	21.9%	21.9%	26.6%	26.6%	23.1%	23.1%	24.6%	24.6%	27.7%	27.7%	25.9%	25.9%
51 - 100	32.0	53.8	39.7	61.6	30.5	57.1	33.8	56.8	32.1	56.8	34.9	62.6	34.0	59.9
101 - 130	12.9	66.6	12.4	73.9	10.3	67.4	12.1	68.9	10.0	66.8	11.2	73.8	11.1	71.0
131 - 150	6.1	72.8	4.7	78.6	4.1	71.5	5.2	74.1	3.9	70.7	4.5	78.3	4.5	75.5
151 - 185	7.5	80.3	4.4	83.0	4.1	75.6	5.7	79.8	3.8	74.5	4.4	82.7	4.6	80.1
186 - 200	0.2	80.5	0.1	83.1	0.1	75.7	0.1	80.0	0.1	74.6	0.1	82.8	0.1	80.2
201 - 225	0.1	80.5	0.1	83.2	0.1	75.7	0.1	80.0	0.0	74.6	0.0	82.9	0.1	80.3
226 - 250	0.0	80.6	0.0	83.2	0.0	75.8	0.0	80.1	0.0	74.7	0.0	82.9	0.0	80.3
Over 250	0.1	80.7	0.0	83.2	0.0	75.8	0.1	80.1	0.0	74.7	0.0	82.9	0.0	80.3
Income reported as zero[a]	4.2	84.9	3.0	86.2	3.0	78.9	3.6	83.7	4.9	79.6	1.7	84.6	2.9	83.2
Not reported[b]	15.1	100.0	13.8	100.0	21.1	100.0	16.3	100.0	20.4	100.0	15.4	100.0	16.8	100.0
Total WIC	271,086		164,307		149,931		585,324		622,187		1,388,655		2,596,166	

Exhibit 4.9 (continued)

Distribution of Percent of Poverty Level of WIC Participants by Participant Category and Racial or Ethnic Characteristics

	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women		Infants		Children		Total WIC	
Percent of Poverty Level	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**	**Percent**	**Cumulative Percent**
White (non-Hispanic)														
0 - 50	22.3%	22.3%	19.6%	19.6%	26.4%	26.4%	23.2%	23.2%	24.1%	24.1%	22.9%	22.9%	23.3%	23.3%
51 - 100	26.0	48.3	27.0	46.6	25.2	51.6	25.9	49.1	25.0	49.2	28.8	51.7	27.1	50.4
101 - 130	14.4	62.7	17.1	63.7	13.9	65.4	14.7	63.8	14.8	64.0	16.2	67.9	15.5	65.8
131 - 150	8.6	71.3	10.0	73.7	7.4	72.9	8.5	72.2	7.9	71.8	9.0	76.9	8.6	74.4
151 - 185	11.3	82.6	11.0	84.7	8.4	81.3	10.3	82.5	8.9	80.7	10.4	87.3	10.0	84.4
186 - 200	0.8	83.4	0.5	85.2	0.5	81.7	0.6	83.2	0.4	81.2	0.5	87.8	0.5	84.9
201 - 225	0.5	83.9	0.3	85.5	0.3	82.0	0.4	83.6	0.3	81.4	0.3	88.1	0.3	85.2
226 - 250	0.3	84.2	0.1	85.6	0.2	82.2	0.2	83.8	0.2	81.6	0.1	88.2	0.2	85.4
Over 250	0.3	84.5	0.2	85.8	0.2	82.4	0.3	84.0	0.2	81.8	0.2	88.4	0.2	85.6
Income reported as zero[a]	3.6	88.1	2.3	88.1	2.6	84.9	3.0	87.1	3.2	85.0	1.6	90.0	2.4	88.0
Not reported[b]	11.9	100.0	11.9	100.0	15.1	100.0	12.9	100.0	15.0	100.0	10.0	100.0	12.0	100.0
Total WIC	383,421		143,711		260,523		787,656		814,779		1,553,170		3,155,604	
Racial data not reported														
0 - 50	21.2%	21.2%	19.0%	19.0%	15.4%	15.4%	18.6%	18.6%	26.1%	26.1%	24.2%	24.2%	23.4%	23.4%
51 - 100	24.5	45.6	24.1	43.1	17.0	32.3	21.7	40.2	23.9	50.0	24.9	49.1	23.8	47.2
101 - 130	10.5	56.1	11.9	55.1	7.9	40.2	9.9	50.1	9.9	59.9	11.5	60.6	10.6	57.8
131 - 150	5.8	61.9	6.0	61.1	4.0	44.2	5.2	55.3	4.8	64.7	5.6	66.2	5.3	63.1
151 - 185	5.1	67.0	5.0	66.0	5.0	49.3	5.1	60.3	4.3	69.0	5.6	71.8	5.1	68.1
186 - 200	0.1	67.1	0.2	66.3	0.0	49.3	0.1	60.5	0.1	69.2	0.2	72.0	0.1	68.3
201 - 225	0.1	67.2	0.0	66.3	0.0	49.3	0.0	60.5	0.1	69.3	0.1	72.1	0.1	68.4
226 - 250	0.1	67.3	0.1	66.3	0.0	49.3	0.1	60.5	0.1	69.3	0.0	72.1	0.0	68.4
Over 250	0.0	67.3	0.2	66.5	0.0	49.4	0.1	60.6	0.2	69.5	0.1	72.2	0.1	68.5
Income reported as zero[a]	12.2	79.6	5.7	72.3	4.8	54.1	8.0	68.6	9.0	78.5	4.8	77.0	6.9	75.5
Not reported[b]	20.4	100.0	27.7	100.0	45.9	100.0	31.4	100.0	21.5	100.0	23.0	100.0	24.5	100.0
Total WIC	6,709		3,832		6,012		16,553		21,413		29,738		67,704	

Notes

Poverty level calculations are based on income, income period, and household size as reported by State WIC agencies.

[a] Zero incomes are reported separately and excluded from these income calculations. In some reporting agencies, zero may be used to indicate missing information or adjunctive eligibility. PC98 cannot, therefore, distinguish between households with missing income information and households reporting zero income.

[b] Not reported indicates the percentage of participants by participant category for whom no data on income, income period, or size of economic unit are reported.

Exhibit 4.10

Distribution of Percent of Poverty Level at Certification for WIC Participants Reporting No Other Benefit Receipt[a]

Percent of Poverty Level	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women		Infants		Children		Total WIC	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Percent by participant category													
0 - 50	55,277	14.1%	22,798	12.9%	30,328	15.6%	108,402	14.2%	150,926	18.0%	196,524	13.3%	455,852	14.8%
51-100	113,702	29.1	60,149	34.0	58,487	30.2	232,339	30.5	247,221	29.5	487,153	33.0	966,714	31.4
101-130	67,428	17.2	33,935	19.2	35,981	18.6	137,344	18.0	136,745	16.3	296,396	20.1	570,485	18.5
131-150	41,485	10.6	19,124	10.8	20,520	10.6	81,129	10.7	75,740	9.0	173,196	11.7	330,065	10.7
151-185	56,788	14.5	20,763	11.8	23,850	12.3	101,401	13.3	86,038	10.3	201,386	13.6	388,825	12.6
186-200	1,937	0.5	456	0.3	525	0.3	2,918	0.4	1,757	0.2	4,458	0.3	9,133	0.3
201-225	1,254	0.3	177	0.1	205	0.1	1,637	0.2	730	0.1	1,755	0.1	4,121	0.1
226-250	506	0.1	75	0.0	109	0.1	690	0.1	322	0.0	694	0.0	1,706	0.1
Over 250	485	0.1	140	0.1	185	0.1	809	0.1	687	0.1	1,154	0.1	2,650	0.1
Income reported as zero[b]	29,285	7.5	9,593	5.4	11,957	6.2	50,835	6.7	60,787	7.2	53,570	3.6	165,192	5.4
Not reported[c]	22,824	5.8	9,490	5.4	11,653	6.0	43,967	5.8	78,095	9.3	60,024	4.1	182,086	5.9
Total WIC	390,971	100.0%	176,700	100.0%	193,801	100.0%	761,471	100.0%	839,047	100.0%	1,476,309	100.0%	3,076,827	100.0%

Notes

[a] This table excludes individuals for whom no data regarding participation in TANF, Food Stamps, and Medicaid are reported.

[b] Zero incomes are reported separately and excluded from these income calculations. In some reporting agencies, zero may be used to indicate missing information or adjunctive eligibility. PC98 cannot, therefore, distinguish between households with missing income information and households reporting zero income.

[c] Not reported indicates the percentage of participants by participant category for whom no data on income, income period, or size of economic unit are reported.

Exhibit 4.11

Comparison of Poverty Levels of WIC Participants to Persons in the US Population in 1998

Percent of Poverty Level	General US Population[a] 1998	Persons in US Families[a] 1998	Persons in US Families with Children Under Six Years[a] 1998	US WIC[b] 1998	US WIC Reporting[b] Income 1998
0 - 50	5.0%	4.9%	9.7%	28.1%	34.0%
51 - 100	8.1	7.4	11.6	28.7	34.7
101 - 130	5.4	4.9	7.1	12.5	15.1
131 - 150	3.8	3.5	4.4	6.1	7.4
151 - 185	6.8	6.5	8.1	6.6	8.0
186 - 200	2.8	2.8	3.0	0.3	0.3
Over 200	66.7	69.1	54.6	0.4	0.4
Income reported as zero[c]	1.4	1.0	1.7	2.8	N/A
Not reported[d]	N/A	N/A	N/A	14.6	N/A
Total	268,480,000	226,809,000	69,825,000	8,042,758	6,649,144

Notes

N/A indicates not applicable.

[a] Source: March 1998 *Current Population Survey.*
Current Population Survey poverty levels reflect respondents' 1997 incomes.

[b] WIC participant poverty level calculations are based on income, income period, and household size as reported by State WIC agencies. Figures in this table represent a count of individual WIC participants.

[c] Zero incomes are reported separately and excluded from these income calculations. In some reporting agencies, zero may be used to indicate missing information or adjunctive eligibility. PC98 cannot, therefore, distinguish between households with missing income information and households reporting zero income.

[d] Not reported indicates the percentage of participants for whom no data on income, income period, or size of economic unit are reported.

percent of WIC participants in that category declined 8 percentage points from 36 percent in 1994 to 34 percent in 1996 and to 28 percent in 1998. The expansion of WIC has allowed the program to serve more "near poor" individuals—households with incomes above the poverty level but less than 185 percent of poverty. Because of the large amount of unreported income data, caution must be exercised when interpreting these figures.

Within racial/ethnic categories, the percentage of Hispanic WIC enrollees below the poverty line has decreased from 71 percent in 1996 to 60 percent in 1998. This decline represents the greatest decrease among any ethnic group, though 60 percent of Hispanic WIC enrollees still live below the poverty line. The percentage of black WIC enrollees below the poverty line has decreased 4.6 percentage points since 1996, after decreasing 3 percentage points between 1994 and 1996. The percent of Asians reporting income at or below the poverty level declined by 7.4 percentage points between 1996 and 1998. Whites displayed a five percentage point decrease during this time. Again, it is important to note that these findings apply to only the 83 percent of April 1998 WIC participants for whom income data were reported.

Exhibit 4.10 presents the distribution of percent of poverty for those participants who report no participation in the TANF, Food Stamp, and Medicaid Programs. This group accounts for 38 percent of the WIC population. There are some differences between this group and the WIC population receiving other benefits. About one-half (46 percent) of these individuals are below the poverty line as compared with 62 percent of the WIC population reporting participation in public aid programs. While the percentage of participants below the poverty line decreased by 11 percentage points between 1996 and 1998 for the WIC population reporting participation in aid programs, the decline was only one percentage point for participants receiving no other benefits.

The poverty of WIC participants can be seen in the information displayed in Exhibit 4.11. This table contains data on percent of poverty level for the general US population, for American families, and for families with children under six years of age. National data are drawn from the US Census Bureau's *Current Population Survey*. In general, in this country, 5 percent of the population falls into the 0-to-50 percent poverty level. The rate increases to 9.7 percent for families with children under six years of age. In 1998, over one-quarter (28.1 percent) of all WIC participants reported incomes falling into the 0-to-50 percent of poverty range. WIC participants are clearly concentrated at the lower end of the poverty distribution.

5. NUTRITIONAL RISK CHARACTERISTICS

Applicants must be determined to be at nutritional risk to meet eligibility requirements for the WIC program. To qualify for WIC benefits, applicants must be determined to be at risk based on anthropometric, biochemical, medical, or dietary factors. During the determination process, height and weight must be measured, and a blood test for anemia (usually hemoglobin or hematocrit) administered to all participants except infants under six months of age.[1] Medical history or dietary patterns may also be considered during this process. The nutritional risk determination is made by a competent professional authority, such as a physician, nutritionist, nurse, or other health professional or paraprofessional.

In order to allow for coordination with medical care, Federal policy has, since the inception of the WIC Program, permitted State agencies to develop nutrition risk criteria within broad Federal parameters spelled out in the Child Nutrition Act of 1966, as amended. Accordingly, the nutrition risk criteria used to determine eligibility have historically varied from State to State. WIC Participant and Program Characteristics reports from 1988 through 1998 reflect these differences among States. Because of concerns about equity, in 1992 FNS asked the National Academy of Sciences (NAS) Institute of Medicine to review the scientific basis for risk criteria used in the program, and recommend definitions and cutoffs. NAS issued a report with recommendations in 1996, which became the basis for a policy change that took effect April 1, 1999. States are now required to use only criteria that have been reviewed by the Risk Identification and Selection Collaborative (a joint NAWD/FNS working group) and approved by FNS. Data reflecting these uniform risk definitions will first become available with the publication of PC2000.

Because nutritional risk criteria vary across State WIC agencies, criteria must be grouped into categories (standardized) in order to report on national participant characteristics. A committee of the National Association of WIC Directors (NAWD) created a set of risk categories which FNS has chosen to use for reporting nutritional risk data for biennial participant studies, including PC98. Each State WIC agency converted its specific nutritional risk criteria into the NAWD categories that are used, throughout this chapter, to display PC98 data on nutritional risks. Definitions of the NAWD risks appear in Exhibit 5.1.

Nutritional Risk Criteria

During the eligibility determination process, WIC staff collect dietary information from applicants and participants. Exhibits 5.2 and 5.3 present information on State dietary intake policies and methods. Most States obtain dietary intake information from all participants. In PC98, as in PC96, approximately four-fifths of the States used twenty-four hour recalls and food frequency/food item checklists to obtain nutritional data. State-by-State tables appear in Appendix D.

During the certification process, nutritional risks are recorded in applicant files. An applicant may be determined to possess more than one nutritional risk. Approximately 65 percent of the State WIC agencies and 85 percent of local WIC agencies

[1]Children with normal blood test results at last certification are also not tested.

Exhibit 5.1

Broad Categories of Nutritional Risk Criteria Developed by the National Association of WIC Directors

Anthropometric

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

Biochemical

- Hematocrit or hemoglobin below State criteria
- Other biochemical test results which indicate nutritional abnormality (such as cholesterol, folic acid, B_6, B_{12}, other nutritional anemias)

Clinical/Health/Medical

- Pregnancy-induced conditions (such as toxemia, preeclampsia, eclampsia, pregnancy-induced hypertension, gestational diabetes, excessive vomiting, and nausea)
- Delivery of low-birthweight/premature infant
- Prior stillbirth, miscarriage, spontaneous abortion, or neonatal death
- General obstetrical risks (such as multiple fetus births, high parity, closely spaced pregnancies, age)
- Nutrition-related risk conditions (such as any nutrition-related chronic disease, genetic disorder, infectious disease, clinical malnutrition, failure to thrive, drug nutrient interactions)
- Substance abuse (drugs, alcohol, tobacco)
- Other health risk (such as mental retardation)

Dietary

- Inadequate/inappropriate nutrient intake
- Other dietary risk

Other Risk

- Regression
- Transfer (nutrition risk unknown)
- Breastfeeding mother/infant dyad
- Infant of a WIC-eligible mother or mother at risk during pregnancy
- Homelessness/migrancy
- Other nutritional risks

Exhibit 5.2

State Policies for Obtaining Dietary Intake Information

State Dietary Policy	State Agencies	
	Number	Percent
Information is obtained from all participants	76	86.4%
Information is obtained only from participants at risk due to dietary inadequacy	5	5.7
Other policies affect obtaining information[a]	7	8.0
Total	88	100.0%

Note

[a]For more information on other policies, see Exhibit D5.2 in Appendix D.

Exhibit 5.3

Dietary Intake Methods Routinely Used by States

Dietary Intake Method	State Agencies	
	Number	Percent[a]
Twenty-four hour recall	72	81.8%
Food frequency/food item checklist	70	79.5
Dietary record or diary	6	6.8
Computer-assisted analysis	7	8.0
Some other method[b]	2	2.3

Notes

[a]Responses are not mutually exclusive, so percentages do not sum to 100 percent. Percentages are based on the number (88) of reporting State WIC agencies.

[b]For more information on other methods, see Exhibit D5.3 in Appendix D.

(representing about three-quarters of all WIC participants) reported that every identified nutritional risk is recorded for each participant. State and local documentation policies are displayed in Exhibit 5.4; State-by-State tables appear in Appendix D.

States may report the three highest priority nutritional risks present at the current certification. The percentage of WIC participants for whom three nutritional risks were reported was almost 22 percent in 1998, slightly more than the 18 percent reported in 1994 and the 19 percent in 1996, but less than the 26 percent reported in 1992. PC98 data are not conducive to more detailed analysis of these fluctuations. An infant or child is more likely to have a single nutritional risk reported, while the categories of pregnant and breastfeeding women have the highest percentages of participants with three nutritional risks. At least one nutritional risk was reported for 99.2 percent of all individuals enrolled in the WIC Program in April 1998. (See Exhibit 5.5.)

Nutritional Risks in PC98

One notable strength of PC98's census dataset is that it allows examination of nutritional risks for specific participant subgroups, such as American Indian/Alaskan Native WIC enrollees. PC98 also permits consideration of characteristics of pregnant teenagers and migrants. Distributions of nutritional risks by participant category, age, and race/ethnicity are presented in Exhibits 5.6 through 5.23. Exhibits 5.6, 5.7, 5.10, 5.11, and 5.23 provide detailed analysis by participant age, while Exhibits 5.12 through 5.16 and 5.18 through 5.22 display distributions of nutritional risk by racial/ethnic categories. (Migrant WIC enrollment is described in Chapter Eight.)

Consistent with earlier PCs, the most commonly reported categories of nutritional risk reported for the entire WIC population are anthropometric and dietary risks (Exhibit 5.8). Distributions vary, however, across participant categories.

The nutritional risks reported most frequently for WIC women in PC98, as in PC96, PC94, and PC92, are general obstetrical risks and inadequate or inappropriate nutrient intake. Blood measurements below State criteria were reported for a quarter of WIC women. Clinical, medical, and health risks (and, in particular, general obstetrical risks) were reported for almost 90 percent of women under eighteen years of age and 77 percent of women over thirty-four years of age, compared with about 50 percent of women between the ages of eighteen and thirty-four. Dietary risk reports were highest among women eighteen to thirty-four years of age. (See Exhibits 5.6, 5.9, and 5.23.)

While the distribution of nutritional risks in 1998 is generally similar to that in PC96, a few substantial changes occurred. For pregnant, breastfeeding, and postpartum women, the rate at which high weight for height was reported increased by 3 to 4 percentage points. The incidence of high weight for height has increased steadily from 1992—an overall increase of 8 percentage points. This incidence of inappropriate weight gain reported for all women has also increased for all women from 22 percent in 1992 to 25 percent in 1998. These trends among WIC participants mirror changes observed in the general population. From PC96 to PC98, the rate at which inadequate or inappropriate nutrition intake was reported increased among all women by 2.3 percentage points, with the largest increase occurring among breastfeeding women. However, the rate has fluctuated since 1992, so no trend is evident. The incidence of other categories of risks changed by smaller amounts, if at all, from PC96 to PC98.

Nutritional risks for infants vary by age at certification. (See Exhibits 5.7 and 5.10.) In PC92, PC94, PC96 and PC98, about three-quarters of all infants from zero to three

Exhibit 5.4

State and Local Agency Documentation of Nutritional Risk Criteria

Method	State Agencies		Percent of Local Agencies[a,b]	Percent of Participants[a,b]
	Number	Percent		
The single most important risk criterion is recorded[c]	0	0.0%	1.0% (0.53)	1.4% (0.42)
All risk criteria are recorded	56	63.6	86.7 (0.00)	78.8 (0.00)
A set number of the more important risk criteria are recorded[d]	21	23.9	8.4 (1.44)	15.4 (4.01)
The most easily and quickly identifiable criteria are recorded	3	3.4	0.4 (0.32)	0.5 (0.34)
Local certifiers decide which criteria and how many criteria to record	7	8.0	2.7 (0.85)	1.2 (0.48)
Some other procedure is used[e]	1	1.1	0.7 (0.36)	1.0 (0.51)
Not reported	0	0.0	0.2 (0.25)	1.6 (2.22)
Total	88	100.0%	100.0%	100.0%

Notes

[a]Standard errors are in parentheses.

[b]A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[c]It is likely that the local WIC agencies in this category are located in States allowing local discretion and that these local agencies have chosen to record the single most important risk.

[d]Most State agencies report documenting three or five risks.

[e]For more information on other procedures reported by State WIC agencies, see Exhibit D5.4 in Appendix D.

Exhibit 5.5

Distribution of Number of Nutritional Risk Factors for WIC Participants Reported at Certification 1994, 1996, 1998

Number of Risk Factors	Pregnant Women			Breastfeeding Women			Postpartum Women			Infants			Children			Total WIC		
	1994	1996	1998	1994	1996	1998	1994	1996	1998	1994	1996	1998	1994	1996	1998	1994	1996	1998
	Percent by participant category																	
1	22.6%	19.6%	17.1%	24.2%	19.8%	17.1%	30.5%	31.7%	27.4%	58.9%	57.2%	53.0%	53.3%	54.5%	51.7%	48.4%	48.1%	44.7%
2	33.4	33.3	32.1	31.6	35.3	32.5	35.7	35.3	34.6	30.2	30.1	32.7	33.7	32.2	33.1	32.8	32.1	33.0
3	42.7	45.7	50.3	43.2	44.2	49.9	32.2	32.4	37.5	9.9	12.1	13.8	12.1	12.9	14.6	17.8	19.2	21.7
No risk reported	1.4	1.3	0.5	1.0	0.7	0.4	1.6	0.6	0.4	1.0	0.5	0.5	1.0	0.5	0.6	1.1	0.6	0.5
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Note

In 1994, 1996, and 1998 each State WIC agency reported up to three risks, recorded for each participant, on its automated client information system.

Exhibit 5.6
Number and Percent of Women WIC Participants by Participant Category, Age at Certification, and Type of Nutritional Risk Reported

Participant Category and Age at Certification	Anthropometric		Biochemical		Clinical, Health, and Medical		Dietary		Other Risks[a]		No Risk Reported		Total Women[b]	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Percent by participant category and age													
Pregnant women	577,828	64.7%	214,438	24.0%	543,284	60.9%	409,442	45.9%	17,953	2.0%	4,827	0.5%	892,674	100.0%
Under 15 years	3,661	53.6	2,020	29.6	6,214	91.1	2,659	39.0	125	1.8	45	0.7	6,825	100.0
15 - 17 years	50,365	55.6	22,475	24.8	81,708	90.2	34,978	38.6	1,515	1.7	463	0.5	90,568	100.0
18 - 34 years	489,643	66.0	176,195	23.7	412,226	55.5	356,480	48.0	15,407	2.1	3,966	0.5	742,123	100.0
35 or more years	33,260	64.8	13,347	26.0	42,009	81.8	14,612	28.5	731	1.4	245	0.5	51,354	100.0
Age not reported	900	49.9	401	22.2	1,128	62.5	714	39.5	175	9.7	108	6.0	1,804	100.0
Breastfeeding women	190,186	48.8	96,544	24.8	212,132	54.5	175,038	45.0	155,910	40.0	1,488	0.4	389,391	100.0
Under 15 years	239	38.1	239	38.2	556	88.7	215	34.4	189	30.3	1	0.2	626	100.0
15 - 17 years	5,903	37.4	4,579	29.0	13,809	87.4	5,800	36.7	5,629	35.6	62	0.4	15,791	100.0
18 - 34 years	160,966	48.9	81,731	24.8	165,843	50.4	153,366	46.6	136,067	41.3	1,261	0.4	329,339	100.0
35 or more years	22,113	53.2	9,519	22.9	30,782	74.0	14,569	35.0	13,375	32.2	118	0.3	41,575	100.0
Age not reported	965	46.8	474	23.0	1,143	55.5	1,088	52.8	650	31.5	46	2.2	2,061	100.0
Postpartum women	264,107	44.7	199,813	33.8	336,812	57.0	288,826	48.9	37,282	6.3	2,564	0.4	591,050	100.0
Under 15 years	965	32.5	1,186	39.9	2,613	88.0	1,267	42.7	155	5.2	9	0.3	2,970	100.0
15 - 17 years	17,901	34.1	18,810	35.8	45,014	85.7	22,372	42.6	3,018	5.7	212	0.4	52,553	100.0
18 - 34 years	226,488	45.7	167,679	33.8	259,937	52.4	250,105	50.4	31,901	6.4	2,141	0.4	496,085	100.0
35 or more years	16,949	47.5	11,031	30.9	26,851	75.2	13,044	36.5	2,025	5.7	111	0.3	35,692	100.0
Age not reported	1,804	48.1	1,108	29.5	2,397	63.9	2,039	54.4	184	4.9	91	2.4	3,750	100.0
Total women	1,032,121	55.1	510,795	27.3	1,092,229	58.3	873,307	46.6	211,145	11.3	8,880	0.5	1,873,116	100.0
Under 15 years	4,864	46.7	3,445	33.1	9,383	90.0	4,141	39.7	469	4.5	55	0.5	10,421	100.0
15 - 17 years	74,169	46.7	45,864	28.9	140,530	88.4	63,150	39.7	10,162	6.4	737	0.5	158,912	100.0
18 - 34 years	877,097	56.0	425,605	27.2	838,005	53.5	759,952	48.5	183,374	11.7	7,368	0.5	1,567,547	100.0
35 or more years	72,322	56.2	33,897	26.4	99,642	77.5	42,224	32.8	16,130	12.5	474	0.4	128,620	100.0
Age not reported	3,668	48.2	1,983	26.0	4,668	61.3	3,840	50.4	1,009	13.2	245	3.2	7,615	100.0

Notes

[a]Other risks include regression, transfer (nutritional risk unknown), breastfeeding mother and infant dyad, and homelessness/migrancy.

[b]The total women column reports only number of women in the category.

In 1998, State WIC agencies could report up to three nutritional risks for each participant. This table examines all risks reported for every participant. When multiple risks within the same classification are reported for one person, these risks are combined and counted one time in order to accurately calculate the number and percentage of WIC participants with a specific type (or category) of risk. Nonetheless, because of the reporting of multiple risks, columns total more than 100 percent.

Exhibit 5.7

Number and Percent of Infant and Child WIC Participants by Age at Certification and Type of Nutritional Risk Reported

Participant Category and Age at Certification	Anthropometric		Biochemical		Clinical, Health, and Medical		Dietary		Other Risks[a]		No Risk Reported		Total Infants and Children	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Percent by participant category and age													
Infants[b]	485,718	23.7%	77,506	3.8%	230,905	11.3%	270,857	13.2%	1,699,267	82.9%	9,610	0.5%	2,048,626	100.0%
0 - 3 months	396,819	21.9	32,505	1.8	194,674	10.7	179,857	9.9	1,604,936	88.6	8,061	0.4	1,811,288	100.0
4 - 5 months	18,374	33.6	4,599	8.4	9,511	17.4	15,142	27.7	33,179	60.6	380	0.7	54,738	100.0
6 - 8 months	49,876	38.8	27,251	21.2	18,392	14.3	53,359	41.5	50,959	39.7	546	0.4	128,445	100.0
9 - 11 months	19,364	39.2	12,736	25.8	8,065	16.3	21,775	44.1	6,723	13.6	464	0.9	49,336	100.0
Age not reported	1,285	26.7	415	8.6	264	5.5	725	15.0	3,469	72.0	160	3.3	4,819	100.0
Children	1,385,441	33.6	1,007,429	24.4	783,081	19.0	2,815,146	68.3	241,539	5.9	24,661	0.6	4,121,017	100.0
1 year	555,272	37.8	412,602	28.1	262,632	17.9	956,120	65.1	95,794	6.5	14,075	1.0	1,468,580	100.0
2 years	354,960	34.3	270,058	26.1	193,057	18.7	710,052	68.6	54,190	5.2	4,034	0.4	1,034,432	100.0
3 years	262,070	28.6	201,685	22.0	183,621	20.0	651,664	71.0	49,388	5.4	3,556	0.4	917,758	100.0
4 years	202,239	30.2	119,731	17.9	140,646	21.0	474,270	70.9	37,230	5.6	2,521	0.4	668,972	100.0
Age not reported	10,901	34.9	3,353	10.7	3,124	10.0	23,041	73.7	4,936	15.8	475	1.5	31,275	100.0

Notes

In 1998, State WIC agencies could report up to three nutritional risks for each participant. This table examines all risks reported for every participant. When multiple risks within the same classification are reported for one person, these risks are combined and counted one time in order to accurately calculate the number and percentage of WIC participants with a specific type (or category) of risk. Nonetheless, because of the reporting of multiple risks, columns total more than 100 percent.

[a]Other risks include regression, transfer (nutritional risk unknown), breastfeeding mother and infant dyad, infant of a WIC-eligible mother or mother at risk during pregnancy, and homelessness/migrancy.

[b]An infant is defined as a participant who, at certification, is under one year of age and who would be classified as a child at the age of 366 days.

Exhibit 5.8

Number and Percent of WIC Participants with Specific Nutritional Risks Reported at Certification

Type of Risk and Specific Risk	WIC Participants	
	Number	Percent
	Percent by risk type	
Anthropometric	2,903,281	36.1%
Low weight for height	358,898	4.5
High weight for height	1,337,250	16.6
Short stature	477,234	5.9
Inappropriate growth or weight gain pattern	917,589	11.4
Low birthweight or premature birth	206,807	2.6
Other anthropometric	128,703	1.6
Biochemical	1,595,730	19.8
Hematocrit or hemoglobin below State criteria	1,588,314	19.7
Other biochemical test results which indicate nutritional abnormality	11,311	0.1
Clinical, Health, Medical	2,106,215	26.2
Pregnancy-induced conditions	60,258	0.7
Delivery of low-birthweight or premature infant	41,159	0.5
Prior stillbirth, miscarriage, spontaneous abortion, or neonatal death	79,329	1.0
General obstetrical risks	733,475	9.1
Nutrition-related risk conditions	606,252	7.5
Substance abuse	452,142	5.6
Other health risk	490,104	6.1
Dietary	3,959,310	49.2
Inadequate or inappropriate nutrient intake	3,684,785	45.8
Other dietary risk	461,737	5.7
Other risk	2,151,951	26.8
Regression	130,579	1.6
Transfer (nutrition risk unknown)	133,306	1.7
Breastfeeding mother and infant dyad	644,458	8.0
Infant of a WIC-eligible mother or mother at risk during pregnancy	1,541,844	19.2
Homelessness/Migrancy	5,777	0.1
Other nutritional risks	59,570	0.7
No risk reported	43,151	0.5
US WIC - total number of risks reported	14,150,880	
US WIC - total number of participants	8,042,758	

Note

In 1998, State WIC agencies could report up to three nutritional risks for each participant. This table examines all risks reported for every participant. When multiple risks within the same classification are reported for one person, these risks are combined and counted one time in order to accurately calculate the number and percentage of WIC participants with a specific type (or category) of risk.

Exhibit 5.9

Number and Percent of Women WIC Participants by Participant Category with Specific Nutritional Risks Reported

Risk	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
				Percent by participant category				
Women in category	892,674		389,391		591,050		1,873,116	
Anthropometric	577,828	64.7%	190,186	48.8%	264,107	44.7%	1,032,121	55.1%
Low weight for height	77,898	8.7	13,198	3.4	23,331	3.9	114,427	6.1
High weight for height	269,548	30.2	141,720	36.4	193,739	32.8	605,007	32.3
Short stature	14,346	1.6	563	0.1	1,401	0.2	16,310	0.9
Inappropriate growth or weight gain pattern	349,807	39.2	50,307	12.9	61,541	10.4	461,655	24.6
Other anthropometric	22,804	2.6	3,564	0.9	5,606	0.9	31,974	1.7
Biochemical	214,438	24.0	96,544	24.8	199,813	33.8	510,795	27.3
Hematocrit or hemoglobin below State criteria	213,750	23.9	96,324	24.7	199,280	33.7	509,354	27.2
Other biochemical test results which indicate nutritional abnormality	1,176	0.1	445	0.1	962	0.2	2,583	0.1
Clinical, Health, Medical	543,284	60.9	212,132	54.5	336,812	57.0	1,092,229	58.3
Pregnancy-induced conditions	25,981	2.9	15,327	3.9	18,950	3.2	60,258	3.2
Delivery of low-birthweight or premature infant	16,282	1.8	7,368	1.9	17,508	3.0	41,159	2.2
Prior stillbirth, miscarriage, spontaneous abortion, or neonatal death	42,600	4.8	10,622	2.7	26,108	4.4	79,329	4.2
General obstetrical risks	370,126	41.5	147,399	37.9	215,950	36.5	733,475	39.2
Nutrition-related risk conditions	80,660	9.0	25,418	6.5	39,874	6.7	145,953	7.8
Substance abuse	119,100	13.3	29,319	7.5	56,316	9.5	204,735	10.9
Other health risk	31,076	3.5	25,342	6.5	46,258	7.8	102,676	5.5
Dietary	409,442	45.9	175,038	45.0	288,826	48.9	873,307	46.6
Inadequate or inappropriate nutrient intake	394,622	44.2	171,344	44.0	280,833	47.5	846,799	45.2
Other dietary risk	24,019	2.7	5,613	1.4	11,080	1.9	40,713	2.2
Other risk	17,953	2.0	155,910	40.0	37,282	6.3	211,145	11.3
Regression	48	0.0	1,026	0.3	1,577	0.3	2,650	0.1
Transfer (nutrition risk unknown)	11,583	1.3	4,683	1.2	14,172	2.4	30,438	1.6
Breastfeeding mother and infant dyad	246	0.0	151,061	38.8	5,424	0.9	156,730	8.4
Homelessness/Migrancy	630	0.1	226	0.1	244	0.0	1,101	0.1
Other nutritional risks	5,473	0.6	2,708	0.7	16,242	2.7	24,422	1.3
No risk reported	4,827	0.5	1,488	0.4	2,564	0.4	8,880	0.5

Note

In 1998, State WIC agencies could report up to three nutritional risks for each participant. This table examines all risks reported for every participant. When multiple risks within the same classification are reported for one person, these risks are combined and counted one time in order to accurately calculate the number and percentage of WIC participants with a specific type (or category) of risk.

Exhibit 5.10

Number and Percent of Infant WIC Participants with Specific Nutritional Risks Reported by Age at Certification

Risk	0 - 3 Months		4 - 5 Months		6 - 8 Months		9 - 11 Months		Age Not Reported		Total Infants	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
						Percent by age						
Infants in age group	1,811,288		54,738		128,445		49,336		4,819		2,048,626	
Anthropometric	396,819	21.9%	18,374	33.6%	49,876	38.8%	19,364	39.2%	1,285	26.7%	485,718	23.7%
Low weight for height	59,024	3.3	1,452	2.7	4,049	3.2	3,110	6.3	190	3.9	67,825	3.3
High weight for height	55,611	3.1	6,061	11.1	15,837	12.3	6,811	13.8	440	9.1	84,760	4.1
Short stature	121,047	6.7	4,836	8.8	12,242	9.5	5,819	11.8	354	7.3	144,297	7.0
Inappropriate growth or weight gain pattern	56,427	3.1	4,280	7.8	18,820	14.7	5,837	11.8	198	4.1	85,563	4.2
Low birthweight or premature birth	167,243	9.2	5,230	9.6	9,920	7.7	2,393	4.9	290	6.0	185,076	9.0
Other anthropometric	54,251	3.0	1,209	2.2	2,109	1.6	320	0.6	186	3.9	58,074	2.8
Biochemical	32,505	1.8	4,599	8.4	27,251	21.2	12,736	25.8	415	8.6	77,506	3.8
Hematocrit or hemoglobin below State criteria[a]	32,043	1.8	4,557	8.3	27,179	21.2	12,666	25.7	414	8.6	76,859	3.8
Other biochemical test results which indicate nutritional abnormality	495	0.0	52	0.1	119	0.1	147	0.3	2	0.0	815	0.0
Clinical, Health, Medical	194,674	10.7	9,511	17.4	18,392	14.3	8,065	16.3	264	5.5	230,905	11.3
Nutrition-related risk conditions	59,878	3.3	3,297	6.0	7,558	5.9	5,527	11.2	129	2.7	76,390	3.7
Substance abuse	76,386	4.2	1,762	3.2	1,351	1.1	404	0.8	55	1.1	79,958	3.9
Other health risk	67,544	3.7	4,894	8.9	10,159	7.9	2,479	5.0	89	1.8	85,166	4.2
Dietary	179,857	9.9	15,142	27.7	53,359	41.5	21,775	44.1	725	15.0	270,857	13.2
Inadequate or inappropriate nutrient intake	134,359	7.4	9,644	17.6	30,751	23.9	17,847	36.2	649	13.5	193,250	9.4
Other dietary risk	49,601	2.7	6,100	11.1	25,510	19.9	4,727	9.6	113	2.3	86,051	4.2
Other risk	1,604,936	88.6	33,179	60.6	50,959	39.7	6,723	13.6	3,469	72.0	1,699,267	82.9
Regression	438	0.0	137	0.3	1,196	0.9	710	1.4	5	0.1	2,486	0.1
Transfer (nutrition risk unknown)	37,756	2.1	2,953	5.4	4,170	3.2	773	1.6	136	2.8	45,789	2.2
Breastfeeding mother and infant dyad	457,550	25.3	7,679	14.0	13,757	10.7	2,115	4.3	590	12.2	481,691	23.5
Infant of a WIC-eligible mother or mother at risk during pregnancy	1,439,188	79.5	25,973	47.4	38,484	30.0	3,347	6.8	2,811	58.3	1,509,803	73.7
Homelessness/Migrancy	894	0.0	84	0.2	147	0.1	51	0.1	2	0.0	1,178	0.1
Other nutritional risks	9,800	0.5	439	0.8	264	0.2	79	0.2	341	7.1	10,923	0.5
No risk reported	8,061	0.4	380	0.7	546	0.4	464	0.9	160	3.3	9,610	0.5

Notes

In 1998, State WIC agencies could report up to three nutritional risks for each participant. This table examines all risks reported for every participant. When multiple risks within the same classification are reported for one person, these risks are combined and counted one time in order to accurately calculate the number and percentage of WIC participants with a specific type (or category) of risk.

[a] Federal WIC regulations permit State and local agencies to dispense with hematological testing for infants under six months of age, as well as for children who are found to be within normal ranges at their last certification. However, blood tests should be performed on such children at least once in every twelve-month period.

Exhibit 5.11

Number and Percent of Child WIC Participants with Specific Nutritional Risks Reported by Age at Certification

Risk	1 Year[a]		2 Years		3 Years		4 Years		Age Not Reported		Total Children	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
						Percent by age						
Children in age group	1,468,580		1,034,432		917,758		668,972		31,275		4,121,017	
Anthropometric	555,272	37.8%	354,960	34.3%	262,070	28.6%	202,239	30.2%	10,901	34.9%	1,385,441	33.6%
Low weight for height	76,434	5.2	44,986	4.3	32,733	3.6	21,099	3.2	1,395	4.5	176,646	4.3
High weight for height	246,086	16.8	172,014	16.6	120,036	13.1	102,276	15.3	7,072	22.6	647,483	15.7
Short stature	133,428	9.1	80,312	7.8	58,987	6.4	41,900	6.3	1,999	6.4	316,626	7.7
Inappropriate growth or weight gain pattern	157,553	10.7	92,550	8.9	68,783	7.5	50,121	7.5	1,363	4.4	370,371	9.0
Low birthweight or premature birth	16,655	1.1	2,613	0.3	1,224	0.1	708	0.1	530	1.7	21,730	0.5
Other anthropometric	15,354	1.0	9,079	0.9	8,308	0.9	5,824	0.9	89	0.3	38,655	0.9
Biochemical	412,602	28.1	270,058	26.1	201,685	22.0	119,731	17.9	3,353	10.7	1,007,429	24.4
Hematocrit or hemoglobin below State criteria[b]	411,342	28.0	268,453	26.0	200,189	21.8	118,767	17.8	3,351	10.7	1,002,102	24.3
Other biochemical test results which indicate nutritional abnormality	2,117	0.1	2,348	0.2	2,122	0.2	1,324	0.2	2	0.0	7,913	0.2
Clinical, Health, Medical	262,632	17.9	193,057	18.7	183,621	20.0	140,646	21.0	3,124	10.0	783,081	19.0
Nutrition-related risk conditions	123,886	8.4	92,135	8.9	91,903	10.0	73,191	10.9	2,795	8.9	383,910	9.3
Substance abuse	53,222	3.6	43,396	4.2	39,997	4.4	30,680	4.6	154	0.5	167,449	4.1
Other health risk	103,099	7.0	74,753	7.2	70,700	7.7	53,498	8.0	213	0.7	302,263	7.3
Dietary	956,120	65.1	710,052	68.6	651,664	71.0	474,270	70.9	23,041	73.7	2,815,146	68.3
Inadequate or inappropriate nutrient intake	875,259	59.6	669,148	64.7	623,597	67.9	454,939	68.0	21,792	69.7	2,644,736	64.2
Other dietary risk	167,315	11.4	80,813	7.8	51,201	5.6	32,948	4.9	2,696	8.6	334,972	8.1
Other risk	95,794	6.5	54,190	5.2	49,388	5.4	37,230	5.6	4,936	15.8	241,539	5.9
Regression	35,773	2.4	34,034	3.3	31,014	3.4	23,914	3.6	707	2.3	125,443	3.0
Transfer (nutrition risk unknown)	21,869	1.5	13,769	1.3	12,270	1.3	8,763	1.3	409	1.3	57,079	1.4
Breastfeeding mother and infant dyad	5,608	0.4	141	0.0	66	0.0	18	0.0	204	0.7	6,037	0.1
Infant of a WIC-eligible mother or mother at risk during pregnancy	28,126	1.9	171	0.0	108	0.0	89	0.0	3,547	11.3	32,041	0.8
Homelessness/Migrancy	1,135	0.1	944	0.1	839	0.1	576	0.1	5	0.0	3,499	0.1
Other nutritional risks	7,258	0.5	5,994	0.6	6,036	0.7	4,693	0.7	244	0.8	24,225	0.6
No risk reported	14,075	1.0	4,034	0.4	3,556	0.4	2,521	0.4	475	1.5	24,661	0.6

Notes

In 1998, State WIC agencies could report up to three nutritional risks for each participant. This table examines all risks reported for every participant. When multiple risks within the same classification are reported for one person, these risks are combined and counted one time in order to accurately calculate the number and percent of WIC participants with a specific type (or category) of risk.

[a] At certification, 36 percent of child WIC participants are one-year-old.

[b] Federal WIC regulations permit State and local agencies to dispense with hematological testing for infants under six months of age, as well as for children who are found to be within normal ranges at their last certification. However, blood tests should be performed on such children at least once in every twelve-month period.

Exhibit 5.12

Number and Percent of American Indian and Alaskan Native WIC Participants with Specific Nutritional Risks Reported by Participant Category

	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women		Infants		Children		Total WIC	
Risk	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
							Percent by participant category							
Participants in category	12,506		5,996		6,940		25,442		27,656		68,041		121,140	
Anthropometric	7,546	60.3%	3,304	55.1%	3,891	56.1%	14,741	57.9%	7,575	27.4%	26,388	38.8%	48,704	40.2%
Low weight for height	804	6.4	191	3.2	223	3.2	1,219	4.8	822	3.0	2,142	3.1	4,183	3.5
High weight for height	4,635	37.1	2,766	46.1	3,212	46.3	10,613	41.7	2,748	9.9	17,167	25.2	30,528	25.2
Short stature	73	0.6	16	0.3	62	0.9	151	0.6	1,770	6.4	5,454	8.0	7,374	6.1
Inappropriate growth or weight gain pattern	3,260	26.1	436	7.3	470	6.8	4,166	16.4	670	2.4	3,007	4.4	7,843	6.5
Low birthweight or premature birth	0	0.0	0	0.0	0	0.0	0	0.0	2,266	8.2	347	0.5	2,613	2.2
Other anthropometric	100	0.8	25	0.4	75	1.1	200	0.8	983	3.6	1,613	2.4	2,797	2.3
Biochemical	2,043	16.3	1,224	20.4	2,366	34.1	5,633	22.1	1,082	3.9	11,441	16.8	18,156	15.0
Hematocrit or hemoglobin below State criteria	2,035	16.3	1,223	20.4	2,364	34.1	5,622	22.1	1,077	3.9	11,422	16.8	18,121	15.0
Other biochemical test results which indicate nutritional abnormality	10	0.1	3	0.1	4	0.1	17	0.1	6	0.0	32	0.0	55	0.0
Clinical, Health, Medical	9,044	72.3	3,623	60.4	4,765	68.7	17,433	68.5	5,070	18.3	18,469	27.1	40,971	33.8
Pregnancy-induced conditions	625	5.0	166	2.8	247	3.6	1,038	4.1	0	0.0	0	0.0	1,038	0.9
Delivery of low-birthweight or premature infant	294	2.4	163	2.7	293	4.2	750	2.9	0	0.0	0	0.0	750	0.6
Prior stillbirth, miscarriage, spontaneous abortion, or neonatal death	718	5.7	112	1.9	294	4.2	1,124	4.4	0	0.0	0	0.0	1,124	0.9
General obstetrical risks	5,974	47.8	2,139	35.7	3,034	43.7	11,146	43.8	0	0.0	0	0.0	11,146	9.2
Nutrition-related risk conditions	1,473	11.8	903	15.1	815	11.7	3,191	12.5	2,733	9.9	13,587	20.0	19,512	16.1
Substance abuse	2,141	17.1	613	10.2	949	13.7	3,703	14.6	1,014	3.7	2,404	3.5	7,121	5.9
Other health risk	623	5.0	287	4.8	358	5.2	1,268	5.0	1,464	5.3	3,454	5.1	6,186	5.1
Dietary	6,011	48.1	2,464	41.1	3,003	43.3	11,478	45.1	3,558	12.9	51,194	75.2	66,230	54.7
Inadequate or inappropriate nutrient intake	5,888	47.1	2,427	40.5	2,832	40.8	11,148	43.8	3,171	11.5	49,335	72.5	63,654	52.5
Other dietary risk	191	1.5	60	1.0	192	2.8	443	1.7	478	1.7	4,139	6.1	5,060	4.2

Exhibit 5.12 (continued)

Number and Percent of American Indian and Alaskan Native WIC Participants with Specific Nutritional Risks Reported by Participant Category

Risk	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women		Infants		Children		Total WIC	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Percent by participant category													
Other risk	263	2.1%	2,968	49.5%	227	3.3%	3,458	13.6%	23,868	86.3%	3,351	4.9%	30,676	25.3%
Regression	7	0.1	22	0.4	32	0.5	61	0.2	58	0.2	1,889	2.8	2,008	1.7
Transfer (nutrition risk unknown)	46	0.4	36	0.6	60	0.9	142	0.6	199	0.7	198	0.3	539	0.4
Breastfeeding mother and infant dyad	14	0.1	2,917	48.7	45	0.6	2,976	11.7	7,054	25.5	71	0.1	10,101	8.3
Infant of a WIC-eligible mother or mother at risk during pregnancy	0	0.0	0	0.0	0	0.0	0	0.0	21,924	79.3	561	0.8	22,485	18.6
Homelessness/Migrancy	10	0.1	1	0.0	5	0.1	16	0.1	23	0.1	59	0.1	98	0.1
Other nutritional risks	186	1.5	41	0.7	88	1.3	315	1.2	82	0.3	630	0.9	1,027	0.8
No risk reported	61	0.5	16	0.3	28	0.4	105	0.4	179	0.6	332	0.5	616	0.5

Notes

An infant is defined as a participant who, at certification, is under one year of age and who would be classified as a child at the age of 366 days.

In 1998, State WIC agencies could report up to three nutritional risks for each participant. This table examines all risks reported for every participant. When multiple risks within the same classification are reported for one person, these risks are combined and counted one time in order to accurately calculate the number and percent of WIC participants with a specific type (or category) of risk.

This table reports information on persons having origins in any of the original peoples of North America, who maintain cultural identification through tribal affiliation or community recognition (includes Aleuts and Eskimos).

Exhibit 5.13

Number and Percent of Asian or Pacific Islander WIC Participants with Specific Nutritional Risks Reported by Participant Category

Risk	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women		Infants		Children		Total WIC	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Percent by participant category													
Participants in category	24,914		13,425		18,600		56,940		64,400		138,697		260,037	
Anthropometric	16,570	66.5%	5,544	41.3%	7,498	40.3%	29,611	52.0%	13,185	20.5%	43,501	31.4%	86,297	33.2%
Low weight for height	4,212	16.9	743	5.5	1,125	6.0	6,080	10.7	1,948	3.0	5,721	4.1	13,748	5.3
High weight for height	3,697	14.8	3,625	27.0	4,119	22.1	11,441	20.1	1,641	2.5	16,985	12.2	30,067	11.6
Short stature	1,440	5.8	30	0.2	42	0.2	1,512	2.7	3,787	5.9	13,407	9.7	18,706	7.2
Inappropriate growth or weight gain pattern	12,805	51.4	1,620	12.1	3,007	16.2	17,432	30.6	2,486	3.9	12,330	8.9	32,248	12.4
Low birthweight or premature birth	0	0.0	0	0.0	0	0.0	0	0.0	4,609	7.2	357	0.3	4,966	1.9
Other anthropometric	376	1.5	66	0.5	54	0.3	496	0.9	1,997	3.1	907	0.7	3,400	1.3
Biochemical	7,461	29.9	3,818	28.4	6,865	36.9	18,145	31.9	1,653	2.6	30,339	21.9	50,137	19.3
Hematocrit or hemoglobin below State criteria	7,451	29.9	3,815	28.4	6,852	36.8	18,119	31.8	1,639	2.5	30,217	21.8	49,975	19.2
Other biochemical test results which indicate nutritional abnormality	22	0.1	7	0.1	17	0.1	46	0.1	19	0.0	191	0.1	256	0.1
Clinical, Health, Medical	13,311	53.4	7,042	52.5	9,668	52.0	30,021	52.7	8,282	12.9	29,877	21.5	68,180	26.2
Pregnancy-induced conditions	635	2.6	534	4.0	704	3.8	1,873	3.3	0	0.0	0	0.0	1,873	0.7
Delivery of low-birthweight or premature infant	253	1.0	293	2.2	289	1.6	835	1.5	0	0.0	0	0.0	835	0.3
Prior stillbirth, miscarriage, spontaneous abortion, or neonatal death	647	2.6	219	1.6	398	2.1	1,263	2.2	0	0.0	0	0.0	1,263	0.5
General obstetrical risks	10,806	43.4	5,457	40.7	6,969	37.5	23,233	40.8	0	0.0	0	0.0	23,233	8.9
Nutrition-related risk conditions	1,252	5.0	567	4.2	628	3.4	2,447	4.3	1,401	2.2	12,573	9.1	16,420	6.3
Substance abuse	1,376	5.5	931	6.9	1,710	9.2	4,017	7.1	5,127	8.0	11,149	8.0	20,293	7.8
Other health risk	534	2.1	519	3.9	859	4.6	1,912	3.4	2,153	3.3	9,398	6.8	13,463	5.2
Dietary	12,045	48.3	6,437	47.9	10,213	54.9	28,695	50.4	7,400	11.5	102,996	74.3	139,091	53.5
Inadequate or inappropriate nutrient intake	11,847	47.6	6,349	47.3	9,795	52.7	27,991	49.2	6,147	9.5	97,576	70.4	131,714	50.7
Other dietary risk	303	1.2	129	1.0	461	2.5	893	1.6	1,409	2.2	14,215	10.2	16,517	6.4

Exhibit 5.13 (continued)

Number and Percent of Asian or Pacific Islander WIC Participants with Specific Nutritional Risks Reported by Participant Category

Risk	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women		Infants		Children		Total WIC	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Percent by participant category													
Other risk	1,296	5.2%	5,861	43.7%	1,488	8.0%	8,644	15.2%	54,213	84.2%	10,905	7.9%	73,762	28.4%
Regression	0	0.0	22	0.2	24	0.1	46	0.1	76	0.1	1,986	1.4	2,108	0.8
Transfer (nutrition risk unknown)	102	0.4	76	0.6	233	1.3	411	0.7	465	0.7	479	0.3	1,355	0.5
Breastfeeding mother and infant dyad	8	0.0	4,652	34.7	172	0.9	4,832	8.5	13,981	21.7	89	0.1	18,902	7.3
Infant of a WIC-eligible mother or mother at risk during pregnancy	0	0.0	0	0.0	0	0.0	0	0.0	42,629	66.2	414	0.3	43,043	16.6
Homelessness/Migrancy	18	0.1	11	0.1	1	0.0	30	0.1	64	0.1	116	0.1	210	0.1
Other nutritional risks	1,168	4.7	1,173	8.7	1,067	5.7	3,408	6.0	6,069	9.4	7,899	5.7	17,376	6.7
No risk reported	266	1.1	82	0.6	63	0.3	411	0.7	355	0.6	1,144	0.8	1,910	0.7

Notes

An infant is defined as a participant who, at certification, is under one year of age and who would be classified as a child at the age of 366 days.

In 1998, State WIC agencies could report up to three nutritional risks for each participant. This table examines all risks reported for every participant. When multiple risks within the same classification are reported for one person, these risks are combined and counted one time in order to accurately calculate the number and percent of WIC participants with a specific type (or category) of risk.

This table reports information on persons 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.

Exhibit 5.14

Number and Percent of Black (non-Hispanic) WIC Participants with Specific Nutritional Risks Reported by Participant Category

	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women		Infants		Children		Total WIC	
Risk	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
							Percent by participant category							
Participants in category	194,038		58,120		149,043		401,202		498,190		942,716		1,842,107	
Anthropometric	127,365	65.6%	30,150	51.9%	70,213	47.1%	227,728	56.8%	134,965	27.1%	326,213	34.6%	688,907	37.4%
Low weight for height	15,561	8.0	1,688	2.9	5,669	3.8	22,918	5.7	21,266	4.3	48,274	5.1	92,458	5.0
High weight for height	71,681	36.9	24,546	42.2	53,907	36.2	150,135	37.4	19,130	3.8	138,740	14.7	308,004	16.7
Short stature	560	0.3	141	0.2	651	0.4	1,352	0.3	48,085	9.7	79,893	8.5	129,330	7.0
Inappropriate growth or weight gain pattern	67,482	34.8	7,580	13.0	15,079	10.1	90,142	22.5	23,510	4.7	91,670	9.7	205,322	11.1
Low birthweight or premature birth	0	0.0	0	0.0	0	0.0	0	0.0	59,063	11.9	8,451	0.9	67,515	3.7
Other anthropometric	4,839	2.5	237	0.4	795	0.5	5,871	1.5	9,384	1.9	9,098	1.0	24,352	1.3
Biochemical	66,298	34.2	21,607	37.2	67,550	45.3	155,454	38.7	23,746	4.8	297,651	31.6	476,851	25.9
Hematocrit or hemoglobin below State criteria	66,004	34.0	21,520	37.0	67,294	45.2	154,817	38.6	23,517	4.7	295,026	31.3	473,359	25.7
Other biochemical test results which indicate nutritional abnormality	564	0.3	182	0.3	427	0.3	1,173	0.3	314	0.1	4,071	0.4	5,558	0.3
Clinical, Health, Medical	107,893	55.6	28,406	48.9	84,768	56.9	221,067	55.1	38,597	7.7	139,205	14.8	398,870	21.7
Pregnancy-induced conditions	5,002	2.6	1,728	3.0	4,109	2.8	10,838	2.7	0	0.0	0	0.0	10,838	0.6
Delivery of low-birthweight or premature infant	4,646	2.4	1,754	3.0	5,701	3.8	12,102	3.0	0	0.0	0	0.0	12,102	0.7
Prior stillbirth, miscarriage, spontaneous abortion, or neonatal death	11,415	5.9	2,590	4.5	8,717	5.8	22,721	5.7	0	0.0	0	0.0	22,721	1.2
General obstetrical risks	77,540	40.0	19,153	33.0	56,494	37.9	153,187	38.2	0	0.0	0	0.0	153,187	8.3
Nutrition-related risk conditions	13,363	6.9	3,135	5.4	8,831	5.9	25,328	6.3	12,665	2.5	58,470	6.2	96,464	5.2
Substance abuse	13,435	6.9	2,063	3.6	7,723	5.2	23,221	5.8	12,066	2.4	22,229	2.4	57,516	3.1
Other health risk	6,205	3.2	3,868	6.7	12,868	8.6	22,941	5.7	15,277	3.1	67,220	7.1	105,438	5.7
Dietary	88,813	45.8	25,827	44.4	65,989	44.3	180,628	45.0	75,117	15.1	608,020	64.5	863,765	46.9
Inadequate or inappropriate nutrient intake	84,023	43.3	24,961	42.9	63,912	42.9	172,896	43.1	50,300	10.1	563,492	59.8	786,687	42.7
Other dietary risk	7,334	3.8	1,266	2.2	2,998	2.0	11,599	2.9	27,160	5.5	77,256	8.2	116,014	6.3

Exhibit 5.14 (continued)

Number and Percent of Black (non-Hispanic) WIC Participants with Specific Nutritional Risks Reported by Participant Category

Risk	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women		Infants		Children		Total WIC	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Percent by participant category													
Other risk	5,144	2.7%	19,494	33.5%	6,770	4.5%	31,408	7.8%	397,972	79.9%	77,113	8.2%	506,494	27.5%
Regression	3	0.0	141	0.2	586	0.4	730	0.2	552	0.1	38,862	4.1	40,144	2.2
Transfer (nutrition risk unknown)	4,747	2.4	680	1.2	5,315	3.6	10,743	2.7	18,134	3.6	28,945	3.1	57,822	3.1
Breastfeeding mother and infant dyad	30	0.0	19,064	32.8	696	0.5	19,790	4.9	73,861	14.8	1,268	0.1	94,919	5.2
Infant of a WIC-eligible mother or mother at risk during pregnancy	0	0.0	0	0.0	0	0.0	0	0.0	363,351	72.9	8,754	0.9	372,105	20.2
Homelessness/Migrancy	68	0.0	11	0.0	57	0.0	137	0.0	196	0.0	391	0.0	723	0.0
Other nutritional risks	297	0.2	82	0.1	152	0.1	531	0.1	650	0.1	1,682	0.2	2,863	0.2
No risk reported	604	0.3	132	0.2	433	0.3	1,168	0.3	1,534	0.3	4,146	0.4	6,848	0.4

Notes

An infant is defined as a participant who, at certification, is under one year of age and who would be classified as a child at the age of 366 days.

In 1998, State WIC agencies could report up to three nutritional risks for each participant. This table examines all risks reported for every participant. When multiple risks within the same classification are reported for one person, these risks are combined and counted one time in order to accurately calculate the number and percent of WIC participants with a specific type (or category) of risk.

This table reports information on persons having origins in any of the black racial groups of Africa.

Exhibit 5.15

Number and Percent of Hispanic WIC Participants with Specific Nutritional Risks Reported by Participant Category

Risk	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women		Infants		Children		Total WIC	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
							Percent by participant category							
Participants in category	271,086		164,307		149,931		585,324		622,187		1,388,655		2,596,166	
Anthropometric	192,269	70.9%	83,854	51.0%	63,451	42.3%	339,574	58.0%	119,774	19.3%	456,113	32.8%	915,461	35.3%
Low weight for height	14,449	5.3	3,372	2.1	3,052	2.0	20,872	3.6	15,228	2.4	54,474	3.9	90,574	3.5
High weight for height	79,982	29.5	63,384	38.6	47,540	31.7	190,907	32.6	16,818	2.7	263,208	19.0	470,932	18.1
Short stature	11,109	4.1	172	0.1	135	0.1	11,417	2.0	29,165	4.7	71,939	5.2	112,521	4.3
Inappropriate growth or weight gain pattern	149,555	55.2	22,018	13.4	16,983	11.3	188,555	32.2	15,448	2.5	100,544	7.2	304,548	11.7
Low birthweight or premature birth	0	0.0	0	0.0	0	0.0	0	0.0	43,339	7.0	1,762	0.1	45,101	1.7
Other anthropometric	6,182	2.3	2,164	1.3	376	0.3	8,722	1.5	26,438	4.2	6,665	0.5	41,825	1.6
Biochemical	78,866	29.1	41,686	25.4	46,965	31.3	167,518	28.6	20,259	3.3	405,730	29.2	593,507	22.9
Hematocrit or hemoglobin below State criteria	78,697	29.0	41,646	25.3	46,902	31.3	167,246	28.6	20,070	3.2	404,732	29.1	592,048	22.8
Other biochemical test results which indicate nutritional abnormality	255	0.1	102	0.1	132	0.1	489	0.1	241	0.0	1,656	0.1	2,386	0.1
Clinical, Health, Medical	158,584	58.5	94,063	57.2	80,821	53.9	333,468	57.0	81,085	13.0	325,829	23.5	740,382	28.5
Pregnancy-induced conditions	7,762	2.9	7,868	4.8	5,807	3.9	21,437	3.7	0	0.0	0	0.0	21,437	0.8
Delivery of low-birthweight or premature infant	1,995	0.7	1,286	0.8	1,497	1.0	4,778	0.8	0	0.0	0	0.0	4,778	0.2
Prior stillbirth, miscarriage, spontaneous abortion, or neonatal death	6,317	2.3	1,983	1.2	2,974	2.0	11,275	1.9	0	0.0	0	0.0	11,275	0.4
General obstetrical risks	115,615	42.6	72,301	44.0	58,203	38.8	246,118	42.0	0	0.0	0	0.0	246,118	9.5
Nutrition-related risk conditions	35,027	12.9	10,994	6.7	9,401	6.3	55,422	9.5	22,244	3.6	162,324	11.7	239,989	9.2
Substance abuse	16,069	5.9	9,183	5.6	8,687	5.8	33,939	5.8	32,610	5.2	83,759	6.0	150,308	5.8
Other health risk	8,109	3.0	10,822	6.6	10,640	7.1	29,571	5.1	30,398	4.9	117,493	8.5	177,462	6.8
Dietary	102,510	37.8	67,308	41.0	67,904	45.3	237,722	40.6	66,258	10.6	903,757	65.1	1,207,737	46.5
Inadequate or inappropriate nutrient intake	99,247	36.6	66,016	40.2	66,373	44.3	231,637	39.6	55,362	8.9	844,231	60.8	1,131,230	43.6
Other dietary risk	5,586	2.1	1,968	1.2	2,231	1.5	9,785	1.7	12,866	2.1	123,082	8.9	145,733	5.6

Exhibit 5.15 (continued)

Number and Percent of Hispanic WIC Participants with Specific Nutritional Risks Reported by Participant Category

Risk	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women		Infants		Children		Total WIC	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Percent by participant category													
Other risk	2,519	0.9%	70,168	42.7%	17,470	11.7%	90,157	15.4%	548,666	88.2%	57,262	4.1%	696,085	26.8%
Regression	13	0.0	365	0.2	198	0.1	576	0.1	425	0.1	35,419	2.6	36,420	1.4
Transfer (nutrition risk unknown)	1,008	0.4	1,342	0.8	2,009	1.3	4,360	0.7	5,188	0.8	5,016	0.4	14,563	0.6
Breastfeeding mother and infant dyad	67	0.0	68,992	42.0	2,235	1.5	71,294	12.2	215,874	34.7	1,548	0.1	288,715	11.1
Infant of a WIC-eligible mother or mother at risk during pregnancy	0	0.0	0	0.0	0	0.0	0	0.0	492,500	79.2	8,438	0.6	500,938	19.3
Homelessness/Migrancy	309	0.1	152	0.1	110	0.1	571	0.1	565	0.1	2,138	0.2	3,273	0.1
Other nutritional risks	1,138	0.4	402	0.2	13,054	8.7	14,594	2.5	1,648	0.3	5,810	0.4	22,052	0.8
No risk reported	1,660	0.6	708	0.4	947	0.6	3,315	0.6	2,722	0.4	10,091	0.7	16,128	0.6

Notes

An infant is defined as a participant who, at certification, is under one year of age and who would be classified as a child at the age of 366 days.

In 1998, State WIC agencies could report up to three nutritional risks for each participant. This table examines all risks reported for every participant. When multiple risks within the same classification are reported for one person, these risks are combined and counted one time in order to accurately calculate the number and percent of WIC participants with a specific type (or category) of risk.

This table reports information on persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin regardless of race.

Exhibit 5.16

Number and Percent of White (non-Hispanic) WIC Participants with Specific Nutritional Risks Reported by Participant Category

Risk	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women		Infants		Children		Total WIC	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Percent by participant category													
Participants in category	383,421		143,711		260,523		787,656		814,779		1,553,170		3,155,604	
Anthropometric	229,335	59.8%	65,528	45.6%	116,901	44.9%	411,764	52.3%	204,855	25.1%	522,667	33.7%	1,139,286	36.1%
Low weight for height	42,296	11.0	7,135	5.0	13,175	5.1	62,606	7.9	27,633	3.4	64,633	4.2	154,872	4.9
High weight for height	107,522	28.0	46,161	32.1	83,717	32.1	237,401	30.1	43,144	5.3	205,926	13.3	486,471	15.4
Short stature	1,091	0.3	205	0.1	510	0.2	1,805	0.2	59,739	7.3	143,760	9.3	205,304	6.5
Inappropriate growth or weight gain pattern	112,973	29.5	17,821	12.4	24,801	9.5	155,594	19.8	42,318	5.2	159,653	10.3	357,565	11.3
Low birthweight or premature birth	0	0.0	0	0.0	0	0.0	0	0.0	73,887	9.1	10,777	0.7	84,664	2.7
Other anthropometric	11,268	2.9	1,067	0.7	4,306	1.7	16,641	2.1	18,966	2.3	20,244	1.3	55,851	1.8
Biochemical	57,836	15.1	27,045	18.8	73,633	28.3	158,514	20.1	29,796	3.7	256,128	16.5	444,439	14.1
Hematocrit or hemoglobin below State criteria	57,659	15.0	26,961	18.8	73,441	28.2	158,061	20.1	29,671	3.6	254,620	16.4	442,353	14.0
Other biochemical test results which indicate nutritional abnormality	272	0.1	138	0.1	367	0.1	777	0.1	146	0.0	1,869	0.1	2,792	0.1
Clinical, Health, Medical	250,776	65.4	77,224	53.7	153,402	58.9	481,403	61.1	96,293	11.8	265,912	17.1	843,608	26.7
Pregnancy-induced conditions	11,615	3.0	4,890	3.4	7,928	3.0	24,433	3.1	0	0.0	0	0.0	24,433	0.8
Delivery of low-birthweight or premature infant	9,019	2.4	3,829	2.7	9,668	3.7	22,516	2.9	0	0.0	0	0.0	22,516	0.7
Prior stillbirth, miscarriage, spontaneous abortion, or neonatal death	23,245	6.1	5,693	4.0	13,662	5.2	42,601	5.4	0	0.0	0	0.0	42,601	1.3
General obstetrical risks	157,339	41.0	47,040	32.7	88,573	34.0	292,952	37.2	0	0.0	0	0.0	292,952	9.3
Nutrition-related risk conditions	29,345	7.7	9,456	6.6	19,343	7.4	58,144	7.4	36,483	4.5	134,466	8.7	229,093	7.3
Substance abuse	85,540	22.3	16,390	11.4	37,072	14.2	139,002	17.6	28,685	3.5	47,403	3.1	215,090	6.8
Other health risk	15,454	4.0	9,759	6.8	21,399	8.2	46,611	5.9	35,544	4.4	103,613	6.7	185,769	5.9
Dietary	197,104	51.4	71,050	49.4	138,246	53.1	406,401	51.6	115,121	14.1	1,126,463	72.5	1,647,985	52.2
Inadequate or inappropriate nutrient intake	190,663	49.7	69,644	48.5	134,542	51.6	394,850	50.1	75,822	9.3	1,067,644	68.7	1,538,315	48.7
Other dietary risk	10,591	2.8	2,183	1.5	5,103	2.0	17,878	2.3	43,120	5.3	115,637	7.4	176,635	5.6

Exhibit 5.16 (continued)

Number and Percent of White (non-Hispanic) WIC Participants with Specific Nutritional Risks Reported by Participant Category

Risk	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women		Infants		Children		Total WIC	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Percent by participant category													
Other risk	8,533	2.2%	56,090	39.0%	11,157	4.3%	75,779	9.6%	658,870	80.9%	91,639	5.9%	826,288	26.2%
Regression	24	0.0	468	0.3	725	0.3	1,217	0.2	1,348	0.2	46,789	3.0	49,354	1.6
Transfer (nutrition risk unknown)	5,613	1.5	2,505	1.7	6,461	2.5	14,579	1.9	21,391	2.6	22,267	1.4	58,237	1.8
Breastfeeding mother and infant dyad	125	0.0	54,172	37.7	2,239	0.9	56,536	7.2	165,058	20.3	3,029	0.2	224,623	7.1
Infant of a WIC-eligible mother or mother at risk during pregnancy	0	0.0	0	0.0	0	0.0	0	0.0	577,493	70.9	13,772	0.9	591,265	18.7
Homelessness/Migrancy	220	0.1	49	0.0	70	0.0	339	0.0	281	0.0	715	0.0	1,335	0.0
Other nutritional risks	2,561	0.7	964	0.7	1,848	0.7	5,373	0.7	2,293	0.3	7,789	0.5	15,455	0.5
No risk reported	2,045	0.5	486	0.3	952	0.4	3,483	0.4	4,370	0.5	8,533	0.5	16,386	0.5

Notes

An infant is defined as a participant who, at certification, is under one year of age and who would be classified as a child at the age of 366 days.

In 1998 State WIC agencies could report up to three nutritional risks for each participant. This table examines all risks reported for every participant. When multiple risks within the same classification are reported for one person, these risks are combined and counted one time in order to accurately calculate the number and percent of WIC participants with a specific type (or category) of risk.

This table reports information on persons having origins in any of the original peoples of Europe, North Africa, or the Middle East.

Exhibit 5.17

Nutritional Risks Reported in at Least 15 Percent of WIC Participants 1994, 1996, 1998

Participant Category and Type of Risk	1994	1996	1998
	Percent by category		
Pregnant women	823,605	877,748	892,674
General obstetrical risks	38.0%	39.6%	41.5%
Hematocrit or hemoglobin below State criteria	24.0	24.1	23.9
Prepregnancy high weight for height	26.4	27.5	30.2
Inadequate or inappropriate nutrient intake	45.2	41.9	44.2
Inappropriate growth or weight gain pattern	29.3	36.9	39.2
Breastfeeding women	275,159	330,177	389,391
Breastfeeding mother and infant dyad	40.1%	42.9%	38.8%
General obstetrical risks	28.7	36.2	37.9
Hematocrit or hemoglobin below State criteria	19.5	22.4	24.7
High weight for height	29.8	33.1	36.4
Inadequate or inappropriate nutrient intake	40.4	39.3	44.0
Other health risk	16.1	--	--
Postpartum women	491,999	567,913	591,050
General obstetrical risks	28.1%	35.1%	36.5%
Hematocrit or hemoglobin below State criteria	28.6	30.5	33.7
High weight for height	26.3	28.7	32.8
Inadequate or inappropriate nutrient intake	49.7	46.2	47.5
Other health risk	18.8	--	--
Infants	1,852,455	1,988,789	2,048,626
Breastfeeding mother and infant dyad	17.1%	19.3%	23.5%
Infant of a WIC-eligible mother or mother at risk during pregnancy	67.3	70.6	73.7
Children	3,464,632	3,982,815	4,121,017
Hematocrit or hemoglobin below State criteria	23.9%	25.1%	24.3%
High weight for height	14.7	15.0	15.7
Inadequate or inappropriate nutrient intake	58.1	59.8	64.2

Notes

A dash indicates that, for the year in question, this risk occurred in less than 15 percent of WIC participants in the certification category.
In 1994, 1996, and 1998 each State WIC agency reported up to three risks, recorded for each participant, on its automated client information system.

Exhibit 5.18

Nutritional Risks Reported in at Least 15 Percent of American Indian and Alaskan Native WIC Participants by Participant Category

Participant Category and Type of Risk	Percent
Pregnant women	12,506
General obstetrical risks	47.8%
Hematocrit or hemoglobin below State criteria	16.3
Prepregnancy high weight for height	37.1
Inadequate or inappropriate nutrient intake	47.1
Inappropriate growth or weight gain pattern	26.1
Substance abuse	17.1
Breastfeeding women	5,996
Breastfeeding mother and infant dyad	48.7%
General obstetrical risks	35.7
Hematocrit or hemoglobin below State criteria	20.4
High weight for height	46.1
Inadequate or inappropriate nutrient intake	40.5
Other health risk	15.1
Postpartum women	6,940
General obstetrical risks	43.7%
Hematocrit or hemoglobin below State criteria	34.1
High weight for height	46.3
Inadequate or inappropriate nutrient intake	40.8
Infants	27,656
Breastfeeding mother and infant dyad	25.5%
Infant of a WIC-eligible mother or mother at risk during pregnancy	79.3
Children	68,041
Hematocrit or hemoglobin below State criteria	16.8%
High weight for height	25.2
Inadequate or inappropriate nutrient intake	72.5
Nutrition-related risk conditions	20.0
Total	121,140

Notes

These figures represent 15 percent or more of all WIC participants in the participant category in this racial or ethnic group.

American Indians and Alaskan Natives include persons having origins in any of the original peoples of North America, who maintain cultural identification through tribal affiliation or community recognition (includes Aleuts and Eskimos).

Exhibit 5.19

Nutritional Risks Reported in at Least 15 Percent of Asian and Pacific Islander WIC Participants by Participant Category

Participant Category and Type of Risk	Percent
Pregnant women	24,914
General obstetrical risks	43.4%
Hematocrit or hemoglobin below State criteria	29.9
Inadequate or inappropriate nutrient intake	47.6
Inappropriate growth or weight gain pattern	51.4
Prepregnancy low weight for height	16.9
Breastfeeding women	13,425
Breastfeeding mother and infant dyad	34.7%
General obstetrical risks	40.7
Hematocrit or hemoglobin below State criteria	28.4
High weight for height	27.0
Inadequate or inappropriate nutrient intake	47.3
Postpartum women	18,600
General obstetrical risks	37.5%
Hematocrit or hemoglobin below State criteria	36.8
High weight for height	22.1
Inadequate or inappropriate nutrient intake	52.7
Other health risk	16.2
Infants	64,400
Breastfeeding mother and infant dyad	21.7%
Infant of a WIC-eligible mother or mother at risk during pregnancy	66.2
Children	138,697
Hematocrit or hemoglobin below State criteria	21.8%
Inadequate or inappropriate nutrient intake	70.4
Total	260,037

Notes

These figures represent 15 percent or more of all WIC participants in the participant category in this racial or ethnic group.

This table reports information on persons 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.

Exhibit 5.20

Nutritional Risks Reported in at Least 15 Percent of Black (non-Hispanic) WIC Participants by Participant Category

Participant Category and Type of Risk	Percent
Pregnant women	194,038
General obstetrical risks	40.0%
Hematocrit or hemoglobin below State criteria	34.0
Prepregnancy high weight for height	36.9
Inadequate or inappropriate nutrient intake	43.3
Inappropriate growth or weight gain pattern	34.8
Breastfeeding women	58,120
Breastfeeding mother and infant dyad	32.8%
General obstetrical risks	33.0
Hematocrit or hemoglobin below State criteria	37.0
High weight for height	42.2
Inadequate or inappropriate nutrient intake	42.9
Postpartum women	149,043
General obstetrical risks	37.9%
Hematocrit or hemoglobin below State criteria	45.2
High weight for height	36.2
Inadequate or inappropriate nutrient intake	42.9
Infants	498,190
Infant of a WIC-eligible mother or mother at risk during pregnancy	72.9%
Children	942,716
Hematocrit or hemoglobin below State criteria	31.3%
Inadequate or inappropriate nutrient intake	59.8
Total	1,842,107

Notes

These figures represent 15 percent or more of all WIC participants in the participant category in this racial or ethnic group.

This table reports information on persons having origins in any of the black racial groups of Africa.

Exhibit 5.21

Nutritional Risks Reported in at Least 15 Percent of Hispanic WIC Participants by Participant Category

Participant Category and Type of Risk	Percent
Pregnant women	271,086
General obstetrical risks	42.6%
Hematocrit or hemoglobin below State criteria	29.0
Prepregnancy high weight for height	29.5
Inadequate or inappropriate nutrient intake	36.6
Inappropriate growth or weight gain pattern	55.2
Breastfeeding women	164,307
Breastfeeding mother and infant dyad	42.0%
General obstetrical risks	44.0
Hematocrit or hemoglobin below State criteria	25.3
High weight for height	38.6
Inadequate or inappropriate nutrient intake	40.2
Postpartum women	149,931
General obstetrical risks	38.8%
Hematocrit or hemoglobin below State criteria	31.3
High weight for height	31.7
Inadequate or inappropriate nutrient intake	44.3
Infants	622,187
Breastfeeding mother and infant dyad	34.7%
Infant of a WIC-eligible mother or mother at risk during pregnancy	79.2
Children	1,388,655
Hematocrit or hemoglobin below State criteria	29.1%
High weight for height	19.0
Inadequate or inappropriate nutrient intake	60.8
Total	2,596,166

Notes

These figures represent 15 percent or more of all WIC participants in the participant category in this racial or ethnic group.

This table reports information on persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin regardless of race.

Exhibit 5.22

Nutritional Risks Reported in at Least 15 Percent of White (non-Hispanic) WIC Participants by Participant Category

Participant Category and Type of Risk	Percent
Pregnant women	383,421
General obstetrical risks	41.0%
Hematocrit or hemoglobin below State criteria	15.0
Prepregnancy high weight for height	28.0
Inadequate or inappropriate nutrient intake	49.7
Inappropriate growth or weight gain pattern	29.5
Substance abuse	22.3
Breastfeeding women	143,711
Breastfeeding mother and infant dyad	37.7%
General obstetrical risks	32.7
Hematocrit or hemoglobin below State criteria	18.8
High weight for height	32.1
Inadequate or inappropriate nutrient intake	48.5
Postpartum women	260,523
General obstetrical risks	34.0%
Hematocrit or hemoglobin below State criteria	28.2
High weight for height	32.1
Inadequate or inappropriate nutrient intake	51.6
Infants	814,779
Breastfeeding mother and infant dyad	20.3%
Infant of a WIC-eligible mother or mother at risk during pregnancy	70.9
Children	1,553,170
Hematocrit or hemoglobin below State criteria	16.4%
Inadequate or inappropriate nutrient intake	68.7
Total	3,155,604

Notes

These figures represent 15 percent or more of all WIC participants in the participant category in this racial or ethnic group.

This table reports information on persons having origins in any of the original peoples of Europe, North Africa, or the Middle East.

Exhibit 5.23

Nutritional Risks Reported in at Least 15 Percent of Pregnant WIC Participants by Age at Certification

Age at Certification and Type of Risk	Percent
Under 15 years	6,825
General obstetrical risks	89.9%
Hematocrit or hemoglobin below State criteria	29.5
Inadequate or inappropriate nutrient intake	36.9
Inappropriate growth or weight gain pattern	33.7
15 - 17 years	90,568
General obstetrical risks	88.0%
Hematocrit or hemoglobin below State criteria	24.8
High weight for height	15.3
Inadequate or inappropriate nutrient intake	37.0
Inappropriate growth or weight gain pattern	34.0
18 - 34 years	742,123
General obstetrical risks	33.2%
Hematocrit or hemoglobin below State criteria	23.7
Prepregnancy high weight for height	31.7
Inadequate or inappropriate nutrient intake	46.3
Inappropriate growth or weight gain pattern	39.8
35 or more years	51,354
General obstetrical risks	72.7%
Hematocrit or hemoglobin below State criteria	25.9
High weight for height	37.2
Inadequate or inappropriate nutrient intake	27.2
Inappropriate growth or weight gain pattern	41.1
Not reported	1,804
Total Pregnant Women	892,674

Note

These figures represent 15 percent or more of all pregnant WIC participants in each age group.

months are at risk because their mothers are WIC-eligible or because their mothers were at risk during pregnancy. Dietary risks are more likely to be reported for older infants.

The rate of dietary risk for children has increased steadily from 52 percent in 1992 to 68 percent in 1998. This shift probably reflects the impact of additional funding which has allowed WIC to serve more children and an increasing percentage of lower priority participants. Anthropometric risks were reported for one-third of child WIC participants. This rate declined steadily from a high of 40 percent in 1992 undoubtedly due to the same factors that caused the rate of dietary risk to increase. Biochemical risks are reported for a quarter of children, with slightly higher rates among one and two-year old participants. There are only minimal differences by age with regard to other types of nutritional risks reported for WIC children. (See Exhibits 5.7 and 5.11.)

The increase in infants and children reported at nutritional risk due to substance abuse needs special mention. While the total number of infants and children with this risk remains small, reports increased from about 0.5 percent in PC94 to 3 percent in PC96 and to 4 percent in PC98. This shift can primarily be attributed to a policy change in the California WIC program which occurred between PC94 and PC96. Infants and children exposed to second-hand smoke are now considered to be at nutritional risk in California; are eligible for WIC benefits; and are included in the substance abuse category.

The patterns of risks by race/ethnicity described below are similar to findings from PC92, PC94, and PC96. (See Exhibits 5.12 through 5.16, 5.18 through 5.22.) In all years, the category of general obstetrical risks for pregnant women were reported with the highest frequencies among American Indians and Alaskan Natives, Asians and Pacific Islanders, and Hispanics. Blood measurements below State criteria occur most often among black WIC women and least often among American Indian/Alaskan Native and white women. Only among American Indians/Alaskan Natives and whites was substance abuse reported for over 15 percent of pregnant WIC women. Low prepregnancy weight for height was reported for over 15 percent of pregnant Asian/Pacific Islander enrollees.

Changes between PC96 and PC98 within racial/ethnic categories generally mirror the distributions reported for all WIC women. Reported high weight-for-height increased by 5 percentage points among American Indian women, about 2 percentage points among Hispanic women, and about 4 percentage points among white, black, and Asian women. Reported inappropriate weight gain also increased by 3 percentage points among Hispanic women. Examining the entire period between 1992 and 1998, reports of excessive weight gain have grown more common in all racial/ethnic categories.

The most commonly reported infant nutritional risk across all racial/ethnic categories is WIC-eligible mother or mother at risk during pregnancy. In 1998, as in 1992, 1994, and 1996, dietary risks account for the largest proportions of child nutritional risks in every racial/ethnic category. In 1998, as in the three previous studies, black and Hispanic children are about twice as likely to be reported as having blood measures below State standards as compared with Native American/Alaskan Native and white children. Substance abuse risks are highest (between 6 and 8 percent) among Asian and Hispanic infants and children. This increase, again, results largely from California's inclusion, in this risk category, of infants and children exposed to second-hand smoke.

Nutrition and Poverty Status

Exhibits 5.24 through 5.30 present distributions of nutritional risks by percent of poverty. In PC98, as in PC96 and PC94, women at lower income levels generally report higher levels of obstetrical risk; the assignment of dietary risk increases with income.[2] While this statistic is an interesting one, the PCs do not collect supporting data that would allow its interpretation. Among infants, dietary risks increase slightly with income. The most visible pattern among children is the general increase in reported dietary risks and accompanying decrease in reported anthropometric risks as income rises. Similar findings were reported in PC96 and PC94. The frequency of blood measurements below State criteria decreases slightly with increased income for both women and children, a pattern also evident in PC96, though not in PC94.

Anthropometric Values

Weight and height are measured and recorded during the eligibility determination process. These data are routinely collected by States, and reporting, especially for infants, has improved over time. Since PC94, invalid or unreported data for weight for age and height for age decreased by over 15 percentage points for infants. Reporting for child participants has also improved since 1994.

Measurements for WIC infants and children were compared with the statistical norms in the general population using National Center for Health Statistics-Centers for Disease Control and Prevention standardized distributions. Exhibits 5.31 and 5.33 display numbers and percents of infants and children who fall at the upper and lower limits of the standard distributions. The distribution of infant and child anthropometric data by race/ethnicity are presented in Exhibits 5.32 and 5.34.

Although the data show slight increases over time in percentage of overweight infants and children (above the ninetieth percentiles of weight for age and weight for height), these changes may reflect lower proportions of missing or invalid anthropometric data since 1994. If we assume participants with missing data are similar to all other participants, then the percentage of infants above the ninetieth percentile of weight for age increased from 14.5 percent in 1994 to 15.1 percent in 1996 and 15.4 percent in 1998. Using the same assumption, the percentage of infants above the ninetieth percentile of weight for length increased from 13.0 percent in 1994 to 13.5 percent in 1996 and 1998.

Across ethnic categories, black infants and Asian/Pacific Islander child WIC recipients are most likely to fall below the tenth percentile for weight for length, weight for age, and length for age. American Indian and Alaskan Native infants and children have the greatest likelihood of exceeding the ninetieth percentile for weight for length and weight for age. In general, these findings replicate data reported in the 1992, 1994, and 1996 studies of WIC participant and program characteristics.

Exhibits 5.35 and 5.36 present numbers and percents of infants and children determined to be at risk according to modal values of anthropometric criteria reported by State WIC agencies. (See Appendix D, Exhibits D5.35A - D5.35C.) In computing modal values, equal weight is assigned to every reporting State.

Exhibit 5.37 presents information on anthropometric risks for breastfeeding and postpartum women. This exhibit applies modal criteria for current weight for height derived from the reported State-specific values. (See Appendix D, Exhibit D5.37.)

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[2]These tabulations first appeared in PC94.

Exhibit 5.24

Number and Percent of Women WIC Participants with Specific Nutritional Risks Reported At Certification by Percent of Poverty

Type of Risk and Specific Risk	Level of Poverty													
	Up to 100%		101% to 130%		131% to 185%		186% and over		Income Reported as Zero[a]		Not Reported[b]		Total WIC	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Participants in category	1,013,401		235,768		263,340		16,416		65,105		279,086		1,873,116	
Anthropometric	571,333	56.4%	131,661	55.8%	146,570	55.7%	8,926	54.4%	39,487	60.7%	134,143	48.1%	1,032,121	55.1%
Low weight for height	65,253	6.4	14,724	6.2	15,807	6.0	1,209	7.4	5,045	7.7	12,389	4.4	114,427	6.1
High weight for height	340,445	33.6	79,428	33.7	85,663	32.5	4,776	29.1	22,260	34.2	72,436	26.0	605,007	32.3
Short stature	10,492	1.0	2,286	1.0	2,173	0.8	68	0.4	643	1.0	649	0.2	16,310	0.9
Inappropriate growth or weight gain pattern	242,741	24.0	56,658	24.0	66,341	25.2	3,711	22.6	21,351	32.8	70,853	25.4	461,655	24.6
Other anthropometric	20,818	2.1	3,371	1.4	4,501	1.7	612	3.7	766	1.2	1,905	0.7	31,974	1.7
Biochemical	282,700	27.9	57,437	24.4	60,414	22.9	3,173	19.3	16,932	26.0	90,138	32.3	510,795	27.3
Hematocrit or hemoglobin below State standard	281,841	27.8	57,267	24.3	60,236	22.9	3,157	19.2	16,868	25.9	89,984	32.2	509,354	27.2
Other biochemical test results which indicate nutritional abnormality	1,461	0.1	287	0.1	289	0.1	20	0.1	152	0.2	374	0.1	2,583	0.1
Clinical, Health, Medical	604,438	59.6	132,495	56.2	143,428	54.5	9,339	56.9	36,186	55.6	166,343	59.6	1,092,229	58.3
Pregnancy-induced conditions	36,452	3.6	8,390	3.6	8,526	3.2	500	3.0	2,026	3.1	4,364	1.6	60,258	3.2
Delivery of low-birthweight or premature infant	23,882	2.4	5,769	2.4	5,842	2.2	428	2.6	566	0.9	4,672	1.7	41,159	2.2
Prior stillbirth, miscarriage, spontaneous abortion, or neonatal death	39,669	3.9	10,433	4.4	12,880	4.9	1,254	7.6	1,522	2.3	13,571	4.9	79,329	4.2
General obstetrical risks	410,350	40.5	84,217	35.7	87,178	33.1	5,002	30.5	27,560	42.3	119,168	42.7	733,475	39.2
Nutrition-related risk conditions	60,736	6.0	17,085	7.2	23,018	8.7	1,089	6.6	1,811	2.8	42,213	15.1	145,953	7.8
Substance abuse	120,581	11.9	25,447	10.8	26,924	10.2	2,527	15.4	7,438	11.4	21,819	7.8	204,735	10.9
Other health risk	61,946	6.1	13,238	5.6	14,048	5.3	1,248	7.6	2,550	3.9	9,646	3.5	102,676	5.5
Dietary	434,250	42.9	115,024	48.8	137,575	52.2	9,007	54.9	34,883	53.6	142,568	51.1	873,307	46.6
Inadequate or inappropriate nutrient intake	417,127	41.2	110,991	47.1	133,889	50.8	8,861	54.0	34,312	52.7	141,619	50.7	846,799	45.2
Other dietary risk	25,808	2.5	6,290	2.7	5,873	2.2	216	1.3	805	1.2	1,721	0.6	40,713	2.2
Other Risk	123,126	12.1	29,632	12.6	30,346	11.5	1,486	9.1	6,918	10.6	19,637	7.0	211,145	11.3
Regression	1,669	0.2	351	0.1	350	0.1	22	0.1	37	0.1	220	0.1	2,650	0.1
Transfer (nutrition risk unknown)	15,824	1.6	4,185	1.8	4,578	1.7	477	2.9	1,987	3.1	3,387	1.2	30,438	1.6
Breastfeeding mother and infant dyad	89,814	8.9	23,604	10.0	23,792	9.0	944	5.8	4,624	7.1	13,952	5.0	156,730	8.4
Homelessness/Migrancy	712	0.1	95	0.0	71	0.0	9	0.1	71	0.1	143	0.1	1,101	0.1
Other risk	17,302	1.7	2,188	0.9	2,366	0.9	83	0.5	270	0.4	2,214	0.8	24,422	1.3
No risk reported	2,837	0.3	765	0.3	948	0.4	77	0.5	690	1.1	3,562	1.3	8,880	0.5

Notes

In 1998, State WIC agencies could report up to three nutritional risks for each participant. This table examines all risks reported for every participant. When multiple risks within the same classification are reported for one person, these risks are combined and counted one time in order to accurately calculate the number and percent of WIC participants with a specific type (or category) of risk.

[a]Zero incomes are reported separately and excluded from these income calculations. In some reporting agencies, zero may be used to indicate missing information or adjunctive eligibility. PC98 cannot, therefore, distinguish between households with missing income information and households reporting zero income.

[b]Not reported includes the number and percent of participants for whom no data on income, income period, or size of economic unit are reported.

Exhibit 5.25

Number and Percent of Infant WIC Participants with Specific Nutritional Risks Reported At Certification by Percent of Poverty

Type of Risk and Specific Risk	Level of Poverty													
	Up to 100%		101% to 130%		131% to 185%		186% and over		Income Reported as Zero[a]		Not Reported[b]		Total WIC	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Participants in category	1,121,622		237,342		231,839		12,198		85,556		360,068		2,048,626	
Anthropometric	283,097	25.2%	56,184	23.7%	55,958	24.1%	3,105	25.5%	19,581	22.9%	67,793	18.8%	485,718	23.7%
Low weight for height	41,115	3.7	7,386	3.1	6,940	3.0	400	3.3	2,852	3.3	9,131	2.5	67,825	3.3
High weight for height	48,674	4.3	11,308	4.8	12,406	5.4	614	5.0	3,016	3.5	8,741	2.4	84,760	4.1
Short stature	85,339	7.6	15,743	6.6	14,801	6.4	922	7.6	6,426	7.5	21,067	5.9	144,297	7.0
Inappropriate growth or weight gain pattern	45,743	4.1	9,363	3.9	10,708	4.6	640	5.2	2,207	2.6	16,901	4.7	85,563	4.2
Low birthweight or premature birth	104,816	9.3	20,078	8.5	19,609	8.5	1,148	9.4	8,081	9.4	31,343	8.7	185,076	9.0
Other anthropometric	39,544	3.5	7,207	3.0	6,366	2.7	285	2.3	2,561	3.0	2,112	0.6	58,074	2.8
Biochemical	48,632	4.3	8,912	3.8	8,974	3.9	519	4.3	2,589	3.0	7,879	2.2	77,506	3.8
Hematocrit or hemoglobin below State standard	48,261	4.3	8,849	3.7	8,913	3.8	517	4.2	2,531	3.0	7,787	2.2	76,859	3.8
Other biochemical test results which indicate nutritional abnormality	476	0.0	69	0.0	71	0.0	2	0.0	67	0.1	130	0.0	815	0.0
Clinical, Health, Medical	146,643	13.1	25,874	10.9	24,131	10.4	1,514	12.4	9,385	11.0	23,358	6.5	230,905	11.3
Nutrition-related risk conditions	46,933	4.2	8,771	3.7	9,222	4.0	548	4.5	1,856	2.2	9,060	2.5	76,390	3.7
Substance abuse	53,102	4.7	8,696	3.7	6,770	2.9	220	1.8	4,900	5.7	6,270	1.7	79,958	3.9
Other health risk	53,603	4.8	9,563	4.0	9,117	3.9	797	6.5	3,110	3.6	8,975	2.5	85,166	4.2
Dietary	127,143	11.3	29,369	12.4	33,892	14.6	1,617	13.3	14,172	16.6	64,664	18.0	270,857	13.2
Inadequate or inappropriate nutrient intake	81,525	7.3	20,210	8.5	23,042	9.9	1,024	8.4	10,429	12.2	57,020	15.8	193,250	9.4
Other dietary risk	50,870	4.5	10,244	4.3	11,993	5.2	640	5.2	4,087	4.8	8,216	2.3	86,051	4.2
Other Risk	927,702	82.7	198,542	83.7	187,882	81.0	9,679	79.4	68,884	80.5	306,577	85.1	1,699,267	82.9
Regression	1,317	0.1	329	0.1	384	0.2	22	0.2	59	0.1	374	0.1	2,486	0.1
Transfer (nutrition risk unknown)	24,085	2.1	4,874	2.1	4,324	1.9	441	3.6	5,074	5.9	6,990	1.9	45,789	2.2
Breastfeeding mother and infant dyad	260,755	23.2	61,087	25.7	59,045	25.5	2,247	18.4	22,781	26.6	75,776	21.0	481,691	23.5
Infant of a WIC-eligible mother or mother at risk during pregnancy	838,493	74.8	176,083	74.2	163,446	70.5	8,724	71.5	57,525	67.2	265,531	73.7	1,509,803	73.7
Homelessness/Migrancy	798	0.1	73	0.0	51	0.0	7	0.1	80	0.1	169	0.0	1,178	0.1
Other risk	5,876	0.5	1,687	0.7	2,049	0.9	55	0.5	88	0.1	1,168	0.3	10,923	0.5
No risk reported	3,024	0.3	689	0.3	710	0.3	78	0.6	1,040	1.2	4,069	1.1	9,610	0.5

Notes

In 1998, State WIC agencies could report up to three nutritional risks for each participant. This table examines all risks reported for every participant. When multiple risks within the same classification are reported for one person, these risks are combined and counted one time in order to accurately calculate the number and percent of WIC participants with a specific type (or category) of risk.

[a]Zero incomes are reported separately and excluded from these income calculations. In some reporting agencies, zero may be used to indicate missing information or adjunctive eligibility. PC98 cannot, therefore, distinguish between households with missing income information and households reporting zero income.

[b]Not reported includes the number and percent of participants for whom no data on income, income period, or size of economic unit are reported.

An infant is defined as a participant who, at certification, is under one year of age and who would be classified as a child at the age of 366 days.

Exhibit 5.26

Number and Percent of Child WIC Participants with Specific Nutritional Risks Reported At Certification by Percent of Poverty

Type of Risk and Specific Risk	Level of Poverty													
	Up to 100%		101% to 130%		131% to 185%		186% and over		Income Reported as Zero[a]		Not Reported[b]		Total WIC	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Participants in category	2,433,687		528,560		530,568		24,401		71,930		531,870		4,121,017	
Anthropometric	800,135	32.9%	174,251	33.0%	170,861	32.2%	8,301	34.0%	21,585	30.0%	210,310	39.5%	1,385,441	33.6%
Low weight for height	112,891	4.6	21,344	4.0	21,331	4.0	1,096	4.5	2,859	4.0	17,125	3.2	176,646	4.3
High weight for height	378,686	15.6	79,864	15.1	75,096	14.2	3,052	12.5	11,739	16.3	99,046	18.6	647,483	15.7
Short stature	192,603	7.9	41,076	7.8	39,563	7.5	2,393	9.8	6,000	8.3	34,991	6.6	316,626	7.7
Inappropriate growth or weight gain pattern	188,577	7.7	47,637	9.0	50,390	9.5	2,540	10.4	3,272	4.5	77,955	14.7	370,371	9.0
Low birthweight or premature birth	11,868	0.5	3,603	0.7	2,869	0.5	269	1.1	180	0.3	2,941	0.6	21,730	0.5
Other anthropometric	25,525	1.0	5,540	1.0	5,592	1.1	409	1.7	632	0.9	957	0.2	38,655	0.9
Biochemical	626,059	25.7	118,282	22.4	107,040	20.2	4,204	17.2	14,989	20.8	136,856	25.7	1,007,429	24.4
Hematocrit or hemoglobin below State standard	622,166	25.6	117,838	22.3	106,660	20.1	4,180	17.1	14,880	20.7	136,378	25.6	1,002,102	24.3
Other biochemical test results which indicate nutritional abnormality	5,703	0.2	659	0.1	534	0.1	33	0.1	169	0.2	815	0.2	7,913	0.2
Clinical, Health, Medical	537,705	22.1	92,676	17.5	85,210	16.1	5,090	20.9	11,274	15.7	51,125	9.6	783,081	19.0
Nutrition-related risk conditions	260,092	10.7	44,649	8.4	42,863	8.1	2,345	9.6	5,469	7.6	28,492	5.4	383,910	9.3
Substance abuse	125,399	5.2	19,832	3.8	15,451	2.9	408	1.7	2,829	3.9	3,530	0.7	167,449	4.1
Other health risk	204,772	8.4	36,156	6.8	32,980	6.2	2,620	10.7	4,055	5.6	21,679	4.1	302,263	7.3
Dietary	1,598,133	65.7	369,857	70.0	385,460	72.7	17,094	70.1	57,159	79.5	387,444	72.8	2,815,146	68.3
Inadequate or inappropriate nutrient intake	1,480,291	60.8	345,911	65.4	364,978	68.8	16,381	67.1	54,585	75.9	382,590	71.9	2,644,736	64.2
Other dietary risk	226,550	9.3	46,105	8.7	41,721	7.9	1,626	6.7	5,645	7.8	13,325	2.5	334,972	8.1
Other Risk	150,864	6.2	31,265	5.9	29,470	5.6	1,625	6.7	3,909	5.4	24,407	4.6	241,539	5.9
Regression	81,242	3.3	16,632	3.1	15,455	2.9	658	2.7	846	1.2	10,610	2.0	125,443	3.0
Transfer (nutrition risk unknown)	34,899	1.4	7,742	1.5	6,415	1.2	552	2.3	2,455	3.4	5,017	0.9	57,079	1.4
Breastfeeding mother and infant dyad	3,713	0.2	856	0.2	942	0.2	36	0.1	90	0.1	400	0.1	6,037	0.1
Infant of a WIC-eligible mother or mother at risk during pregnancy	19,478	0.8	3,327	0.6	3,494	0.7	213	0.9	334	0.5	5,195	1.0	32,041	0.8
Homelessness/Migrancy	2,635	0.1	291	0.1	165	0.0	11	0.0	133	0.2	264	0.0	3,499	0.1
Other risk	13,347	0.5	3,398	0.6	3,902	0.7	190	0.8	114	0.2	3,274	0.6	24,225	0.6
No risk reported	7,703	0.3	2,482	0.5	2,409	0.5	124	0.5	924	1.3	11,019	2.1	24,661	0.6

Notes

In 1998, State WIC agencies could report up to three nutritional risks for each participant. This table examines all risks reported for every participant. When multiple risks within the same classification are reported for one person, these risks are combined and counted one time in order to accurately calculate the number and percent of WIC participants with a specific type (or category) of risk.

[a]Zero incomes are reported separately and excluded from these income calculations. In some reporting agencies, zero may be used to indicate missing information or adjunctive eligibility. PC98 cannot, therefore, distinguish between households with missing income information and households reporting zero income.

[b]Not reported includes the number and percent of participants for whom no data on income, income period, or size of economic unit are reported.

Exhibit 5.27

Number and Percent of One-Year-Old Child WIC Participants with Specific Nutritional Risks Reported At Certification by Percent of Poverty

Type of Risk and Specific Risk	Level of Poverty													
	Up to 100%		101% to 130%		131% to 185%		186% and over		Income Reported as Zero[a]		Not Reported[b]		Total WIC	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Participants in category	843,334		189,587		197,698		10,433		28,676		198,853		1,468,580	
Anthropometric	316,955	37.6%	70,273	37.1%	71,245	36.0%	3,822	36.6%	9,604	33.5%	83,373	41.9%	555,272	37.8%
Low weight for height	47,389	5.6	9,328	4.9	9,488	4.8	513	4.9	1,439	5.0	8,278	4.2	76,434	5.2
High weight for height	140,646	16.7	30,361	16.0	29,511	14.9	1,349	12.9	4,984	17.4	39,235	19.7	246,086	16.8
Short stature	80,261	9.5	17,129	9.0	16,743	8.5	1,054	10.1	2,701	9.4	15,540	7.8	133,428	9.1
Inappropriate growth or weight gain pattern	82,535	9.8	20,758	10.9	22,422	11.3	1,249	12.0	1,653	5.8	28,936	14.6	157,553	10.7
Low birthweight or premature birth	8,937	1.1	2,531	1.3	2,320	1.2	225	2.2	134	0.5	2,508	1.3	16,655	1.1
Other anthropometric	9,882	1.2	2,177	1.1	2,379	1.2	191	1.8	274	1.0	452	0.2	15,354	1.0
Biochemical	247,548	29.4	50,155	26.5	47,509	24.0	2,093	20.1	6,878	24.0	58,419	29.4	412,602	28.1
Hematocrit or hemoglobin below State standard	246,684	29.3	50,045	26.4	47,416	24.0	2,086	20.0	6,841	23.9	58,270	29.3	411,342	28.0
Other biochemical test results which indicate nutritional abnormality	1,439	0.2	180	0.1	150	0.1	9	0.1	52	0.2	287	0.1	2,117	0.1
Clinical, Health, Medical	172,607	20.5	31,860	16.8	31,620	16.0	2,222	21.3	4,338	15.1	19,986	10.1	262,632	17.9
Nutrition-related risk conditions	79,258	9.4	14,833	7.8	15,526	7.9	942	9.0	1,969	6.9	11,358	5.7	123,886	8.4
Substance abuse	38,429	4.6	6,448	3.4	5,390	2.7	154	1.5	1,156	4.0	1,645	0.8	53,222	3.6
Other health risk	67,318	8.0	12,651	6.7	12,494	6.3	1,227	11.8	1,559	5.4	7,850	3.9	103,099	7.0
Dietary	526,929	62.5	126,502	66.7	136,811	69.2	7,025	67.3	22,046	76.9	136,806	68.8	956,120	65.1
Inadequate or inappropriate nutrient intake	473,154	56.1	115,005	60.7	126,118	63.8	6,543	62.7	20,459	71.3	133,980	67.4	875,259	59.6
Other dietary risk	108,729	12.9	23,521	12.4	23,022	11.6	1,124	10.8	3,464	12.1	7,455	3.7	167,315	11.4
Other Risk	57,626	6.8	12,196	6.4	12,351	6.2	788	7.6	1,688	5.9	11,144	5.6	95,794	6.5
Regression	22,234	2.6	4,949	2.6	4,788	2.4	220	2.1	282	1.0	3,301	1.7	35,773	2.4
Transfer (nutrition risk unknown)	12,767	1.5	2,946	1.6	2,672	1.4	252	2.4	1,049	3.7	2,183	1.1	21,869	1.5
Breastfeeding mother and infant dyad	3,400	0.4	820	0.4	912	0.5	35	0.3	76	0.3	365	0.2	5,608	0.4
Infant of a WIC-eligible mother or mother at risk during pregnancy	17,237	2.0	2,843	1.5	3,016	1.5	197	1.9	238	0.8	4,595	2.3	28,126	1.9
Homelessness/Migrancy	816	0.1	101	0.1	60	0.0	5	0.0	43	0.1	110	0.1	1,135	0.1
Other risk	3,719	0.4	1,107	0.6	1,474	0.7	90	0.9	32	0.1	836	0.4	7,258	0.5
No risk reported	4,634	0.5	1,520	0.8	1,523	0.8	83	0.8	410	1.4	5,904	3.0	14,075	1.0

Notes

In 1998, State WIC agencies could report up to three nutritional risks for each participant. This table examines all risks reported for every participant. When multiple risks within the same classification are reported for one person, these risks are combined and counted one time in order to accurately calculate the number and percent of WIC participants with a specific type (or category) of risk.

[a]Zero incomes are reported separately and excluded from these income calculations. In some reporting agencies, zero may be used to indicate missing information or adjunctive eligibility. PC98 cannot, therefore, distinguish between households with missing income information and households reporting zero income.

[b]Not reported includes the number and percent of participants for whom no data on income, income period, or size of economic unit are reported.

Exhibit 5.28

Number and Percent of Two-Year-Old Child WIC Participants with Specific Nutritional Risks Reported At Certification by Percent of Poverty

Type of Risk and Specific Risk	Level of Poverty													
	Up to 100%		101% to 130%		131% to 185%		186% and over		Income Reported as Zero[a]		Not Reported[b]		Total WIC	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Participants in category	612,724		133,109		133,521		5,733		18,102		131,243		1,034,432	
Anthropometric	203,282	33.2%	44,440	33.4%	43,522	32.6%	1,964	34.3%	5,353	29.6%	56,398	43.0%	354,960	34.3%
Low weight for height	28,771	4.7	5,474	4.1	5,558	4.2	261	4.6	684	3.8	4,238	3.2	44,986	4.3
High weight for height	99,324	16.2	21,029	15.8	19,969	15.0	773	13.5	2,957	16.3	27,961	21.3	172,014	16.6
Short stature	48,962	8.0	10,344	7.8	9,995	7.5	599	10.4	1,516	8.4	8,896	6.8	80,312	7.8
Inappropriate growth or weight gain pattern	46,271	7.6	11,593	8.7	12,403	9.3	563	9.8	750	4.1	20,969	16.0	92,550	8.9
Low birthweight or premature birth	1,308	0.2	715	0.5	289	0.2	23	0.4	17	0.1	261	0.2	2,613	0.3
Other anthropometric	5,927	1.0	1,359	1.0	1,324	1.0	83	1.4	168	0.9	218	0.2	9,079	0.9
Biochemical	168,961	27.6	31,333	23.5	28,112	21.1	1,016	17.7	3,885	21.5	36,751	28.0	270,058	26.1
Hematocrit or hemoglobin below State standard	167,774	27.4	31,208	23.4	27,990	21.0	1,011	17.6	3,854	21.3	36,615	27.9	268,453	26.0
Other biochemical test results which indicate nutritional abnormality	1,705	0.3	182	0.1	171	0.1	7	0.1	52	0.3	231	0.2	2,348	0.2
Clinical, Health, Medical	133,083	21.7	22,810	17.1	20,814	15.6	1,195	20.8	2,856	15.8	12,300	9.4	193,057	18.7
Nutrition-related risk conditions	62,367	10.2	10,746	8.1	10,183	7.6	567	9.9	1,375	7.6	6,896	5.3	92,135	8.9
Substance abuse	32,693	5.3	5,082	3.8	3,977	3.0	104	1.8	732	4.0	808	0.6	43,396	4.2
Other health risk	50,859	8.3	8,929	6.7	8,112	6.1	591	10.3	1,020	5.6	5,241	4.0	74,753	7.2
Dietary	405,165	66.1	93,544	70.3	97,884	73.3	4,062	70.8	14,584	80.6	94,812	72.2	710,052	68.6
Inadequate or inappropriate nutrient intake	376,053	61.4	87,902	66.0	93,324	69.9	3,965	69.2	14,083	77.8	93,821	71.5	669,148	64.7
Other dietary risk	56,293	9.2	10,875	8.2	9,302	7.0	241	4.2	1,208	6.7	2,894	2.2	80,813	7.8
Other Risk	34,135	5.6	7,250	5.4	6,665	5.0	320	5.6	901	5.0	4,920	3.7	54,190	5.2
Regression	22,014	3.6	4,610	3.5	4,199	3.1	163	2.8	236	1.3	2,813	2.1	34,034	3.3
Transfer (nutrition risk unknown)	8,447	1.4	1,841	1.4	1,584	1.2	123	2.1	592	3.3	1,182	0.9	13,769	1.3
Breastfeeding mother and infant dyad	113	0.0	7	0.0	8	0.0	0	0.0	8	0.0	5	0.0	141	0.0
Infant of a WIC-eligible mother or mother at risk during pregnancy	111	0.0	22	0.0	18	0.0	2	0.0	11	0.1	7	0.0	171	0.0
Homelessness/Migrancy	720	0.1	84	0.1	34	0.0	5	0.1	41	0.2	60	0.0	944	0.1
Other risk	3,305	0.5	826	0.6	925	0.7	32	0.6	25	0.1	881	0.7	5,994	0.6
No risk reported	1,165	0.2	394	0.3	342	0.3	13	0.2	220	1.2	1,900	1.4	4,034	0.4

Notes

In 1998, State WIC agencies could report up to three nutritional risks for each participant. This table examines all risks reported for every participant. When multiple risks within the same classification are reported for one person, these risks are combined and counted one time in order to accurately calculate the number and percent of WIC participants with a specific type (or category) of risk.

[a]Zero incomes are reported separately and excluded from these income calculations. In some reporting agencies, zero may be used to indicate missing information or adjunctive eligibility. PC98 cannot, therefore, distinguish between households with missing income information and households reporting zero income.

[b]Not reported includes the number and percent of participants for whom no data on income, income period, or size of economic unit are reported.

Exhibit 5.29

Number and Percent of Three-Year-Old Child WIC Participants with Specific Nutritional Risks Reported At Certification by Percent of Poverty

Type of Risk and Specific Risk	Level of Poverty													
	Up to 100%		101% to 130%		131% to 185%		186% and over		Income Reported as Zero[a]		Not Reported[b]		Total WIC	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Participants in category	552,817		117,442		114,207		4,768		14,734		113,790		917,758	
Anthropometric	154,111	27.9%	33,050	28.1%	30,966	27.1%	1,431	30.0%	3,768	25.6%	38,743	34.0%	262,070	28.6%
Low weight for height	21,682	3.9	3,944	3.4	3,674	3.2	186	3.9	426	2.9	2,820	2.5	32,733	3.6
High weight for height	72,302	13.1	14,929	12.7	13,296	11.6	470	9.9	2,077	14.1	16,963	14.9	120,036	13.1
Short stature	36,229	6.6	7,813	6.7	7,349	6.4	452	9.5	1,080	7.3	6,064	5.3	58,987	6.4
Inappropriate growth or weight gain pattern	34,467	6.2	8,860	7.5	9,007	7.9	441	9.2	508	3.4	15,499	13.6	68,783	7.5
Low birthweight or premature birth	795	0.1	194	0.2	133	0.1	12	0.3	13	0.1	77	0.1	1,224	0.1
Other anthropometric	5,620	1.0	1,178	1.0	1,141	1.0	78	1.6	121	0.8	171	0.2	8,308	0.9
Biochemical	129,227	23.4	23,250	19.8	19,717	17.3	693	14.5	2,785	18.9	26,012	22.9	201,685	22.0
Hematocrit or hemoglobin below State standard	128,126	23.2	23,117	19.7	19,601	17.2	685	14.4	2,756	18.7	25,903	22.8	200,189	21.8
Other biochemical test results which indicate nutritional abnormality	1,563	0.3	194	0.2	140	0.1	11	0.2	40	0.3	174	0.2	2,122	0.2
Clinical, Health, Medical	129,466	23.4	21,349	18.2	18,856	16.5	971	20.4	2,307	15.7	10,671	9.4	183,621	20.0
Nutrition-related risk conditions	64,455	11.7	10,327	8.8	9,626	8.4	487	10.2	1,189	8.1	5,819	5.1	91,903	10.0
Substance abuse	30,589	5.5	4,639	4.0	3,536	3.1	86	1.8	555	3.8	592	0.5	39,997	4.4
Other health risk	48,802	8.8	8,457	7.2	7,312	6.4	477	10.0	818	5.6	4,834	4.2	70,700	7.7
Dietary	376,399	68.1	85,117	72.5	86,394	75.6	3,466	72.7	12,065	81.9	88,223	77.5	651,664	71.0
Inadequate or inappropriate nutrient intake	356,254	64.4	81,215	69.2	83,333	73.0	3,391	71.1	11,769	79.9	87,635	77.0	623,597	67.9
Other dietary risk	36,305	6.6	6,793	5.8	5,573	4.9	152	3.2	625	4.2	1,752	1.5	51,201	5.6
Other Risk	31,839	5.8	6,507	5.5	5,712	5.0	277	5.8	754	5.1	4,300	3.8	49,388	5.4
Regression	20,477	3.7	4,110	3.5	3,619	3.2	159	3.3	198	1.3	2,451	2.2	31,014	3.4
Transfer (nutrition risk unknown)	7,811	1.4	1,662	1.4	1,256	1.1	95	2.0	495	3.4	950	0.8	12,270	1.3
Breastfeeding mother and infant dyad	52	0.0	4	0.0	3	0.0	0	0.0	4	0.0	3	0.0	66	0.0
Infant of a WIC-eligible mother or mother at risk during pregnancy	75	0.0	11	0.0	8	0.0	0	0.0	6	0.0	8	0.0	108	0.0
Homelessness/Migrancy	641	0.1	66	0.1	46	0.0	1	0.0	29	0.2	56	0.0	839	0.1
Other risk	3,424	0.6	793	0.7	894	0.8	35	0.7	33	0.2	857	0.8	6,036	0.7
No risk reported	1,083	0.2	348	0.3	308	0.3	17	0.4	168	1.1	1,632	1.4	3,556	0.4

Notes

In 1998, State WIC agencies could report up to three nutritional risks for each participant. This table examines all risks reported for every participant. When multiple risks within the same classification are reported for one person, these risks are combined and counted one time in order to accurately calculate the number and percent of WIC participants with a specific type (or category) of risk.

[a]Zero incomes are reported separately and excluded from these income calculations. In some reporting agencies, zero may be used to indicate missing information or adjunctive eligibility. PC98 cannot, therefore, distinguish between households with missing income information and households reporting zero income.

[b]Not reported includes the number and percent of participants for whom no data on income, income period, or size of economic unit are reported.

Exhibit 5.30

Number and Percent of Four-Year-Old Child WIC Participants with Specific Nutritional Risks Reported At Certification by Percent of Poverty

Type of Risk and Specific Risk	Level of Poverty													
	Up to 100%		101% to 130%		131% to 185%		186% and over		Income Reported as Zero[a]		Not Reported[b]		Total WIC	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Participants in category	407,863		83,478		80,380		3,275		10,015		83,962		668,972	
Anthropometric	119,538	29.3%	24,865	29.8%	23,570	29.3%	1,015	31.0%	2,736	27.3%	30,515	36.3%	202,239	30.2%
Low weight for height	14,251	3.5	2,387	2.9	2,405	3.0	126	3.8	290	2.9	1,640	2.0	21,099	3.2
High weight for height	62,278	15.3	12,501	15.0	11,324	14.1	413	12.6	1,649	16.5	14,111	16.8	102,276	15.3
Short stature	25,975	6.4	5,513	6.6	5,216	6.5	275	8.4	676	6.7	4,245	5.1	41,900	6.3
Inappropriate growth or weight gain pattern	24,619	6.0	6,202	7.4	6,330	7.9	280	8.5	344	3.4	12,347	14.7	50,121	7.5
Low birthweight or premature birth	496	0.1	93	0.1	73	0.1	7	0.2	6	0.1	33	0.0	708	0.1
Other anthropometric	4,036	1.0	814	1.0	737	0.9	56	1.7	64	0.6	115	0.1	5,824	0.9
Biochemical	78,358	19.2	13,085	15.7	11,282	14.0	382	11.7	1,395	13.9	15,230	18.1	119,731	17.9
Hematocrit or hemoglobin below State standard	77,619	19.0	13,009	15.6	11,233	14.0	378	11.5	1,383	13.8	15,146	18.0	118,767	17.8
Other biochemical test results which indicate nutritional abnormality	994	0.2	103	0.1	73	0.1	6	0.2	25	0.2	123	0.1	1,324	0.2
Clinical, Health, Medical	100,798	24.7	16,158	19.4	13,459	16.7	674	20.6	1,755	17.5	7,802	9.3	140,646	21.0
Nutrition-related risk conditions	52,411	12.9	8,276	9.9	7,111	8.8	327	10.0	920	9.2	4,147	4.9	73,191	10.9
Substance abuse	23,637	5.8	3,655	4.4	2,534	3.2	59	1.8	386	3.9	409	0.5	30,680	4.6
Other health risk	37,677	9.2	6,093	7.3	5,026	6.3	322	9.8	656	6.5	3,725	4.4	53,498	8.0
Dietary	277,076	67.9	60,806	72.8	60,699	75.5	2,398	73.2	8,190	81.8	65,102	77.5	474,270	70.9
Inadequate or inappropriate nutrient intake	262,875	64.5	58,143	69.7	58,772	73.1	2,346	71.6	8,000	79.9	64,804	77.2	454,939	68.0
Other dietary risk	23,759	5.8	4,451	5.3	3,378	4.2	92	2.8	344	3.4	925	1.1	32,948	4.9
Other Risk	24,533	6.0	4,678	5.6	4,066	5.1	216	6.6	467	4.7	3,271	3.9	37,230	5.6
Regression	16,140	4.0	2,850	3.4	2,723	3.4	112	3.4	126	1.3	1,962	2.3	23,914	3.6
Transfer (nutrition risk unknown)	5,674	1.4	1,252	1.5	856	1.1	78	2.4	299	3.0	604	0.7	8,763	1.3
Breastfeeding mother and infant dyad	13	0.0	1	0.0	2	0.0	0	0.0	2	0.0	.	.	18	0.0
Infant of a WIC-eligible mother or mother at risk during pregnancy	54	0.0	13	0.0	6	0.0	1	0.0	6	0.1	9	0.0	89	0.0
Homelessness/Migrancy	457	0.1	37	0.0	24	0.0	0	0.0	20	0.2	37	0.0	576	0.1
Other risk	2,769	0.7	636	0.8	556	0.7	31	0.9	22	0.2	679	0.8	4,693	0.7
No risk reported	743	0.2	198	0.2	203	0.3	11	0.3	110	1.1	1,257	1.5	2,521	0.4

Notes

In 1998, State WIC agencies could report up to three nutritional risks for each participant. This table examines all risks reported for every participant. When multiple risks within the same classification are reported for one person, these risks are combined and counted one time in order to accurately calculate the number and percent of WIC participants with a specific type (or category) of risk.

[a]Zero incomes are excluded from these income calculations. In some reporting agencies, zero may be used to indicate missing information or adjunctive eligibility. PC98 cannot, therefore, distinguish between households with missing income information and households reporting zero income.

[b]Not reported includes the number and percent of participants for whom no data on income, income period, or size of economic unit are reported.

Exhibit 5.31

Distribution of Infant[a] WIC Participants According to Selected Anthropometric Measures: 1994, 1996, 1998

NCHS-CDC Percentiles[b]	1994	1996	1998
	Percent by percentile[c]		
Weight for length[d]			
<3rd percentile	2.5%	2.3%	2.3%
<5th	4.9	4.7	4.8
<10th	7.8	7.7	7.8
>90th	9.2	10.3	10.3
>95th	5.0	5.6	5.7
>98th	4.0	4.5	4.5
Invalid or unreported anthropometric data[e]	29.5	23.9	23.7
Weight for age[e]			
<3rd percentile	4.6	5.1	5.5
<5th	6.4	7.1	7.5
<10th	10.5	11.7	12.4
>90th	11.4	14.2	14.9
>95th	8.0	10.0	10.7
>98th	5.2	6.5	6.8
Invalid or unreported anthropometric data	21.5	6.2	3.1
Length for age[d,f]			
<3rd percentile	7.9	9.1	9.8
<5th	9.5	10.9	11.5
<10th	13.4	15.3	15.9
Invalid or unreported anthropometric data	25.2	7.0	4.1
WIC infants	1,852,455	1,988,789	2,048,625

Notes

Percentiles are calculated using software for pediatric anthropometry developed by the Centers for Disease Control and the World Health Organization. See: Sullivan, M. and J. Gorstein. December 1990. *ANTHRO: Software for Calculating Pediatric Anthropometry*, Version 1.01.

[a] An infant is defined as a participant who, at certification, is under one year of age and who would be classified as a child at the age of 366 days.

[b] NCHS = National Center for Health Statistics. CDC = Centers for Disease Control and Prevention.

[c] Percentiles reported in this table are cumulative. For example the <5th category includes those infants in the <3rd percentile, and the >95th category includes those infants in the >98th percentile.

[d] It is assumed that height for an infant is recumbent length.

[e] Infants less than 19.3 inches are coded as invalid by CDC software program in weight-to-length percentile calculations.

[f] Age is calculated in months using birthdates and dates height and weight are measured.

Exhibit 5.32

Distribution of Infant WIC Participants by Racial or Ethnic Characteristics According to Selected Anthropometric Measures[a]

NCHS-CDC Percentiles[b]	American Indian or Alaskan Native	Asian or Pacific Islander	Black (non-Hispanic)	Hispanic	White (non-Hispanic)	Race or Ethnicity Not Reported
			Percent by characteristic			
Weight for length[c]						
<3rd percentile[d]	1.7%	2.6%	2.9%	2.3%	2.0%	2.2%
<5th	3.8	5.1	5.6	4.6	4.4	4.5
<10th	6.3	8.6	8.9	7.7	7.2	7.6
>90th	14.1	10.3	8.6	11.0	10.5	10.8
>95th	8.1	5.8	4.8	6.1	5.6	5.7
>98th	6.4	4.7	3.9	5.0	4.3	4.4
Invalid or unreported[e] anthropometric data	20.4	21.8	30.4	23.4	20.1	20.8
Weight for age[f]						
<3rd percentile[d]	4.7	4.1	7.5	4.5	5.2	4.2
<5th	6.5	5.7	10.1	6.1	7.2	5.7
<10th	10.6	10.8	16.5	10.4	11.7	10.1
>90th	19.5	14.0	11.8	16.7	15.4	15.5
>95th	14.2	9.9	8.7	12.4	10.8	10.8
>98th	9.4	6.3	5.7	7.7	6.8	7.1
Invalid or unreported anthropometric data	3.4	2.2	3.7	2.4	3.3	5.9
Length for age[c,f]						
<3rd percentile[d]	8.6	8.4	12.8	8.8	8.9	7.1
<5th	10.3	10.0	14.7	10.3	10.8	8.5
<10th	14.3	13.9	19.3	14.2	15.4	12.4
Invalid or unreported anthropometric data	4.6	3.4	4.8	3.7	3.9	6.6
WIC infants	27,656	64,400	498,190	622,186	814,778	21,413

Notes

Percentiles are calculated using software for pediatric anthropometry developed by the Centers for Disease Control and the World Health Organization. See: Sullivan, M. and J. Gorstein. December 1990. *ANTHRO: Software for Calculating Pediatric Anthropometry*, Version 1.01.

[a] An infant is defined as a participant who, at certification, is under one year of age and who would be classified as a child at the age of 366 days.

[b] NCHS = National Center for Health Statistics. CDC = Centers for Disease Control and Prevention.

[c] It is assumed that height for an infant is recumbent length.

[d] Percentiles reported in this table are cumulative. For example the <5th category includes those infants in the <3rd percentile, and the >95th category includes those infants in the >98th percentile.

[e] Infants less than 19.3 inches are coded as invalid by CDC software program in weight-to-length percentile calculations.

[f] Age is calculated in months using birthdates and dates height and weight are measured.

Exhibit 5.33

Distribution of Child WIC Participants by Age According to Selected Anthropometric Measures: 1994, 1996, 1998

	1 Year Old			2 or More Years Old		
NCHS-CDC Percentiles[a]	**1994**	**1996**	**1998**	**1994**	**1996**	**1998**
	Percent by percentile[b]					
Weight for height[c]						
<3rd percentile	2.2%	2.1%	1.9%	1.3%	1.1%	1.0%
<5th	3.3	3.2	3.0	2.4	2.0	1.9
<10th	7.6	7.3	7.0	5.4	4.6	4.4
>90th	20.8	21.5	23.0	13.7	14.8	16.5
>95th	13.1	13.6	14.5	8.8	9.7	11.0
>98th[d]	10.2	10.8	11.5	6.9	7.6	8.7
Invalid or unreported anthropometric data	4.5	5.2	2.5	3.3	4.8	1.9
Weight for age[c,d]						
<3rd percentile	4.2	4.1	3.0	3.5	3.0	2.2
<5th	5.9	5.9	4.8	5.3	4.6	3.6
<10th	9.9	10.1	9.1	10.0	8.8	7.6
>90th	13.3	16.3	17.3	13.2	15.5	17.8
>95th	8.6	10.7	11.3	8.6	10.3	11.9
>98th[d]	6.4	8.2	8.5	6.5	7.9	9.2
Invalid or unreported anthropometric data	14.8	4.7	1.3	7.8	4.9	1.4
Height for age[c,d]						
<3rd percentile	6.1	5.9	6.2	4.1	3.8	3.2
<5th	8.4	8.2	8.7	5.9	5.6	4.8
<10th	13.4	13.5	14.2	10.4	9.8	8.9
>90th	7.9	10.1	10.2	13.0	14.8	16.6
>95th	4.4	5.8	5.7	7.8	9.1	10.2
>98th	3.0	4.0	3.9	5.3	6.3	7.1
Invalid or unreported anthropometric data	16.5	6.5	1.8	8.4	5.4	1.4
WIC children	1,384,268	1,423,566	1,468,579	1,979,761	2,550,508	2,621,162

Notes

Percentiles are calculated using software for pediatric anthropometry developed by the Centers for Disease Control and the World Health Organization. See: Sullivan M. and J. Gorstein. December 1990. *ANTHRO: Software for Calculating Pediatric Anthropometry*, Version 1.01.

Age is not reported for 31,275 children.

[a] NCHS = National Center for Health Statistics. CDC = Centers for Disease Control and Prevention.

[b] Percentiles reported in this table are cumulative. For example the <5th category includes those infants in the <3rd percentile, and the >95th category includes those infants in the >98th percentile.

[c] NCHS-CDC reference curves for one-to-two-year-old children are based on a sample of children from Yellow Springs, Ohio, who were measured by researchers at the Fels Research Institute. For children aged two or more, NCHS-CDC growth reference curves are based on a representative sample of US children.

[d] Age is calculated in months using birthdates and dates height and weight are measured.

Exhibit 5.34

Distribution of Child WIC Participants by Age and Race or Ethnicity According to Selected Anthropometric Measures

NCHS[a] Percentiles	American Indian or Alaskan Native		Asian or Pacific Islander		Black (non-Hispanic)		Hispanic		White (non-Hispanic)		Race or Ethnicity Not Reported	
	1 Year Old	2 or More Years Old	1 Year Old	2 or More Years Old	1 Year Old	2 or More Years Old	1 Year Old	2 or More Years Old	1 Year Old	2 or More Years Old	1 Year Old	2 or More Years Old
	Percent by characteristic											
Weight for height[b]												
<3rd[c]	1.4%	0.8%	3.2%	1.2%	2.3%	1.4%	1.6%	0.8%	2.0%	1.1%	2.2%	1.0%
<5th	2.1	1.4	4.9	2.0	3.5	2.5	2.5	1.5	3.0	2.0	3.4	1.8
<10th	4.7	3.0	10.4	4.8	7.9	5.5	6.1	3.7	7.1	4.5	8.2	4.3
>90th	29.9	21.3	17.7	17.2	22.8	14.8	26.2	20.5	20.8	13.7	22.8	16.4
>95th	19.9	14.0	10.8	11.6	14.6	9.7	17.1	14.3	12.6	8.7	14.3	11.2
>98th	16.2	10.9	8.5	9.3	11.6	7.5	13.7	11.6	9.8	6.6	11.1	8.8
Invalid or unreported anthropometric data	3.8	1.8	2.4	1.5	2.9	1.5	3.1	2.7	1.9	1.5	2.9	2.4
Weight for age[b,d]												
<3rd[c]	2.6	1.6	4.3	2.8	3.5	2.4	2.4	1.7	3.2	2.6	3.1	2.2
<5th	3.9	2.7	6.9	4.7	5.5	3.9	3.8	2.9	5.0	4.3	4.7	3.6
<10th	6.9	5.5	12.9	9.6	10.1	7.8	7.7	6.2	9.5	8.8	8.7	7.5
>90th	23.1	21.5	12.8	16.5	17.5	18.0	19.3	21.3	15.8	14.3	18.6	18.5
>95th	15.8	14.5	8.1	11.3	11.6	11.9	12.9	14.9	10.1	9.1	12.1	12.4
>98th	12.2	11.3	6.1	8.9	8.8	9.1	9.9	11.9	7.4	6.9	9.2	9.8
Invalid or unreported anthropometric data	1.1	1.1	1.0	1.0	1.0	1.1	2.0	2.3	0.9	0.9	2.3	2.2
Height for age[b,d]												
<3rd[c]	5.4	2.7	7.4	4.8	6.9	2.9	6.1	3.0	5.8	3.6	5.3	3.0
<5th	7.6	4.0	10.4	7.3	9.4	4.2	8.5	4.5	8.3	5.5	7.4	4.5
<10th	12.6	7.7	17.0	12.7	14.9	7.7	14.2	8.4	13.8	10.1	12.4	8.3
>90th	9.9	16.2	9.4	13.3	11.0	20.4	10.5	17.5	9.6	13.7	12.0	18.0
>95th	5.3	9.8	5.5	8.1	6.3	13.1	6.0	10.9	5.3	8.2	7.0	11.4
>98th	3.4	6.8	3.7	5.6	4.3	9.3	4.2	7.6	3.5	5.4	5.0	7.8
Invalid or unreported anthropometric data	3.3	1.3	2.0	1.2	1.9	1.0	2.4	2.1	1.4	1.2	2.5	2.0
WIC Children	21,510	41,139	47,070	90,487	343,445	594,936	469,897	915,116	575,226	961,807	11,432	17,677

Notes

Age is not reported for 5,392 American Indian/Alaskan Native children, 1,140 Asian/Pacific Islander children, 4,335 black children, 3,642 Hispanic children, 16,137 white children, and 629 of the children missing race/ethnicity information.

[a] NCHS = National Center for Health Statistics. Percentiles are calculated using software for pediatric anthropometry developed by the Centers for Disease Control and the World Health Organization. See: Sullivan M. and J. Gorstein. December 1990. *ANTHRO: Software for Calculating Pediatric Anthropometry*, Version 1.01.

[b] NCHS-CDC reference curves for one-to-two-year-old children are based on a sample of children from Yellow Springs, Ohio, who were measured by researchers at the Fels Research Institute. For children aged two or more, NCHS-CDC growth reference curves are based on a representative sample of US children.

[c] Percentiles reported in this table are cumulative. For example the <5th category includes those children in the <3rd percentile, and the >95th category includes those children in the >98th percentile.

[d] Age is calculated in months using birthdates and dates height and weight are measured.

Exhibit 5.35

Number and Percent of Infant WIC Participants at Risk According to Several Anthropometric Criteria

	Number	Percent
1998 WIC Modal Criteria		
Weight for age[a]		
Underweight	254,312	12.4%
Overweight	304,849	14.9
Weight not reported	40,656	2.0
Length for age[b]		
Short stature	325,799	15.9
Tall stature	228,305	11.1
Length not reported	57,151	2.8
Weight for length[a]		
Underweight	159,504	7.8
Overweight	209,276	10.2
Weight or length not reported	60,756	3.0
Weight and length not reported	37,051	1.8
WIC infants	2,048,626	

Notes

Anthropometric criteria are based on percentiles developed by the National Center for Health Statistics (NCHS). Percentiles are calculated using software for pediatric anthropometry developed by the Centers for Disease Control and the World Health Organization. See: Sullivan, M. and J. Gorstein. December 1990. *ANTHRO: Software for Calculating Pediatric Anthropometry*, Version 1.01.

Calculations for modal criteria assign equal weight to every reporting State. There is substantial variation in numbers of State WIC agencies reporting information on anthropometric criteria. For details on this topic, see Appendix D, Exhibits D5.35A, D5.35B, and D5.35C.

[a]Infants falling below the tenth percentile for weight for age or weight for length meet the modal criteria for underweight for age or length. Infants over the ninetieth percentile are considered overweight.

[b]Infants falling below the tenth percentile for length for age meet the modal criteria for short stature. Tall stature is set at length for age measurements above the ninetieth percentile.

Exhibit 5.36

Number and Percent of Child WIC Participants at Risk According to Several Anthropometric Criteria

	1 Year		2 Years		3 Years		4 Years		Age Not Reported[c]		Total Children	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1998 WIC Modal Criteria												
Weight for age[a]												
Underweight	133,611	9.1%	80,958	7.8%	71,380	7.8%	47,810	7.1%	1,478	4.7%	335,237	8.1%
Overweight	252,823	17.2	188,335	18.2	151,278	16.5	123,818	18.5	1,879	6	718,134	17.4
Weight not reported	15,425	1.1	10,780	1.0	9,557	1.0	7,850	1.2	883	2.8	44,494	1.1
Height for age[b]												
Short stature	209,638	14.3	75,069	7.3	88,685	9.7	71,677	10.7	2,165	6.9	447,234	10.9
Tall stature	148,537	10.1	191,354	18.5	142,731	15.6	97,996	14.6	1,331	4.3	581,949	14.1
Height not reported	20,405	1.4	16,766	1.6	10,211	1.1	7,687	1.1	1,051	3.4	56,120	1.4
Weight for height[a]												
Underweight	103,396	7.0	50,264	4.9	38,343	4.2	26,911	4.0	1,260	4.0	220,175	5.3
Overweight	320,371	21.8	159,381	15.4	150,602	16.4	123,471	18.5	5,610	17.9	759,436	18.4
Weight or height not reported	22,339	1.5	17,888	1.7	11,405	1.2	9,039	1.4	1,092	3.5	61,764	1.5
Weight and height not reported	13,492	0.9	9,657	0.9	8,362	0.9	6,497	1.0	842	2.7	38,850	0.9
Children in age group	1,468,580		1,034,432		917,758		668,972		31,275		4,121,017	

Notes

Anthropometric criteria are based on percentiles developed by the National Center for Health Statistics (NCHS). Percentiles are calculated using software for pediatric anthropometry developed by the Centers for Disease Control and the World Health Organization. See: Sullivan, M. and J. Gorstein. December 1990. *ANTHRO: Software for Calculating Pediatric Anthropometry*, Version 1.01.

Calculations for modal criteria assign equal weight to every reporting State. There is substantial variation in numbers of State WIC agencies reporting information on anthropometric criteria. For details on this topic, see Appendix D, Exhibits D5.35A, D5.35B, and D5.35C.

[a]Children falling below the tenth percentile for weight for age or weight for height meet the modal criteria for underweight for age or height. Children over the ninetieth percentile are considered overweight.

[b]Children falling below the tenth percentile for height for age meet the modal criteria for short stature. Tall stature is set at height for age measurements above the ninetieth percentile.

[c]Weight for age and height for age have been reported for children missing age at certification for whom, however, age at height and weight measurement could be calculated.

Exhibit 5.37

Number and Percent of Breastfeeding and Postpartum Women WIC Participants at Risk According to Several Anthropometric Criteria

	Breastfeeding Women		Postpartum Women	
	Number	**Percent**	**Number**	**Percent**
1998 WIC modal criteria[a]				
Current weight for height				
Underweight	12,228	3.1%	22,623	3.8%
Overweight	206,419	53.0	321,760	54.4
Weight not reported	7,710	2.0	11,197	1.9
Height not reported	5,382	1.4	8,132	1.4
Weight or height not reported	10,912	2.8	13,837	2.3
Weight and height not reported	2,180	0.6	5,491	0.9
Women in category	389,391		591,050	

Notes

Standard height and weight percentiles are based on the Metropolitan Life Actuarial Tables, 1959.

Calculation for modal criteria assign equal weight to every reporting State. Seventy-five State WIC agencies reported criteria for underweight for breastfeeding women; seventy-three agencies provided criteria for overweight. For postpartum women, seventy-one State WIC agencies reported criteria for underweight; sixty-nine agencies provided information on overweight. See Exhibit D5.37 in Appendix D for more details.

[a]Weight for height measurements for breastfeeding and postpartum women ten percent below standard meet the modal criteria for underweight for height; twenty percent above standard is overweight for height.

When PC98 modal criteria are considered, over half (53.0 percent for breastfeeding women and 54.4 percent of postpartum women) of these participant groups are overweight. The percent of overweight breastfeeding women increased by 10 percentage points and the percent of overweight postpartum women increased by 7 percentage points between 1996 and 1998. These changes should be treated somewhat cautiously due to unreported height data in PC96. Assuming participants with missing data are similar to all other participants, then the percent of overweight breastfeeding women and the percent of overweight postpartum women only increased by 3 percentage points between 1996 and 1998.

It is interesting to compare these figures with the State-specific nutritional risks reported in Exhibit 5.9 where only 36.3 percent of breastfeeding women and 32.7 percent of postpartum women are reported as having high weight for height. These differences between the incidence of high weight for height in the anthropometric risks and the reported nutritional risks could be due to two factors. One, some participants may be overweight according to State criteria and the risk may not be recorded. Two, reported nutritional risks use State-specific criteria to determine whether participants are overweight while the anthropometric data use a national standard. State-specific variations in overweight criteria coupled with State differences in the WIC population can lead to differences in the incidence of high weight to height between the two measures. Figures for underweight for height are about the same in both exhibits.

Blood Measures

Federal regulations allow each State to set WIC eligibility criteria for determining nutritional risk using hemoglobin and/or hematocrit measures. States reported their eligibility criteria for PC98; average values are presented in Exhibits 5.38 and 5.39 along with the 1989 CDC standards for anemia and modal values from PC94 and PC96. State-by-State tables appear in Appendix D (Exhibits D5.38A - D5.38J). The modal criteria for blood measures have changed very slightly across the States since 1994. In calculating median and modal values for hemoglobin and hematocrit criteria, equal weight is assigned to every reporting State.

Most anemia screening occurs in WIC clinics. Three-quarters of all local agencies report that over 90 percent of WIC participants are screened at the clinic (Exhibit 5.40). In half the local agencies, blood tests are done once a year (if previous results were normal); 40 percent of agencies screen for anemia at each certification (Exhibit 5.41). Most agencies (90 percent) use a fingerstick to obtain blood samples and 80 percent of agencies use a hemocue to analyze the samples (Exhibit 5.42). Agencies report that WIC personnel are trained in blood screening procedures using a variety of methods including videos and testing subjects under supervision. Workers periodically attend refresher training and are assessed for competency in obtaining blood samples.

As part of the minimum data set for PC98, States reported hemoglobin and hematocrit values for women, children, and infants over six months of age. Blood measures were reported for 70 percent of all participants. (See Exhibit 5.43.) Most of the missing values are for infants, who are not required to be tested unless they are over six months of age when they are certified for WIC benefits, and for children who have received normal blood tests within the six months prior to certification. For children, Federal regulations allow for waiving blood tests, given normal results at previous certification appointments. In these cases, State information systems report blood measures as missing. For PC98, States were permitted to report erythrocyte protoporphyrin values, but only three States exercised that option, reporting on only 3,362 WIC enrollees.

Exhibit 5.38

State 1998 Nutritional Risk Eligibility Criteria for Hemoglobin and Hematocrit Levels Compared with 1989 CDC Standards for Anemia

Participant Category	1998 WIC Program Criteria				1989 CDC Standard[a]
	Minimum Value	Maximum Value	Median Value	Modal Value	
Hemoglobin					
Pregnant women					
First trimester	10.0	12.7	11.4	11.0	11.0
Second trimester	10.0	12.5	11.0	12.0	10.5
Third trimester	10.0	13.0	11.1	11.0	11.0
Constant criterion	10.0	12.5	12.0	12.0	__
Breastfeeding women	10.0	13.5	12.0	12.0	12.0
Postpartum women	10.9	13.4	12.0	12.0	12.0
Infants	9.9	12.4	11.0	11.0	__
Children					
1 year old	9.9	12.5	11.0	11.0	11.0
2 through 4 years	10.9	12.6	11.2	11.0	11.2
Hematocrit					
Pregnant women					
First trimester	32.0	38.0	34.0	33.0	33.0
Second trimester	31.0	38.0	33.4	32.0	32.0
Third trimester	32.0	38.0	33.9	33.0	33.0
Constant criterion	33.0	38.0	35.9	36.0	__
Breastfeeding women	33.0	39.0	36.0	36.0	36.0
Postpartum women	33.0	39.0	36.0	36.0	36.0
Infants	30.9	36.0	33.0	33.0	__
Children					
1 year old	30.9	36.0	33.9	34.0	33.0
2 through 4 years	32.9	37.0	34.0	34.0	34.0

Notes

Hemoglobin values are reported in grams per deciliter. Hematocrit values are reported as percents. When WIC applicants have blood tests values *less than or equal to* the State-specific criteria, they are considered to be at nutritional risk. However, only participants with blood test values *below* CDC criteria are considered at risk for anemia.

For this table, calculations for means and medians include values for States setting separate criteria by age or by trimester as well as values for States with constant criteria. Statistics reported for first, second, and third trimesters include both the States reporting criteria on that trimester plus all constant criteria. Calculations for medians and modes assign equal weight to every state. All State WIC agencies reported hemoglobin and/or hematocrit criteria for pregnant, breastfeeding and postpartum women, as well as for infants and children ages 2-5. Eighty-seven States reported criteria for children less than two years of age. For additional detail on criteria, see Exhibits D5.38A through D5.38J.

[a]Centers for Disease Control. 1989 "CDC Criteria for Anemia in Children and Childbearing-Aged Women." *Morbidity and Mortality Weekly Report*, 38, 22: 401-404. The CDC has not published standards for infants. However, cutoff values for one-to-two-year-old children can be extrapolated back to six months of age. For nonpregnant females under fifteen years of age, the hemoglobin standard is 11.8; the hematocrit standard is 35.5.

Exhibit 5.39

Hematologic Criteria Commonly Used for Determining WIC Eligibility

Participant Category	CDC 1989 Standards for Anemia[a]		1994 WIC Modal Criteria		1996 WIC Modal Criteria		1998 WIC Modal Criteria	
	Hemoglobin	Hematocrit	Hemoglobin	Hematocrit	Hemoglobin	Hematocrit	Hemoglobin	Hematocrit
Pregnant women								
First Trimester	11.0	33.0	12.0	33.0	12.0	33.0	11.0	33.0
Second Trimester	10.5	32.0	12.0	31.9	12.0	31.9	12.0	32.0
Third Trimester	11.0	33.0	10.9	33.0	11.0	33.0	11.0	33.0
Breastfeeding and postpartum women	12.0	36.0	12.0	36.0	12.0	36.0	12.0	36.0
Infants[b]	a	a	11.0	34.0	11.0	34.0	11.0	33.0
Children								
1 year old	11.0	33.0	11.0	34.0	11.0	34.0	11.0	34.0
2 - 4 years	11.2	34.0	11.0	34.0	11.0	34.0	11.0	34.0

Notes

Federal WIC regulations permit State and local agencies to dispense with hematological testing for infants under six months of age, as well as for children who are found to be within normal ranges at their last certification. However, blood tests should be performed on such children at least once in every twelve-month period.

Hemoglobin values are reported in grams per deciliter. Hematocrit values are reported as percents. When WIC applicants have blood tests values *less than or equal to* the State-specific criteria, they are considered to be at nutritional risk. However, only participants with blood test values *below* CDC criteria are considered at risk for anemia.

[a] Centers for Disease Control. 1989 "CDC Criteria for Anemia in Children and Childbearing-Aged Women." *Morbidity and Mortality Weekly Report*, 38, 22: 401-404. The CDC has not published standards for infants. However, cutoff values for one-to-two-year-old children can be extrapolated back to six months of age. For nonpregnant females under fifteen years of age the hemoglobin standard is 11.8; the hematocrit standard is 35.5.

[b] An infant is defined as a participant who, on the day of certification, is under one year of age and who would be classified as a child at the age of 366 days.

Exhibit 5.40

Percent of Clients Screened for Anemia at Doctor's Office or Non-WIC Clinic

Percent of Clients	Percent of Local Agencies
Less than 10 percent	74.7% (1.94)
10 - 24 percent	7.2 (1.42)
25 - 49 percent	2.5 (0.85)
50 - 74 percent	2.3 (0.85)
75 percent or more	9.1 (1.46)
Not reported	4.1 (0.83)
Total	100.0%

Note

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

Exhibit 5.41

Blood Screening Procedures at WIC Clinics

Procedures	Percent of Local Agencies	Percent of Paticipants
Frequency of clinic screening		
At each certification	40.4% (2.50)	33.7% (3.83)
Once a year if previous result was normal	51.9 (2.53)	53.6 (4.47)
Other	3.9 (0.99)	1.9 (0.89)
Not reported	3.7 (0.63)	10.8 (2.12)
Total	100.0%	100.0%
Blood samples obtained using		
Fingerstick	91.5% (1.05)	73.4% (3.34)
Venipuncture	0.8 (0.48)	0.8 (0.97)
Other	0.0 (0.00)	0.0 (0.00)
Not reported	7.7 (1.26)	25.8 (3.30)
Total	100.0%	100.0%

Exhibit 5.41 (continued)

Blood Screening Procedures at WIC Clinics

Procedures	Percent of Local Agencies	Percent of Paticipants
WIC personnel trained by[a]		
Watching a video	38.5% (2.68)	33.4% (3.88)
Testing multiple subjects under supervision of trained instructor	65.2 (2.33)	60.3 (3.39)
Attending periodic refresher training	42.8 (2.63)	42.1 (4.28)
Periodic assessment of competency	47.2 (2.72)	40.5 (4.48)
Other	11.5 (1.90)	8.5 (2.72)
Not reported	9.0 (1.25)	26.2 (3.49)

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[a]Columns do not sum to 100 percent because respondents were permitted multiple responses.

Exhibit 5.42

Instruments Used to Test Hemoglobin or Hematocrit at WIC Clinics

Instrument	Percent of Local Agencies Using Instrument	Percent of Clients Screened with Instrument
Hemocue	79.6 (1.92)	73.4 (2.01)
Automated hematology analyzer (Coulter counter)	2.7 (0.92)	1.7 (0.64)
StatCrit	7.8 (1.49)	6.8 (1.33)
BMS hemoglobinometer	1.3 (0.63)	0.6 (0.35)
Other	9.3 (1.44)	6.0 (1.07)
Not Reported	8.6 (1.12)	11.3 (1.44)
Total	[a]	100.0%

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[a]Column does not sum to 100 percent because respondents were permitted multiple responses.

Exhibit 5.43

Availability of Hematological Data for WIC Participants

Percent of WIC Participants by Participant Category with Specific Types of Hematological Measures

Type of Measure	Pregnant Women	Breastfeeding Women	Postpartum Women	Total Women	Infants[a]	Children	Total WIC
	Percent by participant category						
Participants in category	892,674	389,391	591,050	1,873,116	2,048,626	4,121,017	8,042,758
Participants with test report for ...							
Hemoglobin	58.8%	53.1%	62.2%	58.7%	9.5%	64.3%	49.0%
Hematocrit	15.9	18.8	15.9	16.5	2.6	17.4	13.4
Hemoglobin and hematocrit	16.0	11.0	11.2	13.4	0.9	8.9	7.9
No blood test reported	9.2	17.1	10.8	11.4	87.0	9.4	29.6
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes

Although PC98 allowed States the option of reporting erythrocyte protoporphyrin test results, this item was reported for less than 0.1 percent of WIC participants in PC98, thus it does not appear in this table.

[a] An infant is defined as a participant who, at certification, is under one year of age and who would be classified as a child at the age of 366 days. Federal WIC regulations permit State and local agencies to dispense with hematological testing for infants under six months of age as well as for children who are found to be within normal ranges at their last certification. However, blood tests should be performed on such children at least once in every twelve-month period. While WIC Program regulations do not require obtaining and reporting blood measurements on infants, in some instances, staff at local WIC service sites complete blood tests and report test results. All such data reported in 1998 are included in this column.

The results of blood tests are used by local WIC staff to determine eligibility for WIC benefits. Applicants with blood test values at or below State-set criteria are considered at nutritional risk and are eligible for WIC benefits.

Exhibits 5.44 and 5.45 provide information on numbers and proportions of WIC enrollees falling below the three hematologic standards: State-specific criteria; 1998 modal criteria; and the 1989 CDC standard for anemia. Anemia rates for postpartum women are consistently high—above 30 percent—as they were in 1992, 1994, and 1996. For children, anemia rates decrease with age according to State-specific criteria and 1998 modal criteria. Results are similar using CDC standards, except that anemia rates are highest for two-year old children. Note that, in computing table entries for both women and children, percents below State and CDC standards were calculated by excluding women and children for whom data were not reported from numerators but including them in denominators. While percentages reported here must be treated as representative of lower bound estimates of the prevalence of anemia in the WIC population, these estimates may be close to the true values. Children with normal hematocrit and hemoglobin values within the six months prior to certification are not required to be tested and thus unreported data tend to be concentrated among children who had normal blood values.

It would be helpful to compare PC98 findings on anemia in WIC women with information on the US population. However, data on the prevalence of iron deficiency among women during childbearing years are available mainly from the second (1976-1980) National Health and Nutrition Examination Survey (NHANES II), where findings are reported only for nonpregnant women. The sample of pregnant women is too small for detailed analysis. Information from NHANES II indicates that between 5 percent and 10 percent of nonpregnant women display impaired iron status. Iron deficiency anemia was found in less than 2 percent of nonpregnant US women.[3] Not all anemia is caused by iron deficiency, and WIC measures anemia more generally without identifying iron deficiency. Nonetheless, it is likely that rates of anemia in the WIC population are higher than rates for the general US population.

Information on anemia by ethnic category and age appears in Exhibits 5.46 and 5.47. Interpretation of these data must include consideration of unreported data, which are higher among Asian/Pacific Islander and Hispanic WIC women than other ethnicities. In PC98, as in previous studies, black women and children display the highest reported levels of anemia. American Indian or Alaskan Native and white WIC participants reported the lowest levels of anemia. Across age and ethnic categories, percentages of anemic children measured against CDC criteria peak at two years of age and then decrease with age. These findings are similar to outcomes reported in all previous PC studies beginning with PC88.[4] Anemia rates calculated for women and children using State-specific criteria generally fall within 5 percentage points of the State-reports of participants with blood measurements below State-standards displayed in Exhibits 5.9 and 5.11.

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[3]Institute of Medicine. 1990 *Nutrition During Pregnancy*. Washington, DC: National Academy Press.

[4]Findings concerning anemia rates by race/ethnicity and age are similar when missing data are excluded from the percentage distributions.

Exhibit 5.44

Number and Percent of Women WIC Participants Falling Below Several Hematologic Standards

	Pregnant Women													
	First Trimester		Second Trimester		Third Trimester		Not Reported[b]		Breastfeeding Women		Postpartum Women		Total Women	
Hematologic Standard	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
							Percent by participant category							
Women in category	415,983		337,089		105,453		34,149		389,391		591,050		1,873,116	
State-specific criteria for WIC eligibility														
Hemoglobin	50,343	12.1%	59,924	17.8%	31,187	29.6%			81,101	20.8%	180,807	30.6%	403,362	21.5%
Hematocrit	13,853	3.3	16,349	4.9	7,585	7.2			23,940	6.1	39,418	6.7	101,145	5.4
1998 modal criteria														
Hemoglobin	85,277	20.5	122,044	36.2	23,764	22.5			86,344	22.2	195,427	33.1	512,856	27.4
Hematocrit	3,844	0.9	3,836	1.1	5,641	5.3			22,376	5.7	38,904	6.6	74,600	4.0
1989 CDC standard for anemia[a]														
Hemoglobin	19,157	4.6	20,644	6.1	19,052	18.1			74,933	19.2	175,998	29.8	309,784	16.5
Hematocrit	2,652	0.6	3,836	1.1	4,149	3.9			18,507	4.8	32,634	5.5	61,778	3.3
Blood measure not reported	41,076	9.9	30,259	9.0	8,877	8.4	1,927	5.6	68,654	17.6	67,312	11.4	218,105	11.6

Notes

Percent below each standard includes in denominators women for whom no data were reported so that the percentages reported here represent lower bounds.

Estimates reported here are additive. For example, in April 1998, blood test values reported for 19.8 percent (or 371,564) of WIC women met the CDC standards for anemia.

[a]Centers for Disease Control. 1989 "CDC Criteria for Anemia in Children and Childbearing-aged Women." *Morbidity and Mortality Weekly Report*, 38, 22: 401-404.

[b]Not reported indicates the number and percent of participants, by participant category, for whom data were not reported on expected date of delivery or weeks gestation.

Exhibit 5.45

Number and Percent of Child WIC Participants Falling Below Several Hematologic Standards

Standard	1 Year		2 Years		3 Years		4 Years		Age Not Reported		Total Children	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Percent by age at certification											
Children in age group	1,468,580		1,034,432		917,758	668,972			31,275		4,121,017	
State-specific criteria for WIC eligibility												
Hemoglobin	274,347	18.7%	178,150	17.2%	124,760	13.6%	70,479	10.5%	0	0.0%	647,736	15.7%
Hematocrit	54,534	3.7	37,964	3.7	28,312	3.1	15,620	2.3	0	0.0	136,430	3.3
1998 modal criteria												
Hemoglobin	240,195	16.4	138,885	13.4	94,339	10.3	52,573	7.9	0	0.0	525,992	12.8
Hematocrit	67,158	4.6	41,581	4.0	31,457	3.4	17,874	2.7	0	0.0	158,069	3.8
1989 CDC standard for anemia[a]												
Hemoglobin	188,833	12.9	156,111	15.1	107,272	11.7	60,241	9.0	0	0.0	512,456	12.4
Hematocrit	25,597	1.7	26,426	2.6	19,367	2.1	10,524	1.6	0	0.0	81,914	2.0
Not reported[b]	122,572	8.3	96,113	9.3	89,196	9.7	69,905	10.4	8,303	26.5	386,089	9.4

Notes

Percent below each standard includes in denominators children for whom no data were reported so that the percentages reported here represent lower bounds.

Estimates reported here are additive. For example, in April 1998, blood test values for 14.4 percent (or 603,389) of WIC children met the CDC standards for anemia.

Federal WIC regulations permit State and local agencies to dispense with hematological testing for infants under six months of age, as well as for children who are found to be within normal ranges at their last certification. However, blood tests should be performed on such children at least once in every twelve-month period.

[a]Centers for Disease Control. 1989 "CDC Criteria for Anemia in Children and Childbearing-Aged Women." *Morbidity and Mortality Weekly Report*, 38, 22: 401-404.

[b]Not reported indicates the number and percent of participants, by participant category, for whom data were not reported on blood measures.

Exhibit 5.46

Number and Percent of Anemic Women WIC Participants by Participant Category and Racial or Ethnic Characteristics

	American Indian or Alaskan Native		Asian or Pacific Islander		Black (non-Hispanic)		Hispanic		White (non-Hispanic)		Ethnicity Not Reported		Total Women	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Percent by ethnic category													
Women in ethnic category	25,442		56,940		401,202		585,324		787,656		16,553		1,873,116	
Total women	25,442		56,940		401,202		585,324		787,656		16,553		1,873,116	
Below CDC standard[a]	4,364	17.2%	12,706	22.3%	123,292	30.7%	103,450	17.7%	124,290	15.8%	3,461	20.9%	371,563	19.8%
Not reported[b]	2,469	9.7	9,726	17.1	43,890	10.9	125,058	21.4	66,401	8.4	2,783	16.8	250,327	13.4
Pregnant women	12,506		24,914		194,038		271,086		383,421		6,709		892,674	
Below CDC standard[a]	832	6.7	2,013	8.1	28,883	14.9	18,020	6.6	19,234	5.0	508	7.6	69,491	7.8
Not reported[b]	1,389	11.1	4,222	16.9	24,867	12.8	44,328	16.4	38,064	9.9	1,491	22.2	114,361	12.8
Breastfeeding women	5,996		13,425		58,120		164,307		143,711		3,832		389,391	
Below CDC standard[a]	1,194	19.9	3,765	28.0	22,218	38.2	38,020	23.1	27,195	18.9	1,049	27.4	93,440	24.0
Not reported[b]	521	8.7	2,414	18.0	6,389	11.0	46,742	28.4	12,105	8.4	482	12.6	68,654	17.6
Postpartum women	6,940		18,600		149,043		149,931		260,523		6,012		591,050	
Below CDC standard[a]	2,338	33.7	6,928	37.2	72,192	48.4	47,410	31.6	77,861	29.9	1,904	31.7	208,632	35.3
Not reported[b]	559	8.1	3,090	16.6	12,634	8.5	33,988	22.7	16,231	6.2	810	13.5	67,312	11.4

Notes

Percent below each standard includes in denominators women for whom no data were reported so that the percentages reported here represent lower bounds. As noted in notes to Exhibits 5.41 and 5.42, estimates are additive.

[a]Centers for Disease Control. 1989 "CDC Criteria for Anemia in Children and Childbearing-Aged Women." *Morbidity and Mortality Weekly Report*, 38, 22: 401-404.

[b]Not reported indicates the number and percent of participants, by participant category, for whom data were not reported on blood measure or expected date of delivery.

Exhibit 5.47

Number and Percent of Anemic Child WIC Participants by Age at Time of Blood Measurement and Racial or Ethnic Characteristics

	American Indian or Alaskan Native		Asian or Pacific Islander		Black (non-Hispanic)		Hispanic		White (non-Hispanic)		Ethnicity Not Reported		Total Children	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Percent by ethnic category													
Children in ethnic category	68,041		138,697		942,716		1,388,655		1,553,170		29,738		4,121,017	
Total children	68,041		138,697		942,716		1,388,655		1,553,170		29,738		4,121,017	
Below CDC standard[a]	6,602	9.7%	18,152	13.1%	205,790	21.8%	193,619	13.9%	166,102	10.7%	4,126	13.9%	594,390	14.4%
Not reported[b]	6,507	9.6	12,609	9.1	65,179	6.9	114,235	8.2	175,707	11.3	3,550	11.9	377,786	9.2
One-year-old children	21,510		47,070		343,445		469,897		575,226		11,432		1,468,580	
Below CDC standard[a]	2,582	12.0	5,695	12.1	72,951	21.2	63,432	13.5	68,201	11.9	1,577	13.8	214,439	14.6
Not reported[b]	1,897	8.8	4,196	8.9	22,796	6.6	40,049	8.5	52,461	9.1	1,173	10.3	122,572	8.3
Two-year-old children	15,856		35,574		231,357		354,954		389,581		7,110		1,034,432	
Below CDC standard[a]	2,116	13.3	6,028	16.9	60,932	26.3	62,175	17.5	50,069	12.9	1,222	17.2	182,541	17.6
Not reported[b]	1,683	10.6	3,222	9.1	15,537	6.7	27,395	7.7	47,290	12.1	986	13.9	96,113	9.3
Three-year-old children	14,348		31,582		210,324		318,877		336,929		5,698		917,758	
Below CDC standard[a]	1,251	8.7	4,148	13.1	45,194	21.5	43,308	13.6	31,972	9.5	770	13.5	126,641	13.8
Not reported[b]	1,598	11.1	2,902	9.2	15,081	7.2	25,921	8.1	42,926	12.7	767	13.5	89,196	9.7
Four-year-old children	10,935		23,331		153,255		241,285		235,297		4,869		668,972	
Below CDC standard[a]	652	6.0	2,281	9.8	26,714	17.4	24,704	10.2	15,859	6.7	557	11.4	70,768	10.6
Not reported[b]	1,329	12.2	2,288	9.8	11,765	7.7	20,870	8.6	33,030	14.0	624	12.8	69,905	10.4
Age not reported[c]	5,392	7.9	1,140	0.8	4,335	0.5	3,642	0.3	16,137	1.0	629	2.1	31,275	0.8

Notes

Percent below each standard includes in denominators children for whom no data were reported so that the percentages reported here represent lower bounds. As noted in Exhibits 5.44, 5.45, and 5.46, estimates are additive.

Federal WIC regulations permit State and local agencies to dispense with hematological testing for infants under six months of age, as well as for children who are found to be within normal ranges at their last certification. However, blood tests should be performed on such children at least once in every twelve-month period.

[a] Centers for Disease Control. 1989 "CDC Criteria for Anemia in Children and Childbearing-Aged Women." *Morbidity and Mortality Weekly Report*, 38, 22: 401-404.

[b] Not reported indicates the number and percent of participants, by participant category, for whom data were not reported on blood measure.

[c] Age not reported includes those participants for whom data were not reported on date of birth or certification date.

6. NUTRITION EDUCATION AND BREASTFEEDING

Nutrition education plays a crucial role in the WIC Program and is viewed as an essential benefit, directed toward achieving positive changes in participant knowledge, attitude, and behavior about food consumption. Federal regulations require WIC service providers to offer participants at least two nutrition education sessions during each certification period. Certifications tend to occur every six months, with the exception of infants who may be certified for twelve months and pregnant women who may be certified for the duration of pregnancy and up to six weeks postpartum. Education on a variety of health and nutrition-related topics may be provided in individual counseling sessions or group classes and may utilize films and videos as teaching aids. Policies with regard to nutrition education differ within local agencies usually depending on whether or not the participant is classified as high-risk. Such participants include, for example, pregnant women with histories of low birthweight babies, infants born to women with histories of alcohol or drug abuse, and infants or children with congenital malformations.

Local agencies are required to make nutrition education available to all clients at no cost. However, receipt of food vouchers or checks is not contingent upon attendance at nutrition education sessions. Virtually all WIC agencies (over 95 percent) provide nutrition education to participants at certification (Exhibit 6.1). At the conclusion of certification appointments, participants are scheduled for their second nutrition education sessions, usually about eight weeks after certification. To encourage WIC clients to attend nutrition education and for the convenience of clients, approximately two-thirds of all local agencies schedule second nutrition education sessions to coincide with voucher or check issuance. Agencies co-located with or providing health services at WIC clinics may offer nutrition education at scheduled health-care appointments. Approximately 15 to 20 percent of local WIC agencies schedule some nutrition education to coincide with health-care appointments. Just under half of local WIC agencies reported scheduling some separate appointments for nutrition education.

The use and importance of the food guide pyramid, the importance of healthy foods, and the use of WIC foods in providing a healthy diet form the basis for most nutrition education for all types of participants (Exhibit 6.2). Nutrition education sessions in approximately 80 to 85 percent of all local agencies cover each of these topics. Sessions aimed at postpartum women and infants emphasize formula preparation (60 percent) while education directed to children, or their caregivers, and postpartum women stresses strategies to prevent or manage overweight problems (70 percent).

The great majority of sessions involve discussion, counseling, and the use of written materials, including handouts and pamphlets (Exhibit 6.3). These methods are always used in nutrition education sessions conducted by 80 to 90 percent of local agencies. Local agencies less frequently report using videos or slides, food demonstrations, and food models to convey nutrition education. Computer-assisted instruction is rarely used.

In most agencies, nutrition education is offered only by nutritionists. Paraprofessionals may take part in sessions offered to high-risk participants in only 17 to 18 percent of

Exhibit 6.1

Scheduled Nutrition Education Contacts in Local WIC Agencies By Participant Category

	Participant Category[a]									
	Pregnant Women		Breastfeeding Women		Postpartum Women		Infants		Children	
	Percent of Local Agencies	Percent of Participants	Percent of Local Agencies	Percent of Participants	Percent of Local Agencies	Percent of Participants	Percent of Local Agencies	Percent of Participants	Percent of Local Agencies	Percent of Participants
Scheduled during										
Certification	96.8% (0.00)	95.8% (0.00)	96.5% (0.00)	95.7% (0.00)	96.4% (0.00)	95.7% (0.00)	96.5% (0.00)	95.7% (0.00)	96.4% (0.00)	95.7% (0.00)
Food benefit issuance	65.8 (2.50)	73.9 (4.32)	64.0 (2.50)	73.2 (4.35)	63.9 (2.56)	72.7 (4.38)	64.7 (2.56)	73.5 (4.33)	64.2 (2.54)	73.1 (4.32)
Appointments or nutrition education only	44.7 (2.69)	35.6 (4.40)	46.4 (2.66)	37.3 (4.38)	44.2 (2.72)	35.4 (4.39)	46.3 (2.76)	36.6 (4.46)	46.5 (2.73)	35.9 (4.40)
Other health care appointments	20.2 (2.07)	14.4 (3.49)	15.9 (1.86)	10.6 (3.20)	14.5 (1.85)	11.4 (3.24)	19.0 (1.95)	12.7 (3.14)	18.6 (1.89)	11.3 (2.68)
Other	10.3 (1.64)	9.0 (2.16)	9.8 (1.61)	9.3 (2.28)	9.5 (1.61)	7.9 (2.19)	9.9 (1.63)	9.3 (2.48)	9.1 (1.55)	7.8 (2.18)
Not reported	0.2 (0.25)	1.6 (2.22)	0.5 (0.37)	1.7 (2.22)	0.5 (0.37)	1.7 (2.22)	0.5 (0.37)	1.7 (2.22)	0.5 (0.37)	1.7 (2.22)

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[a]Columns do not sum to 100 percent because respondents were permitted multiple responses.

Exhibit 6.2

Topics Emphasized in Nutrition Education Sessions

Nutrition Education Topics	Participant Category				
	Pregnant Women	Breastfeeding Women	Postpartum Women	Infants	Children
	Percent of Local Agencies[a]				
Food Guide Pyramid/Food groups	86.6% (1.90)	84.5% (1.99)	84.6% (2.02)	N/A	87.3% (1.91)
Diet for pregnancy	87.6 (1.73)	N/A	N/A	N/A	N/A
Importance of folic acid	81.0 (1.99)	44.7 (2.62)	47.6 (2.65)	N/A	14.9 (2.01)
Dangers of using tobacco, alcohol, and/or other drugs	89.3 (1.55)	78.0 (2.14)	65.5 (2.50)	41.7 (2.66)	39.7 (2.64)
Breastfeeding	96.6 (0.00)	87.4 (1.71)	34.3 (2.46)	47.0 (2.73)	N/A
Formula preparation	32.7 (2.57)	19.0 (2.20)	62.5 (2.70)	65.4 (2.45)	N/A
Nutritious foods for healthy mother and baby or child	83.2 (2.03)	80.8 (2.17)	81.9 (2.16)	81.2 (2.18)	78.1 (2.28)
Using WIC foods for a healthy diet	82.9 (2.17)	80.2 (2.19)	79.5 (2.27)	73.7 (2.46)	86.2 (1.99)
Thrifty food planning and/or shopping	48.2 (2.64)	43.9 (2.70)	50.2 (2.64)	35.2 (2.41)	48.6 (2.63)
Strategies to prevent or manage overweight (diet, exercise, for example)	47.6 (2.70)	46.8 (2.73)	69.7 (2.42)	32.7 (2.60)	66.5 (2.55)
Healthy eating—taught directly to preschoolers	N/A	N/A	N/A	N/A	37.8 (2.51)
Other topics directed specifically to children	N/A	N/A	N/A	N/A	16.5 (1.96)
Not reported	0.3 (0.33)	2.1 (0.72)	1.0 (0.54)	3.0 (0.85)	1.3 (0.62)

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

N/A indicates not applicable.

Columns do not sum to 100 percent because respondents were permitted multiple responses.

Exhibit 6.3

Methods and Materials Used to Provide Nutrition Education

Methods/Materials	Methods and Materials Used. . .				
	Always	Sometimes	Never	Not Reported	Total
	Percent of Local Agencies				
Counseling/discussion	90.7% (0.00)	8.6% (1.46)	0.0% (0.00)	0.7% (0.54)	100.0%
Written materials (pamphlets, handouts)	77.9 (2.27)	21.9 (2.27)	0.0 (0.00)	0.2 (0.21)	100.0%
Bulletin board, flipcharts, posters	41.3 (2.68)	55.1 (2.74)	2.4 (0.92)	1.2 (0.63)	100.0%
Food models	25.5 (2.23)	65.2 (2.50)	8.2 (1.82)	1.0 (0.55)	100.0%
Facilitated learning	10.4 (1.69)	43.8 (2.62)	38.0 (2.75)	7.8 (1.56)	100.0%
Videos/films/slides	7.4 (1.38)	84.7 (2.04)	6.5 (1.48)	1.4 (0.62)	100.0%
Tests	4.1 (1.06)	41.1 (2.57)	51.6 (2.65)	3.3 (1.00)	100.0%
Food demonstrations or tastings	1.9 (0.65)	60.7 (2.64)	34.0 (2.65)	3.4 (0.99)	100.0%
Computer-assisted instruction	1.7 (0.73)	6.1 (1.43)	87.8 (1.74)	4.4 (1.01)	100.0%

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

local agencies and to lower risk participants in 42 to 49 percent of agencies (Exhibit 6.4). Most (85 to 95 percent) nutrition education sessions, of all types, are less than 20 minutes long (Exhibit 6.5). The longest sessions (50 minutes or more) are more likely to be group sessions.

Most (80 percent) local agencies respond to the increased needs of high-risk participants by tailoring nutrition education services to meet their specific needs (Exhibit 6.6). Nutrition education is generally delivered to these participants in individual sessions—90 percent of local agencies provide some individual counseling to high-risk participants. Approximately 60 percent provide only individual sessions to high-risk participants; the other 30 percent provide both individual and group sessions. Approximately half the local agencies offer high-risk participants more than the two required nutrition education sessions.

WIC service providers are encouraged to consider the ethnic and cultural differences of participants. This mission includes offering nutrition education sessions in the native languages of WIC participants. Nutrition education is available in a wide variety of foreign languages (Exhibit 6.7). Half of all local agencies and almost half of all service delivery sites offer sessions in Spanish. Offerings in other foreign languages are less prevalent; no one foreign language is available in more than 5 percent of all service delivery sites.

Breastfeeding

Since 1989, with passage of the Child Nutrition and WIC Reauthorization Act (PL 101-147), breastfeeding promotion has been a particular area of emphasis for WIC. The act earmarked a minimum of $8 million a year to be spent on breastfeeding promotion, which has allowed State and local WIC agencies to develop a range of strategies to increase breastfeeding incidence in WIC. Virtually all clinics offer group sessions devoted to breastfeeding education (Exhibit 6.8). Clinics also organize breastfeeding support groups (80 percent) to provide information and encouragement to mothers. Approximately one-third of WIC clinics provide home or hospital visits to breastfeeding mothers and half of all sites provide breast pumps to mothers who request them.

PL 103-448, passed in 1994, required USDA to begin, in 1998, reporting to the Congress on incidence and duration of breastfeeding among WIC participants. FNS, in conjunction with the National Association of WIC Directors (NAWD) and the Centers for Disease Control and Prevention (CDC), developed four new MDS items to collect data on breastfeeding. These MDS items, collected for seven-to-eleven-month-old infants, are: currently breastfed; ever breastfed; length of time breastfed; and date breastfeeding data collected. In the past, most States did not routinely collect data on breastfeeding. For PC96, States were asked to report this information only if their management information systems contained the data. Beginning with PC98, States were required to submit these data.

Exhibits 6.9 through 6.11 present the available data on breastfeeding. Not all States were able to provide breastfeeding data, so estimates are based on a restricted sample of States. The PC98 benchmark estimate of the national rate of breastfeeding initiation is based on a sample of 63 States. We excluded the 25 State WIC agencies that

Exhibit 6.4

Nutrition Education in Local WIC Agencies By Participant Category

Nutrition Education Provided by	Participant Category[a]									
	Pregnant Women		Breastfeeding Women		Postpartum Women		Infants		Children	
	Percent of Local Agencies	Percent of Participants	Percent of Local Agencies	Percent of Participants	Percent of Local Agencies	Percent of Participants	Percent of Local Agencies	Percent of Participants	Percent of Local Agencies	Percent of Participants
High-Risk Participants										
Nutritionist	93.4% (1.26)	96.7% (0.66)	91.6% (1.35)	95.6% (0.66)	91.1% (1.4)	95.2% (0.95)	92.9% (1.29)	96.8% (0.65)	92.7% (1.31)	96.7% (0.66)
Paraprofessional	16.7 (1.85)	18.0 (3.3)	16.9 (2.42)	19.8 (3.6)	17.4 (2.29)	20.0 (3.65)	17.7 (2.27)	20.2 (3.64)	18.0 (2.27)	20.4 (3.62)
Not reported	1.4 (2.33)	0.3 (0.25)	2.9 (1.34)	1.4 (0.29)	3.2 (1.30)	1.9 (0.74)	2.2 (1.59)	0.4 (0.27)	2.2 (1.59)	0.4 (0.27)
Non-High-Risk Participants										
Nutritionist	83.6% (1.96)	83.4% (3.19)	82.5% (1.96)	82.6% (3.19)	80.4% (1.99)	79.7% (3.27)	82.2% (1.91)	81.9% (3.27)	80.8% (1.97)	79.5% (3.30)
Paraprofessional	42.0 (2.40)	47.1 (4.29)	44.0 (2.33)	53.2 (4.28)	46.2 (2.52)	56.8 (4.12)	46.3 (2.46)	56.2 (4.20)	49.3 (2.52)	58.2 (4.13)
Not reported	1.5 (0.65)	1.9 (2.23)	2.8 (0.91)	2.2 (2.24)	2.7 (0.89)	2.1 (2.23)	2.2 (0.78)	2.0 (2.23)	2.0 (0.75)	1.9 (2.23)

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[a]Columns do not sum to 100 percent because respondents were permitted multiple responses.

Exhibit 6.5

Average Length of Nutrition Education Sessions

Average Length (in minutes)	Type of Nutrition Education Session			
	High-Risk Participants		All Other Participants	
	Group	Individual	Group	Individual
	Percent of Local Agencies			
Less than 10	14.8% (2.04)	11.4% (1.69)	18.1% (2.22)	31.1% (2.58)
10 - 19	19.9 (2.06)	47.5 (2.77)	28.8 (2.51)	52.9 (2.80)
20 - 29	14.2 (1.82)	25.4 (2.40)	21.2 (2.16)	9.6 (2.17)
30 - 39	3.9 (0.98)	9.7 (2.04)	5.1 (1.28)	3.3 (1.36)
40 - 49	2.7 (1.43)	3.9 (1.33)	2.1 (0.79)	0.6 (0.35)
50 and longer	3.3 (2.87)	1.9 (0.68)	3.1 (3.04)	0.6 (0.01)
Not reported	41.2 (2.56)	0.3 (0.24)	21.6 (2.11)	1.8 (0.70)
Total	100.0%	100.0%	100.0%	100.0%

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

Exhibit 6.6

Special Nutrition Education Services Provided by Local WIC Agencies to High-Risk Participants by Participant Category

	High-Risk Participant Category[a]									
	Pregnant Women		Breastfeeding Women		Postpartum Women		Infants		Children	
	Percent of Local Agencies	Percent of Participants	Percent of Local Agencies	Percent of Participants	Percent of Local Agencies	Percent of Participants	Percent of Local Agencies	Percent of Participants	Percent of Local Agencies	Percent of Participants
Type of service										
Individual care plan	76.8% (2.31)	82.6% (3.99)	72.9% (2.39)	78.0% (4.30)	71.7% (2.43)	76.5% (4.37)	75.5% (2.35)	80.8% (4.32)	74.6% (2.37)	80.0% (4.31)
More frequent sessions	51.1 (2.66)	56.3 (4.96)	46.5 (2.60)	52.4 (4.97)	41.3 (2.59)	45.9 (4.93)	50.2 (2.56)	53.6 (4.67)	45.9 (2.59)	49.7 (4.87)
Individual counseling only	60.3 (2.55)	51.1 (4.37)	59.0 (2.61)	48.5 (4.38)	57.0 (2.58)	47.3 (4.34)	60.5 (2.51)	51.6 (4.31)	58.7 (2.49)	49.8 (4.25)
Both individual counseling and group sessions	34.3 (2.49)	46.8 (4.76)	33.1 (2.46)	46.8 (4.79)	32.3 (2.51)	45.2 (4.75)	32.8 (2.55)	45.6 (4.76)	34.1 (2.57)	46.2 (4.74)
Other	2.8 (0.90)	4.0 (5.00)	2.9 (0.91)	5.5 (5.03)	2.5 (0.86)	3.4 (6.08)	2.8 (0.88)	3.4 (6.07)	2.5 (0.87)	3.4 (6.14)
Not reported	1.0 (0.58)	2.4 (3.10)	2.4 (0.82)	3.5 (3.10)	3.8 (1.03)	5.0 (3.10)	1.3 (0.63)	2.3 (3.10)	1.3 (0.63)	2.3 (3.10)

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[a]Columns do not sum to 100 percent because respondents were permitted multiple responses.

Exhibit 6.7

Availability of Nutrition Education in Foreign Languages at WIC Local Agencies and Service Delivery Sites

Language	Percent of Local Agencies[a]	Percent of Service Delivery Sites[a]
Spanish	50.0% (2.66)	43.9% (3.52)
Vietnamese	5.3 (1.17)	2.7 (0.88)
Cambodian/Khmer	1.8 (1.39)	0.9 (0.38)
Laotian	4.6 (1.12)	2.8 (0.99)
Thai	1.6 (1.48)	1.0 (0.61)
Hmong	3.8 (1.02)	2.1 (0.99)
Chinese	3.3 (0.98)	1.9 (0.86)
Haitian/Creole	2.7 (1.07)	1.4 (0.56)
French	5.7 (0.99)	3.6 (2.01)
Portuguese	1.7 (1.29)	0.9 (0.43)
Native American Language	3.9 (1.31)	2.6 (1.03)
Other	8.0 (1.61)	N/A

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[a]Columns do not sum to 100 percent because respondents were permitted multiple responses.

Exhibit 6.8

Breastfeeding Support and Promotion Services Provided at WIC Service Delivery Sites

Type of Service	Percent of Service Delivery Sites[a]	Percent of Participants[a]
Group education sessions devoted solely to breastfeeding	97.4 (0.00)	98.4 (0.49)
Breastfeeding support groups	80.7 (0.90)	88.1 (1.31)
Provision of breast pumps	43.6% (1.20)	66.3% (2.22)
Individual counseling on breastfeeding	31.4 (1.07)	44.1 (2.48)
Home/hospital visit	30.9 (1.11)	39.1 (2.78)
Peer counseling for breastfeeding	16.7 (0.91)	32.4 (2.26)
Other	5.4 (0.57)	5.4 (1.03)
Not reported	0.6 (0.21)	0.3 (0.18)

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[a]Columns do not sum to 100 percent because respondents were permitted multiple responses.

Exhibit 6.9

Breastfeeding Rates for WIC Infants Aged Seven-to-Eleven Months in April 1998 by State

Region and State	WIC Infants in Age Range	Ever or Currently Breastfed					
		Yes		No		Not Reported	
	Number	Number	Percent	Number	Percent	Number	Percent
Total for States reporting[a]	740,985	307,834	41.5	392,346	52.9	40,805	5.5
Northeast							
Connecticut	5,720	2,339	40.9	3,342	58.4	39	0.7
Massachusetts	12,763	6,800	53.3	5,779	45.3	184	1.4
New Hampshire	2,054	768	37.4	1,015	49.4	271	13.2
New York	53,828	24,326	45.2	22,795	42.3	6,707	12.5
Rhode Island	2,474	765	30.9	1,691	68.4	18	0.7
Vermont	1,370	754	55.0	590	43.1	26	1.9
Pleasant Point (ME)	8	3	37.5	5	62.5	0	0.0
Seneca Nation (NY)	29	12	41.4	17	58.6	0	0.0
Mid-Atlantic							
Delaware	2,028	582	28.7	1,329	65.5	117	5.8
District of Columbia	2,141	844	39.4	1,018	47.5	279	13.0
Maryland	11,831	5,113	43.2	6,717	56.8	1	0.0
Pennsylvania	27,046	8,446	31.2	18,423	68.1	177	0.7
Puerto Rico	[b]	[b]	[b]	[b]	[b]	[b]	[b]
West Virginia	5,142	1,955	38.0	3,185	61.9	2	0.0
Southeast							
Florida	48,493	24,109	49.7	21,341	44.0	3,043	6.3
Georgia	[b]	[b]	[b]	[b]	[b]	[b]	[b]
North Carolina	23,723	10,004	42.2	13,548	57.1	171	0.7
Tennessee	19,867	4,349	21.9	15,233	76.7	285	1.4
Eastern Band— Cherokee (NC)	50	38	76.0	11	22.0	1	2.0

Exhibit 6.9 (continued)

Breastfeeding Rates for WIC Infants Aged Seven-to-Eleven Months in April 1998 by State

Region and State	WIC Infants in Age Range	Ever or Currently Breastfed					
		Yes		No		Not Reported	
	Number	Number	Percent	Number	Percent	Number	Percent
Midwest							
Illinois	[b]	[b]	[b]	[b]	[b]	[b]	[b]
Indiana	17,396	7,286	41.9	9,983	57.4	127	0.7
Michigan	27,149	10,169	37.5	14,037	51.7	2,943	10.8
Minnesota	10,181	4,280	42.0	5,826	57.2	75	0.7
Ohio	27,007	8,873	32.9	17,959	66.5	175	0.6
Wisconsin	11,165	3,508	31.4	7,521	67.4	136	1.2
Southwest							
Arkansas	10,442	3,504	33.6	6,298	60.3	640	6.1
Texas	90,839	41,494	45.7	49,063	54.0	282	0.3
ACL (NM)	45	22	48.9	23	51.1	0	0.0
Cherokee Nation (OK)	724	258	35.6	460	63.5	6	0.8
Chickasaw Nation (OK)	[b]	[b]	[b]	[b]	[b]	[b]	[b]
Choctaw Nation (OK)	200	18	9.0	182	91.0	0	0.0
Eight Northern Pueblos (NM)	31	8	25.8	20	64.5	3	9.7
Muscogee Creek Nation (OK)	[b]	[b]	[b]	[b]	[b]	[b]	[b]
Osage Nation (OK)	120	43	35.8	60	50.0	17	14.2
Otoe-Missouria (OK)	[b]	[b]	[b]	[b]	[b]	[b]	[b]
Pueblo of Isleta (NM)	60	27	45.0	29	48.3	4	6.7
Pueblo of San Filipe (NM)	35	20	57.1	15	42.9	0	0.0
Pueblo of Zuni (NM)	58	42	72.4	13	22.4	3	5.2
Sac and Fox Nation (OK)	29	8	27.6	18	62.1	3	10.3
Santo Domingo (NM)	17	4	23.5	12	70.6	1	5.9

Exhibit 6.9 (continued)

Breastfeeding Rates for WIC Infants Aged Seven-to-Eleven Months in April 1998 by State

Region and State	WIC Infants in Age Range	Ever or Currently Breastfed					
		Yes		No		Not Reported	
	Number	Number	Percent	Number	Percent	Number	Percent
Mountain Plains							
Colorado	[b]	[b]	[b]	[b]	[b]	[b]	[b]
Iowa	6,635	3,300	49.7	3,229	48.7	106	1.6
Kansas	5,933	3,272	55.1	2,602	43.9	59	1.0
Missouri	15,429	6,392	41.4	8,915	57.8	122	0.8
Montana	[b]	[b]	[b]	[b]	[b]	[b]	[b]
Nebraska	3,164	1,348	42.6	1,737	54.9	79	2.5
South Dakota	1,458	703	48.2	755	51.8	0	0.0
Utah	5,971	3,961	66.3	1,529	25.6	481	8.1
Wyoming	[b]	[b]	[b]	[b]	[b]	[b]	[b]
Shoshone-Arapahoe (WY)	98	59	60.2	25	25.5	14	14.3
Standing Rock Sioux (ND)	[b]	[b]	[b]	[b]	[b]	[b]	[b]

Exhibit 6.9 (continued)

Breastfeeding Rates for WIC Infants Aged Seven-to-Eleven Months in April 1998 by State

Region and State	WIC Infants in Age Range	Ever or Currently Breastfed					
		Yes		No		Not Reported	
	Number	Number	Percent	Number	Percent	Number	Percent
Western							
Alaska	2,216	1,492	67.3	723	32.6	1	0.0
American Samoa	[b]	[b]	[b]	[b]	[b]	[b]	[b]
Arizona	15,688	9,278	59.1	6,116	39.0	294	1.9
Californiac	133,031	51,896	39.0	80,323	60.4	812	0.6
Guam	669	367	54.9	302	45.1	0	0.0
Hawaii	3,753	2,489	66.3	938	25.0	326	8.7
Nevada	4,814	2,618	54.4	2,150	44.7	46	1.0
Oregon	[b]	[b]	[b]	[b]	[b]	[b]	[b]
Washington	16,423	10,581	64.4	5,266	32.1	576	3.5
ITC—Arizona	[b]	[b]	[b]	[b]	[b]	[b]	[b]
ITC—Nevada	93	45	48.4	42	45.2	6	6.5
Navajo Nation (AZ)	1,371	1,066	77.8	305	22.2	0	0.0

Notes

[a]Includes those states reporting data on breastfeeding initiation for at least 75 percent of all seven-to-eleven-month-old infants. These national estimates are based on information for 81 percent of all WIC infants aged seven-to-eleven-months.

[b]State-reported data on at least 75 percent of all seven-to-eleven-month-old WIC infants and available data were used in establishing the PC98 national breastfeeding initiation rate. As originally agreed between FNS and the National Association of WIC Directors, a State-specific rate is not calculated if information was available for less than 85 percent of seven-to-eleven-month-old infants within any given State.

[c]California's breastfeeding initiation rate is a lower bound estimate, as previously footnoted. Upper bound estimate is 75 percent if missing data on ever breastfed are attributed positively for those not currently breastfed.

Exhibit 6.10

Median Breastfeeding Duration in Weeks for WIC Infants Aged Seven-to-Eleven Months in April 1998 by State

Region and State	WIC Infants in Age Range	Infants Breastfed		Breastfed WIC Infants with Reported Breastfeeding Duration		Median Duration in Weeks	Mean Duration Within First Six Months
	Number	Number	Percent	Number	Percent		
Total for States reporting[a]	395,283	159,839	40.4	149,095	93.3	14.0	14.4
Northeast							
Connecticut	[b]	[b]	[b]	[b]	[b]	[b]	[b]
Massachusetts	12,763	6,800	53.3	6,452	94.9	15.0	14.8
New Hampshire	[b]	[b]	[b]	[b]	[b]	[b]	[b]
New York	53,828	24,326	45.2	24,310	99.9	22.0	16.5
Rhode Island	[b]	[b]	[b]	[b]	[b]	[b]	[b]
Vermont	1,370	754	55.0	733	97.2	17.0	15.2
Mid-Atlantic							
District of Columbia	[b]	[b]	[b]	[b]	[b]	[b]	[b]
Pennsylvania	27,046	8,446	31.2	7,807	92.4	14.0	14.8
West Virginia	[b]	[b]	[b]	[b]	[b]	[b]	[b]
Southeast							
Florida	48,493	24,109	49.7	22,498	93.3	13.0	13.8
Georgia	[b]	[b]	[b]	[b]	[b]	[b]	[b]
North Carolina	23,723	10,004	42.2	9,981	99.8	8.0	12.4
Tennessee	19,867	4,349	21.9	3,863	88.8	26+	22.7
Eastern Band—Cherokee (NC)	50	38	76.0	38	100.0	13.5	14.4

Exhibit 6.10 (continued)

Median Breastfeeding Duration in Weeks for WIC Infants Aged Seven-to-Eleven Months in April 1996 by State

Region and State	WIC Infants in Age Range	Infants Breastfed		Breastfed WIC Infants with Reported Breastfeeding Duration		Median Duration in Weeks	Mean Duration Within First Six Months
	Number	Number	Percent	Number	Percent		
Midwest							
Illinois	35,950	10,371	28.8	10,102	97.4	15.0	14.7
Indiana	17,396	7,286	41.9	6,500	89.2	6.0	10.1
Michigan	27,149	10,169	37.5	10,156	99.9	8.0	12.3
Ohio	27,007	8,873	32.9	7,910	89.1	12.0	14.2
Southwest							
Arkansas	[b]	[b]	[b]	[b]	[b]	[b]	[b]
ACL (NM)	45	22	48.9	19	86.4	22.0	18.5
Chickasaw Nation (OK)	304	94	30.9	94	100.0	5.5	10.2
Muscogee Creek Nation (OK)	109	21	19.3	21	100.0	16.0	12.9
Osage Nation (OK)	120	43	35.8	40	93.0	26+	16.9
Pueblo of Isleta (NM)	60	27	45.0	24	88.9	26+	18.6
Pueblo of Zuni (NM)	58	42	72.4	40	95.2	26+	21.8
Sac and Fox Nation (OK)	29	8	27.6	8	100.0	10.0	12.1
Mountain Plains							
Kansas	[b]	[b]	[b]	[b]	[b]	[b]	[b]
Nebraska	[b]	[b]	[b]	[b]	[b]	[b]	[b]
South Dakota	1,458	703	48.2	632	89.9	10.0	13.1
Utah	5,971	3,961	66.3	3,423	86.4	26.0	18.6
Shoshone-Arapahoe (WY)	98	59	60.2	57	96.6	24.0	17.7
Standing Rock Sioux (ND)	61	28	45.9	27	96.4	13.0	15.0

Exhibit 6.10 (continued)

Median Breastfeeding Duration in Weeks for WIC Infants Aged Seven-to-Eleven Months in April 1996 by State

Region and State	WIC Infants in Age Range	Infants Breastfed		Breastfed WIC Infants with Reported Breastfeeding Duration		Median Duration in Weeks	Mean Duration Within First Six Months
	Number	Number	Percent	Number	Percent		
Western							
Alaska	2,216	1,492	67.3	1,451	97.3	26+	21.0
American Samoa	545	422	77.4	394	93.4	26+	25.8
Arizona	15,688	9,278	59.1	9,068	97.7	20.0	16.3
Guam	669	367	54.9	366	99.7	3.0	8.1
Nevada	4,814	2,618	54.4	2,573	98.3	22.0	16.3
ITC—Arizona	869	446	51.3	445	99.8	16.0	14.7
ITC—Nevada	93	45	48.4	45	100.0	25.0	17.3
Navajo Nation (AZ)	1,371	1,066	77.8	1,066	100.0	24.5	17.3

Notes

[a]Includes the forty States reporting data on breastfeeding initiation for at least 75 percent of all seven-to-eleven-month-old infants and duration data for at least 75 percent of breastfed infants. Since infants in these States comprise only 46 percent of all infants aged seven-to-eleven-months, duration estimates do not constitute a national estimate.

[b]As originally agreed between FNS and the National Association of WIC Directors, a State-specific rate is not calculated if information was available for less than 85 percent of seven-to-eleven-month-old infants within any given State.

Exhibit 6.11

Estimated Breastfeeding Duration by State

Number and Percent of WIC Infants Aged Seven-to-Eleven Months in April 1998 Breastfeeding for Six Months or More

		Infants Reporting Six or More Months of Breastfeeding			
	WIC Infants in Age Range	Lower Bound Estimate		Upper Bound Estimate	
Region and State	Number	Number	Percent	Number	Percent
Total for States reporting[a]	395,283	57,121	14.5	102,191	25.9
Northeast					
Connecticut	[b]	[b]	[b]	[b]	[b]
Massachusetts	12,763	2,663	20.9	3,300	25.9
New Hampshire	[b]	[b]	[b]	[b]	[b]
New York	53,828	11,135	20.7	19,156	35.6
Rhode Island	[b]	[b]	[b]	[b]	[b]
Vermont	1,370	295	21.5	360	26.3
Mid-Atlantic					
District of Columbia	[b]	[b]	[b]	[b]	[b]
Pennsylvania	27,046	3,064	11.3	3,880	14.3
West Virginia	[b]	[b]	[b]	[b]	[b]
Southeast					
Florida	48,493	8,390	17.3	13,258	27.3
Georgia	[b]	[b]	[b]	[b]	[b]
North Carolina	23,723	2,232	9.4	3,745	15.8
Tennessee	19,867	3,066	15.4	3,988	20.1
Eastern Band—Cherokee (NC)	50	15	30.0	16	32.0

Exhibit 6.11 (continued)

Estimated Breastfeeding Duration by State

Number and Percent of WIC Infants Aged Seven-to-Eleven Months in April 1998 Breastfeeding for Six Months or More

		Infants Reporting Six or More Months of Breastfeeding			
	WIC Infants in Age Range	Lower Bound Estimate		Upper Bound Estimate	
Region and State	Number	Number	Percent	Number	Percent
Midwest					
Illinois	35,950	4,259	11.8	12,149	33.8
Indiana	17,396	1,351	7.8	2,344	13.5
Michigan	27,149	3,355	12.4	6,311	23.2
Ohio	27,007	2,788	10.3	4,296	15.9
Southwest					
Arkansas	[b]	[b]	[b]	[b]	[b]
ACL (NM)	45	7	15.6	13	28.9
Chickasaw Nation (OK)	304	25	8.2	96	31.6
Muscogee Creek Nation (OK)	109	4	3.7	26	23.9
Osage Nation (OK)	120	22	18.3	44	36.7
Pueblo of Isleta (NM)	60	14	23.3	21	35.0
Pueblo of Zuni (NM)	58	30	51.7	35	60.3
Sac and Fox Nation (OK)	29	2	6.9	5	17.2
Mountain Plains					
Kansas	[b]	[b]	[b]	[b]	[b]
Nebraska	[b]	[b]	[b]	[b]	[b]
South Dakota	1,458	203	13.9	294	20.2
Utah	5,971	1,846	30.9	2,891	48.4
Shoshone-Arapahoe (WY)	98	31	31.6	49	50.0
Standing Rock Sioux (ND)	61	11	18.0	25	41.0

Exhibit 6.11 (continued)

Estimated Breastfeeding Duration by State

Number and Percent of WIC Infants Aged Seven-to-Eleven Months in April 1998 Breastfeeding for Six Months or More

		Infants Reporting Six or More Months of Breastfeeding			
	WIC Infants in Age Range	Lower Bound Estimate		Upper Bound Estimate	
Region and State	Number	Number	Percent	Number	Percent
Western					
Alaska	2,216	1,058	47.7	1,113	50.2
American Samoa	545	389	71.4	532	97.6
Arizona	15,688	3,912	24.9	4,826	30.8
Guam	669	65	9.7	67	10.0
Nevada	4,814	1,266	26.3	1,371	28.5
ITC—Arizona	869	187	21.5	372	42.8
ITC—Nevada	93	26	28.0	32	34.4
Navajo Nation (AZ)	1,371	551	40.2	552	40.3

Notes

[a]Includes the forty States reporting data on breastfeeding initiation for at least 75 percent of all seven-to-eleven-month-old infants and duration data for at least 75 percent of breastfed infants. Since infants in these States comprise only 46 percent of all infants aged seven-to-eleven-months, duration estimates do not constitute a national estimate.

[b]As originally agreed between FNS and the National Association of WIC Directors, a State-specific rate is not calculated if information was available for less than 85 percent of seven-to-eleven-month-old infants within any given State.

reported information on less than 75 percent of infants aged seven to eleven months.[1] WIC enrollees in reporting States and ITOs comprise 85 percent of infants aged seven to eleven months, and data are available on 95 percent of these infants. Our benchmark estimate is based on 81 percent of all WIC infants aged seven to eleven months.

In those States reporting breastfeeding data, 42 percent of all seven- to-eleven-month-old infants are currently breastfed or were breastfed at some time. Substantial variation exists among States: some report more than 70 percent of infants are breastfed; in other States less than 25 percent of infants are ever breastfed.

States were asked to provide information on the length of time infants were breastfed. Many States could not provide these data so that estimates of breastfeeding duration are based on a substantially restricted sample of States and not a national estimate. Only the forty State agencies that were able to provide duration data for at least 75 percent of infants for whom breastfeeding was reportedly initiated are included in Exhibits 6.10 and 6.11.[2] The breastfeeding duration data are "right censored", that is, we do not know the full duration for infants who were currently breastfeeding when their data were collected. Therefore calculating an arithmetic mean of reported duration for both current and ever-breastfed infants would underestimate the duration for those currently breastfed. Instead, information on duration is summarized in three statistics which are practically unaffected by this limitation. First, the *median* duration is calculated by State and for all included States combined. Nearly all WIC infants with duration data reside in States in which at least half of ever-breastfed infants had stopped breastfeeding by the time the data were collected. Median duration in most of these States is therefore twenty-six weeks or less. (The exceptions are a few ITOs.) Second, the *mean duration during the first six months* is calculated--a value that is known for all infants whose data were collected at age six months or later, regardless of current breastfeeding status. Finally, the *percent who breastfed six months or more* is examined. This measure is of special interest because of the health benefits that accrue to infants who are breastfed for at least six months.

Across the forty States reporting data, fourteen is the median number of weeks infants were breastfed. Again, substantial variation exists among States. In some States, the median was less than four weeks. Other agencies, notably two ITOs, report median breastfeeding duration exceeded 26 weeks.

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[1]We have excluded these States and ITOs from our benchmark estimate of the national rate to avoid the possibility of bias from incomplete information. The excluded States are: Alabama, Idaho, Kentucky, Louisiana, Maine, Mississippi, New Jersey, New Mexico, North Dakota, Oklahoma, South Carolina, and Virginia. The ITOs excluded are: Citizen-Potawatomi Cheyenne River Sioux, Five Sandoval, ITC-Oklahoma, Indian Township, Mississippi Choctaw, Omaha Santee, Rosebud Sioux, Three Affiliated, Ute Mountain Ute, WOD and Winnebago. The Virgin Islands was also excluded. Six of the states reported no information, and an additional two states reported information on 1 percent or less of infants. The remainder reported information on 14 to 74 percent of infants.

California has been included in the analysis despite some ambiguities in the data. While current breastfeeding status is reported on virtually all seven-to-eleven-month-olds, information on initiation is missing for nearly half those not currently breastfeeding. We have assumed that none of these infants were breastfed, and so California's breastfeeding rate shown in Exhibit 6.9 is a lower bound estimate.

[2]Breastfeeding duration was counted as missing for: 1) currently breastfed infants for whom the date breastfeeding data was collected was not reported; 2) currently breastfed infants less than 22 weeks old when data were collected; and 3) ever breastfed infants for whom duration was not reported.

Exhibit 6.11 attempts to deal with the missing data on initiation and duration of breastfeeding by estimating lower and upper bounds for the percentage of infants breastfed for six or more months. The lower bound estimate counts only those infants who *reported* six or more months of breastfeeding. Breastfed infants for whom no initiation and duration information are reported are assumed to have been breastfed for less than six months. The upper bound estimates includes infants known to have been breastfed for at least six months as well as infants for whom initiation and duration of breastfeeding are not known.[3] Across the forty State WIC agencies reporting breastfeeding data, the proportion of infants breastfed for six or more months ranges from a lower bound estimate of 14.5 percent to an upper bound estimate of 25.9 percent. This range is consistent with other findings about breastfeeding in the poverty population. In 1993, USDA estimated that 14 percent of women below 185 percent of poverty breastfed their infants for six or more months.[4]

[3]Only States reporting data for at least 75 percent of seven-to-eleven month old infants are included in the upper and lower bound estimates. The range between the upper and lower bounds reflects missing data on breastfeeding initiation and duration. The upper bound also counts currently breastfeeding infants who were between five and six months old when data were collected, as having been breastfed for six months.

[4]Food and Nutrition Service. 1993 *Estimates of Persons Income Eligible for the Special Supplemental Food Program for Women, Infants, and Children (WIC) in 1989*. Alexandria, Virginia: USDA. Analyses used data from the 1988 National Maternal and Infant Health Survey.

7. PRIORITY LEVELS

As described in Chapter One of this report, the WIC Program must operate within annual funding levels established by the Congress. The number of participants served by the program depends on the total funds available as well as on the allocation of these funds by FNS to individual States. For each local agency, a maximum caseload is determined based on the agency's funding level and predicted caseload turnover. When a local WIC agency reaches this maximum participation level within available funding, a system of priorities is followed in allocating caseload "slots" to eligible applicants. Some agencies maintain waiting lists of eligible applicants and, as WIC openings become available, fill them from their waiting lists.

Federal regulations define seven levels of priority for service provision in local agencies. These levels are based on applicant categories and type of nutritional risk. (See Exhibit 7.1.) In general, precedence is given to medically based nutritional risks over risks based only on inadequate diet. Further, higher priority levels are assigned to infants, pregnant women, and breastfeeding women. State agencies may create sub-priorities and may expand priority levels III, IV, or V to include high-risk postpartum women.

Priority level distribution by participant category is presented in Exhibit 7.2, and priority level distributions by age for infants and children appear in Exhibits 7.3 and 7.4.

States reported priority levels for 99 percent of WIC participants in 1998, 1996 and 1994, as compared with 1992 when priority was reported for 93.6 percent of WIC participants. Between 1994 and 1998, there are virtually no changes in the proportions of WIC women and infants assigned to priority levels I and II. In 1998, 63.6 percent of children were assigned to priority level III (the highest child priority) as compared with 65.7 percent in 1996—a 2 percentage point decrease. This decrease continues a trend that began in 1994, when 68.2 percent of children were assigned to priority level III. It may be that as enrollment has increased, WIC has been able to serve more lower priority children. Concurrently, in 1998, priority level V shows a continued increase—moving from 28.9 percent in 1994 to 32.8 percent in 1996 and 34.8 percent in 1998. Priority level VII continues to have less than 1 percent of WIC child enrollees.

Exhibit 7.1

WIC Priorities

Priority	Description
I	Pregnant and breastfeeding women and infants at nutritional risk as demonstrated by anthropometric or hematological assessment or by other documented nutritionally-related medical condition.
II	Infants up to six months of age of mothers who participated in WIC during pregnancy, or who would have been eligible to participate under Priority I documented medical condition. This priority may also be assigned to a breastfeeding mother of an infant who is classified as Priority II.
III	Children at nutritional risk as demonstrated by anthropometric or hematological assessment or other documented medical condition. At State option, this priority can also include high-risk postpartum women.
IV	Pregnant and breastfeeding women and infants at nutritional risk as demonstrated by inadequate dietary pattern. At State option, this priority can also include homeless and migrant pregnant and breastfeeding women and infants and high-risk postpartum women.
V	Children at nutritional risk due to inadequate dietary pattern. At State option, this priority can also include homeless and migrant children and high-risk postpartum women.
VI	Postpartum women, not breastfeeding, at nutritional risk on either medical or dietary criteria—unless assigned to higher priorities at State discretion. At State option, this priority can also include homeless and migrant postpartum women.
VII	Previously certified participants likely to regress in nutritional status without continuation of supplemental foods. At State option, this priority can also include homeless and migrant participants.

Exhibit 7.2

Priority of All WIC Participants by Participant Category

Priority	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women		Infants[a]		Children		Total WIC	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Percent by participant category													
I[b]	824,109	92.3%	350,180	89.9%	4,615	0.8%	1,178,904	62.9%	1,007,476	49.2%	17,265	0.4%	2,203,645	27.4%
II	133	0.0	10,775	2.8	255	0.0	11,163	0.6	932,905	45.5	11,753	0.3	955,821	11.9
III	99	0.0	348	0.1	242,976	41.1	243,423	13.0	12,558	0.6	2,621,653	63.6	2,877,634	35.8
IV	64,585	7.2	25,591	6.6	51,012	8.6	141,188	7.5	74,301	3.6	3,410	0.1	218,899	2.7
V	167	0.0	54	0.0	16,634	2.8	16,855	0.9	3,532	0.2	1,425,315	34.6	1,445,702	18.0
VI	502	0.1	958	0.2	269,622	45.6	271,082	14.5	105	0.0	367	0.0	271,554	3.4
VII	1,628	0.2	672	0.2	2,033	0.3	4,333	0.2	3,707	0.2	21,717	0.5	29,757	0.4
No priority reported	1,451	0.2	814	0.2	3,903	0.7	6,168	0.3	14,041	0.7	19,537	0.5	39,745	0.5
US WIC	892,674	100.0%	389,391	100.0%	591,050	100.0%	1,873,116	100.0%	2,048,626	100.0%	4,121,017	100.0%	8,042,758	100.0%

Notes

About 3.2 percent of one-year-old children are eleven-month-old infants who have been recertified as children. About 0.1 percent of WIC participants who are classified as infants are participants who are older than 366 days.

[a] An infant is defined as a participant who, at certification, is under one year of age and who would be classified as a child at the age of 366 days.

[b] A small proportion of postpartum women and children may not have had their State-level records or priorities updated on State-maintained management information systems when they were certified for WIC benefits in different certification categories.

Exhibit 7.3

Priority of Infant WIC Participants by Age at Certification

Priority	Age at Certification[a]											
	0 - 3 Months		4 - 5 Months		6 - 8 Months		9 - 11 Months		Age Not Reported		Total Infants	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Percent by age group											
I	858,709	47.4%	32,500	59.4%	87,375	68.0%	26,356	53.4%	2,537	52.6%	1,007,476	49.2%
II	894,416	49.4	15,890	29.0	18,818	14.7	1,997	4.0	1,784	37.0	932,905	45.5
III[b]	4,274	0.2	168	0.3	235	0.2	7,833	15.9	48	1.0	12,558	0.6
IV	38,854	2.1	5,404	9.9	21,045	16.4	8,776	17.8	222	4.6	74,301	3.6
V[b]	1,002	0.1	65	0.1	61	0.0	2,361	4.8	43	0.9	3,532	0.2
VI	58	0.0	6	0.0	15	0.0	19	0.0	7	0.1	105	0.0
VII	3,253	0.2	75	0.1	166	0.1	180	0.4	33	0.7	3,707	0.2
No priority reported	10,721	0.6	630	1.2	730	0.6	1,815	3.7	146	3.0	14,041	0.7
Infants in age group	1,811,288	100.0%	54,738	100.0%	128,445	100.0%	49,336	100.0%	4,819	100.0%	2,048,626	100.0%

Notes

An infant is defined as a participant who, at certification, is under one year of age and who would be classified as a child at the age of 366 days.

[a]About 0.1 percent of WIC participants who are classified as infants are participants who are older than 366 days.

[b]Apparent inconsistencies between priorities III and V and certification as an infant may be largely due to States unable to provide historical data on priorities for some infants.

Exhibit 7.4

Priority of Child WIC Participants by Age at Certification

Priority	Age at Certification											
	1 Year[a]		2 Years		3 Years		4 Years		Age Not Reported		Total Children	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Percent by age group											
I[b]	15,826	1.1%	200	0.0%	160	0.0%	109	0.0%	970	3.1%	17,265	0.4%
II[b]	10,958	0.7	75	0.0	70	0.0	40	0.0	610	2.0	11,753	0.3
III	972,291	66.2	679,961	65.7	554,930	60.5	401,121	60.0	13,351	42.7	2,621,653	63.6
IV	3,153	0.2	91	0.0	91	0.0	64	0.0	11	0.0	3,410	0.1
V	443,649	30.2	347,001	33.5	356,107	38.8	262,522	39.2	16,036	51.3	1,425,315	34.6
VI	105	0.0	83	0.0	89	0.0	75	0.0	15	0.0	367	0.0
VII	6,447	0.4	5,665	0.5	5,207	0.6	4,329	0.6	69	0.2	21,717	0.5
No priority reported	16,150	1.1	1,356	0.1	1,105	0.1	712	0.1	213	0.7	19,537	0.5
Children in age group	1,468,580	100.0%	1,034,432	100.0%	917,758	100.0%	668,972	100.0%	31,275	100.0%	4,121,017	100.0%

Notes

[a] About 3.2 percent of one-year-old children are eleven-month-old infants who have been recertified as children.

[b] Apparent inconsistencies between priorities I and II and certification as a child may be largely due to State-level automated procedures which routinely reassign infants as children at the age of 366 days without revising assigned priorities.

8. CHARACTERISTICS OF MIGRANT WIC PARTICIPANTS

Federal regulations define a migrant farmworker as an individual whose principal employment is in agriculture on a seasonal basis, who has been so employed within the last twenty-four months, and who establishes, for the purposes of such employment, a temporary abode. As part of the Minimum Data Set, States report migrant status for all individuals enrolled in the WIC Program.

In April 1998, State WIC agencies recorded on their enrollment files 53,158 individuals who are members of migrant farmworker families. This group accounts for less than 1 percent of the eight million Americans receiving WIC benefits—about the same proportion as reported in 1992, 1994, and 1996. Migrant participation in the WIC Program tends to be concentrated in a small number of States. In fact, more than half (59 percent) of migrant WIC enrollees in April 1998 were enrolled in WIC in California, Florida, and Texas. This distribution is similar to information reported in 1996. See Exhibit 8.1. State-by-State tables appear in Appendix E.

In actual numbers, there was a steady increase between 1992 and 1996 in the number of migrant WIC enrollees. However, between 1996 and 1998 actual migrant farmworker WIC enrollment decreased by approximately 6,500 enrollees (11 percent). The decrease was concentrated in Florida, Illinois, Oregon, South Carolina, and Washington.

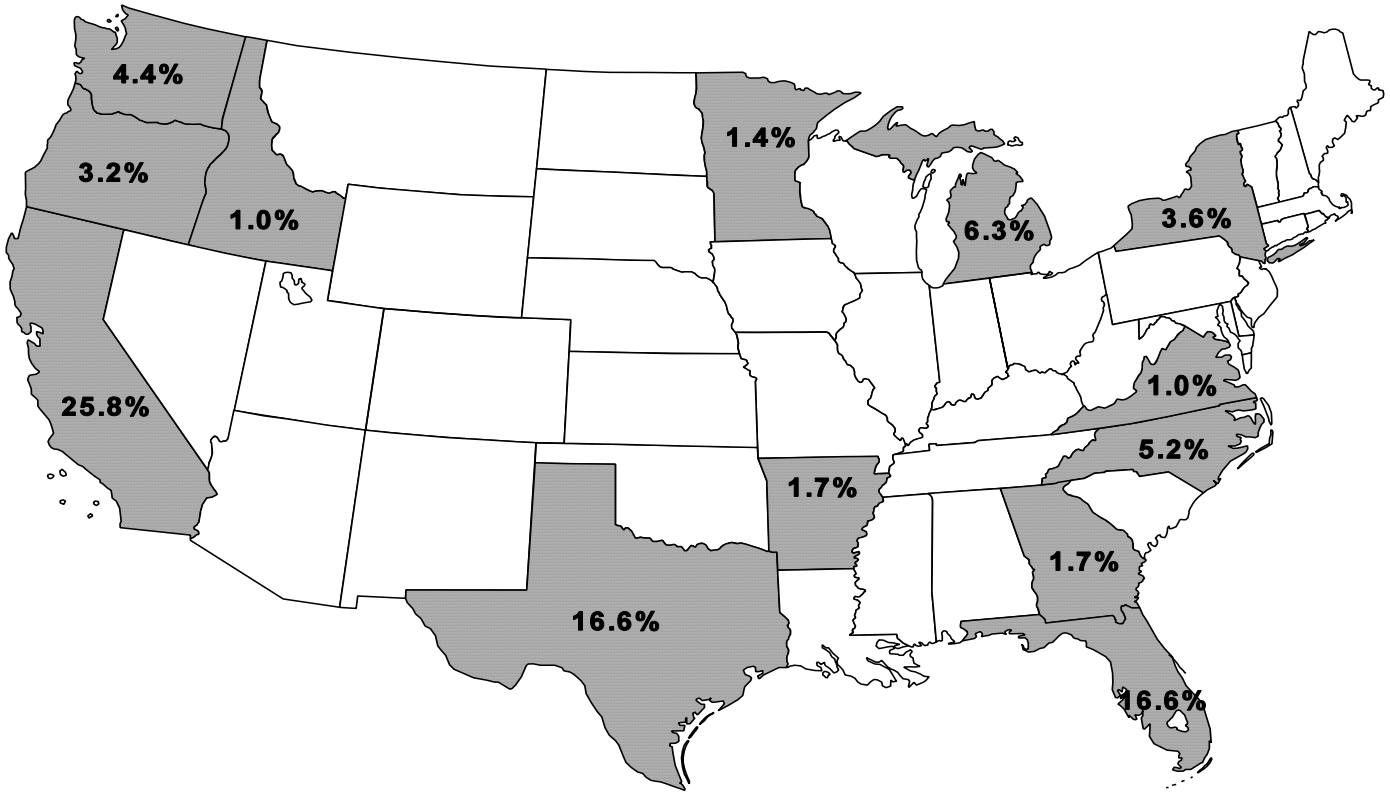
Most States provided information on migrant farmworker status for the individuals enrolled in their WIC programs. Less than 1 percent of the total number of individuals enrolled in WIC in April 1998 lack information on migrant farmworker status. Given these numbers, it seems reasonable to assume that the information in this chapter is representative of migrant WIC participants.

Exhibits 8.2 through 8.11 present information on the characteristics of migrant WIC enrollees. Similar to information reported in earlier chapters on total WIC enrollment, enrollment of pregnant migrant WIC women, as a percent of all migrant WIC, is about the same in 1998 as it was in both 1994 and 1996—12 percent. WIC enrollment of breastfeeding migrant women, as a percent of all migrant WIC women, continued to increase from 1994 to 1996, by 2 percentage points, and from 1996 to 1998 by 5 percentage points. Similar to the national trend, the proportion of migrant infant enrollees declined and the proportion of migrant WIC children increased between 1992 and 1998. For migrants, most of the change occurred between 1992 and 1994; the proportions of migrant infants and children have been stable since 1994.

In general, migrant women WIC enrollees appear to be slightly older than the general WIC population. As with total enrollment, a high proportion of migrant infants (86.6 percent) enrolled in WIC at zero to three months of age in 1998. The percentage of infants in WIC who enrolled at age zero-to-three-months has increased steadily since 1992 for both migrant and non-migrant infants.

Exhibit 8.1

Distribution of Migrant Farmworker WIC Participants by State
April 1998



Note

Percentages are based on total migrant WIC participation. States with less than 1 percent of the total WIC migrant population are not shown.

Exhibit 8.2

Distribution of Migrant Farmworker WIC Participants by WIC Participant Category and Age at Certification

Participant Category and Age at Certification	Migrant	Non-Migrant	Migrant Status Not Reported	Total WIC Participants
	Percent by participant category			
Pregnant women	6,242	883,499	2,934	892,674
Under 15 years	0.7%	0.8%	0.7%	0.8%
15 - 17 years	8.7	10.2	10.6	10.1
18 - 34 years	83.9	83.1	81.6	83.1
35 or more years	6.5	5.7	6.7	5.8
Age not reported	0.2	0.2	0.4	0.2
Breastfeeding women	3,545	384,500	1,346	389,391
Under 15 years	0.2%	0.2%	0.0%	0.2%
15 - 17 years	3.5	4.1	4.7	4.1
18 - 34 years	86.4	84.6	85.2	84.6
35 or more years	9.7	10.7	10.0	10.7
Age not reported	0.2	0.5	0.1	0.5
Postpartum women	3,059	585,636	2,355	591,050
Under 15 years	0.5%	0.5%	1.0%	0.5%
15 - 17 years	7.5	8.9	9.0	8.9
18 - 34 years	83.8	83.9	81.6	83.9
35 or more years	7.7	6.0	8.2	6.0
Age not reported	0.6	0.6	0.1	0.6
Total women	12,846	1,853,635	6,635	1,873,116
Under 15 years	0.5%	0.6%	0.7%	0.6%
15 - 17 years	7.0	8.5	8.8	8.5
18 - 34 years	84.5	83.7	82.4	83.7
35 or more years	7.7	6.9	7.9	6.9
Age not reported	0.3	0.4	0.2	0.4
Infants[a]	10,147	2,030,222	8,257	2,048,626
0 - 3 months	86.6%	88.5%	79.3%	88.4%
4 - 5 months	4.1	2.6	9.9	2.7
6 - 8 months	6.2	6.3	8.5	6.3
9 - 12 months	2.8	2.4	2.1	2.4
Age not reported	0.2	0.2	0.2	0.2
Children	30,166	4,080,320	10,530	4,121,017
1 year	29.6%	35.7%	36.6%	35.6%
2 years	24.9	25.1	25.8	25.1
3 years	24.9	22.2	23.3	22.3
4 years	20.5	16.2	14.0	16.2
Age not reported	0.1	0.8	0.3	0.8
US WIC	53,158	7,964,177	25,422	8,042,758

Note

[a] An infant is defined as a participant who, at certification, is under one year of age and who would be classified as a child at the age of 366 days.

The distribution of trimester of enrollment for migrant women is also similar to the distribution for the larger WIC population. Close to half (46.9 percent) of migrant prenatal clients enroll in WIC during the first trimester; another 38.8 percent enroll during the second trimester (Exhibit 8.3).

Overall, migrant WIC enrollees display a similar level of participation in other social support programs as is observed in US WIC. However, migrant WIC enrollees are somewhat more likely to receive food stamps and less likely to receive TANF than the general WIC population. The percentage (41.6 percent) of migrant WIC enrollees reporting no other program participation is only slightly higher than the percentage (38.3 percent) found in US WIC.

The migrant WIC population also has lower average family income; however, the gap has become progressively smaller since 1994. Average (mean) income is 6 percent higher in the non-migrant WIC population than in the migrant WIC population. In 1996, average income for non-migrant WIC was 12 percent higher than average migrant income; in 1994 the comparable figure was 20 percent. Between 1994 and 1998, average migrant income increased by 47 percent while average income for non-migrant WIC increased by only 29 percent. Nonetheless, 63 percent of migrant WIC enrollees are at or below 100 percent of the US poverty threshold while 57 percent of non-migrant WIC enrollees fall into this category.[1]

The distribution of nutritional risks for migrant WIC resembles the distribution reported for US WIC with two exceptions—anemia is more frequently reported for migrant WIC women and substance abuse is less frequently reported for migrant WIC women. Migrant children also show somewhat higher rates of anemia, but the distribution for anthropometric measures among migrant children is similar to the distribution reported for children in the larger WIC population.

The priority distribution for migrant WIC is similar to the distribution reported for US WIC. However, infant, child, and postpartum migrant WIC participants are somewhat more likely to have higher (medically based) priorities than the overall population. In contrast, pregnant and breastfeeding migrants are more likely to be assigned dietary-based priorities than are members of the general WIC population.

[1]The poverty distribution among migrants must be treated somewhat cautiously in PC98 because of problems with missing income data in Texas. Data are missing for approximately 78 percent of migrant WIC participants in the State and almost 17 percent of all WIC migrants are enrolled in Texas.

Exhibit 8.3

Distribution of Migrant Pregnant Women WIC Participants by Trimester of Enrollment

Trimester of Enrollment	Number	Percent
First trimester	2,927	46.9%
Second trimester	2,424	38.8
Third trimester	713	11.4
Trimester not reported	176	2.8
Total migrant pregnant women	6,242	100.0%

Exhibit 8.4

Number and Percent of Migrant WIC Participants with Reported Participation in Other Programs at Certification

Migrant WIC participants reported receiving benefits from ...	Number	Percent of All Migrant WIC
Temporary Assistance to Needy Families (TANF), Food Stamp, and Medicaid Programs	6,333	11.9%
TANF and Food Stamp Programs	232	0.4
TANF and Medicaid Programs	474	0.9
Food Stamp and Medicaid Programs	7,924	14.9
TANF only	119	0.2
Food Stamp Program only	2,256	4.2
Medicaid Program only	11,003	20.7
Do not participate in other programs	22,111	41.6
Not reported	2,707	5.1
US Migrant WIC	53,158	100.0%

Notes

Not reported indicates the number and percentage of participants for whom no data regarding participation in Medicaid, TANF, and Food Stamps are reported.

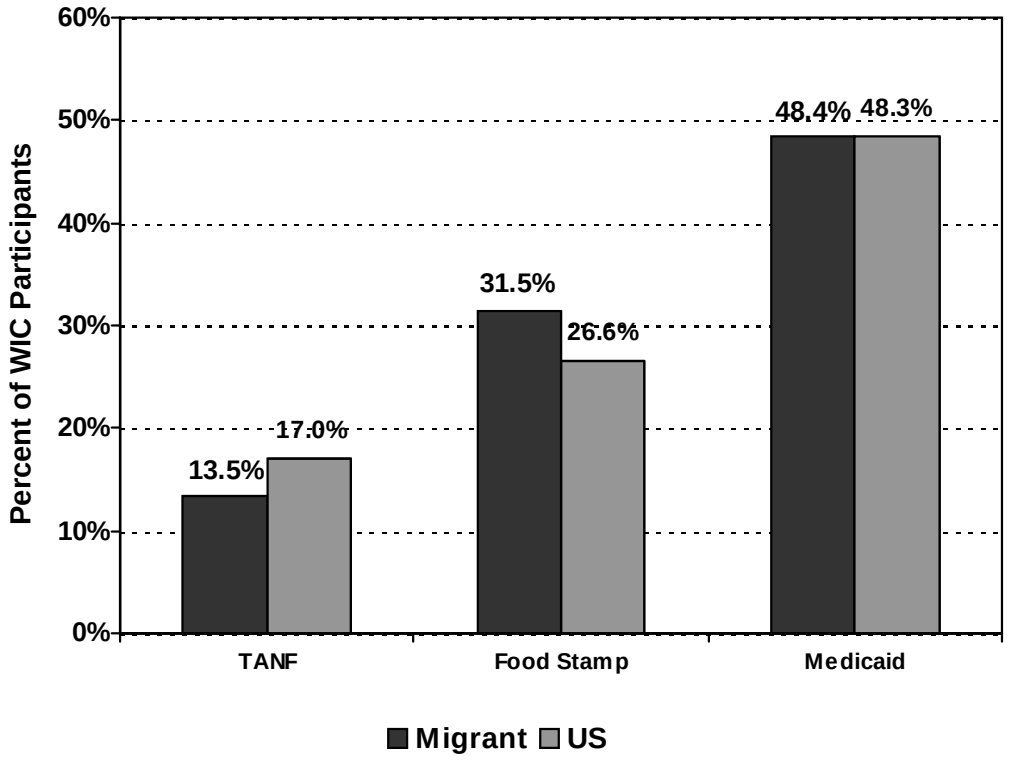


Exhibit 8.5

Mean and Median Annualized Family or Economic Unit Income of WIC Participants by Participant Category and Migrant Status

	Pregnant Women	Breastfeeding Women	Postpartum Women	Total Women	Infants	Children	Total WIC
Migrant Farmworkers	6,242	3,545	3,059	12,846	10,147	30,166	53,159
Average (mean) income	$11,645	$11,913	$11,135	$11,607	$11,374	$11,994	$11,791
Median income	$10,572	$11,052	$10,400	$10,572	$10,400	$11,040	$10,800
Percent with income reported	78.9%	81.6%	74.5%	78.6%	71.1%	79.6%	77.7%
Percent with income reported as zero[a]	3.5	2.6	3.0	3.2	5.2	1.6	2.6
Percent with income not reported[b]	17.5	15.8	22.5	18.2	23.7	18.9	19.6
Non-migrants	883,499	384,500	585,636	1,853,635	2,030,222	4,080,320	7,964,177
Average (mean) income	$12,019	$13,631	$11,546	$12,216	$12,018	$12,828	$12,492
Median income	$11,076	$12,996	$10,400	$11,400	$10,948	$11,760	$11,440
Percent with income reported	82.0%	83.9%	79.7%	81.7%	78.4%	85.4%	82.7%
Percent with income reported as zero[a]	4.2	2.9	2.8	3.5	4.2	1.7	2.8
Percent with income not reported[b]	13.8	13.2	17.5	14.8	17.4	12.9	14.5
Migrant status not reported	2,934	1,346	2,355	6,635	8,257	10,530	25,422
Average (mean) income	$10,370	$11,049	$8,420	$9,836	$8,989	$9,395	$9,410
Median income	$8,320	$9,620	$5,400	$7,524	$6,214	$6,600	$6,600
Percent with income reported	71.0%	77.5%	71.3%	72.4%	54.9%	82.5%	70.9%
Percent with income reported as zero[a]	2.1	1.9	1.5	1.8	1.3	0.8	1.2
Percent with income not reported[b]	26.9	20.6	27.2	25.7	43.8	16.7	27.9
US WIC	892,674	389,391	591,050	1,873,116	2,048,626	4,121,017	8,042,758

Notes

State and local WIC agencies may collect data on weekly, monthly, or annual incomes. For reporting and analysis, annualized incomes have been computed.
Also note that income calculations include only those participants for whom State agencies reported data on income, income period, and size of economic unit.
In 1998, a State WIC agency could report actual income or could report an income range. Both types of data are included in the calculations of mean and median incomes.

[a] Zero incomes are reported separately and excluded from these mean and median calculations. In some reporting agencies, zero may be used to indicate missing information or adjunctive eligibility. PC98 cannot distinguish between households with missing income information and households reporting zero income.

[b] Not reported indicates the percentage of participants by participant category for whom no data on income, income period, or size of economic unit are reported.

Exhibit 8.6

Distribution of Percent of Poverty Level of WIC Participants by Participant Category and Migrant Status

Percent of Poverty Level	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women		Infants		Children		Total Participants	
	Percent	Cumulative Percent	Percent	Cumulative Percent	Percent	Cumulative Percent	Percent	Cumulative Percent	Percent	Cumulative Percent	Percent	Cumulative Percent	Percent	Cumulative Percent
	Percent of total women								Percent by participant category					
Migrant[a]														
0 - 50	24.2%	24.2%	25.7%	25.7%	26.9%	26.9%	25.3%	25.3%	25.9%	25.9%	28.0%	28.0%	26.9%	26.9%
51 - 100	34.5	58.7	40.5	66.2	34.0	60.8	36.0	61.3	31.4	57.3	37.2	65.2	35.8	62.7
101 - 130	10.4	69.1	9.3	75.6	7.6	68.4	9.4	70.7	7.8	65.1	8.4	73.5	8.5	71.2
131 - 150	4.3	73.4	3.3	78.8	2.9	71.3	3.7	74.4	3.0	68.1	3.1	76.6	3.2	74.4
151 - 185	5.0	78.4	2.7	81.6	3.0	74.3	3.9	78.3	2.9	70.9	2.8	79.4	3.1	77.5
186 - 200	0.2	78.7	0.0	81.6	0.0	74.4	0.1	78.4	0.1	71.0	0.1	79.4	0.1	77.6
201 - 225	0.1	78.8	0.1	81.6	0.1	74.4	0.1	78.5	0.1	71.1	0.1	79.5	0.1	77.7
226 - 250	0.0	78.8	0.0	81.6	0.0	74.5	0.0	78.6	0.0	71.1	0.0	79.5	0.0	77.7
Over 250	0.1	78.9	0.0	81.6	0.0	74.5	0.0	78.6	0.0	71.1	0.0	79.6	0.0	77.7
Income reported as zero[b]	3.5	82.5	2.6	84.2	3.0	77.5	3.2	81.8	5.2	76.3	1.6	81.1	2.6	80.4
Not reported[c]	17.5	100.0	15.8	100.0	22.5	100.0	18.2	100.0	23.7	100.0	18.9	100.0	19.6	100.0
Total migrant WIC	6,242		3,545		3,059		12,846		10,147		30,166		53,159	
Non-Migrant														
0 - 50	24.8	24.8	23.0	23.0	30.9	30.9	26.3	26.3	28.6	28.6	28.7	28.7	28.1	28.1
51 - 100	27.3	52.1	32.2	55.1	25.4	56.3	27.7	54.1	26.1	54.8	30.3	59.0	28.7	56.8
101 - 130	12.9	65.0	14.0	69.1	11.3	67.6	12.6	66.7	11.6	66.4	12.9	71.9	12.5	69.3
131 - 150	7.0	72.0	7.0	76.1	5.5	73.1	6.5	73.2	5.5	71.9	6.3	78.1	6.1	75.4
151 - 185	8.9	80.9	7.2	83.3	5.9	79.0	7.6	80.8	5.8	77.8	6.7	84.8	6.7	82.1
186 - 200	0.5	81.4	0.3	83.5	0.3	79.3	0.4	81.2	0.2	78.0	0.3	85.1	0.3	82.4
201 - 225	0.3	81.7	0.1	83.7	0.2	79.5	0.2	81.4	0.1	78.2	0.1	85.2	0.2	82.5
226 - 250	0.2	81.8	0.1	83.8	0.1	79.6	0.1	81.5	0.1	78.3	0.1	85.3	0.1	82.6
Over 250	0.2	82.0	0.1	83.9	0.1	79.7	0.2	81.7	0.1	78.4	0.1	85.4	0.1	82.7
Income reported as zero[b]	4.2	86.2	2.9	86.8	2.8	82.5	3.5	85.2	4.2	82.6	1.7	87.1	2.8	85.5
Not reported[c]	13.8	100.0	13.2	100.0	17.5	100.0	14.8	100.0	17.4	100.0	12.9	100.0	14.5	100.0
Total non-migrant WIC	883,499		384,500		585,636		1,853,635		2,030,222		4,080,320		7,964,177	

Exhibit 8.6 (continued)

Distribution of Percent of Poverty Level of WIC Participants by Participant Category and Migrant Status

Percent of Poverty Level	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women		Infants		Children		Total Participants	
	Percent	Cumulative Percent	Percent	Cumulative Percent	Percent	Cumulative Percent	Percent	Cumulative Percent	Percent	Cumulative Percent	Percent	Cumulative Percent	Percent	Cumulative Percent
	Percent of total women								Percent by participant category					
Migrant status not reported														
0 - 50	28.7	28.7	31.4	31.4	44.1	44.1	34.7	34.7	31.7	31.7	48.3	48.3	39.4	39.4
51 - 100	20.1	48.7	25.3	56.7	13.9	58.0	18.9	53.7	12.9	44.7	18.4	66.7	16.8	56.1
101 - 130	8.1	56.9	11.1	67.8	6.3	64.3	8.1	61.7	5.5	50.1	7.5	74.3	7.0	63.2
131 - 150	5.2	62.1	5.0	72.8	3.0	67.3	4.4	66.1	2.2	52.3	3.7	77.9	3.4	66.5
151 - 185	6.8	68.8	3.6	76.4	3.3	70.6	4.9	71.0	2.2	54.5	3.6	81.6	3.5	70.0
186 - 200	0.8	69.7	0.3	76.7	0.3	70.9	0.5	71.5	0.2	54.7	0.3	81.9	0.3	70.3
201 - 225	0.7	70.4	0.2	77.0	0.3	71.1	0.5	72.0	0.1	54.8	0.3	82.2	0.3	70.6
226 - 250	0.4	70.8	0.3	77.3	0.1	71.3	0.3	72.3	0.0	54.8	0.2	82.4	0.2	70.8
Over 250	0.2	71.0	0.2	77.5	0.0	71.3	0.2	72.4	0.1	54.9	0.1	82.5	0.1	70.9
Income reported as zero[a]	2.1	73.1	1.9	79.4	1.5	72.8	1.8	74.3	1.3	56.2	0.8	83.3	1.2	72.1
Not reported[b]	26.9	100.0	20.6	100.0	27.2	100.0	25.7	100.0	43.8	100.0	16.7	100.0	27.9	100.0
Total migrant status not reported WIC	2,934		1,346		2,355		6,635		8,257		10,530		25,422	

Notes

Poverty level calculations are based on income, income period, and household size as reported by State WIC agencies.

[a] The percent of migrants with missing income information increased from 7.4 percent in 1996 to 19.6 percent in 1998 primarily due to increased non-reporting in Texas (income is missing for 60 percent of all participants). Thus, observed changes in the poverty distribution between 1996 and 1998 must be treated cautiously.

[b] Zero incomes are reported separately and excluded from these income calculations. In some reporting agencies, zero may be used to indicate missing information or adjunctive eligibility. PC98 cannot, therefore, distinguish between households with missing income information and households reporting zero income.

[c] Not reported indicates the percentage of participants by participant category for whom no data on income, income period, or size of economic unit are reported.

Exhibit 8.7

Nutritional Risks Reported in at Least 15 Percent of Migrant Farmworker WIC Participants by Participant Category

Participant Category and Type of Risk	Percent
Pregnant Women	6,242
General obstetrical risks	36.9%
Hematocrit or hemoglobin below State standard	25.7
High weight for height	27.7
Inadequate or inappropriate nutrient intake	42.1
Inappropriate growth or weight gain pattern	42.3
Breastfeeding Women	3,545
Breastfeeding mother or infant dyad	33.7%
General obstetrical risks	34.7
Hematocrit or hemoglobin below State standard	30.4
High weight for height	32.4
Inadequate or inappropriate nutrient intake	44.3
Other health risk	15.3
Postpartum Women	3,059
General obstetrical risks	32.0%
Hematocrit or hemoglobin below State standard	37.0
High weight for height	26.1
Inadequate or inappropriate nutrient intake	45.9
Other health risk	18.5
Infants	10,147
Breastfeeding mother or infant dyad	32.6%
Infant of a WIC-eligible mother or mother at risk during pregnancy	68.6
Children	30,166
Hematocrit or hemoglobin below State standard	29.6%
High weight for height	18.1
Inadequate or inappropriate nutrient intake	61.9
Total	53,159

Note

Risks shown each represent 15 percent or more of all migrant WIC participants in the participant category.

Exhibit 8.8

Number and Percent of Migrant Farmworker WIC Participants with Specific Nutritional Risks Reported by Participant Category

	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women		Infants		Children		Total Migrant WIC	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Percent by participant category													
Participants in category	6,242		3,545		3,059		12,846		10,147		30,166		53,159	
Anthropometric	3,834	61.4%	1,511	42.6%	1,084	35.4%	6,430	50.1%	1,953	19.2%	10,114	33.5%	18,496	34.8%
Low weight for height	312	5.0	77	2.2	72	2.4	461	3.6	182	1.8	634	2.1	1,276	2.4
High weight for height	1,728	27.7	1,150	32.4	797	26.1	3,675	28.6	388	3.8	5,447	18.1	9,510	17.9
Short stature	228	3.7	16	0.5	10	0.3	254	2.0	405	4.0	1,899	6.3	2,558	4.8
Inappropriate growth or weight gain pattern	2,643	42.3	400	11.3	301	9.8	3,343	26.0	361	3.6	3,073	10.2	6,777	12.7
Low birthweight or premature birth	0	0.0	0	0.0	0	0.0	0	0.0	585	5.8	71	0.2	656	1.2
Other anthropometric	31	0.5	5	0.1	1	0.0	37	0.3	358	3.5	35	0.1	430	0.8
Biochemical	1,623	26.0	1,077	30.4	1,137	37.2	3,836	29.9	719	7.1	8,976	29.8	13,531	25.5
Hematocrit or hemoglobin below State standard	1,606	25.7	1,077	30.4	1,133	37.0	3,815	29.7	673	6.6	8,942	29.6	13,430	25.3
Other biochemical test results which indicate nutritional abnormality	19	0.3	1	0.0	4	0.1	24	0.2	46	0.5	41	0.1	111	0.2
Clinical, Health, Medical	3,430	55.0	1,929	54.4	1,779	58.2	7,138	55.6	1,578	15.6	6,437	21.3	15,152	28.5
Pregnancy-induced conditions	167	2.7	148	4.2	91	3.0	406	3.2	0	0.0	0	0.0	406	0.8
Delivery of low-birthweight or premature infant	124	2.0	48	1.4	91	3.0	263	2.0	0	0.0	0	0.0	263	0.5
Prior stillbirth, miscarriage, spontaneous abortion, or neonatal death	164	2.6	49	1.4	108	3.5	321	2.5	0	0.0	0	0.0	321	0.6
General obstetrical risks	2,303	36.9	1,229	34.7	980	32.0	4,512	35.1	0	0.0	0	0.0	4,512	8.5
Nutrition-related risk conditions	750	12.0	220	6.2	180	5.9	1,150	9.0	232	2.3	2,604	8.6	3,986	7.5
Substance abuse	349	5.6	143	4.0	155	5.1	647	5.0	506	5.0	1,594	5.3	2,747	5.2
Other health risk	404	6.5	544	15.3	567	18.5	1,515	11.8	923	9.1	3,172	10.5	5,610	10.6
Dietary	2,943	47.1	1,681	47.4	1,525	49.9	6,149	47.9	1,443	14.2	20,939	69.4	28,531	53.7
Inadequate or inappropriate nutrient intake	2,629	42.1	1,572	44.3	1,405	45.9	5,606	43.6	1,007	9.9	18,681	61.9	25,294	47.6
Other dietary risk	612	9.8	199	5.6	192	6.3	1,003	7.8	543	5.4	4,399	14.6	5,945	11.2
Other risk	570	9.1	1,427	40.3	440	14.4	2,437	19.0	8,773	86.5	5,119	17.0	16,329	30.7
Regression	0	0.0	10	0.3	4	0.1	14	0.1	6	0.1	524	1.7	544	1.0
Transfer (nutrition risk unknown)	174	2.8	81	2.3	135	4.4	390	3.0	677	6.7	889	2.9	1,955	3.7
Breastfeeding mother or infant dyad	0	0.0	1,195	33.7	18	0.6	1,213	9.4	3,309	32.6	25	0.1	4,546	8.6
Infant of a WIC-eligible mother or mother at risk during pregnancy	0	0.0	0	0.0	0	0.0	0	0.0	6,962	68.6	108	0.4	7,070	13.3
Homelessness/Migrancy	193	3.1	89	2.5	70	2.3	352	2.7	415	4.1	1,538	5.1	2,305	4.3
Other nutritional risks	213	3.4	128	3.6	223	7.3	564	4.4	707	7.0	2,165	7.2	3,436	6.5
No risk reported	67	1.1	20	0.6	23	0.8	110	0.9	103	1.0	243	0.8	456	0.9

Notes

An infant is defined as a participant who, at certification, is under one year of age and who would be classified as a child at the age of 366 days.

In 1998, State WIC agencies could report up to three nutritional risks for each participant. This table examines all risks reported for every participant. When multiple risks within a classification are reported for one person, these risks are combined and counted one time in order to accurately calculate the number and percent of WIC participants with a specific type (or category) of risk.

Exhibit 8.9

Number and Percent of Anemic Migrant Farmworker WIC Participants by Participant Category

	Migrant WIC Participants	
	Number	**Percent**
Migrant WIC women	12,846	
Total women	12,846	
Below CDC standard[a]	2,497	19.4%
Not reported[b]	1,862	14.5
Pregnant women	6,242	
Below CDC standard[a]	465	7.4
Not reported[b]	852	13.7
Breastfeeding women	3,545	
Below CDC standard[a]	947	26.7
Not reported[b]	510	14.4
Postpartum women	3,059	
Below CDC standard[a]	1,085	35.5
Not reported[b]	500	16.3
Migrant WIC children	30,166	
Total children	30,166	
Below CDC standard[a]	5,126	17.0
Not reported[b]	2,553	8.5
One-year-old children	8,916	
Below CDC standard[a]	1,430	16.0
Not reported[b]	732	8.2
Two-year-old children	7,517	
Below CDC standard[a]	1,669	22.2
Not reported[b]	623	8.3
Three-year-old children	7,507	
Below CDC standard[a]	1,260	16.8
Not reported[b]	634	8.4
Four-year-old children	6,188	
Below CDC standard[a]	767	12.4
Not reported[b]	564	9.1
Age not reported	37	0.1

Notes

Percent below each standard includes in denominators WIC participants for whom no data were reported so that the percentages reported here represent lower bounds.

Federal WIC regulations permit State and local agencies to dispense with hematological testing for infants under six months of age, as well as for children who are found to be within normal ranges at their last certification. However, blood tests should be performed on such children at least once in every twelve-month period.

[a] Centers for Disease Control. 1989 "CDC Criteria for Anemia in Children and Childbearing-Aged Women." *Morbidity and Mortality Weekly Report*, 38, 22: 401-404.

[b] Not reported indicates the percentage of participants, by participant category, for whom data were not reported on blood measure or expected date of delivery.

Exhibit 8.10

Distribution of Infant and Child Migrant Farmworker WIC Participants According to Selected Anthropometric Measures

NCHS-CDC Percentiles[a]	Infants[b]	Children	
		1 Year Old	2 or more Years
		Percent by percentile[c]	
Weight for height [d,e]			
<3rd percentile	2.0%	1.3%	0.6%
<5th	4.2	2.2	1.1
<10th	7.0	5.0	2.9
>90th	11.3	27.8	19.7
>95th	6.3	17.9	13.5
>98th	5.0	14.6	10.8
Invalid or missing anthropometric data [f]	27.7	4.7	3.7
Weight for age[d,f]			
<3rd percentile	4.1	2.2	1.8
<5th	5.6	3.4	2.9
<10th	10.0	7.2	6.4
>90th	90.0	19.8	18.6
>95th	95.0	13.3	12.9
>98th	98.0	10.3	10.3
Invalid or missing anthropometric data	9.0	3.4	3.0
Height for age[d,e,g]			
<3rd percentile	7.4	5.9	3.6
<5th	8.5	8.5	5.7
<10th	12.1	14.7	10.2
>90th	10.8	8.9	13.9
>95th	5.3	5.0	8.1
>98th	4.4	3.3	5.5
Invalid or missing anthropometric data	10.8	4.3	3.1
WIC Migrant Participants	10,146	8,916	21,212

Notes

Percentiles are calculated using software for pediatric anthropometry developed by the Centers for Disease Control and the World Health Organization. See: Sullivan M. and J. Gorstein. December 1990. *ANTHRO: Software for Calculating Pediatric Anthropometry Version 1.01*.

Age is not reported for 39 migrant children.

[a] NCHS = National Center for Health Statistics. CDC = Centers for Disease Control and Prevention.

[b] An infant is defined as a participant who, at certification, is under one year of age and who would be classified as a child at the age of 366 days.

[c] Percentiles reported in this table are cumulative. For example the <5th category includes those infants in the <3rd percentile, and the >95th category includes those infants in the >98th percentile.

[d] NCHS-CDC reference curves for one-to-two-year-old children are based on a sample of children from Yellow Springs, Ohio, who were measured by researchers at the Fels Research Institute. For children aged two or more, NCHS-CDC growth reference curves are based on a representative sample of US children.

[e] It is assumed that height for an infant is recumbent length.

[f] Infants less than 19.3 inches are coded as invalid by CDC software program in weight-to-length percentile calculations.

[g] Age is calculated in months using birthdates and dates of height and weight measurement.

Exhibit 8.11

Priority of Migrant Farmworker WIC Participants by Participant Category

Priority	Pregnant Women		Breastfeeding Women		Postpartum Women		Total Women		Infants		Children		Total Migrant WIC	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	Percent by participant category													
I	5,530	88.6%	3,063	86.4%	30	1.0%	8,623	67.1%	5,666	55.8%	44	0.1%	14,333	27.0%
II	0	0.0	107	3.0	1	0.0	108	0.8	3,644	35.9	45	0.1	3,797	7.1
III	0	0.0	3	0.1	1,362	44.5	1,365	10.6	66	0.7	20,243	67.1	21,674	40.8
IV	566	9.1	315	8.9	383	12.5	1,264	9.8	383	3.8	23	0.1	1,669	3.1
V	2	0.0	0	0.0	32	1.0	34	0.3	23	0.2	9,129	30.3	9,186	17.3
VI	2	0.0	17	0.5	1,129	36.9	1,148	8.9	0	0.0	1	0.0	1,149	2.2
VII	79	1.3	13	0.4	16	0.5	108	0.8	138	1.4	243	0.8	489	0.9
No priority reported	63	1.0	27	0.8	106	3.5	196	1.5	227	2.2	439	1.5	862	1.6
US WIC	6,242		3,545		3,059		12,846		10,147		30,166		53,159	

Notes

In the migrant WIC population, about 1.5 percent of one-year-old children are eleven-month-old infants who have been recertified as children. About 0.1 percent of migrant WIC participants who are classified as infants are participants older than 366 days.

[a] A small proportion of participants may not have had their State-level records or priorities updated on State-maintained management information systems when they were certified for WIC benefits in different certification categories.

9. LOCAL WIC AGENCY OPERATIONS

WIC services are delivered in each of the fifty States, the District of Columbia, American Samoa, Guam, Puerto Rico, and the American Virgin Islands. In 1998, thirty-three Indian tribal organizations also served as State WIC agencies. While State agencies allocate funding and set policies and procedural guidelines, services are delivered to WIC participants by local WIC agencies and their service sites. In 1998, 2,203 local agencies provided services to WIC participants at an estimated 8,932 service delivery sites. It is important to point out again that local WIC estimates presented in this report are based on data from a survey of a sample of local WIC agencies. Standard errors for all estimates are included in each exhibit. Sampling and estimation are described in Chapter One.

As discussed in Chapter One, most local WIC agencies are health agencies, primarily State or county health departments, generally providing WIC services to clients within their neighborhoods. Virtually all service delivery sites operated by local agencies are full-service sites (Exhibit 9.1). Specific features of site operations reflect, in part, characteristics of the agency and its participants. While 53 percent of the service delivery sites are open part-time and 46 percent rotate staff among several service delivery sites, these clinics tend to be smaller than average. The percents of WIC participants served by sites with these characteristics are only 19 and 22 percent, respectively. Larger service sites tend to offer extended hours of operation. Slightly more than one-quarter of sites are open extended hours; half of all WIC participants are served by these sites. Although two-thirds of all participants are served by sites located near public transportation, relatively few of the smaller sites have bus or subway routes nearby. To help alleviate transportation obstacles, 41 percent of the local agencies (serving 32 percent of participants) offer home visits.

To encourage participation, and help ensure that clients receive needed services, most local WIC agencies attempt to contact participants who miss scheduled appointments (Exhibit 9.2). Contact is most likely to be made if a certification appointment is missed; only 5 percent of local agencies report no followup when clients miss certification appointments; 11 percent do not follow up when clients neglect to pick up their checks or vouchers; and 16 percent do not follow up when nutrition education appointments are missed. The most common methods of followup are postcards and telephone calls. There is some increase in use of autodialers for missed certification appointments with 6.4 percent of local agencies reporting their use in 1998 compared to 1.4 percent in 1996.

Federal funds provide WIC benefits and pay administrative costs for the WIC Program. Exhibit 9.3 displays the allocation of federal nutrition services and administrative (NSA) funds to various WIC functions. On average, 48 percent of sites' NSA funds are used for client services, which include the costs of certification, benefit issuance, and referral to health and social services. Nutrition education accounts for an average of 24 percent of sites' funds, while an average of 9 percent are devoted solely to breastfeeding support and promotion. The remaining 20 percent of funds are used for general administrative functions such as overhead and clerical support.

Exhibit 9.1

Features of WIC Service Delivery Sites

Site Features	Percent of Service Delivery Sites[a]	Percent of Participants[a]
All WIC services	94.8% (0.00)	98.1% (0.59)
Part-time operation	53.1 (1.26)	18.7 (1.39)
Extended hours	26.2 (1.12)	48.7 (2.71)
Appointments for rural or working participants	91.4 (0.74)	95.1 (0.68)
Motorized facilities	2.9 (0.45)	1.5 (0.69)
Home visits available	41.0 (1.12)	32.1 (2.17)
Services provided by itinerant WIC workers	46.2 (1.21)	21.8 (1.81)
Transportation provided to and from site	3.5 (0.44)	1.3 (0.38)
Site near bus or subway route	38.8 (1.13)	68.4 (2.14)
Require blood tests from sources other than WIC	15.2 (0.65)	29.2 (2.83)
Require documentation of pregnancy for certification of prenatal applicants	45.9 (1.05)	52.2 (2.50)
Site features not reported	0.1 (0.07)	0.1 (0.03)

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[a]Columns do not sum to 100 percent because respondents were permitted multiple responses.

Exhibit 9.2

Local WIC Agency Contacts with Participants Who Miss Scheduled Appointments

Type of Followup . . .	Percent of Local Agencies[a]	Percent of Participants[a]
After missed certification appointment		
No followup	5.0% (1.05)	5.1% (2.02)
Personal telephone contact	65.1 (2.36)	73.8 (4.05)
Autodialer	6.4 (1.24)	13.3 (4.02)
Mail	80.9 (1.99)	74.2 (4.07)
Home visits[b]	5.1 (1.31)	3.7 (1.58)
Other	3.7 (1.00)	3.9 (2.02)
Not reported	3.0 (1.03)	1.0 (0.66)
After missed nutrition education appointment		
No followup	15.8% (1.95)	16.8% (3.79)
Personal telephone contact	50.7 (2.57)	58.4 (4.33)
Autodialer	4.5 (1.02)	10.0 (3.25)
Mail	65.5 (2.40)	60.7 (4.27)
Home visits[b]	3.0 (0.91)	2.8 (0.24)
Other	4.3 (1.04)	3.6 (1.72)
Not reported	7.0 (1.42)	7.4 (2.63)

Exhibit 9.2 (continued)

Local WIC Agency Contacts with Participants Who Miss Scheduled Appointments

Type of Followup . . .	Percent of Local Agencies[a]	Percent of Participants[a]
After missed food instrument issuance		
No followup	10.8% (1.64)	11.2% (3.29)
Personal telephone contact	55.0 (2.56)	65.0 (4.27)
Autodialer	4.5 (1.02)	10.9 (3.75)
Mail	71.3 (2.28)	69.9 (4.25)
Home visits[b]	3.8 (1.04)	3.5 (0.26)
Other	2.3 (0.77)	2.4 (1.14)
Not reported	7.9 (1.41)	4.5 (1.88)

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[a]Columns do not sum to 100 percent because respondents were permitted multiple responses.

[b]Only if funded by WIC.

Exhibit 9.3

Allocation of Nutrition Services and Administration (NSA) Funds by Local WIC Agencies

Percentage of NSA Funds Allocated to. . .	Percent of Local Agencies[a]	Percent of Participants[a]
Client services		
0-24%	8.1% (1.76)	6.6% (3.56)
25-49%	39.8 (3.03)	43.9 (5.22)
50-74%	46.8 (3.06)	45.3 (5.21)
75-100%	5.2 (1.38)	4.2 (2.22)
Mean	47.8% (1.08)	
Nutrition education		
0-24%	53.1% (2.83)	54.0% (4.38)
25-49%	45.9 (2.82)	45.5 (4.44)
50-74%	1.0 (0.54)	0.5 (0.41)
75-100%	0.0 (0.00)	0.0 (0.00)
Mean	24.2% (0.54)	
Breastfeeding promotion and support		
0-24%	96.3% (0.00)	98.0% (0.00)
25-49%	3.7 (1.27)	2.0 (1.52)
50-74%	0.0 (0.00)	0.0 (0.00)
75-100%	0.0 (0.00)	0.0 (0.00)
Mean	8.8% (0.37)	

Exhibit 9.3 (continued)

Allocation of Nutrition Services and Administration (NSA) Funds by Local WIC Agencies

Percentage of NSA Funds Allocated to. . .	Percent of Local Agencies[a]	Percent of Participants[a]
General administration		
0-24%	70.4% (2.76)	75.0% (4.30)
25-49%	23.9 (2.62)	21.9 (4.32)
50-74%	3.1 (1.05)	2.1 (1.09)
75-100%	2.5 (2.02)	0.9 (0.77)
Mean	20.2% (1.04)	

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[a]Percentages are based on non-missing values.

Access to Health Care and Social Services

The local WIC service agency serves as a link between participants and appropriate health-care providers and social services. WIC agencies are charged with helping participants obtain and use preventive health-care services which can be provided on-site or via referrals to other agencies. This mission is an important WIC benefit and is seen by WIC professionals as essential for improving the health of participants. Exhibits 9.4 and 9.5 present data on the availability of various health services at WIC service delivery sites, as well as referral procedures. Most WIC service sites (70 percent) report on-site availability of some type of pediatric care; 48 percent offer both well-baby care and immunizations. Just under half of WIC service sites report on-site availability of family planning services. Other medical services, including routine adult health services, obstetrical and gynecological care, and dental care, tend to be provided off-site. WIC agencies generally provide referrals for each of these services on an as needed basis. WIC's continuing link with health care is demonstrated by these referrals and by the co-location with pediatric care available to 72 percent of WIC participants. Adult health care is co-located with WIC in agencies serving over one-third of WIC participants. Patterns in 1998 are similar to findings reported by the 1988 and 1996 surveys of local agencies.[1]

During the past decade, WIC has worked with other federal agencies, particularly the US Department of Health and Human Services, to create networks of care providers to ensure that WIC participants receive the services they need. At the local level, this strategy is seen in referring WIC participants to a wide range of social services. For example, in 1998, most local agencies assisted WIC participants with TANF, food stamps, Medicaid, substance abuse counseling, child support and child care (Exhibits 9.6 through 9.9), if needed. Although enrollment for these services is primarily off-site, some agencies do offer on-site services as well. Medicaid enrollment is offered at one-quarter of the sites, servicing 29 percent of participants. Substance abuse counseling is available at 16 percent of the sites.

Staffing Local WIC Agencies

As discussed in preceding chapters, the WIC caseload increased substantially during the 1990s, though the rate of growth slowed between 1996 and 1998. Several items on the local agency survey attempt to determine the impact of these changes on staffing at the service delivery level. Two-thirds of local agencies report they have sufficient professional staff to support WIC operations, two-thirds have sufficient clerical/support staff, and 56 percent have sufficient para-professional staff (Exhibit 9.10). Whether or not they have a sufficient number of staff, most local agencies report that existing staff possess appropriate skills (Exhibit 9.11).

Half of the local WIC agencies report difficulty hiring professional staff. The most common reasons are lack of competitive salary and benefits (41 percent) and lack of qualified applicants (36 percent). Poor working conditions for professional staff are reported in 9 percent of local agencies in 1998, down from 15 percent in 1996. See Exhibits 9.13 and 9.14. These agencies report less difficulty in hiring para-professional and clerical staff. Most WIC agencies report that they have no difficulties retaining professional (69 percent), para-professional (58 percent), or clerical/support (77 percent) staff (Exhibit 9.15). The most commonly cited problems with regard to retaining staff are: low salary and benefits; lack of upward mobility; workload; and low morale (Exhibit 9.16). Twenty percent of local WIC agencies report using

[1]Questions on the availability of health and social services are not identical in the 1988, 1996, and 1998 surveys, making comparisons over time difficult.

Exhibit 9.4

Provision of Health Services at WIC Service Delivery Sites by Type of Service

Type of Service	Service Available On-Site	Referrals. . . Provided to all participants	Provided based on individual need	Not provided	Information not reported
	Percent of Service Delivery Sites	Percent of Service Delivery Sites[a]			
Pediatric care					
Well-baby care and immunizations	47.5% (1.25)	22.6% (0.92)	60.6% (1.07)	13.3% (0.73)	3.6% (0.44)
Immunizations only	22.7 (1.12)	10.6 (0.64)	48.1 (1.09)	27.5[b] (0.97)	13.8 (0.80)
Any pediatric care	70.2 (1.12)	33.2 (1.03)	51.6 (1.10)	1.3 (0.30)	13.9 (0.81)
Family planning	47.1 (1.23)	12.0 (0.82)	80.6 (0.95)	3.8 (0.46)	3.6 (0.41)
Routine adult health services—regular checkups, immunizations, minor illnesses	30.6 (1.19)	10.0 (0.82)	69.6 (1.07)	14.7 (0.85)	5.6 (0.46)
Obstetrical and gynecological care	30.0 (1.18)	12.4 (0.88)	78.2 (1.01)	6.1 (0.63)	3.3 (0.40)
Dental care	13.0 (0.82)	10.4 (0.84)	77.5 (1.00)	8.4 (0.69)	3.7 (0.43)

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[a]Rows do not sum to 100 percent. Most sites that offer services on-site also provide referrals for these services when needed.

[b]Includes sites that provide referrals for both well-baby care and immunizations to all participants.

Exhibit 9.5

Provision of Health Services for WIC Participants by Type of Service

Type of Service	Service Available On-Site	Referrals. . . Provided to all participants	Provided based on individual need	Not provided	Information not reported
	Percent of Participants	Percent of Participants[a]			
Pediatric care					
Well-baby care and immunizations	51.1% (2.66)	21.5% (1.76)	60.9% (2.22)	14.5% (1.41)	3.0% (0.65)
Immunizations only	20.9 (1.98)	12.6 (1.31)	47.5 (2.50)	26.4[b] (2.03)	13.5 (1.58)
Any pediatric care	72.0 (2.82)	34.1 (2.10)	51.1 (2.46)	1.1 (0.41)	13.7 (1.62)
Family planning	55.1 (2.46)	12.6 (1.33)	80.4 (1.86)	3.9 (1.28)	3.1 (0.50)
Routine adult health services—regular checkups, immunizations, minor illnesses	34.6 (2.35)	7.9 (1.10)	70.2 (2.95)	16.2 (3.04)	5.7 (0.82)
Obstetrical and gynecological care	39.7 (2.46)	12.6 (1.74)	80.6 (1.94)	3.5 (0.73)	3.2 (0.64)
Dental care	20.7 (2.00)	7.5 (1.23)	80.2 (1.92)	9.1 (1.44)	3.2 (0.55)

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[a]Rows do not sum to 100 percent. Most sites that offer services on-site also provide referrals for these services when needed.

[b]Includes sites that provide referrals for both well-baby care and immunizations to all participants.

Exhibit 9.6

Availability of Social Services at WIC Service Delivery Sites by Type of Service

Type of Service	Enrollment Available On-Site	Enrollment Not Available On-Site, but Available Off-Site	Service Not Available Within 30-mile Radius	Information Not Reported	Total
	Percent of Service Delivery Sites				
TANF	5.7% (0.65)	82.3% (1.01)	6.1% (0.65)	5.9% (0.60)	100.0%
Food Stamps	6.6 (0.70)	88.6 (0.89)	3.2 (0.52)	1.6 (0.32)	100.0%
Medicaid	26.1 (1.10)	69.2 (1.18)	2.7 (0.49)	2.0 (0.34)	100.0%
Child support enforcement	3.1 (0.52)	85.2 (0.94)	7.7 (0.71)	4.0 (0.47)	100.0%
General assistance	4.9 (0.62)	76.2 (1.06)	12.4 (0.81)	6.5 (0.57)	100.0%
Other food assistance programs	6.0 (0.59)	86.7 (0.87)	4.2 (0.57)	3.1 (0.41)	100.0%
Child care assistance	5.8 (0.60)	85.0 (0.93)	4.9 (0.62)	4.3 (0.46)	100.0%
Substance abuse counseling[a]	15.6 (0.92)	76.1 (1.10)	6.1 (0.65)	2.2 (0.37)	100.0%
Community or migrant services	6.6 (0.69)	69.5 (1.15)	16.1 (0.87)	7.8 (0.64)	100.0%
Indian health services	3.0 (0.36)	27.1 (1.07)	58.4 (1.15)	11.5 (0.77)	100.0%

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[a]Includes alcohol, tobacco, and other substance abuse.

Exhibit 9.7

Availability of Social Services for WIC Participants by Type of Service

Type of Service	Enrollment Available On-Site	Enrollment Not Available On-Site, but Available Off-Site	Service Not Available Within 30-mile Radius	Information Not Reported	Total
	Percent of Participants				
TANF	7.3% (1.35)	84.7% (1.66)	2.6% (0.67)	5.4% (0.89)	100.0%
Food Stamps	7.7 (1.40)	90.2 (1.43)	0.8 (0.26)	1.3 (0.29)	100.0%
Medicaid	29.3 (2.27)	67.8 (2.27)	0.6 (0.22)	2.3 (0.36)	100.0%
Child support enforcement	2.6 (0.69)	89.4 (1.16)	5.3 (0.88)	2.6 (0.34)	100.0%
General assistance	5.8 (1.31)	78.4 (1.89)	9.2 (1.51)	6.6 (0.94)	100.0%
Other food assistance programs	5.5 (1.06)	89.8 (1.25)	1.6 (0.43)	3.1 (0.57)	100.0%
Child care assistance	4.4 (1.09)	88.6 (2.95)	2.2 (0.54)	4.7 (3.03)	100.0%
Substance abuse counseling[a]	15.1 (1.94)	80.2 (2.02)	2.2 (0.57)	2.5 (0.51)	100.0%
Community or migrant services	5.6 (1.03)	74.9 (1.91)	13.1 (1.40)	6.3 (1.03)	100.0%
Indian health services	0.7 (0.19)	36.0 (2.92)	52.1 (2.72)	11.1 (1.30)	100.0%

Notes

Standard errors are in parentheses.

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[a]Includes alcohol, tobacco, and other substance abuse.

Exhibit 9.8

Referral Procedures for Social Services at WIC Service Delivery Sites by Type of Service

Type of Service	Referrals Provided to All Participants	Referrals Provided Based on Individual Need	No Referrals	Information Not Reported	Total
	Percent of Service Delivery Sites				
TANF	29.4% (0.96)	57.4% (1.10)	3.0% (0.42)	10.2% (0.73)	100.0%
Food Stamps	32.1 (1.01)	63.0 (1.08)	1.4 (0.23)	3.5 (0.45)	100.0%
Medicaid	32.6 (1.01)	63.1 (1.07)	0.5 (0.18)	3.8 (0.45)	100.0%
Child support enforcement	18.6 (0.82)	67.6 (1.05)	4.4 (0.52)	9.4 (0.71)	100.0%
General assistance	9.6 (0.62)	67.3 (1.15)	5.9 (0.55)	17.2 (0.92)	100.0%
Other food assistance programs	11.3 (0.69)	81.8 (0.90)	1.0 (0.27)	5.9 (0.59)	100.0%
Child care assistance	9.2 (0.65)	80.0 (0.92)	5.0 (0.50)	5.8 (0.53)	100.0%
Substance abuse counseling[a]	13.7 (0.70)	79.8 (0.91)	2.7 (0.43)	3.8 (0.47)	100.0%
Community or migrant services	7.4 (0.58)	70.0 (1.07)	4.5 (0.51)	18.1 (0.95)	100.0%
Indian health services	3.5 (0.35)	33.1 (1.02)	14.1 (0.97)	49.3 (1.18)	100.0%

Notes

Standard errors are in parentheses.

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[a] Includes alcohol, tobacco, and other substance abuse.

Exhibit 9.9

Referral Procedures for Social Services to WIC Participants by Type of Service

Type of Service	Referrals Provided to All Participants	Referrals Provided Based on Individual Need	No Referrals	Information Not Reported	Total
	Percent of Participants				
TANF	36.3% (2.73)	55.2% (2.62)	0.9% (0.27)	7.6% (0.99)	100.0%
Food Stamps	39.4 (2.76)	58.1 (2.76)	0.7 (0.21)	1.7 (0.45)	100.0%
Medicaid	40.5 (2.75)	56.9 (2.72)	0.4 (0.22)	2.3 (0.42)	100.0%
Child support enforcement	23.6 (1.95)	66.3 (2.18)	4.0 (0.72)	6.1 (0.82)	100.0%
General assistance	12.6 (1.50)	64.6 (2.87)	6.4 (0.94)	16.4 (2.85)	100.0%
Other food assistance programs	12.6 (1.26)	83.2 (1.37)	0.7 (0.31)	3.5 (0.50)	100.0%
Child care assistance	8.2 (1.03)	80.2 (2.86)	5.9 (0.87)	5.8 (2.94)	100.0%
Substance abuse counseling[a]	19.2 (3.08)	77.2 (2.93)	1.5 (0.33)	2.2 (0.45)	100.0%
Community or migrant services	5.8 (0.96)	71.6 (2.16)	5.2 (0.73)	17.3 (1.99)	100.0%
Indian health services	1.5 (0.49)	33.9 (2.74)	14.6 (1.60)	50.0 (2.66)	100.0%

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[a]Includes alcohol, tobacco, and other substance abuse.

Exhibit 9.10

Staffing in Local WIC Agencies by Type of Staff

Staffing levels at WIC agency are described as . . .	Percent of Local Agencies	Percent of Participants
Professional staff		
More than sufficient	7.7% (1.26)	2.2% (0.66)
Sufficient	60.1 (2.58)	55.8 (4.80)
Less than sufficient	30.0 (2.46)	41.2 (4.78)
Not reported	2.2 (0.88)	0.8 (0.72)
Total	100.0%	100.0%
Para-professional staff		
More than sufficient	4.6% (1.02)	2.4% (0.52)
Sufficient	51.1 (2.54)	55.0 (4.38)
Less than sufficient	17.7 (2.20)	24.9 (3.80)
Not applicable[a]	15.1 (1.77)	11.4 (2.85)
Not reported	11.4 (1.80)	6.3 (1.89)
Total	100.0%	100.0%

Exhibit 9.10 (continued)

Staffing in Local WIC Agencies by Type of Staff

Staffing levels at WIC agency are described as . . .	Percent of Local Agencies	Percent of Participants
Clerical/support staff		
More than sufficient	8.2% (1.30)	4.3% (5.17)
Sufficient	58.2 (2.59)	59.3 (4.66)
Less than sufficient	28.7 (2.41)	33.5 (4.69)
Not reported	4.9 (1.18)	2.9 (0.82)
Total	100.0%	100.0%

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[a]Type of staff not used.

Exhibit 9.11

Staff Skills and Experience in Local WIC Agencies by Type of Staff

Agency staff skills are described as . . .	Percent of Local Agencies	Percent of Participants
Professional staff		
More than appropriate	42.6% (2.65)	31.6% (4.38)
Appropriate	54.5 (2.62)	65.5 (4.41)
Less than appropriate	1.7 (0.84)	2.4 (9.82)
Not reported	1.2 (0.62)	0.5 (0.39)
Total	100.0%	100.0%
Para-professional staff		
More than appropriate	18.7% (1.94)	11.3% (1.99)
Appropriate	48.2 (2.54)	66.1 (3.96)
Less than appropriate	4.6 (1.19)	5.3 (2.26)
Not applicable[a]	15.1 (1.77)	11.4 (2.85)
Not reported	13.5 (2.10)	6.0 (1.72)
Total	100.0%	100.0%

Exhibit 9.11 (continued)

Staff Skills and Experience in Local WIC Agencies by Type of Staff

Agency staff skills are described as . . .	Percent of Local Agencies	Percent of Participants
Clerical/support staff		
More than appropriate	23.8% (2.11)	13.3% (2.85)
Appropriate	68.6 (2.26)	81.7 (2.90)
Less than appropriate	3.9 (1.01)	2.4 (1.13)
Not reported	3.7 (0.97)	2.6 (0.78)
Total	100.0%	100.0%

Notes

Standard errors are in parentheses.

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[a]Type of staff not used.

Exhibit 9.12

Staff Hiring in Local WIC Agencies by Type of Staff

Local WIC agency has hired new staff members during the last twenty-four months	Percent of Local Agencies	Percent of Participants
Professional staff		
Yes	56.9% (2.55)	77.7% (4.25)
No	36.0 (2.39)	18.5 (4.07)
Not reported	7.1 (1.53)	3.7 (1.59)
Total	100.0%	100.0%
Para-professional staff		
Yes	30.1% (2.41)	56.0% (4.40)
No	35.5 (2.44)	21.5 (3.84)
Not applicable[a]	15.1 (1.77)	11.4 (2.85)
Not reported	19.2 (2.13)	11.0 (2.20)
Total	100.0%	100.0%
Clerical/support staff		
Yes	50.7% (2.48)	72.9% (3.55)
No	40.1 (2.46)	22.5 (3.42)
Not reported	9.2 (1.81)	4.6 (1.58)
Total	100.0%	100.0%

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[a]Type of staff not used.

Exhibit 9.13

Level of Difficulty Reported by Local WIC Agencies in Recruiting and Hiring Staff

Level of difficulty reported by local WIC agencies in recruiting and hiring staff	Percent of Local Agencies	Percent of Participants
Professional staff		
Difficult	51.2% (2.57)	61.7% (4.71)
Not difficult	44.8 (2.66)	37.3 (4.84)
Not reported	4.1 (1.04)	1.0 (0.52)
Total	100.0%	100.0%
Para-professional staff		
Difficult	21.4% (2.13)	23.2% (3.88)
Not difficult	48.4 (2.51)	56.3 (4.42)
Not applicable[a]	15.1 (1.77)	11.4 (2.85)
Not reported	15.1 (2.00)	9.1 (2.17)
Total	100.0%	100.0%
Clerical/support staff		
Difficult	17.6% (2.02)	21.0% (4.17)
Not difficult	74.9 (2.29)	75.6 (4.04)
Not reported	7.5 (1.35)	3.4 (1.23)
Total	100.0%	100.0%

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[a]Type of staff not used.

Exhibit 9.14

Difficulties Reported by Local WIC Agencies in Recruiting and Hiring Staff

Difficulties reported by local WIC agencies in recruiting and hiring staff	Percent of Local Agencies[a]	Percent of Participants[a]
Professional staff		
No problems	34.7% (2.53)	27.0% (4.17)
Salary and/or benefits not competitive	40.8 (2.63)	49.6 (5.05)
Lack of qualified applicants	36.0 (2.55)	46.5 (4.52)
Labor shortage	11.4 (1.90)	18.4 (4.04)
Hiring freeze	11.3 (1.77)	13.3 (3.29)
Poor working conditions	8.7 (1.99)	7.4 (2.41)
Safety of the facility and/or neighborhood	2.6 (0.76)	8.7 (2.77)
Other	5.1 (1.26)	9.0 (2.71)
Not reported	6.5 (1.31)	3.7 (2.18)
Para-professional staff		
No problems	34.3% (2.59)	39.9% (4.60)
Salary and/or benefits not competitive	16.6 (2.01)	24.5 (4.39)
Lack of qualified applicants	14.7 (2.02)	17.8 (3.93)
Hiring freeze	8.4 (1.67)	7.9 (2.45)
Poor working conditions	3.1 (1.36)	3.6 (3.59)
Labor shortage	2.0 (0.78)	3.9 (2.29)
Safety of the facility and/or neighborhood	0.6 (0.37)	3.2 (2.11)
Other	3.6 (1.08)	6.3 (2.09)
Not applicable[b]	15.1 (1.77)	11.4 (2.85)
Not reported	18.4 (2.14)	11.9 (2.41)

Exhibit 9.14 (continued)

Difficulties Reported by Local WIC Agencies in Recruiting and Hiring Staff

Difficulties reported by local WIC agencies in recruiting and hiring staff	Percent of Local Agencies[a]	Percent of Participants[a]
Clerical/support staff		
No problems	56.7% (2.61)	53.5% (4.46)
Salary and/or benefits not competitive	21.3 (2.24)	27.3 (4.50)
Lack of qualified applicants	12.2 (1.76)	16.9 (4.14)
Hiring freeze	10.1 (2.05)	12.0 (2.96)
Poor working conditions	6.0 (3.11)	4.1 (3.20)
Labor shortage	1.6 (3.11)	3.8 (2.55)
Safety of the facility and/or neighborhood	1.0 (0.49)	2.5 (2.12)
Other	3.9 (1.16)	5.5 (2.22)
Not reported	11.1 (1.73)	6.2 (1.78)

Notes

Standard errors are in parentheses.

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[a]Column doesrd not sum to 100 percent because respondents were permitted multiple responses.

[b]Type of staff not used.

Exhibit 9.15

Level of Difficulty Reported by Local WIC Agencies in Retaining Staff

Level of difficulty reported by local WIC agencies in retaining staff	Percent of Local Agencies	Percent of Participants
Professional staff		
Difficult	28.1% (2.48)	34.9% (4.08)
Not difficult	69.4 (2.38)	63.7 (4.19)
Not reported	2.5 (0.84)	1.5 (0.28)
Total	100.0%	100.0%
Para-professional staff		
Difficult	12.2% (1.76)	14.3% (3.21)
Not difficult	58.4 (2.46)	64.5 (4.19)
Not applicable[a]	15.1 (1.77)	11.4 (2.85)
Not reported	14.2 (2.15)	9.9 (2.54)
Total	100.0%	100.0%
Clerical/support staff		
Difficult	19.0% (2.09)	26.8% (4.53)
Not difficult	77.1 (2.17)	71.0 (4.42)
Not reported	3.9 (0.96)	2.2 (0.69)
Total	100.0%	100.0%

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[a]Type of staff not used.

Exhibit 9.16

Difficulties Encountered by Local WIC Agencies Retaining Staff

Difficulties encountered by local WIC agencies retaining staff	Percent of Local Agencies[a]	Percent of Participants[a]
Professional staff		
No problems	47.2% (2.71)	43.4% (4.96)
Salary and/or benefits not competitive	34.2 (2.50)	39.3 (4.66)
Lack of upward mobility	28.7 (2.42)	33.8 (4.54)
Workload	19.7 (2.15)	25.9 (3.91)
Low morale	7.7 (1.42)	12.5 (3.11)
Poor working conditions	7.2 (1.60)	7.4 (3.26)
Safety of the facility and/or neighborhood	3.9 (1.02)	8.7 (2.99)
Other	4.4 (2.98)	5.0 (1.16)
Not reported	5.9 (1.30)	2.8 (1.50)
Para-professional staff		
No problems	38.8% (2.74)	42.7% (5.13)
Salary and/or benefits not competitive	17.9 (2.17)	20.2 (3.99)
Lack of upward mobility	17.1 (2.06)	25.9 (4.49)
Workload	12.1 (1.73)	16.7 (3.48)
Low morale	7.5 (1.50)	12.8 (3.31)
Poor working conditions	5.9 (1.41)	5.8 (2.67)
Safety of the facility and/or neighborhood	2.0 (0.78)	4.6 (2.23)
Other	1.3 (2.71)	1.4 (0.31)

Exhibit 9.16 (continued)

Difficulties Encountered by Local WIC Agencies Retaining Staff

Difficulties encountered by local WIC agencies retaining staff	Percent of Local Agencies[a]	Percent of Participants[a]
Not applicable[b]	15.1 (1.77)	11.4 (2.85)
Not reported	16.8 (2.09)	11.1 (2.48)
Clerical/support staff		
No problems	53.2% (2.76)	50.2% (4.79)
Salary and/or benefits not competitive	24.9 (2.38)	28.1 (4.64)
Lack of upward mobility	21.7 (2.35)	31.6 (5.02)
Workload	19.1 (2.18)	28.9 (4.38)
Low morale	12.1 (1.79)	18.4 (3.75)
Poor working conditions	8.8 (1.68)	7.7 (2.86)
Safety of the facility and/or neighborhood	2.6 (0.90)	3.9 (2.12)
Other	3.3 (1.34)	1.6 (0.61)
Not reported	7.6 (1.35)	5.5 (1.66)

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[a]Column does not sum to 100 percent because respondents were permitted multiple responses.

[b]Type of staff not used.

volunteers to supplement paid WIC staff within the past year, although in most agencies, volunteers were not an important part of program operations (Exhibit 9.17). Work space in three-quarters of service delivery sites is deemed adequate by local agency personnel. The other quarter report inadequate space for current staffing and caseload levels (Exhibit 9.18). This is an improvement since 1996 when 30 percent of agencies reported inadequate space.

Exhibit 9.17

Use of Volunteers to Deliver WIC Services

	Percent of Local Agencies	Percent of Participants
Use of volunteers[a]		
Replace WIC staff for a few days at a time	1.2% (2.27)	1.3% (0.89)
Replace WIC staff for more than a month	1.1 (0.55)	2.0 (0.95)
Supplement paid WIC staff	20.2 (2.35)	25.3 (3.78)
Do not use volunteers	78.5 (2.19)	72.7 (3.92)
Not reported	0.8 (0.49)	0.9 (1.01)
Importance of volunteers		
Critical	0.8% (3.02)	1.7% (1.77)
Very important	3.9 (1.33)	5.9 (2.33)
Convenient help	13.6 (1.92)	15.7 (3.09)
Not important	2.2 (0.69)	3.2 (0.50)
Necessary for public relations but a drain on administration	0.0 (0.00)	0.0 (0.00)
Do not use volunteers	78.5 (2.19)	72.7 (3.92)
Not reported	1.0 (0.57)	0.7 (0.21)
Total	100.0%	100.0%

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

[a]Columns do not sum to 100 percent because respondents were permitted multiple responses.

Exhibit 9.18

Physical Space at WIC Service Delivery Sites

Physical space at service delivery site is described as . . .	Percent of Service Delivery Sites	Percent of Participants
Adequate	76.4% (1.14)	74.8% (2.05)
Inadequate	22.5 -1.13	24.8 -2.04
Not reported	1.1 -0.27	0.5 -0.21
Total	100.0%	100.0%

Notes

Standard errors are in parentheses.

A total of 460 local WIC agencies responded to the PC98 Summary of Local Programs. Responses are weighted to reflect the universe of 2,203 local agencies, the estimated universe of 8,932 service delivery sites, and the universe of 8,042,758 participants.

Adequate physical space is defined as sufficient and appropriate space for the numbers of staff and participants and for their program responsibilities.