

National Survey of WIC Participants II

Volume 3: Improper Payments Report (Final Report)



United States
Department of
Agriculture

Food and
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Service

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National Survey of WIC Participants II

Volume 3: Improper Payments Report (Final Report)

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EXECUTIVE SUMMARY—ONE PAGE SUMMARY

The National Survey of WIC Participants II (NSWP-II) Report Volume 3 presents the improper payment analysis for FY2009 WIC Program, focusing on income eligibility error. The data used were from an in-person interview of WIC participants, WIC voucher redemption records, and WIC administrative reports.

Overall, the case error rate was determined to be 3.05 percent of approximately 9.11 million WIC participants, with the highest rates of error among Infants and Breastfeeding participants (5.29% and 5.18%) and the lowest among Children (1.85%).

The dollar error rate estimate for the national population of WIC participants was calculated before and after rebates from infant formula manufacturers to State WIC Programs were considered. The total post-rebate error amount was \$130,499,928 out of a total post-rebate program cost of \$4,373,776,840—a dollar error rate of 2.98 percent.

	Case Error Rates (%)	Post-Rebate Dollar Error Amounts (\$)
Pregnant	3.31	15,722,258
Breastfeeding	5.18	26,051,235
Post-Partum	2.14	6,431,074
Infant	5.29	48,714,683
Child	1.85	33,580,679
Total	3.05	130,499,928

Taking a retrospective look, the case and dollar error rates in the WIC Program have come down over time.

Fiscal Year	Case Error Rate (%)	Dollar Error Rate (%)
FY1988 pre-rebate	5.70	5.60
FY1998 post-rebate	4.50	4.62
FY2009 pre-rebate	3.05	3.72
FY2009 post-rebate		2.98

Two additional telephone surveys were conducted with (1) new applicants who were denied WIC benefits and (2) terminated/discontinued participants—that is, individuals whose eligibility came to an end and who either were turned down when they reapplied for WIC benefits or voluntarily decided not to apply. Among both groups, there was scant evidence that individuals were incorrectly being turned down for WIC benefits.

EXECUTIVE SUMMARY

For 35 years, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) has provided benefits to low-income, pregnant, and new mothers and their infants and young children who are at nutritional risk. The WIC Program, the United States Department of Agriculture's (USDA) third largest nutrition assistance program, serves more than 9 million participants monthly and has been growing consistently. Half of the participants are children ages 1 to 5 years; one-quarter are infants (0–12 months of age); and the remaining quarter are, in descending order of prevalence, pregnant, postpartum (i.e., nonbreastfeeding), and breastfeeding women.

This report, the last of three for the National Survey of WIC Participants II (NSWP-II), addresses the third objective of the study—the estimation of the rate and annual cost of improper payments in the WIC Program due to certification error. It examines cases of overpayment and presents statistics on case errors and related dollar error. The analysis also explores sources of possible underpayment in two areas—applicants who were incorrectly turned down for WIC benefits or current WIC participants turned away at time of recertification—in the last chapter titled “Denial & Termination/Discontinuation Findings.” The findings of this volume will be used to develop a model for estimating future improper payments in the WIC Program.

For the first National Survey of WIC Participants (NSWP-I), data were collected in 1998, and a report was issued in 2001. Data for NSWP-II were collected in late 2009. The approach used in the two studies differed in some important ways: NSWP-II collected benefit redemption records for each sampled participant to generate estimates of improper payment dollar errors, whereas NSWP-I used WIC average food voucher¹ costs to estimate the dollar error. Statistics that measure the cost to the program based on actually redeemed voucher values are more accurate than those based on the average food cost because redeemed values vary, as WIC participants do not necessarily redeem the full value of the voucher. Technical details in data collection, processing, and analysis are presented in appendices to respective volumes of the NSWP-II report. A separate technical report is available that combines the appendices from all volumes.

Survey Methodology

Telephone surveys were first conducted to interview a sample of WIC participants (n = 2,538) about their preferences and usage of the WIC Program in late 2009 and early 2010. Closely following the telephone interviews, in-person interviews were arranged and conducted with half of the respondents (n = 1,210). The purpose of the interviews was to assess erroneous payments due to certification error. There are two forms of certification error: provision of service to ineligible applicants and denial of service to eligible applicants.

¹ Food voucher (also known as food instrument or food coupon) means a check, electronic benefits transfer card (EBT), voucher or other document used by a participant to obtain supplemental foods.

- **Provision of service to ineligible applicants**—Erroneous payments were determined from information provided by applicants during eligibility determination for WIC benefits. This was accomplished by asking respondents to show the documents or “proofs” they had originally used to gain eligibility in the WIC Program. The proofs had to meet the standards set by FNS and/or the State agency. From the interviews, the eligibility of each WIC participant was determined to be either correct or improper, and the number of case errors was determined. Further, case error was translated to dollar error, which required researchers to obtain the actual redemption data for respondents from State WIC programs from May to July 2009.
- **Denial of service to eligible applicants**—Instead of in-person interviews, two very short telephone interviews were conducted with samples of denied applicants (new applicants who were denied benefits) and terminations/discontinuations (participants whose eligibility had ended in May 2009 and were not recertified—either by their own choice or involuntarily by the WIC Program). Since incorrectly determined denials and terminations/discontinuations constitute a form of WIC Program underpayment, their determination is germane to improper payment calculations.

Analytic Criteria

Eligibility for WIC is based on meeting five basic criteria, as established in the Federal regulations and as carried out by all State WIC Programs: (1) categorical eligibility, (2) residential eligibility, (3) proof of identity, (4) nutritional risk eligibility, and (5) income (or adjunctive income) eligibility.

- **Category**—To receive WIC benefits, participants must be one of the following: a pregnant woman, a breastfeeding woman, a postpartum woman, an infant (birth to 12 months), or a child (1 to 5 years old). Among participants in this category, only infants and children were checked, and their classification was verified via records of birthdates provided by States.
- **Residence**—Participants must show proof that they live in a residence within the State or the local agency/clinic’s jurisdiction. Special rules apply to migrant farm workers; homeless individuals; or victims of theft, loss, or disaster. For recertification, WIC participants’ folders² are often considered permissible proof of residence, depending on the State policy. Proofs were checked against a list of acceptable document types.
- **Identity**—Participants must provide credible proof of identification. For recertification, WIC folders are often considered permissible proof of identification, depending on the State policy. Proofs were checked against a list of acceptable document types.
- **Nutrition**—Nutritional risk eligibility was not assessed in this study, as it is out of the scope of this study.
- **Income/Adjunctive Income**—Participants must have gross income at or below 185 percent of the Federal Poverty Income Guidelines or show proof of participation in SNAP, Temporary Assistance for Needy Families (TANF), Medicaid, or other eligible State-

² WIC folders contain the official WIC participant identification documents issued by WIC agencies which shows eligibility based on extant documentation in the official case file.

administered program. Two approaches were used to assess income/adjunctive income eligibility:

1. Income documents or proofs of participation in adjunctive income programs provided by the applicant were checked against a list of acceptable document types for the month of May 2009. If responding participant could not locate income documents from the time of last certification proof of *current* income or adjunctive program participation was accepted.
2. Since the income guidelines rise with the size of the family, the measure of the family economic unit was an important part of the equation. This was measured by asking about all members living in the household and determining if they shared income and expenses as a family unit.

In reviewing the eligibility information collected, researchers identified 234 cases where participants had not provided credible income or adjunctive program information. Follow-ups were made with State agencies directly, asking for more information about the certification information on file. This special case review step was used to determine the proper or improper status of these cases.

To measure dollar error, redemption data were requested from the States for all the participants originally sampled. The data received listed all food vouchers for the month requested. One State was unable to provide redemption data by the study deadline, so imputation (data substitution) procedures were employed using data from other States in the same region.

Improper Payment Estimates

Measurement of improper payments (IP) includes both case and dollar errors. The case error refers to participants who were certified to receive, but who were not in fact eligible for, WIC benefits. Dollar error refers to the dollar amount of WIC benefits issued to and actually redeemed by ineligible participants, namely, overpayments. The term “certification error” is used for a broader concept that includes income eligibility error (error due to household income higher than WIC eligibility requirement) and other errors, such as expired certification error or error from incorrectly denying or terminating participants. In this study, the case and dollar error estimates are reported for income eligibility error only. Other types of errors were explored, with tentative results presented in appendices, and not included in the formal improper payment statistics.

Based on the actual redemption data available for respondents—as required by the Contract—it was only possible to calculate dollar amount of overpayments, not of underpayments. Underpayments occur when persons are inappropriately denied benefits or given food vouchers worth less than that to which they are entitled. With errors caused by either inappropriately denied benefits or incorrectly issued low voucher values, underpayment dollar error must be estimated based on the assumed voucher value that the erroneously denied person should have received, rather than the actual redemption value as the Contract requires. This study examined participant perceived reasons for benefit denial and termination, but did not formally assess case error and related dollar errors because it was not feasible to do so in this study.

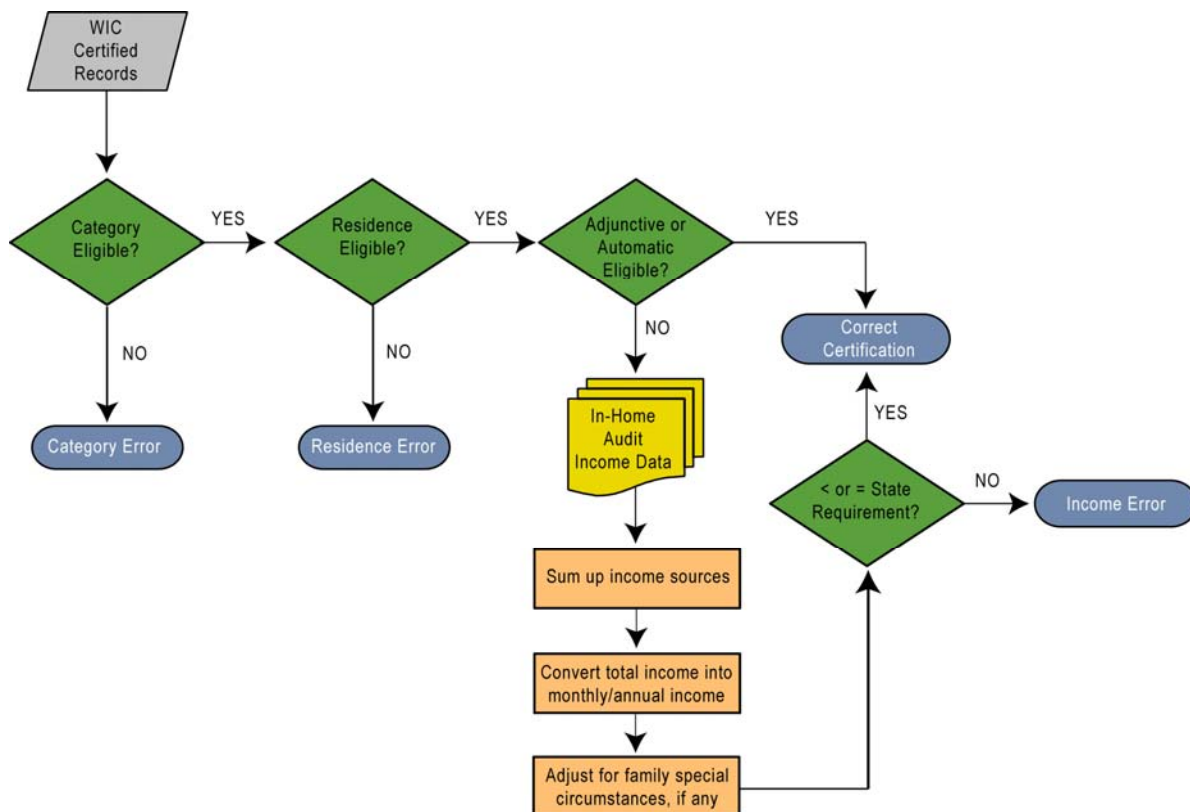
The study collected actual redemption records from the States for each participant sampled, from which the actual dollar amount of the redeemed benefits was determined for any erroneous case. In contrast, NSWPI relied on estimates from the WIC average food cost per participant in the 1998 fiscal year.

Income Eligibility Error

Of the different program eligibility criteria examined, the most challenging was the income eligibility error. It is complicated by the variety of discretionary guidelines used by States in defining the economic unit, treating special cases, and determining which income sources to count. It requires applicants to report incomes and provide supporting evidence, which is often subject to judgment. Income eligibility error is therefore the main focus of the improper payment analysis.

Exhibit ES-1 illustrates the basic process of identifying certification errors based on WIC eligibility criteria. Data obtained during the in-person interview as well as information collected via the special case study follow-up review with States both served as independent ways to document the WIC certification process and confirm correct or erroneous eligibility.

Exhibit ES-1: Process of Identifying Erroneous Certification, by Eligibility Criteria



Source: National Survey of WIC Participants II Study

Of the WIC participant population of 9,113,617 in May 2009, this study estimated 277,952 cases to have income eligibility error due to income error, equivalent to 3.05 percent of the total WIC

participant population (95% C.I. = 2.29% and 3.70%; see Exhibit ES-2)³. Unless specifically noted otherwise, all statistics presented in this report are weighted by final sample weights and adjusted for the survey design effect (see Appendix G for details).

Eligibility error estimates were examined by WIC Program category in Exhibit ES-2 for a group comparison. For breastfeeding women and infants, the eligibility error rates were 5.18 percent and 5.29 percent, respectively. The error rates for participants in the other three program categories were found to be lower (3.31% for pregnant women, 2.14% for postpartum women, and 1.85% for children).

Exhibit ES-2: Number and Percent of Eligibility Errors, by WIC Category

WIC Category	Number of Respondents in Error (Unweighted sample units)	Number of All WIC Participants in Error (Weighted sample units)	Percent (%)	95% Confidence Interval (%)	
Pregnant	7	31,750	3.31	0.25	6.38
Breastfeeding	9	30,174	5.18	1.23	9.12
Postpartum	6	13,538	2.14	0.16	4.11
Infant	11	114,091	5.29	2.07	8.50
Child	6	88,399	1.85	-0.32	4.02
Total	39	277,952	3.05	1.42	4.68

Source: National Survey of WIC Participants II Study

Using redemption records collected from State agencies, the dollar error estimates were determined from food voucher values actually redeemed by sampled WIC participants whose eligibility was determined to have been in error.

Infant Formula Rebates

Adjustment for WIC infant formula rebates was necessary to measure the real cost to the WIC Program because State WIC agencies receive substantial rebates on the price of infant formula from the manufacturers. These rebate values should be subtracted from the redeemed infant voucher value for each infant identified as having eligibility error to generate post-rebate dollar error estimates. The available redemption records, however, would not allow rebate adjustments, because the redemption data contained only an overall redeemed value for each food voucher. To proxy the rebate value of the infant formula out of the redeemed value and calculate the post-rebate cost, researchers integrated WIC administrative data and NSWP-II statistics (see Appendix L for details).

As pre-rebate and post-rebate dollar errors were sample estimates based on May 2009 information, both needed to be aggregated to represent the nationwide improper payment for

³ The conventional 95% confidence interval or C.I. is used in this report to indicate the variation of the statistics. For example, C.I. = 2.29% and 3.70% indicating that if repeated samples were surveyed, 95 percent of the samples would generate an eligibility error rate ranging from 2.29% to 3.70%.

FY2009. This was done by applying final sample weights and an annualizing factor to represent the WIC total improper payment in FY2009.

Pre-rebate Annual Dollar Error

The resulting pre-rebate overpayment dollar errors, estimated at \$233,176,463 (95% C.I. = \$117,658,694 and \$348,694,109), represent the WIC total improper payments in FY2009 (Exhibit ES-3a). Of the approximately \$6.27 billion WIC total food costs, including infant rebate values, the pre-rebate dollar error rate amounted to about 3.72 percent (Exhibit ES-4). Breaking up the annualized estimates by WIC category, the pre-rebate dollar error was highest for infants at approximately \$151 million and lowest among postpartum women, at approximately \$6 million (Exhibit ES-3a).

Exhibit ES-3a: Pre-rebate Annualized Dollar Amounts of Eligibility Error by WIC Category

WIC Category	Number of WIC Participants in Error	Dollar Error (\$)	95% Confidence Interval (%)	
Pregnant	31,750	15,722,258	753,800	30,690,715
Breastfeeding	30,174	26,051,235	5,915,464	46,187,006
Postpartum	13,538	6,431,074	854,399	12,007,749
Infant	114,091	151,391,157	47,887,348	254,894,965
Child	88,399	33,580,679	-10,435,616	77,596,975
WIC Total	277,952	233,176,403	117,658,694	348,694,109

Source: National Survey of WIC Participants II Study

Post-rebate Annual Dollar Error

Post-rebate annual dollar error was estimated to be \$130,499,928 (95% C.I. = \$70,478,357 and \$190,521,499, see Exhibit ES-3b). Dividing this by the approximately \$4.37 billion WIC food costs (excluding infant rebate values, see *Infant Formula Rebates*), the post-rebate dollar error rate was about 2.98 percent (Exhibit ES-4). This lower rate was due to the rebate adjustment, in which the dollar error estimate for infants was reduced to \$48,714,683, substantially lower than the pre-rebate estimate of \$151,391,157, though still higher than the estimates for other categories.

Exhibit ES-3b: Post-rebate Annualized Dollar Amounts of Eligibility Error, by WIC Category

WIC Category	Number of WIC Participants in Error	Dollar Error (\$)	95% Confidence Interval (%)	
Pregnant	31,750	15,722,258	753,800	30,690,715
Breastfeeding	30,174	26,051,235	5,915,464	46,187,006
Postpartum	13,538	6,431,074	854,399	12,007,749
Infant	114,091	48,714,683	16,222,015	81,207,352
Child	88,399	33,580,679	-10,435,616	77,596,975
WIC Total	277,952	130,499,928	70,478,357	190,521,499

Source: National Survey of WIC Participants II Study

Exhibit ES-4: Pre- and Post-rebate Annualized Dollar Error Amounts and Dollar Error Rates: WIC Eligibility Error

	Dollar Error Amount (\$)	WIC Total Food Costs (\$) ^a	Dollar Error Rate ^b
Pre-rebate	233,176,403	6,274,051,429	3.72%
Post-rebate	130,499,928	4,373,776,840	2.98%

^a The denominator for pre- and post-rebate dollar error rates was the total food costs (the sum of the food costs and infant rebates billed) and the food costs, excluding infant rebates value, respectively. Both numbers were for 48 contiguous States and tribal organizations and were obtained from the FY2009 WIC Monthly Report, <http://www.fns.usda.gov/pd/wicmain.htm> as of 07/29/2011.

^b Dollar error rates were calculated using aggregated values without variance estimation.

Source: National Survey of WIC Participants II Study

Three Studies: A Comparison

Income eligibility case error and dollar error are two improper payment indicators available from two previous studies conducted in FY1988 and FY1998.⁴ Exhibits ES-5 and ES-6 summarize the statistics from the three studies. For income eligibility case error rate, the FY1988 estimate was 5.7 percent (95% CI = 3.80 and 7.60); the FY1998 estimate was 4.5 percent (95% CI = 2.80 and 6.20); and the current study (NSWP-II) estimate for FY2009 was 3.05 percent (95% CI = 1.42 and 4.68).

For dollar error amount and dollar error rate due to income eligibility errors, the FY1988 study estimated a dollar error of approximately \$84 million out of the yearly total WIC food costs of \$1.5 billion—a dollar error rate of 5.60 percent. For FY1998, the NSWP-I estimated a dollar error of approximately \$120 million out of total WIC food costs of \$2.6 billion—a dollar error rate of 4.62 percent. For FY2009, this study estimated a total (pre-rebate) dollar error of approximately \$233 million out of about \$6.27 billion total WIC food costs—a pre-rebate dollar error rate of 3.72 percent. Adjusting for infant formula rebates, the FY2009 post-rebate dollar error was estimated to be approximately \$130 million out of about \$4.37 billion WIC food costs, excluding infant rebates billed—a post-rebate dollar error rate of 2.98 percent.

⁴ The two studies are Food and Nutrition Services, USDA (1990) *WIC Income Verification Study* (for FY1988) and Food and Nutrition Services, USDA (2001). *National Survey of WIC Participants* (for FY1998).

As illustrated in Exhibit ES-7, an overall declining pattern is observable in the declining point estimates of income eligibility case error rate and the dollar error rate from the prior studies for FY1998 and FY1988 and the current study for FY2009 (with either pre- or post-rebate estimates). The differences across the rates of those three years are not statistically significant as the estimated confidence intervals for the years overlap. The comparison suggests that the WIC programs have continued its steady operation in appropriately certifying applicants, perhaps even with improvement. Relevant law and regulation changes that require income documentation for WIC certification may be a factor underlying the performance. The large policy changes occurred—but were not implemented—just 1 year or so before the 1998 study (NSWP-I) and have been well implemented by 2008.⁵ The low error estimates from NSWP-II relative to those from prior studies may be partly attributable to the policy shift.

Exhibit ES-5: Estimates of Eligibility Case Error Rates: 1988, 1998, and 2009

Fiscal Year	Eligibility Case Error Rate (%)	95% CI (%)	
FY1988	5.70	3.80	7.60
FY1998	4.50	2.80	6.20
FY2009	3.05	1.42	4.68

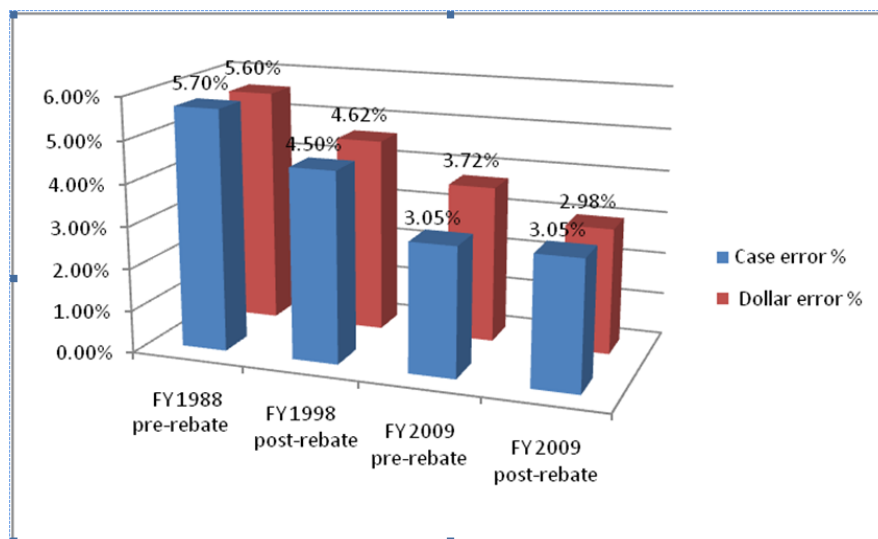
Sources: National Survey of WIC Participants II Study, National Survey of WIC Participants I Study, and WIC Income Verification Study

Exhibit ES-6: Estimates of Dollar Error and Dollar Error Rates from Eligibility Error: 1988, 1998, and 2009

Fiscal Year	Dollar Error (\$ Million)	95% CI of Dollar Error (\$ Million)		WIC Total Food Cost (\$ Million)	Dollar Error Rate (%)
FY1988	84	56	112	1,500	5.60
FY1998	120	69	172	2,600	4.62
FY2009 pre-rebate	233	118	349	6,274	3.72
FY2009 post-rebate	130	70	190	4,374	2.98

Sources: National Survey of WIC Participants II Study, National Survey of WIC Participants I Study, and WIC Income Verification Study

⁵ Swann, C. (2008). Public policy, *Economic conditions, and WIC caseloads*. Accessed at <http://www.uncg.edu/bae/econ/seminars/2008/Swann.pdf>

Exhibit ES-7: Estimates of WIC Case and Dollar Error Rates: 1988,⁶ 1998, and 2009

Sources: National Survey of WIC Participants II Study, National Survey of WIC Participants I Study, and WIC Income Verification Study

Other Certification Errors

No identity or residence errors were found based on the in-person interview data reviewed on WIC participants' identity and residence proofs. All of the responding participants presented appropriate documents for establishing eligibility based on identity and residence.

This study explored the category error due to age misclassification of infants and children (e.g., a child older than 5.5 years who received benefits). The information collected to assess this type of error was limited as will be explained, so the analysis generated only tentative results that require caution and further research. Category errors among women were not examined because it would require extensive effort such as medical record checks, which were deemed beyond the scope of the study.

Another exploratory analysis was intended to identify expired certification error, which occurs when the participant receives and redeems vouchers after certification has expired. To determine expired certification error, the analysis used the available data on certification dates from State agencies—a source considered not adequately reliable. Local agency data on certification are updated more frequently and are more accurate because local agencies actually conduct certification, but these data were not collected in this study. Therefore, the results generated from the analysis of expired certification error also require caution. Technical details and preliminary estimates on infant age misclassification error and expired certification error are presented in Appendices H and K, respectively.

New Applicant Denials

The term “Denials” refers to new applicants who fill out and submit an application for WIC benefits and are denied eligibility. As the April and May 2009 data collection revealed, the

⁶ Rebates were first provided to States in 1988; therefore, the amount of rebates used was too small to affect findings.

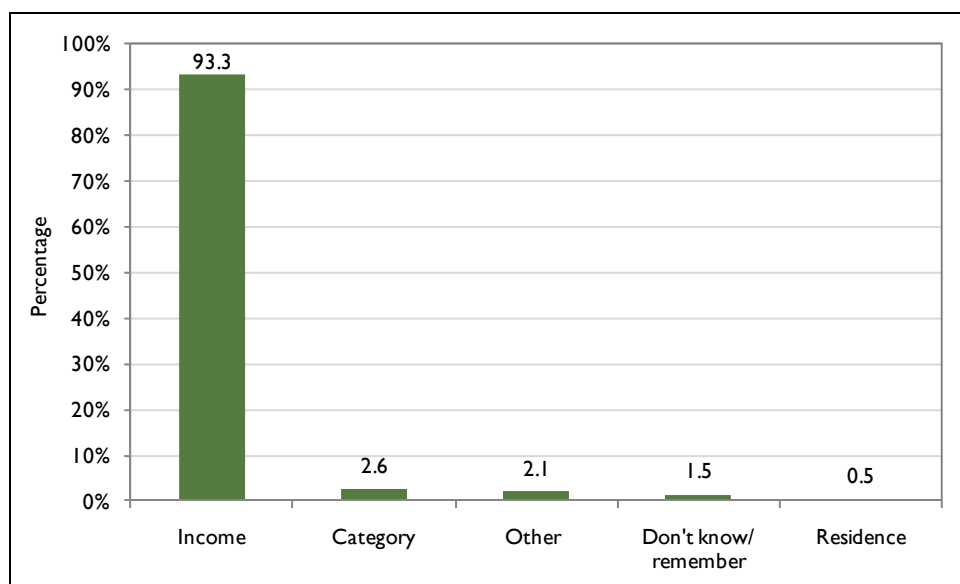
number of Denials is small. Of the 147 clinics sampled to collect names of Denials, 14 clinics did not deny any new applicants at all during the reference month, and a large number of others provided very few denial cases. In addition, four clinics did not provide researchers their record of applicants denied. The end result was that only 410 denied new applicant names were obtained.

The low number of denials compelled the use of all new applicant denial cases provided by the responding clinics in order to produce descriptive statistics. The resulting statistics are not to be considered nationally representative because of the lack of information on the new applicant denial population and the absence of data for a large subset of states/clinics. The findings on new applicant denials are primarily intended to provide some insight into why new WIC applicants were denied eligibility and to examine respondents' perception of agency mistakes in denying their applications.

A total of 410 denied new applicant records were available from sampled clinics, resulting in 194 completed telephone interviews. The low response rate appears to result from a 7- to 9-month lag time between the date of denial and the telephone survey and inability of data collectors to reach the denied new applicants.

Denied new applicants were asked if the reason for their ineligibility for WIC was related to proofs of identification, residence, income, or something else. As shown in Exhibit ES-8, income is by far the main reason applicants were turned down for WIC benefits (93.3%). Only small proportions cite eligibility problems associated with category (2.6%), residence (0.5%), and/or "Other" (2.1%). No respondent reported lack of identification as an eligibility problem. The "Other" problems typically involved miscommunication between the applicant and the clinic; for instance, one applicant stated that the WIC clinic never got back to her.

Exhibit ES-8: Reasons for Ineligibility: Percentage of New Applicant Denials



n = 194

Note: Multiple responses permitted.

Source: National Survey of WIC Participants II Study

The reasons for a new applicant denial depend mostly on the type of proof. Income proofs submitted by the denied new applicants, for example, were almost always considered ineligible because of excessive income (174 out of 181 cases of those denied were income ineligible, or 96.1%), as opposed to submitting an unacceptable type of proof. Category problems all occurred because the applicants were out of scope—that is, not within the WIC definitions for “Pregnant,” “Breastfeeding,” “Postpartum,” “Infant,” or “Child.” No one reported that ineligibility was based on unacceptable documents—for example, one with an expired date or lacking an address or photo.

When respondents were asked if they felt the agency had “made a mistake” in assessing their eligibility, 25.3 percent of denials responded “Yes,” 68.6 percent of respondents responded “No,” and 6.2 percent were either unsure or chose not to answer. All who reported that the agency made a mistake were rejected for reasons of income. It would appear that the most contentious claims were made by applicants whose incomes fell recently but who only had proofs showing the higher income levels. Other discontent came from individuals who had been led to believe by friends or medical staff that they would qualify for benefits.

More than a quarter of total denied new applicants (25.2%) said they took follow-up actions; of those, 71.4 percent reapplied for benefits. From their recorded verbatim remarks, it appears that the vast majority (94.3%) of those who reapplied obtained WIC benefits on their second attempt.

Terminations/Discontinuations

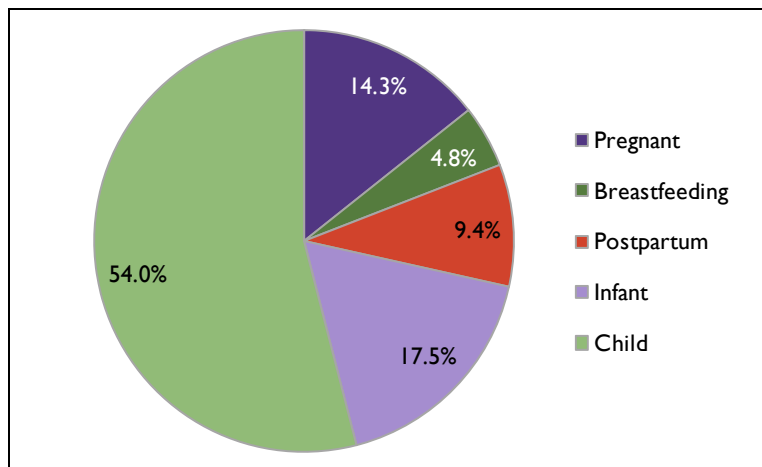
Terminated/discontinued participants are WIC participants who received WIC benefits for a period of time and whose eligibility came to an end. In this study, the term “terminations/discontinuations” applies to participants whose benefits ended and who voluntarily withdrew from the WIC Program (discontinuations) and participants who sought to reapply when their eligibility expired and who were involuntarily determined to be ineligible for continued benefits by their WIC clinic or agency (terminations). This sample of terminations/discontinuations was drawn from State agency lists of all participants who received food issuances in April 2009 but were no longer receiving them in May 2009. The purpose of this part of the study is to look at the reasons why participants’ benefits were ended and their perception about agency mistakes in terminating their benefits.

In all, 393 out of 607 terminated/discontinued participants randomly sampled from a national sample of clinics participated in the study. The data were weighted to reflect the proportion of terminations/discontinuations in the WIC population.

Similar to the WIC participant population as a whole, infants and children make up almost three-quarters of terminated/discontinued WIC participants; pregnant, breastfeeding, and postpartum women constitute the rest. Infants are slightly underrepresented, while pregnant women are slightly overrepresented⁷ (see Exhibit ES-9).

⁷ In the WIC participants’ survey, infants made up 24.3 percent and pregnant women made up 10.5 percent.

Exhibit ES-9: Percentage of Terminated/Discontinued Respondents, by Category



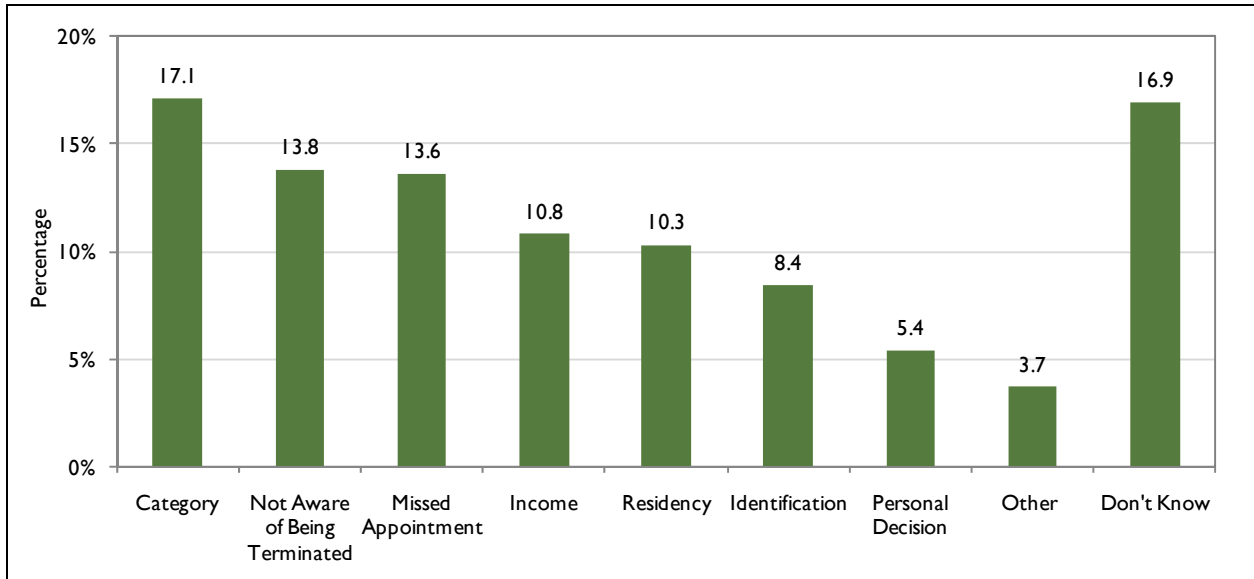
n = 393

Source: National Survey of WIC Participants II Study

The reasons for ineligibility are different for terminations/discontinuations than for denied new applicants. Whereas income ineligibility was at the root of most denials, there was no dominating reason for the ineligibility of terminated/discontinued participants for further benefits. Category changes, typically the proper stop of the benefit, such as a child who aged out of WIC or a mother who stopped breastfeeding, was the most important reason (17.1%). However, other factors also contributed significantly, such as missed appointments (13.6%), income changes (10.8%), residency changes (10.3%), identification issues (8.4%), and personal decisions (5.4%)⁸ (see Exhibit ES-10). About 13.8 percent were not aware that their benefits had ended because they had been recertified so quickly they were unaware of any gap in benefits.

⁸ Personal decisions not to continue with WIC often revolved around scheduling issues and/or perceived inconvenience of having to go to the clinic to get benefits. It also included decisions to stop because food and services were no longer needed.

Exhibit ES-10: Reasons for Ineligibility in Terminated/Discontinued Respondents



n = 393

Note: Multiple responses allowed.

Source: National Survey of WIC Participants II Study

Although 13.8 percent of terminated/discontinued respondents were unaware their benefits had ended, others had their eligibility end because of changes in their situation or personal decisions. As such, very few terminated/discontinued participants (4.3%) disagreed with the decision. For example, those whose category status changed acknowledged the WIC Program rules; those who missed appointments admitted they would have to go back to get recertified; those who moved said they would reapply at their new clinic location; and those who decided to stop WIC for their own reasons had no issue with being terminated/discontinued.

After the end of their benefits, 14.9 percent of terminated/discontinued respondents said they took follow-up action, which largely involved reapplying for benefits. However, it is noted that 4.3 percent said they asked to speak to a supervisor, and 0.6 percent wrote a follow-up letter of protest to WIC.

CHAPTER 1. OVERVIEW OF THE WIC PROGRAM AND PROGRAM ELIGIBILITY

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) is the United States Department of Agriculture's (USDA) third largest food and nutrition assistance program. In existence for more than 35 years, the WIC Program provides benefits to low-income, pregnant, and new mothers and their young children who are at nutritional risk. The benefits consist of nutritious supplemental foods, nutrition education, and referrals to health care and social services. The WIC Program is funded by USDA's Food and Nutrition Service (FNS), which administers the program in partnership with State and local agencies. Although research on the effectiveness of WIC has often been narrow in scope (thus reducing its generalizability),⁹ and some of it is dated, the WIC Program is still widely credited for increasing access to prenatal care,¹⁰ improving birth outcomes,^{11,12} reducing the incidence of anemia,¹³ and enhancing the nutritional quality of participants' diets.¹⁴

Expansion of the program has been dramatic, with the number of participants increasing from 88,000 per month in 1974 to more than 9 million per month in 2010. Today more than half of all infants and about one-quarter of children under 5 years old participate in the program. Current program emphases include promoting food security, healthy eating and weight, and breastfeeding. Recently, the WIC Program rolled out new food packages, which were fully implemented in all State agencies by October 2009. Reflecting the first significant revisions since 1980, the packages are designed to promote greater health by offering fruits and vegetables, as well as foods that have more fiber and less fat and cholesterol. In addition, foods allocated for breastfeeding mothers and infants have been increased to promote breastfeeding more strongly as the healthiest nourishment for infants.

⁹ U.S. Department of Agriculture, Economic Research Service. (2009). *The WIC Program: Background, trends, and economic issues*. Accessed at <http://www.ers.usda.gov/publications/err73/>

¹⁰ Devaney, B., Bilheimer, L., et al. (1992). Medicaid costs and birth outcomes: The effects of prenatal WIC participation and the use of prenatal care. *Journal of Policy Analysis and Management*, 11(4): 573–592, Autumn.

¹¹ Moss, N., and Carver, K. (1998). The effect of WIC and Medicaid on infant mortality in the United States. *American Journal of Public Health*, 88, 1354–1361.

¹² Buescher P., Larson L., et al. (1993). Prenatal WIC participation can reduce low birth weight and newborn medical costs: A cost benefits analysis of WIC participation in North Carolina. *J Am Diet Assoc.*, 93, 163–166.

¹³ Miller, V., Swaney, S. et al. (1985). Impact of the WIC Program on the iron status of infants. *Pediatrics*, 75(1), 100–105, January.

¹⁴ Siega-Riz, A., Kranz, S., et al. (2004). The effect of participation in the WIC Program on preschoolers' diets. *The Journal of Pediatrics*, 144(2): 229–234, February.

1.1 WIC Eligibility and Improper Payments

To qualify for WIC benefits, applicants¹⁵ must meet categorical, residential, identification, income, and nutritional requirements. These requirements are verified by the local WIC agency or clinic at the time of certification or subsequent recertification. The specific requirements involve demonstrating proof of the following:

- **Categorical Eligibility**—The applicant must be either a pregnant woman (during pregnancy and up to 6 weeks after the birth of an infant or the end of pregnancy), a breastfeeding woman (defined as a postpartum woman who is breastfeeding up to 1 year after birth of infant), a postpartum woman who is not breastfeeding (up to 6 months after the birth of an infant or end of pregnancy), an infant (birth to 12 months) or a child (over 12 months and up to 5 years old).
- **Residential Eligibility**—The applicant must live in the State in which the application is made.
- **Identity**—The applicant must show a valid form of identification.
- **Income**—The applicant’s household income must be at or below 185 percent of the Federal poverty line—or even lower, if so required by the State. Applicants are considered adjunctively income eligible if they participate in the Supplemental Nutrition Assistance Program (SNAP), the Temporary Assistance for Needy Families (TANF) program, or Medicaid. In addition, some States allow other State-administered programs to provide adjunctive eligibility; FNS requires that such programs document income eligibility.
- **Nutritional Risk**—The applicant must be assessed by a health professional to be considered at nutritional risk. Conditions meeting this requirement include inadequate diet, a history of high-risk pregnancy, over- and under-weight, child growth problems, and anemia.

Once the determinations of categorical, residential, identity, income, and nutritional risk eligibility have been accepted, the applicant is certified and enrolled in WIC. Once she/he starts receiving food vouchers under the Program she/he is considered to be a participant. Most WIC participants are eligible to receive benefits for a 6- to 12-month period, depending on their category. Pregnant women, for example, are certified for the duration of their pregnancy and up to 6 weeks postpartum; infants are certified up to their first birthday; all other categories are certified for 6 months. When the eligibility period expires, participants must be recertified in order to continue getting benefits, although WIC regulations do allow shortening or extending the period “not to exceed 30 days.”¹⁶

Section 17 of the Child Nutrition Act of 1966, as amended, sets the basic legislative requirements with which State and local agencies must comply. In addition, FNS publishes regulations at 7 CFR §246.7, which spell out in more detail specific requirements and options States follow to implement the program. In some matters—for example, nutritional risk priorities—the WIC regulations are very explicit and give little leeway. However, in many

¹⁵ It is noted that applicants include both new applicants to the WIC Program as well as individuals who are currently participating in the program but are reapplying because their certification period is about to expire.

¹⁶ *Code of Federal Regulations*, Title 29 Part 1210, Section 354 (7 CFR §246.7 (g) (3)).

areas—for example, the list of low-income programs that will allow applicants to adjunctively qualify—the regulations give a fair amount of discretion to the States.

1.2 Goals of the Study

The objectives of the National Survey of WIC Participants II (NSWP-II) were to:

1. Explore the characteristics and experiences of WIC participants,
2. Provide information on the policies, procedures, operations, and staff at State and local WIC agencies,
3. Estimate the annual cost of erroneous payments in the program, and
4. Develop a model for updating estimates for the next 10 years.

The research in this study follows up on the first National Survey of WIC Participants and their Local Agencies (NSWP-I), for which data were collected in 1998 and a report was issued in 2001. Both NSWP-I and NSWP-II gathered data about WIC participants and developed national estimates of the case error rate and dollar error within the WIC Program. However, certain aspects of their methodologies differ. NSWP-I did not attempt to develop a model for future estimates of error.

NSWP-II aims to add to the current body of WIC knowledge by providing updated information on participants' satisfaction and use of WIC services and collecting data not covered by the other studies—especially in the area of State and local WIC agencies' operations. Most importantly, the Program also fulfills the requirements of the 2002 Improper Payments Information Act. This law and subsequent Office of Management and Budget and executive directives stipulate that agencies must review all programs and activities and identify significant erroneous payments, defined as annual payment errors exceeding both 2.5 percent of program payments and \$10 million.

This volume addresses the third goal of the Study—estimating the annual cost of erroneous payments in the program, focusing on overpayments due to income eligibility errors. It starts with an Executive Summary, and then gives an overview of the WIC Program (Chapter 1), the survey methodology (Chapter 2), the eligibility criteria (Chapter 3), improper payment estimates (Chapter 4), denial and termination/discontinuation findings (Chapter 5), and research limitations (Chapter 6). The report includes appendices comprising data collection instruments, communications to States, calculation of weights, and error estimation procedures.

CHAPTER 2. SURVEY METHODOLOGY

A two-part survey was administered from September 2009 to February 2010 to WIC participants who received benefits in May 2009, to gauge satisfaction with the WIC Program and to determine erroneous payments based on the assessments of eligibility for certification for WIC benefits. The survey consisted of two interviews: (1) a telephone interview of 2,538 WIC participants¹⁷ and (2) an in-person interview with 1,210 randomly selected respondents from the first interview. The telephone interview focused on clients' satisfaction with the WIC Program and its benefits; and the findings were reported in the Participant Characteristics Report.¹⁸ The in-person interview focused on improper payments, the subject of this report.

The in-person interviews were conducted in order to solicit and review documents or “proofs” that participants had originally submitted to gain eligibility in the WIC Program. The proofs shown during these interviews were used to determine if the standards set by FNS and/or the State agency had been met or not. Thus, the eligibility of each WIC participant was determined to be correct or improper and the number of case errors was determined. Translating case error into dollar error required obtaining the actual redemption data for respondents from State WIC programs for the period from May through July 2009.

The last chapter of this report also presents findings from brief telephone surveys of two distinct groups:

- Denied new applicants or new applicant denials—defined in this study as new WIC applicants who were denied benefits.¹⁹
- Terminations/Discontinuations—defined in this study as WIC participants whose eligibility had ended in May 2009 (who were not recertified for either voluntary or involuntary reasons).

Incorrectly determined new applicant denials and terminations/discontinuations constitute a form of WIC Program underpayment, which contributes to improper payments. However, ascertaining the incorrect denials and terminations/discontinuations and dollar amounts associated with them was not feasible; therefore, the scope of the study was limited to descriptive analysis of the reasons for denial and termination/discontinuation and respondents' *perception* about agencies' mistakes in denying their applications or terminating their benefits.

¹⁷ A total of 2,538 were actually interviewed to ensure sufficient completes by program category within sampled local agencies and clinics.

¹⁸ U.S. Department of Agriculture, Food and Nutrition Service, Office of Research and Analysis, *National Survey of WIC Participants II: Participant Characteristics Report*, by Daniel M. Geller, et al., Project Officer: Sheku G. Kamara, Karen Castellanos-Brown, Alexandria, VA: 2012.

¹⁹ States that maintained new applicant denial information provided records from May 2009; States that did not keep such records at the State level submitted the names of denials for a 30-day period largely in the month of August 2009, depending on how quickly they were able to start gathering data.

2.1 Source of Data

In-Person Interview

In-person interviews were conducted with 1,210 randomly sampled WIC participants nationwide from September 2009 through early February 2010. Forty-four field interviewers administered the in-person interviews using laptops equipped with computer-assisted personal interviewing (CAPI) software. Field interviewers were each assigned a geographic cluster or area in which they were expected to complete approximately 30 in-person interviews each. The interviews lasted approximately 30 minutes or less and usually took place at the WIC participant's residence. However, on occasion, at the respondent or interviewer's request, interviews were conducted at another, more convenient, location such as a library or fast food chain restaurant. Respondents received a cash incentive of \$20 for their time.²⁰

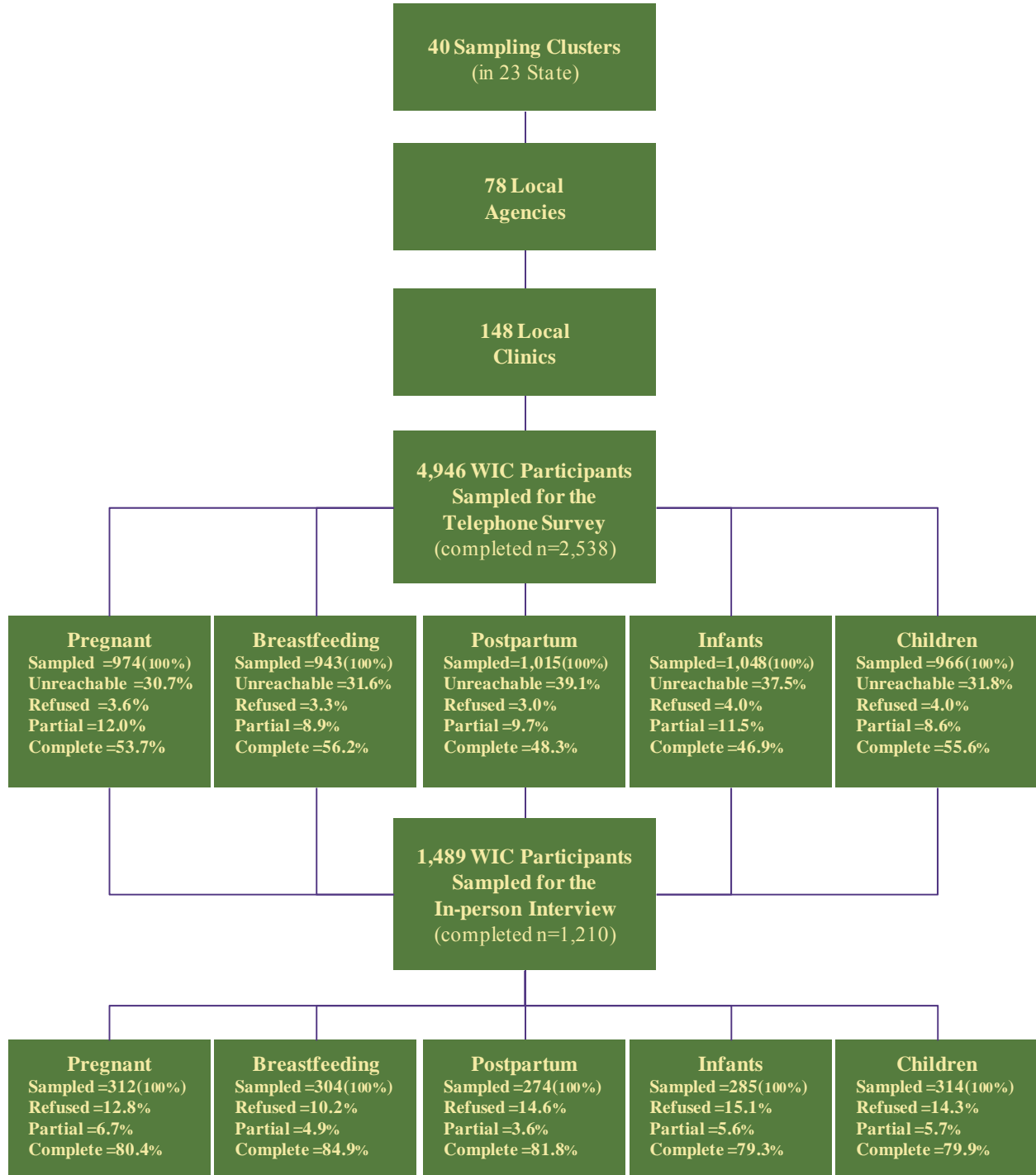
To meet the language needs of the WIC population, 27 of the field interviewers were bilingual, in English and Spanish. In addition, the services of third-party telephone translators in the languages of Mandarin/Cantonese, Vietnamese, and Spanish were retained.

Field interviewers each received 3½ days of intensive training immediately prior to the start of data collection. They were instructed on recruitment and interviewing techniques, the WIC Program, data entry using CAPI on laptops, privacy and security measures, recordkeeping, and the various survey instruments. Respondents for the in-person interview were randomly chosen from respondents who completed the telephone survey and asked if they would participate at the conclusion of the telephone survey. This method worked effectively, and resulted in an overall response rate of 81.3 percent and a cooperation rate of 86.6 percent²¹ for the in-person interview. Exhibit 2-1 details the sample sizes and nonresponse counts and rates by WIC category, nonresponse subcategory, and data collection components.

²⁰ The incentive was paid even if a respondent discontinued the interview or opted not to answer all the questions. All persons receiving the \$20 remittance were required to sign a receipt for the incentive in order to satisfy basic accounting requirements.

²¹ The completion rate is the total number of completes (1,210) divided by the total number of selected (1,489); the cooperation rate treated partial interviews as respondents (e.g., see American Association of Public Opinion Research, http://www.aapor.org/AM/Template.cfm?Section=Standard_Definitions2&Template=/CM/ContentDisplay.cfm&ContentID=3156), or one minus the total refusal rate for this study. The difference between the two rates is attributable to those who agreed to the in-person interview but could not be located when interviewers appeared for or attempted to confirm the appointment.

Exhibit 2-1: Sample Sizes and Response Rates: Data Collection Components, WIC Program Categories, and Nonresponse Subcategories



Source: National Survey of WIC Participants II Study

Questions for the in-person survey (see Appendices A and B), centered on establishing the size of the economic unit and validating proofs of residency, identification, and income (or adjunctive income).²² Field interviewers recorded the type of proof, document number, and the starting and expiration dates, if evident. For income documents, this process was quite involved. It entailed asking participants about 22 potential sources of income for each member of the economic unit, including the nature of the source (wages, alimony, unemployment compensation, etc.), the dollar amount, and frequency to be able to calculate a yearly total.

If respondents were unable to produce clear-cut documentation of their eligibility, they were asked to sign a release form allowing researchers to retrieve third-party verification of their declared income sources and/or participation in other adjunctive eligibility programs. The release form could be an income release form, an undocumented employment information form, and/or a program release form, depending on the participant’s eligibility information from the State files. These are described in Exhibit 2-2.

**Exhibit 2-2: Income and Program Release Forms
and Undocumented Employment Information Form**

Type of Form	Description
Income Release Form	Release form authorizing ICF Macro to retrieve third-party verification of employment and gross pay of WIC participants for Spring 2009.
Undocumented Employment Information Form	WIC participants who were unable to provide employment verification (usually because of self-employment) filled out this form, which enumerated their work responsibilities, title (i.e., painter, babysitter), pay, and hours worked for Spring 2009.
Program Release Form	Release form authorizing ICF Macro to receive third-party verification of program participation in an accepted adjunctive program in Spring 2009.

Source: National Survey of WIC Participants II Study

The release forms were collected by the field interviewers and returned for verification by researchers through third parties.

State-Provided Program Eligibility and Redemption Data

The basic design for NSWP-II was a departure from NSWP-I, which sampled new applicants/certificants/recertificants at local agencies using intercept interviews. Intercept interviews, while convenient, raise several issues and potential sampling and non-sampling biases, including various external factors that affect the ability to contact participants.²³ Most importantly, it could affect the behaviors of respondents, staff, and interviewers, such as staff becoming more attentive to regulations and requirements than usual or otherwise changing

²² Applicants who currently receive SNAP, TANF, or Medicaid are considered adjunctively income eligible and their actual income need not be further documented, as those programs have already done so. In addition, States may declare applicants automatically income eligible if they participate in State-administered programs that regularly document income and have income eligibility guidelines at or below WIC income guidelines. In this report, adjunctive eligibility refers to either adjunctive or automatic eligibility.

²³ For example, the selection of a single date or a few adjacent dates can introduce bias resulting from agency workload variation, weather, or various other external factors (e.g., near holiday, school closing). Also, sampling may not be as random as it appears, because of inadvertent bias associated with the appointment schedule, length of time applicants spend there, or the selection of participants with children in tow.

their behavior to cause a Hawthorne Effect.²⁴ Thus, for NSWP-II, researchers sampled food vouchers for a single month. This had the benefit of including participants who were certified in many of the previous months, as well as those newly certified or recertified. It also helped avoid follow-up calls that would have been necessary to capture changes in status.

In June 2009, shortly after OMB approved the data collection, States were asked to provide all active vouchers to participants that were redeemable in April and May 2009—that is, all food instruments issued to current, temporary, expired, and presumed eligible certificants—from the sampled clinics and local agencies. The samples of participants, terminations/discontinuations, and—in some States—denied applicants were selected from these data. Participants from vouchers redeemable in May and terminated/discontinued participants who received food issuances in April but none in May were sampled (Appendix E contains the data request letter sent to the States).

Only five States maintained denial information in their databases: Alabama, Arizona, Louisiana, New York, and Virginia. Their denied applications were sampled for May 2009. Local agencies and clinics were asked to help identify denied applicants in the remaining States.²⁵ Logs were provided for use in recording a list of denied applicants for 30 days, mostly in August 2009, but sometimes extending into September 2009²⁶ (see Appendix F).

Clinics recorded the name of the applicants, all contact information, and the reason for denial. The applicants were intended to be sampled and later interviewed by telephone. In the majority of the States, there were so few names that sampling was irrelevant. In some clinics, there were no denied applicants for the month. It is not clear whether this is a general pattern of self-selection or whether the timing of the study—during a strong economic recession—contributed to the low numbers. Another related issue concerns the purported presence of applicants who are denied without submitting an application. Some applicants inquire about eligibility criteria over the telephone, and based on the communication decide not to submit an application. Thus, they are not applicants and cannot be considered denied; but there was no way of ascertaining whether they understood the information provided and acted according to their best interests.

To collect the redemption information, States were asked to pull redemption records for all participants with food vouchers in May 2009. Redemption data were obtained on the entire sample frame, rather than being limited to the sample of those interviewed. Since WIC clients have up to 30 days to cash their food vouchers, and vendors and banks have up to 60 days to turn them in, it was not practical to ask States to extract these data until January 2010.

Redemption data were requested from the States primarily during January to February 2010. States were asked to provide those data approximately 1 month later. Several States were late in doing so and did not comply until April or May 2010. North Carolina was unable to provide

²⁴ First described by Henry A. Landsberger, it is the process in which human subjects of an experiment change their behavior because they are being observed, thus creating an inherent bias. See <http://www.experiment-resources.com/hawthorne-effect.html>.

²⁵ Tennessee has a system whereby applications are entered in real time and the applicant is immediately informed of the decision. The centralized regional offices, which maintain the processing systems, do not retain information on denied applicants. The State objected to keeping lists at the clinic or agency level, since offices that enter applications into the systems handle multiple State and Federal assistance programs and are not staffed by the Department of Health and, therefore, are not directly accountable to the WIC Program. Thus, Tennessee was excluded from the denied new applicant sample.

²⁶ North Carolina could not meet the timetable for providing data for the study and did not do so until nearly November 2009. Denied applicant lists from North Carolina were similarly delayed by 30 days in October to November 2009.

redemption records because of major system difficulties.²⁷ Redemption information obtained included voucher number and type, maximum redemption value, actual redeemed dollar amount, issuance and redemption dates, along with client information previously provided to enable records to be matched with the initial sample (see Appendix E).

2.2 Survey Content

Participant Interviews

The purpose of the in-person interviews with participants was to review program eligibility information and obtain supporting documentation to verify whether eligibility was correctly determined, and if not, determine whether there was an erroneous payment. To qualify for WIC benefits, applicants must meet WIC's identification, residential, categorical, nutritional, and income requirements. This study substantiated identification, residential, income (including adjunctive income), and *some* categorical eligibility information.

In-person interviews did not assess nutritional eligibility or categorical eligibility beyond that of establishing the ages of participating infants and children. Assessing category error among women (i.e., determining whether each woman was correctly classified by WIC category—pregnant, breastfeeding, and postpartum) was not attempted since it would have required a more intrusive effort (e.g., medical document check). Data collectors observed gender and age of respondents during interviews and found no evidence of error.

To assess eligibility, field interviewers were asked to request and record selected information from four basic sources of documentation from the WIC participants: (1) identification, (2) proof of residence, (3) household size or family economic unit, and (4) proof of income or adjunctive eligibility. The field interviewer was directed by the computer-assisted software on what types of evidence were acceptable for each requirement, something that varied by State. To determine income or adjunctive income eligibility, WIC participants were asked to show either (1) documentation of household gross income at or below 185 percent of the Federal poverty level (FPL) or other criteria set by the State, or (2) evidence—such as an award letter, voucher or participation card from certain Federal or State means-tested programs—that meets the WIC income requirements.²⁸

Interviews with Denied Applicants and Terminated/Discontinued Participants

Interviews with denied applicants and terminated/discontinued participants sought to establish, via a short telephone survey, whether respondents perceived they had been correctly declared ineligible for WIC. Therefore, the surveys asked targeted questions about whether respondents had been denied eligibility for reasons of identification, residency, income, or anything else. If so, respondents were asked if they agreed with the decision; if not, they were asked what specific document they had shown and if the document showed their name, address, photo, and other

²⁷ North Carolina was unable to provide the data within a conceivably acceptable timeframe. Therefore, ICF Macro used the multiple imputation procedure to impute redemption values for North Carolina cases (see Section 3.5: *Redemption Data Processing*).

²⁸ In some interviews, where the evidence presented was not clear cut, interviewers asked for both income and adjunctive income proofs as an added precaution.

identifying information. Respondents were also asked whether they could “see the point” for the end of their WIC benefits, a question that drove to the issue of fairness of the denial decision. They were also asked if they had appealed the decision and, if so, the outcome of that appeal. A few demographic questions were asked as well (copies of surveys for denials and terminations/discontinuations are in Appendices B and C).

2.3 Sample Design and Weights

The sample design includes the sample allocation, selection of the sample of States, sample creation and selection of clusters, selection of WIC agencies, clinics, and participants, and weighting.

Sample Allocations

The sampling design and sample sizes required for this study were driven by the required estimates of case error and improper payments. Exhibit 2-3 presents the assumed estimates of error rate and other estimates used to calculate the sample size. In each case, the percentage of ineligibles among participants was estimated, with an estimate of 10 percent as a conservative figure. For the entire population of participants, the revised Contract required a 90 percent confidence interval with an error margin of ± 2 percent around the estimate of the rate of erroneous certifications, and the same estimates around the rates of erroneous payments. For each of the categories of participants (pregnant women, breastfeeding mothers, postpartum women, infants, and children) the design called for a 90 percent confidence interval ± 5 percent.²⁹

Exhibit 2-3: Estimates of Error

Parameter	Population	Assumed Estimate (%)	Probability (%)	95% Confidence Interval (%)
Error rates	Combined categories	10	90	± 2
Error rates	Separate categories	10	90	± 5

Source: National Survey of WIC Participants II Study

The in-person survey sample of 1,210 completed interviews was a subset of the original telephone survey of 2,538 WIC participants. For details on sample size calculation and design effect adjustments, see Appendix G.

Selection of States

The primary sampling units (PSUs) were States, selected with probability proportionate to size (PPS) and probability minimum replacement (PMR).³⁰ The use of PMR meant that multiple selections of the larger States were likely. This was done so that the probability of selection of

²⁹ The resulting estimated total case error rate is 3.03% with 95% C.I. = $\pm 1.63\%$; breaking up by program categories, case error rates range from 1.85% for children to 5.29% for infants, with 95% C.I. ranging from ± 1.98 to ± 3.95 , meeting the expected precision levels. See Exhibit 4-4 for details.

³⁰ Probability Minimum Replacement was implemented using the method proposed by Goodman and Kish in 1950, but with the added feature that multiple selections may occur for large States.

any participants in a given category would be approximately equal. States selected multiple times had more local agencies selected (two agencies, each time).

PPS sampling uses a measure of size (MOS) so that the probability of selecting a State is proportional to the MOS. The MOS for the States was the average of the proportion of participants in each of the five categories found in the State. Note that the sampling units are States, not State agencies, which means that participants from Indian Tribal Organizations (ITOs) are counted in the context of the States in which they belong. A sample of 40 state clusters, not necessarily unique and different States, was selected from the 48 contiguous United States, including the District of Columbia, so that the total number of actual geographic States in the sample was 23. Exhibit 2-3 presents the sampled States by FNS region and the number of clusters sampled given the size of the State. The number of times a State was sampled determined the number of clusters sampled within that State. Seven States were sampled multiple times for a total of 23 separate sample States. For extended discussion of state sample selection method, see Appendix G.

Exhibit 2-4: Count of Sampled Research Clusters in the Sampled States

Sampled State	FNS Region	Clusters Sampled
Massachusetts	1	1
New York	1	3
Maryland	2	1
New Jersey	2	1
Pennsylvania	2	1
Virginia	2	1
Alabama	3	1
Florida	3	3
Georgia	3	2
North Carolina	3	1
Tennessee	3	1
Illinois	4	2
Indiana	4	1
Michigan	4	1
Ohio	4	2
Louisiana	5	1
Texas	5	5
Colorado	6	1
Kansas	6	1
Missouri	6	1
Arizona	7	1
California	7	7
Washington	7	1
Total = 23		Total = 40

Source: National Survey of WIC Participants II Study

Selection of Agencies

Two local agencies were sampled with probability proportional to size (PPS) from each cluster. Calculations of the local agency measure of size (MOS) were similar to the State and cluster size calculation described above. Instead of averaging the proportions of each category of WIC participants within a cluster relative to the State totals, the calculations for proportions used the cluster totals. The MOS was multiplied by two to ensure the sampling of two local agencies from each research cluster sampled. For example, with three clusters in New York, six local agencies were selected.

Selection of Clinics

Prior to the selection of the clinics, researchers allocated a total of 2,400 WIC participants across all local agencies sampled, with each category of WIC participants receiving 480 participants. For all but the one local agency sampled multiple times, 30 participants were allocated across the 5 categories within each local agency. (The large California local agency received 90 WIC participants, or 3 times the normal allocation.) Allocation of the 30 participants per local agency occurred according to the distribution of participants across categories in the local agency relative to the distribution of participants among all sampled local agencies. Appendix G presents details of the clinic sample selection procedure.

Selection of Participants

After the selection of WIC clinics, the lists of respondents were obtained from all the clinics sampled in two consecutive months (April and May 2009)—several months before data collection. The later month was the target month.

Participants were classified into the five categories: Pregnant, Breastfeeding, Postpartum women, Children, and Infants. If a participant changed categories within the target month, the most recent category was used. Thus, if an infant became a child during the month, receiving some vouchers (food instruments) as an infant and some as a child, that infant was considered a child for sampling purposes.

Each participant in a clinic was assigned a random number. Sorted by that number, participants underwent a selection process by the first n from each category (where n is the allocation of participants at the clinic level). The remaining participants in a category were retained in their order of selection and acted as replacements; so if a participant (or the participant's mother) refused to respond or could not be located, the next one in line was selected. Once a participant completed a telephone survey, they became eligible for the in-person audit. The first $n/2$ respondents were selected to participate in the audit. In other words, if six participants were to be sampled from a given category, each participant in turn was asked to participate in the audit until three agreed. If any refused to participate, the next telephone respondent was selected.

Weighting

States were sampled with PPS using a size measure that was the average of the proportion of participants in each of the five participant categories. This average was then multiplied by the number of States (clusters) allocated to the sample (40), and the inverse was used as the primary sampling unit (PSU) weight. Similarly, the clusters were also sampled with PPS using a similar MOS. The MOS was then multiplied by the number of research clusters sampled. Local agency probabilities of selection were two times that of the local agency MOS divided by the sum of the MOS for the agencies in the cluster. California and Texas samples were treated in a modified procedure (see Appendix G).

For the participant telephone interview sample, the probability of selection was calculated with the number of participants sampled from the category divided by, the total number of eligible participants from the category receiving WIC benefits from the clinic.

For the in-person interview sample, the probability of selection was calculated with the number of participants sampled from the category divided by the total number of completed telephone participants by WIC category in each selected clinic. The initial weight for an in-person participant was the inverse of their probability of selection (i.e., the product of the probabilities of selecting States, clusters, agencies, and clinics).

The initial weight was adjusted via a nonresponse bias analysis conducted on the in-person participant's sample. It was found that in-person interview participants were significantly more likely to participate in SNAP and that SNAP participation was related to some variables used in improper payment analysis. Adjustment of the in-person sample weights and replicate weight was made via sample raking, applying the WIC population's SNAP participation rates. Appendix G presents the concepts and key issues in nonresponse bias analysis and Appendix I contains tabulations of nonresponse analysis.

CHAPTER 3. WIC ELIGIBILITY CRITERIA

Participant eligibility for WIC benefits is assessed using five basic criteria established in the Federal regulations and implemented by State WIC programs. These are (1) categorical eligibility—the category of the applicant; (2) residential eligibility—place where the applicant lives; (3) proof of identity; (4) nutritional risk eligibility; and (5) income (or adjunctive income) status. Nutritional risk eligibility was not assessed in this study, per the instructions of FNS. This chapter describes the assessment and analysis of the other four eligibility requirements.

3.1 Category

To receive WIC benefits, an applicant must be either a pregnant woman (any time during pregnancy and up to 6 weeks after the birth of an infant or the end of pregnancy); a breastfeeding woman (up to 1 year after delivery of baby); a postpartum woman who is not breastfeeding (up to 6 months after the birth of an infant or end of pregnancy); an infant (birth to 12 months); or a child (1 to 5 years old). Many States allow up to 30 days of leeway in the cut-off dates of these definitions, as permitted by Federal regulations. States that do not allow a leeway operate by the set periods defined by the legislation.

Birth dates of respondents were collected and the ages of infants and children were examined as of May 1, 2009, to ascertain if they were eligible for participation by age (i.e., under 5 years old). If so, further checks were made to see if participants were correctly classified as an infant or child, taking into account the possible 2 to 4 weeks of leeway granted by the State. The categorical eligibility of women participants was not assessed by researchers because it would require extensive effort to check respondents' medical records or other evidence for pregnancy and postnatal experience. Data collectors did, however, conduct onsite observation and found no evidence of category errors among women.

3.2 Residency and Identity

Federal regulations require that agencies check the residency and identity of participants or, in the case of infants or children, the identity of the parent or guardian. If the applicant is a migrant farm worker, homeless individual, or victim of theft, loss, or disaster, agencies are permitted to fulfill the requirement by having the applicant confirm in writing his/her residency or identity (7 CFR §246.7 (c) (2) (i)). Beyond these instructions, State agencies are allowed to decide what they consider to be acceptable proofs of residency and identity.

For the survey, a list of the residency and identity proofs most commonly accepted by States was developed. Then, proofs provided by the respondents were reviewed during the in-person interview and later classified as shown in Exhibit 3-1. It is noteworthy that, in many States, WIC folders³¹ are considered permissible proofs of residency and identification for subsequent recertification of WIC participants. As such, WIC folders were placed as an item on the list of acceptable proofs.

³¹ WIC folders contain the official WIC participant identification documents issued by WIC agencies, which show eligibility based on extant documentation in the official case file.

Exhibit 3-1: Residency and Identity Proofs Collected

Residency Proofs	Identification Proofs
<input type="checkbox"/> State-issued license or ID w/ address	<input type="checkbox"/> State-issued license or ID
<input type="checkbox"/> State/Federal correspondence w/address	<input type="checkbox"/> U.S. passport w/photo
<input type="checkbox"/> WIC folder	<input type="checkbox"/> Foreign passport w/photo
<input type="checkbox"/> Checkbook w/address	<input type="checkbox"/> WIC folder
<input type="checkbox"/> Rent or mortgage receipt, lease w/address	<input type="checkbox"/> W-2 form or Tax bill w/name
<input type="checkbox"/> Utility or tax bill w/address	<input type="checkbox"/> Birth certificate
<input type="checkbox"/> Documents from public school w/address	<input type="checkbox"/> Social Services letter w/ name
<input type="checkbox"/> Written statement from reliable third party (e.g., non-profit aid organization)	<input type="checkbox"/> Social Security or Green Card
	<input type="checkbox"/> Hospital or immunization record
<input type="checkbox"/> Other: SPECIFY	<input type="checkbox"/> Other: SPECIFY

Source: National Survey of WIC Participants II Study

3.3 Economic Unit

Ascertaining the exact size of a participant’s family economic unit (or household)³² is especially important to the determination of income, since the larger the economic unit, the more income is allowed. In the survey of State agencies, the States reported that they use the national WIC Program definition without much variation. According to that definition, a family economic unit is “a group of related or nonrelated individuals who are living together as one economic unit.”

To ascertain economic unit, all members living in the same household were asked about their age and their relationship to the sampled individual (spouse, child, cousin, partner, etc). In an effort to make the national definition more user-friendly for respondents, during the interview, the concept was restated in one of two ways depending on the age of the household member being referred to:

- If the household member was 15 years old or older, interviewers asked—
Do you consider [NAME] to be part of your family group—that is, you are sharing income and expenses as if you were a family—OR do you feel that you each keep your income and expenses and food separately?
- If the household member was 14 years old or younger, interviewers asked—
Do you consider [NAME] to be part of your family group—that is, you are responsible for taking care of them as if you were all in the same family?

If the answer was “Yes” in either case, the person was considered part of the economic unit; if “No,” then the person was not.

³² FNS Instruction 803-3, Rev. 1, defines and addresses the concept of family/economic unit. Family is specifically defined in Section 246.2 of the Federal WIC regulations—803-3/Rev 1 allows use of the terms family and economic unit interchangeably.

The only exception to this was a child in the temporary care of friends or relatives. Since the individual State policy varied in treatment of such children, and the information had been gathered in the State WIC Agency Survey, researchers applied the rules of the individual States when calculating the size of the economic unit. It was found that 11 of the sampled States consider such children part of the economic unit,³³ 8 consider them as separate,³⁴ and 4 leave it to the local WIC agency to decide.³⁵ The latter four were included under the rule used by a majority of the States, which was to consider those children part of the economic unit.

3.4 Income and Adjunctive Income

Federal regulations provide the basis for establishing income eligibility for WIC applicants and require all State agencies to establish guidelines and definitions of income sources to help local agencies and clinics determine an applicant's eligibility (7 CFR §246.7(d) (1)). As an alternative to direct income documentation, regulations mandate adjunctive income eligibility for individuals who participate in SNAP, TANF, Medicaid, and—at the State's discretion, any State-administered program that routinely requires income documentation—"provided that those programs have income eligibility guidelines at or below the State agency's program income guidelines" (7 CFR §246.7(d) (2) (vi)).

Income

To be eligible on the basis of income, applicant gross income for the family economic unit had to fall at or below 185 percent of the U.S. Poverty Income Guidelines, which are shown in Exhibit 3-2 for the 2008–2009 program year.³⁶ Since the income guidelines increase with the size of the family, the definition of family economic unit becomes an important part of the equation.

³³ Arizona, Florida, Indiana, Louisiana, Massachusetts, Missouri, New Jersey, New York, Pennsylvania, Texas, and Washington.

³⁴ Alabama, California, Georgia, Illinois, Kansas, Maryland, Michigan, and Virginia. This includes States that count the children as part of their absent parent's household and States that count the children as an economic unit unto themselves, with separate income.

³⁵ Colorado, North Carolina, Ohio, and Tennessee.

³⁶ Accessed at <http://www.fns.usda.gov/wic/howtoapply/incomeguidelines08-09.htm>. It is appropriate to use the Federal Poverty Income Guideline to check income eligibility even for cases certified prior to July 1 2008 (e.g., 30 infants were found certified by that date), because virtually all EUs' incomes were reported for recent times before the interview (conducted in June through the end of 2009) as few were able to produce income documents months earlier.

**Exhibit 3-2: WIC Income Eligibility Guidelines
(Effective from July 1, 2008 to June 30, 2009)**

The 48 Contiguous States, DC, and the Territories					
Persons in Family or Household Size	Annual	Monthly	Twice Monthly	Biweekly	Weekly
1	19,240	1,604	802	740	370
2	25,900	2,159	1,080	997	499
3	32,560	2,714	1,357	1,253	627
4	39,220	3,269	1,635	1,509	755
5	45,880	3,824	1,912	1,765	883
6	52,540	4,379	2,190	2,021	1,011
7	59,200	4,934	2,467	2,277	1,139
8	65,860	5,489	2,745	2,534	1,267
Each additional member add	+6,660	+555	+278	+257	+129

Since Alaska and Hawaii were not sampled areas, their special income guidelines are not shown.

Source: Food and Nutrition Service, U.S. Department of Agriculture

Federal regulations (CFR) give States options for counting sources of income (depending on the guidelines used to calculate income), but emphasize the importance of clarity and consistency in determining eligibility throughout the State. As a result, each State has a unique set of income sources that determine eligibility, which are largely similar across States. The details of the sources of income, which were derived from the State WIC Agency Survey (7 CFR §246.7(d) (2) (iii)), are shown on Exhibit 3-3.

During the in-person surveys, to analyze income, respondents were asked about specific sources of income for every member in the family economic unit. For each family member, participants were asked about 22 possible sources of income, regardless of whether the State considered the source countable in their income guidelines or not. Then, during analysis of income data, the income sources that were not countable toward income based on the States' individual criteria were removed (See Exhibit 3-3). The countable income sources were then summed to create a measure of total income for the household.

With respect to military pay and allowances, researchers consulted surveys filled out by each State WIC agency to determine the treatment of these items as an income source for individual participants, since not all States treat these items the same way.

- For example, a Leave and Earnings Statement (LES) for military pay is not considered countable as household income in 20 of the 23 sampled states, with the exceptions being Arizona, Michigan, and Texas (see Exhibit 3-3). State Agencies' treatment of military housing allowances was also consulted since 76.8 percent of the sampled States did not count Basic Allowance for Housing for off-base housing and privatization housing in the U.S.; 52.4 percent did not count Family Separation Housing provided to military personnel for overseas housing; 54.9 percent did not count Overseas Housing Allowance

provided to military personnel living overseas; and 63.4 percent did not count Overseas Continental U.S. cost of living allowance (COLA).

Exhibit 3-3: Exhibit 3-3: Sources of Income Used to Determine Eligibility

Income Source	N of States in sample	
	Not counted	Counted
Wages, Salary, Fees	1	22
Military Pay*	21	2
Tips and Bonuses	1	22
Self-Employment	1	22
Unemployment Comp.	1	22
Workers Comp.	4	19
Child Support	1	22
Commissions	2	21
Alimony	1	22
Social Security	1	22
Private Pension	1	22
Medical Assistance	17	6
SSI—Federal Govt.	3	20
SSI—State-issued	4	19
Income from Estates	2	21
Net Royalties	1	22
Other Cash Income	2	21
Energy assistance	18	5
Net Rental Income	4	19
Dividends or Interest	2	21
Income from Trusts	2	21
Other	17	6

* Defined as Leave and Earnings Statement (LES) for military pay

Income Timeframe

The time period used to calculate income—whether the current or the past 12 months—is left up to States who, in turn, often leave the decision up to the local WIC agency or clinic. Field interviewers asked for proofs of income for the month when the participant had been most recently certified. (This most recent certification date had been provided by State WIC agencies as part of the pre-coded information, and it populated automatically on field interviewers' computer screen). Owing to necessary time lags due to sampling, requesting and receiving participant data from States, and carrying out data collection, the dates of (re)certification ranged between 5 and 19 months earlier.³⁷ If respondents were unable to provide income documents for that period, current eligibility documents were accepted. The timeframe used for analysis depended on the document shown as income source. If the source indicated a full-time amount, it was multiplied by 2,080 (i.e., 40 hours × 52 weeks); if part-time, by 1,040 (i.e., 20 hours × 52 weeks); if weekly, by 52; if biweekly, by 26; if bimonthly, by 24; if monthly, by 12; and if yearly, by 1. These income conversion procedures were based on workplace conventions across States, taking into consideration vacations and other leave.

Determination of Eligibility

The determination of income eligibility or ineligibility was done by obtaining proof of claimed income and assessing the total income of the family economic unit relative to its size. Income was summed for all members of the family economic unit for a specified period, and then multiplied by the expected frequency that the income would be received during the year, as described above.

Follow-up Procedures When Evidence Was Lacking

When evidence of income was lacking, a follow-up was conducted. When it was difficult to resolve uncertain cases for a significant number of cases, researchers went to the State WIC agency directly to ask for documentation of the proof that the agency had on file. This was quite successful in resolving about 80 cases. The documentation that the State provided was reviewed and its eligibility evidence was considered correct if it met any of the following criteria:

1. The State provided evidence of an eligible income type³⁸ and dollar amount at or below the amount permitted for the family economic unit of the participant, and the evidence consisted of one of the following:
 - a. Scanned copy of the income item(s);
 - b. Scanned copy of the original application form showing the exact income amount, source and frequency of income, along with a notation by the local agency that at least one of the above acceptable supporting forms of documentation was shown; or
 - c. Screen print taken from the State's WIC computer system of application data showing the exact income amount and the frequency of income, with similar notation that at least one of the above acceptable supporting forms of documentation was shown.

³⁷ The May 2009 participant sample theoretically included infants certified as far back as June 2008. Data collection took place from September 2009 through January 2010. This yields the upper limit of 19 months.

³⁸ Such as paystub, tax return, W-2 form, letter from employer or other as specified by State and deemed acceptable.

2. The State noted exact income information from the local agency, which—while not specifying the type of income proof shown—gave a detailed recording of the income amount and frequency (e.g., \$291.13 per week) that led researchers to believe that a specific income document was seen at certification.
3. The State provided a scanned copy of a signed Self-Declaration of Income letter in which WIC participants attested to migrant or homeless status (< 5 cases).
4. The State records showed that temporary eligibility was awarded and did not continue beyond 30 days, as applicant did not return with proper documents.

Adjunctive Income Eligibility

To qualify based on adjunctive (or automatic) income eligibility, an applicant—or someone in the economic unit—must be a current participant in SNAP, TANF, Medicaid, or another State-administered program approved by the State as meeting certain guidelines—e.g., State Children’s Health Insurance Program (SCHIP) and free or reduced-price breakfast and lunch program. In the survey of State WIC agencies, the list of eligible programs for all States was collected (see Exhibit 3-4).

Exhibit 3-4: List of Adjunctively Eligible Programs Accepted by States

Adjunctive Program	N of States in Sample	
	Eligibility not established	Eligibility established
Medicaid	1	22
SNAP	1	22
TANF	1	22
CHIP	18	5
Free & Reduced Breakfast/Lunch	18	5

* Other adjunctive eligibility programs were rarely established include: FDPIR, Section 8 Housing, SSI, Head Start, and Refugee Resettlement Program.

Determination of Eligibility

Proofs of adjunctive income eligibility submitted by each participant were compared to the list of acceptable programs for each State, using the actual program names specific to each State (e.g., Medicaid in California is Medi-Cal). If the ID number provided seemed similar to other Medicaid numbers, the proof was considered valid. As noted earlier, many program participation

cards did not visually show dates; therefore, a missing date was not a reason to consider a proof invalid.

Eligibility Timeframe

Similar to the time period used for income, the participant was first asked for proofs of income for the month when they had been most recently certified—a date that had been programmed into interviewers' CAPI laptops. If a respondent was unable to provide income documents for the last certification period, they were asked to provide current proofs of program participation instead. In many cases, especially in the case of electronic benefit transfer (EBT) cards, no date could be ascertained from the proof. However, this was not determined to be evidence of improper payments.

Follow-up Procedures When Lacking Evidence

During follow-up when eligibility evidence was lacking, the original intent was to use the Program (information) release forms that were signed by respondents to verify their participation in Medicaid, SNAP, TANF, and other assistance programs. This proved not to be feasible since Social Security numbers are used by these assistance programs to identify participants and the research contractor had been directed not to collect Social Security numbers.

As an alternative, State WIC agencies were contacted for the eligibility verification on record. This helped resolve about 160 cases. State-provided documentation was treated as evidence of proper adjunctive eligibility if the State could provide the individual's adjunctive program and ID number for Medicaid, SNAP, TANF, or other qualified adjunctive programs for the May 2009 period, or for the current (April/May 2010) period if the State's system did not allow checks of past eligibility (e.g., CA, NJ, and PA). Individuals who were not determined to be in error were subject to computerized income eligibility check (see Appendix H for listing of special review cases by States).

3.5 Redemption Data Processing

Redemption Data Request

Redemption data were requested from the States for the months of May through September 2009³⁹ in the clinics sampled. The data contained the WIC participant ID, the date of voucher issuance, the date the voucher was redeemed, the date of voucher expiration, the value of the redeemed voucher, and the maximum value that could be redeemed. The data received were at the voucher issuance level, not the WIC participant level. Each WIC participant had multiple voucher issuances per month requested. It is important to note that New York State had implemented the new food packages in early 2009, and the redemption data for that State contained fruit and vegetable cash value vouchers (CVV).⁴⁰

³⁹ Although redemption data was collected through September, only data through July were used; at that point, all May issuances had been redeemed.

⁴⁰ Per telephone communication (July 6, 2011) with Debbie McIntosh, New York State WIC, who confirmed that the NY redemption data contain the CVV components for both the max voucher value field as well as for the actual redeemed value field.

Data Matching

The size of the State redemption datasets ranged from several thousand records to more than a million. The size of the datasets depended on three things: (1) the number of clinics sampled within the State, (2) the number of participants served by the sampled clinic, and (3) the number of vouchers received by that participant in the months for which data were requested. Due to the quantity of data, it was decided to match the State redemption dataset to the final completed telephone interview list by WIC participant identification number. Eight of the 23 States sampled did not have a 100 percent match. A confirmation was made with each State that the WIC participants who completed the telephone interview did not redeem vouchers during the months of May through September. Six States confirmed that the few missing cases did not redeem voucher issuances. One State found the redemption data for the missing cases and one State required imputation of the entire redemption records (see section below on “Imputation”).

Data Cleaning

After resolving the missing data issues for all States but one (North Carolina), the individual State files were combined into one dataset. The five key variables (redemption values for the 5 months) were examined for correct formatting, and only records with vouchers issued between May and September were kept. If the amount redeemed was missing, the amount redeemed was set to zero. If the maximum redeemable value was missing, it was also set to zero. The same rationale applied when the redeemed value was also missing.⁴¹ The amount redeemed and the maximum redeemable value to the WIC participant by month issued were aggregated, creating a total value redeemed and total maximum redeemable within a month.

Imputation

One sampled state, North Carolina, could not provide redemption data for the analysis. Its redemption data were imputed based on redemption data from neighboring States (Alabama, Florida, Georgia, and Tennessee) that were deemed to some extent similar to North Carolina, namely. The final imputation was done via SAS multiple imputation (MI) procedure (see Appendix E for SAS code). The MI procedure generated a set of five plausible values for filling in the missing value, rather than assigning a single value, thus retaining uncertainties due to missing values.⁴² The average of the plausible values was used in the tabulation, producing estimates of confidence intervals with the correct probability of coverage. MI is generally considered a superior procedure than the single-value procedures, assuming missing data are largely random. The procedure generated reasonable redemption values for missing cases.

Note that, since no eligibility error was found in NC, the imputation of the redemption missing data would not impact the erroneous payment estimation. If there is any impact at all, it would be relevant only to the redemption estimates.

⁴¹ ICF has contacted States to learn about redemption data processing. It was consistent with States data processing procedure to assume a missing value implies no redemption.

⁴² Rubin, D.B. (1987). *Multiple imputation for nonresponse in surveys*. New York: John Wiley & Sons, Inc.

Expired Certification Error

Food vouchers issued to and redeemed by participants whose WIC eligibility has expired is a potential source of error, with consequential overpayments. Obtaining the most current certification dates for respondents is critical to determining expired certification error. Researchers collected certification dates from State agencies and processed the data for analysis. State agencies, however, often proved unable to provide the most reliable information on certification dates. Local agencies may be a better source as they actually conduct certification and handle constantly shifting participant status. In a preliminary effort, assuming that the available certification dates from State agencies were current, analysts examined expired certification error. Because of the data quality concerns, the procedure and results are not presented in the main report, but rather in Appendix K for technical readers.

CHAPTER 4. IMPROPER PAYMENT ESTIMATES

Estimation of improper payments was accomplished by determining two types of errors: case error and dollar error. Case error refers to the number of WIC participants certified to receive but who were not eligible for WIC benefits. Dollar error refers to the dollar amount of WIC benefits issued to and actually redeemed by participants. A major difference between this study and the 2001 NSWP-I study is in the methods used for measuring and estimating dollar error. The current study collected respondent redemption records from the States and used the actual dollar amounts of redeemed benefits to calculate dollar error. In contrast, the 2001 study relied on general estimates from WIC average food cost per participant to proxy dollar errors.

In-person interview data were analyzed to identify case errors linked to actual redemption data. Special reviews were conducted on cases where supporting information on income or adjunctive eligibility was incomplete (see Chapter 2 for methodological details).

With sample weights, estimates of case errors were based on findings obtained from a national sample of WIC participants representing the 48 contiguous United States in May 2009. Note that, unless specifically noted otherwise, all statistics presented in this report were weighted by final sample weights and adjusted for the survey design effect (see Appendix G for details). Exhibit 4-1 shows characteristics of family economic units sampled for the in-person interview by category and other demographic variables analyzed.

Exhibit 4-1: Program Categories, Demographics, and Food Security: Percentage Distribution of WIC Participants in In-person Interview

Participant Category	Percent	Standard Error
<i>Category</i>		
Pregnant	10.5	0
Breastfeeding	6.4	0
Postpartum	7.0	0
Infant	23.7	0.26
Child	52.5	0.26
<i>Race</i>		
American Indian/Alaskan Native	1.1	0.49
Asian/Pacific Islander	2.7	0.72
African American	21.5	3.86
White	44.6	4.63
Other, Multiracial	30.1	4.55
<i>Education</i>		
Less than High School	28.8	2.95
High School	32.9	2.67
More than High School	38.3	3.08
<i>Metropolitan Statistical Area</i>		
Non-metro	23.6	4.98
Metro	76.4	4.98
<i>Participation in WIC^a</i>		
New to WIC	48.3	2.94
Participated before	51.7	2.94

Exhibit 4-1 (continued)

Participant Category	Percent	Standard Error
<i>Food Security Status</i>		
High food security	81.9	1.70
Marginal food security	1.1	0.42
Low food security	9.3	1.22
Very low food security	7.7	1.26
<i>Ethnicity</i>		
Hispanic/Latino	45.7	4.74
Not Hispanic/Latino	54.3	4.74
<i>Language</i>		
English	64.4	4.03
Spanish	31.5	3.84
Other	4.2	1.22
<i>Size of Economic Unit</i>		
1 person(s)	1.1	0.44
2	15.4	2.24
3	24.3	1.81
4	24.2	1.76
5	16.0	1.59
6	9.2	1.28
7	4.7	0.96
8	2.9	0.77
9	0.6	0.29
10	0.1	0.07
11	0.2	0.12
12	0.1	0.08
13	0.0	0.03
14	0.0	0.01
15	0.1	0.07
<i>Children in Household</i>		
Yes	72.8	0.30
No	27.2	0.30
<i>Other Food Program Participation</i>		
No Public Food Assistance	31.4	3.21
Yes, but not SNAP	12.6	1.57
Yes, includes SNAP	56.0	3.38
TOTALS		
Unweighted sample size <i>n</i>		1,210
Estimated WIC total population		9,113,617

^a For the sampled women, “New to WIC” refers to the first time a woman has received WIC benefits for herself and “Participated before” refers to having participated previously with another pregnancy/child. For the sampled children, the two terms refer to, respectively, the first time the adult respondent received WIC benefits for the sampled child and previous participation of WIC by this child (see Appendices A and B).

Source: National Survey of WIC Participants II Study

Exhibit 4-2 presents average monthly income by number of people in the family economic unit (EU) for participants identified as adjunctively ineligible. The mean ranges from zero dollars for one-person households to \$3,309 for households of three, with wide ranges of 95 percent confidence limits. The median income was zero for household groups of size 1 through 4, indicating that one half (or more) of households in these groups had no income at all. The other two groups, of size 5 and 6, had one half of the members with income below \$266.60 and

\$860.00 respectively. All EU-size groups averaged below the 185 percent of the Federal Poverty Level (FPL), except the subgroup of the three-person household, which averaged higher than the 185 percent poverty level. The apparent anomaly was caused by two participants whose EU incomes were found very high; excluding such high-income cases would lead to substantially lower estimates that closely relate to the EU size.⁴³

Exhibit 4-2: Median and Mean Monthly Income by Economic Unit for Income-Eligible WIC Participants (Adjunctively Eligible Excluded)

EU Size	Sample <i>n</i> (Unweighted)	Number of All WIC Participants	Median EU Monthly Income ^a (\$)	Mean EU Monthly Income (\$)	Income allowed for 185% of FPL ^b (\$)	95% CI for Mean (\$)	
1	43	213,069	0	0	1,604	0	0
2	152	1,142,342	0	1168.78	2,159	-412.05	2749.61
3	207	1,425,988	0	3309.09	2,714	-1684.13	8302.3
4	162	1,332,434	0	1429.18	3,269	243.41	2614.94
5	100	767,886	266.6	1038.11	3,824	628.63	1447.59
6 or more	84	737,609	860.0	2685.58	4,379+	-603.69	5974.85
Total (not adjunctively eligible)	748	5,619,329	0	1910.58		-23.23	3844.40

^a Median values were calculated without design effect adjustments

^b This column shows the maximum income level allowed, by household size, to be within the 185% FPL limit. Effective from July 1, 2008 to June 30, 2009 for WIC income eligibility; for EU size greater than 6, add \$555 for each additional person (see: <http://www.fns.usda.gov/wic/howtoapply/incomeguidelines08-09.htm>).

Source: National Survey of WIC Participants II Study

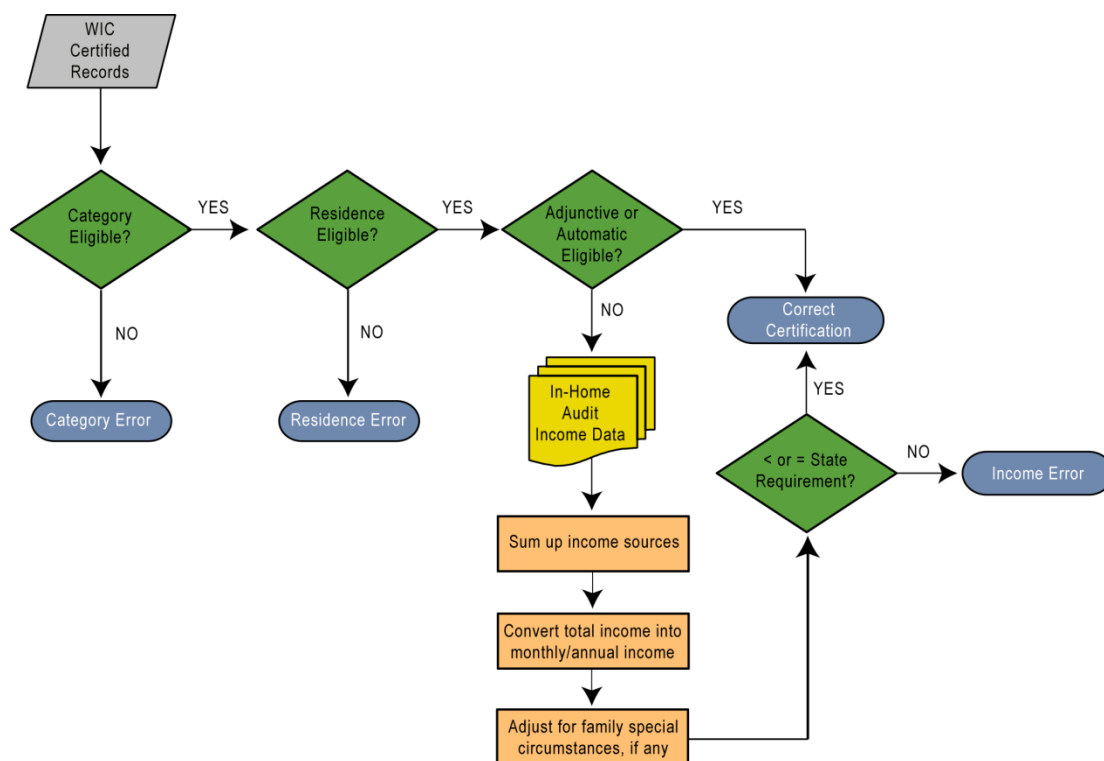
4.1 Certification Error Case Counts and Rates

Five types of certification errors may cause failure to meet WIC Program eligibility requirements. These include identity, category, residence, income/adjunctive income, and nutritional risk eligibility errors. (As mentioned previously, nutritional risk eligibility was not examined in this study.) Of the five types of errors mentioned, the most challenging is the determination of income eligibility error. Income eligibility is complicated by States' discretionary guidelines on defining the family unit (or WIC economic unit), treatment of special cases, and the range of income sources that can be counted. Furthermore, income eligibility error reflects the difficulty of applicants to report incomes and to provide supporting documents to fulfill income eligibility requirements; thus, income eligibility error is the main focus of improper payment analysis.

Exhibit 4-3 illustrates the basic process of identifying certification errors based on WIC eligibility criteria. Data obtained during the in-person interview as well as from the special case study follow-up review with States both serve as independent ways to document the WIC certification process and confirm the accuracy of eligibility.

⁴³ The two cases EU monthly incomes were \$182,530 and \$153,635, respectively. See Appendix H for a discussion of such high-income cases, with comparative estimates for the subsample excluding cases of very high incomes.

Exhibit 4-3: Process of Identifying Erroneous Certification, by Eligibility Criteria



Source: National Survey of WIC Participants II Study

Identity, Residence, and Category Errors

Errors of identity and residence can potentially occur if proofs are not shown or if proofs belonging to other people are submitted by the WIC applicant. However, analysts found no identity or residence errors based on in-person interview data reviewed on WIC participants’ identity proofs and residence proofs. All of the respondents demonstrated appropriate documents for establishing identity and residential eligibility.

Category errors may occur when agencies make a mistake in the age of an infant/child or the dates of a woman’s pregnancy, breastfeeding, and delivery as required by WIC category eligibility. The in-person interview, however, did not collect information on dates of women’s pregnancy, breastfeeding, and baby delivery; hence, category errors for women were not produced. Determining whether each WIC woman was in the correct WIC category (pregnant, breastfeeding, and postpartum) would have required more extensive and intrusive effort (e.g., medical document check), which was not required in the Contract. Data collectors observed gender and age of WIC women but found no evidence of category error for them.

Category error among infants and children was explored by counting the number of days between the birth date and the certification date. Six respondents (weighted to 49,832 WIC participants) were found in category error. They aged over 1 year at certification time (i.e., the difference between the certification date and the birth date was greater than 366 days with one extra day as cushion for trivial errors by the hour)—older than the age the WIC Program requires—yet they received infant benefits rather than child benefits. As the child benefit

redemption values for these participants did not exist, category errors were not included in the total improper payment case and dollar error estimates. Appendix H has procedures and tentative results for these category errors, estimated by calculating the difference between the redeemed infant voucher value and the average child benefit redemption value at their clinic. No over-age children (older than 5 years or 1,828 days at the time of certification) were identified.

In the preliminary analysis of expired certification error, 30 respondents (weighted to 105,023 WIC participants) were found to be in this type of error. With certification dates collected from State agencies, the statistics may be questionable because State agencies were not likely to have the most reliable information on certification dates. Local agencies actually conduct certification and update the certification dates to handle constantly shifting participant status such as WIC benefit issuance, termination, renewal, and category change. Given potential problems with State agencies' certification dates, the expired certification error estimates generated from this study are tentative and thus are not presented in the main body of the report (see Appendix K for a full discussion and the estimates).

Income Eligibility Error

In addition to a computerized examination of income data using SAS, special case reviews were completed for selected difficult cases to establish income eligibility and among all cases to verify adjunct eligibility. The results were integrated with computerized analysis to produce the estimates of income eligibility error (see Chapter 3 and Appendix H).

A SAS program was applied to calculate income by pay period and amount based on the national WIC or approved State-discretionary guidelines. The algorithm determined whether a household member was a member of the economic unit, counted each economic unit member's income sources according to State discretionary policies, summed up the countable income dollar amount by frequency of receipt, checked the amount against the WIC guideline for income eligibility, and generated a tentative decision on eligibility. The algorithm also flagged cases with uncertainty with respect to income source, income evidence, and adjunctive eligibility for special case review.

Special case reviews sought to reclassify information collected by interviewers that was unclear—such as text information with coding difficulties, for example, reclassifying Peachtree State Health Plan as “Medicaid” (Georgia’s program for Medicaid). These reviews also included the results of direct communications with State agencies to provide information about the adjunctive or income proofs originally shown to agencies for selected problem cases (see Appendix H for details on special case reviews).

Of the WIC participant population of 9,113,617 in May 2009, 277,952 cases were estimated to be in error due to income eligibility error, or 3.05 percent of the total WIC participant population (95% CI = 1.42% and 4.68%, see Exhibit 4-4).

Income error estimates are separately presented by WIC Program category in Exhibit 4-4 for a group comparison.⁴⁴ No statistically significant difference was found across WIC categories as

⁴⁴ Income eligibility error estimates were also categorized by research methods used (i.e., computerized analysis and special case study as shown in Appendix H).

the 95 percent confidence limits overlapped. The substantive differences as shown by point estimates, however, are noteworthy. For breastfeeding women and for infants, the income eligibility error rates were relatively high, respectively at 5.18 percent and 5.29 percent. The infant error case count was also particularly high—more than 114,000—because of the group’s high error rate. The error rates for participants in the other three program categories were lower, ranging from 3.31 percent for pregnant women to 1.85 percent for children.

Exhibit 4-4: Number and Percent of Income Eligibility Errors, by WIC Category

WIC Category	Number of Respondents in Error (Unweighted)	Number of All WIC Participants in Error	Percent (%)	95% Confidence Interval (%)	
Pregnant	7	31,750	3.31%	0.25	6.38
Breastfeeding	9	30,174	5.18%	1.23	9.12
Postpartum	6	13,538	2.14%	0.16	4.11
Infant	11	114,091	5.29%	2.07	8.50
Child	6	88,399	1.85%	-0.32	4.02
Total	39	277,952	3.05%	1.42	4.68

Source: National Survey of WIC Participants II Study

4.2 Dollar Error Amounts and Rates

Using redemption records collected from State agencies, the dollar error estimates were derived from food voucher values actually redeemed by sampled WIC participants who were identified as income eligibility error cases. The redeemed values of vouchers issued in May 2009 and redeemed in May, June, and July 2009 were extracted.⁴⁵ Adjustments were made to cope with data problems such as inconsistent inclusion of family members’ redemptions and missing redemption data.

Redemption records for May 2009 were used to estimate annual redemption values. The national cross-sectional representative sample of active participants (“the issuances”) in May 2009 was used to generalize the monthly estimates of redemption values to the WIC participant universe. Examining the records on monthly redemption (May through July), researchers found the month of May covered more redemption values relative to June and July—a pattern to be expected since the cross-sectional sample of the issuances in May included cases that would drop out from the redemption data system due to certification expiration or other reasons in subsequent months. Using the redemption data from all three months would require adjustments for such “drop off” factors that involve uncertainties. Using redemption data in May to generate national annualized dollar error was thus both sensible from a sampling perspective and efficient from a data processing perspective.

⁴⁵ New York State included the new food package, known as Fruit and Vegetable Cash Value Voucher, in its redemption records submitted to ICF.

Analysts annualized the estimates based on May redemption data with a multiplier of 12.285 derived from the WIC Monthly Report on total food costs⁴⁶ in order to take monthly variation of redemption values into account. Presumably, the error rate was constant across months and the monthly redemption value was closely correlated to WIC monthly food cost reported by FNS. Analysts obtained WIC monthly food costs data for FY2009 (October 2008 through September 2009) and divided the FY2009 total cost (\$4,640,847,313) by the May food cost (\$377,758,893) to generate the annualized multiplier 12.285 (see Appendix H for WIC monthly food cost data used for this purpose). Exhibit 4-5a presents pre-rebate redemption values by WIC category.

Adjustment for the WIC infant formula rebate to States was necessary to measure the real cost to the WIC Program because State WIC agencies negotiated with infant formula manufacturers a rebate amount that constitutes a substantial portion of the infant formula costs. Conceptually, the adjustment would entail subtracting the dollar rebate value from the redeemed infant voucher value for each infant identified as eligibility error. The available redemption records, however, did not allow rebate adjustments because the redemption data contain only a single redeemed value for each voucher.

To proxy the infant formula rebate value, data were used from the May 2009 WIC Monthly Report.⁴⁷ The *Rebates Billed* spreadsheet of this report contains the rebates billed by each State WIC Program to infant formula manufacturers while the *Infants Participating* spreadsheet shows the total number of infant participants in each State. The source allowed the calculation of the average rebate value per infant for each State. Dividing the State average rebate value by the national average redemption value (estimated from the NSWP-II sample) produced the rate of redemption due to formula rebates for each sampled State. Multiplying this rate by the actual redeemed voucher value for each infant in the sample generated a proxy measure of rebate value for each infant. For infants identified as ineligible, subtracting this estimated rebate value from their redeemed voucher value yielded rebate-adjusted dollar error, which was weighted and annualized to produce WIC total dollar error estimates (see Appendix L for details on the infant formula rebate adjustments).

Both pre- and post-rebate estimates of dollar error were weighted with the final sample weights and then annualized (see Exhibits 4-5a and 4-5c). The annualizing multiplier was derived from WIC administrative data in order to take monthly variation of redemption values into account. For the post-rebate estimate, the multiplier used was the ratio of the FY2009 rebates billed value (\$1,900,274,589) over the May rebates billed value (\$156,877,423), a multiplier of 12.113.

⁴⁶ Downloaded from: <http://www.fns.usda.gov/pd/wicmain.htm> as of 07/29/2011

⁴⁷ FNS. (2009). FNS Program Data website: Monthly Data—Agency Level, Participation and Food Cost by Category per person: 2009. Accessed 10/5/2011 at <http://www.fns.usda.gov/pd/wicmain.htm> .

Exhibit 4-5a: Pre-rebate May 2009 and Annualized Estimates of Mean and Total Redeemed Dollar Amounts, by WIC Category

WIC Category	Monthly/ Annualized Redemptions	Mean Redeemed (\$)	95% CI for Mean (\$)		Total Redeemed (\$)	95% CI for Total Redeemed (\$)	
Pregnant n = 958,092	May issuance	43.52	37.76	49.28	41,693,372	34,091,806	49,294,938
	Annualized	534.61	463.84	605.37	512,203,073	418,817,838	605,588,308
Breastfeeding n = 582,986	May issuance	44.17	38.84	49.51	25,753,131	21,358,212	30,148,051
	Annualized	542.68	477.20	608.17	316,377,217	262,385,629	370,368,806
Postpartum n = 634,014	May issuance	35.89	28.58	43.20	22,754,884	16,339,046	29,170,722
	Annualized	440.91	351.13	530.69	279,543,748	200,725,175	358,362,321
Infant n = 2,157,909	May issuance	110.10	91.62	128.58	237,585,105	188,174,517	286,995,692
	Annualized	1352.57	1125.60	1579.55	2,918,733,009	2,311,723,941	3,525,742,078
Child n = 4,780,616	May issuance	38.89	33.79	44.00	185,938,305	159,995,332	211,881,278
	Annualized	477.82	415.14	540.49	2,284,252,074	1,965,542,651	2,602,961,496
All WIC participants n = 9,113,617	May issuance	56.37	49.94	62.80	513,724,796	444,403,603	583,045,989
	Annualized	692.49	613.45	771.53	6,311,109,122	5,459,498,266	7,162,719,977

Source: National Survey of WIC Participants II Study

Exhibit 4-5b: Infant Formula Rebate Adjustment: May 2009, Annualized Rebate Values, and Post-rebate Food Costs for Infants

Measure	Monthly/ Annualized	Mean (\$)	95% CI for Mean (\$)		Total (\$)	95% CI for Total (\$)	
Rebate value for infants n = 2,157,909	May	72.70	60.84	84.56	156,877,423	124,580,461	189,174,385
	Annualized	880.60	736.93	1024.27	1,900,256,225	1,509,043,120	2,291,469,329
Post-rebate food cost for infants n = 2,157,909	May	37.40	30.36	44.44	80,707,682	62,802,703	98,612,660
	Annualized	453.04	367.76	538.31	977,612,146	760,729,137	1,194,495,156
Total food cost for infants^a n = 2,157,909	May	110.10			237,585,105		
	Annualized	1333.64			2,877,868,371		

^a Calculated with aggregated numbers without variance estimation

Source: National Survey of WIC Participants II Study

Exhibit 4-5c: Post-rebate May 2009 and Annualized Estimates of Mean and Total Redeemed Dollar Amounts, by WIC Category

WIC Category	Monthly/ Annualized Redemptions	Mean Redeemed (\$)	95% CI for Mean (\$)		Total Redeemed (\$)	95% CI for Total Redeemed (\$)	
Pregnant n = 958,092	May issuance	43.52	37.76	49.28	41,693,372	34,091,806	49,294,938
	Annualized	534.61	463.84	605.37	512,203,073	418,817,838	605,588,308
Breastfeeding n = 582,986	May issuance	44.17	38.84	49.51	25,753,131	21,358,212	30,148,051
	Annualized	542.68	477.20	608.17	316,377,217	262,385,629	370,368,806
Postpartum n = 634,014	May issuance	35.89	28.58	43.20	22,754,884	16,339,046	29,170,722
	Annualized	440.91	351.13	530.69	279,543,748	200,725,175	358,362,321
Infant n = 2,157,909	May issuance	37.40	30.36	44.44	80,707,682	62,802,703	98,612,660
	Annualized	453.04	367.76	538.31	977,612,146	760,729,137	1,194,495,156
Child n = 4,780,616	May issuance	38.89	33.79	44.00	185,938,305	159,995,332	211,881,278
	Annualized	477.82	415.14	540.49	2,284,252,074	1,965,542,651	2,602,961,496
All WIC participants n = 9,113,617	May issuance	39.16	35.24	43.07	356,847,373	314,054,690	399,640,057
	Annualized	479.50	431.54	527.46	4,369,988,259	3,846,290,733	4,893,685,785

Source: National Survey of WIC Participants II Study

Income eligibility error dollar amounts for WIC as a whole and by program category were calculated as the sums of the products of error cases' actual redemption values, the annualizing multiplier 12.285, and the sample weights, respectively, for the entire WIC and each program category. The estimates were overpayment dollar errors since all participants in this error group should not have been awarded WIC benefits (see Appendix H for details of the calculation).

The pre-rebate annualized WIC total improper payment dollar value for FY2009 was estimated at \$233,176,403 (95% CI = \$117,658,694 and \$348,694,109; see Exhibit 4-6a). Of the five categories, infants had the highest estimates—a total of \$151,391,157 (95% CI = \$47,887,348 and \$254,894,965). The dollar error estimate was lowest among postpartum women, a total of \$6,431,074 (95% CI = \$854,399 and \$12,007,749).

Exhibit 4-6a: Pre-rebate Estimates of Annualized Dollar Amounts of Income Eligibility Error by WIC Category

WIC Category	Number of WIC Participants in Error	Dollar Error (\$)	95% Confidence Interval (\$)	
Pregnant	31,750	15,722,258	753,800	30,690,715
Breastfeeding	30,174	26,051,235	5,915,464	46,187,006
Postpartum	13,538	6,431,074	854,399	12,007,749
Infant	114,091	151,391,157	47,887,348	254,894,965
Child	88,399	33,580,679	-10,435,616	77,596,975
WIC Total	277,952	233,176,403	117,658,694	348,694,109

Source: National Survey of WIC Participants II Study

Post-rebate estimates of dollar error amounts are presented in Exhibit 4-6b. Only the estimate for infants changed: the post-rebate dollar error amount was less than \$49 million, less than one-third of the pre-rebate estimate of more than \$151 million. Other categorical estimates remained the same.

Exhibit 4-6b: Post-rebate Estimates of Annualized Dollar Amounts of Income Eligibility Error by WIC Category

WIC Category	Number of WIC Participants in Error	Dollar Error (\$)	95% Confidence Interval (\$)	
Pregnant	31,750	15,722,258	753,800	30,690,715
Breastfeeding	30,174	26,051,235	5,915,464	46,187,006
Postpartum	13,538	6,431,074	854,399	12,007,749
Infant	114,091	48,714,683	16,222,015	81,207,352
Child	88,399	33,580,679	-10,435,616	77,596,975
WIC Total	277,952	130,499,928	70,478,357	190,521,499

Source: National Survey of WIC Participants II Study

Summary: Case Error and Dollar Error

Case Error

The 2009 NSWP-II study estimated that 277,952 out of 9,113,617 WIC participants had income eligibility problems, representing a case error rate of 3.05 percent (95% C.I. = 1.42% and 4.68%; see Exhibit 4-7); the study did not find identity eligibility error and residential eligibility error. Exploratory analyses were conducted to assess category error among infants and children and expired certification errors among all respondents (see Appendices H and K for tentative results).

Exhibit 4-7: Income Eligibility Case Error Count and Rate

WIC Participants in Error	WIC Total Participants	Case Error Rate
277,952	9,113,617	3.05%

Source: National Survey of WIC Participants II Study

Dollar Error

Annual dollar errors associated with income eligibility error were derived based on dollar values of actual monthly voucher values redeemed by WIC participants. Dollar error rates were also estimated as the dollar error amount as a percentage of the yearly total WIC food costs—with and without infant formula rebate adjustment. For pre-rebate error rate, yearly total WIC food costs, including infant rebates billed, was the denominator; for the post-rebate rate, total WIC food costs, excluding rebate-billed values, was the denominator. Dollar error values and dollar error rates were estimated for income eligibility error as the total improper payments for FY2009 (Exhibit 4-8). The pre-rebate dollar error estimate was \$233,176,403 (95% C.I. = \$117,658,694 and \$348,694,109), with a dollar error rate approximately 3.72 percent of the total WIC food costs of \$6,274,051,429. The post-rebate dollar error estimate was \$130,499,928 (95% C.I. = \$70,478,357 and \$190,521,499), with a dollar error rate of approximately 2.98 percent.

Exhibit 4-8: Pre-and Post-rebate Annualized Dollar Error Amounts and Dollar Error Rates: WIC Income Eligibility Error

	Dollar Error Amount (\$)	WIC Total Food Costs ^a (\$)	Dollar Error Rate ^b (%)
Pre-rebate	\$233,176,403	6,274,051,429	3.72
Post-rebate	130,499,928	4,373,776,840	2.98

^a The denominator for pre- and post-rebate dollar error rates were, respectively, the total food costs (the sum of the food costs and infant rebates billed) and the food costs, excluding infant rebates value. Both numbers were for 48 contiguous States and tribal organizations, available from the FY2009 WIC Monthly Report: <http://www.fns.usda.gov/pd/wicmain.htm> as of 07/29/2011.

^b Dollar error rates were calculated using aggregated values without variance estimation.

Source: National Survey of WIC Participants II Study

4.3 Additional Analysis

The background characteristics of the error cases and a comparison of the current WIC improper payment results with previous statistics are presented below.

Characteristics of Participants with Income Eligibility Error

To examine the differences between the income eligible error group and other WIC participants (“no error” group), two-way crosstabs were run with participant background characteristics, including WIC Program category, race-ethnicity, education, home language, EU size, household with child(ren), metro vs. non-metro locale, participation in other assistance programs, and food security (see Appendix H). The group differences in most variables were not found to be statistically significant. The only two variables in which the two groups were found statistically significantly different were education and food security (Exhibit 4-9), specifically:

- Participants with less than a high school education were less likely to have eligibility in error. Of the “no error” group, 29.66 percent had not completed high school (95% CI = 23.46% and 35.85%), higher than the error group’s 3.13 percent (95% CI = 0.00% and 8.17%). The error group seemed less likely to have an education lower than high school, relative to the rest of the WIC population. No significant difference, however, was found in the other two education categories (“high school” and “more than high school”).
- Participants with high food security were also more likely to be improperly eligible. Among the participants found with no error, 81.43 percent (95% CI = 77.87% and 84.98%) were in the “high food security” category; in the error group, the rate was 97.72 percent (95% CI = 94.66% and 100.00%).

While evidence was limited, the two findings implied that participants not eligible for but erroneously awarded WIC benefits tended to be better off in education and food security than those who were eligible and appropriately awarded the benefits.

Exhibit 4-9: Education and Food Security: Participants of Income Eligibility Error and Participants Without the Error

Income Eligibility Error	Demographic/ Program Characteristics	Sample <i>n</i> (Unweighted)	Number of All WIC Participants	Percent Within Group	95% CI for Percent	
Education^a						
No Error	Less than HS	340	2,615,890	29.66	23.46	35.85
	HS	403	2,850,244	32.31	26.82	37.80
	More than HS	424	3,354,695	38.03	31.67	44.39
Error	Less than HS	2	8,702	3.13	0.00	8.17
	HS	19	140,074	50.39	28.93	71.86
	More than HS	18	129,177	46.47	24.15	68.80
Food Security						
No Error	High food security	932	7,194,811	81.43	77.87	84.98
	Marginal food security	21	98,138	1.11	0.25	1.98
	Low food security	115	839,461	9.50	6.92	12.08
	Very low food security	103	703,255	7.96	5.35	10.57
Error	High food security	36	271,610	97.72	94.66	100.00
	Marginal food security	-	-	-	-	-
	Low food security	3	6,342	2.28	0.00	5.34
	Very low food security	-	-	-	-	-

^a Education data were missing in four cases.

Source: National Survey of WIC Participants II Study

Comparing Income Eligibility Error Cases and Dollar Amounts with Prior Studies

A comparison with earlier studies was possible in terms of income eligibility error cases and dollar amounts because these indicators were available from two studies conducted in past decades.⁴⁸ Exhibits 4-10 and 4-11 summarize the statistics from the three studies.

For income eligibility error, the FY1988 study estimated a case error rate of 5.7 percent (95% CI = 3.80 and 7.60). For FY1998, the NSWP-I study estimated a case error rate of 4.5 percent (95% CI = 2.80 and 6.20). The current study, NSWP-II, estimated an income case error rate of 3.05 percent (95% CI = 1.42 and 4.68) for FY2009.

For dollar error amount and dollar error rate due to income eligibility errors, the amounts may be calculated in two ways: Pre-rebate and post-rebate. Pre-rebate figures are the dollars paid out to WIC vendors. Post-rebate figures are the total dollars paid out to WIC vendors *less* the WIC infant formula rebates that all State WIC agencies receive from the manufacturers. The difference between pre-rebate and post-rebate amounts is substantial since States have negotiated sizable rebates (almost \$160 million in May 2009 alone). In the FY1988 study, only the pre-rebate dollar error was calculated since it was the first year rebates were provided and the amount of rebates used was deemed too small to affect findings. In the FY1998 study, the post-rebate amount was calculated for the first time. This 2009 study looks at both.

- The FY1988 study estimated a dollar error of approximately \$84 million out of an annual total of \$1.5 billion in WIC food costs, a dollar error rate of 5.60 percent.
- For FY1998, the NSWP-I estimated a dollar error of approximately \$120 million out of an annual total of \$2.6 billion in WIC food costs, a dollar error rate of 4.62 percent.
- The current NSWP-II study estimated a total (pre-rebate)⁴⁹ dollar error of approximately \$233 million for FY2009; this amount was out of an annual total of nearly \$6.27 billion total WIC food costs, a pre-rebate dollar error rate of 3.72 percent. Adjusting for infant formula rebates, the FY2009 post-rebate dollar error was estimated to be approximately \$130 million out of about \$4.37 billion in annual WIC food costs, excluding infant rebates billed in the fiscal year- a post rebate dollar error rate of 2.98 percent.

Another factor relevant to dollar error estimation involves the different data sources and methods used to calculate estimates. The first study in 1988 used annual WIC food costs, multiplying the case error rate to estimate the total dollar error amounts. Ten years later, NSWP-I used the national average food cost per participant to sum the dollar error values for identified error cases.⁵⁰ While both studies were based on actual food costs (i.e., redeemed voucher values), the data and calculation were at an aggregated level, rather than individual error cases. For example, applying total or average food costs would ignore the lower food costs as redeemed by improperly certified people who, due to their higher incomes, were less likely to use the full benefits. The current study, as required by the Contract, used each individual participant's actual redemption values as the basis to calculate dollar error amounts. This resulted in more realistic

⁴⁸ The two studies are: Food and Nutrition Services, USDA (1990) *WIC Income Verification Study* (for FY1988) and Food and Nutrition Services, USDA (2001) *National Survey of WIC Participants* (for FY1998).

⁴⁹ Pre-rebate means Program costs before rebates from infant formula manufacturers are factored in.

⁵⁰ Food and Nutrition Services, USDA (2001). *National Survey of WIC Participants*, p.194.

estimates, reflecting the fact that some vouchers were not fully redeemed or never redeemed by participants.

Furthermore, the dollar value of infant formula was adjusted to produce a post-rebate estimate of dollar error. For reference purposes, dollar error estimates based on the full voucher values (and without the infant formula rebate adjustment) were calculated, using the maximum values of issued vouchers available in the redemption dataset (see Appendix 4-11). This annualized dollar error was \$329,932,975 (95% CI = \$168,451,359 and \$491,414,592).

Exhibit 4-10: Estimates of Income Eligibility Case Error Rates: 1988, 1998, and 2009

Fiscal Year	Eligibility Case Error Rate	95% CI	
FY2009	3.05%	1.42%	4.68%
FY1998	4.50%	2.80%	6.20%
FY1988	5.70%	3.80%	7.60%

Sources: National Survey of WIC Participants II Study, National Survey of WIC Participants I Study, and WIC Income Verification Study

Exhibit 4-11: Estimates of Dollar Error and Dollar Error Rates from Income Eligibility Error: 1988, 1998, and 2009

Fiscal Year	Dollar Error (\$ Million)	95% CI of Dollar Error (\$ Million)		WIC Total Food Cost (\$ Million)	Dollar Error Rate (%)
FY2009 pre-rebate	233	118	349	6,274	3.72%
FY2009 post-rebate	130	70	190	4,374	2.98%
FY1998	120	69	172	2,600	4.62%
FY1988	84	56	112	1,500	5.60%

Sources: National Survey of WIC Participants II Study, National Survey of WIC Participants I Study, and WIC Income Verification Study

CHAPTER 5. DENIAL AND TERMINATION/DISCONTINUATION FINDINGS

5.1 New Applicant Denials

The findings on new applicant denials are primarily intended to provide insight into the reasons why WIC applicants are denied eligibility as perceived by the applicants and to describe characteristics of denied new applicants. The study did not directly identify erroneous denials, but collected information on respondents' perception of agency mistakes in denying their applications, which would imply potential erroneous denials. The task was difficult still, as WIC agencies conduct the certification process and handle denial records in different ways. In communicating with sampled agencies and clinics, it became clear that many did not have a formal definition of the denial and few had a rigorous data system in place to keep records for applications that are turned down. With a potential applicant, a clinic staff usually talks over the phone and either tells her about her ineligibility or schedules an appointment for certification. Such personal and often amiable "pre-screening" procedures do not result in denial records of the ineligible cases. Most applicants who go through the appointment are issued benefits. Only very few applicants who go through the appointment receive a "notice of ineligibility," which may be documented in some scant form, if at all. The numbers of denial records are very small because potential participants are given the qualifications over the phone most of the time.

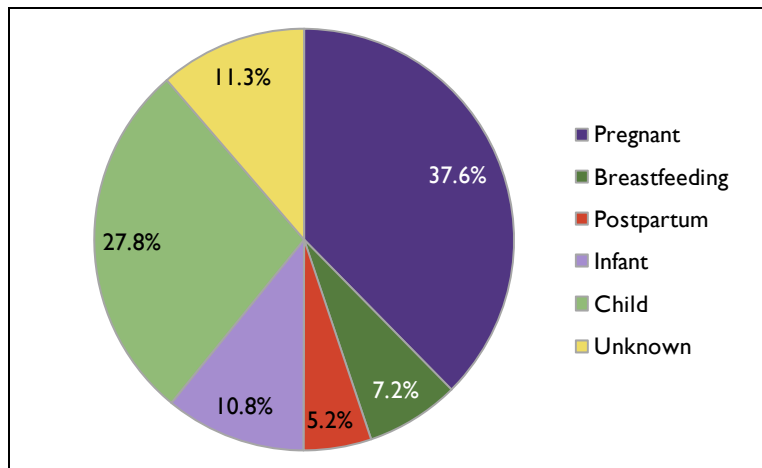
The original research plan envisioned 480 interviews with denied applicants, or about 3 per clinic sampled; the April and May 2009 data collection produced a smaller pool of denied applicants: 410 denials. The smaller than expected pool of denied applicants may have been due in part to 14 out of the 147 clinics asked to submit denial names reporting having no denials and too many other clinics providing five or fewer names.

All the new applicant denial cases provided by the responding States/clinics were used in the denial analysis. Analysts did not weight or adjust the denial sample because of the lack of information on the denial population and the absence of data for a large subset of states/clinics. Neither was a nonresponse bias analysis conducted because clinics provided little information in the denial records. Other than the applicants' contact information, the requested "WIC category" and "reasons for denial" were provided by very few clinics. Without any external information, it is impossible to generate a nationally representative denials sample. In anticipating such problems, ICF revised the data analysis plan to implement a supplemental study to the denial study that collected and analyzed termination/discontinuation data. The termination/discontinuation data analysis recognized that denials often occur at the time of benefit renewal. Termination/discontinuation data were weighted to generate the national estimates (see Section 5.2: *Terminations/Discontinuations*). Together, the denial and termination/discontinuation analyses generated knowledge on specific difficulties facing denial research, as well as descriptive estimates of the denial patterns.

As recorded by the clinics and shown in Exhibit 5-1, the largest category of denied new applicants was pregnant women (37.6%) followed by children (27.8%). Not infrequently, more than one family member applied for benefits at the same time; in such instances, a random

member—an adult—was selected for the survey. It is noted that clinics did not record the category in approximately 25 percent of the cases.

Exhibit 5-1: Profile of Denied New Applicant Respondents, by Category



n = 194

Source: National Survey of WIC Participants II Study

Denied new applicants reported that they are most likely to learn of the WIC Program through friends/coworkers (33.0%) and family members (29.4%). Doctors and other health professionals also constituted an important source (14.9%). A smaller group of denials (5.7%) did not remember where they first heard of WIC, mostly stating that they have “always known about WIC” or “It’s always been there.” Other ways applicants learned about WIC include previous participation in WIC, word of mouth, the military, schools, and the WIC clinic itself (see Exhibit 5-2).

Exhibit 5-2: How New Applicants Heard About WIC

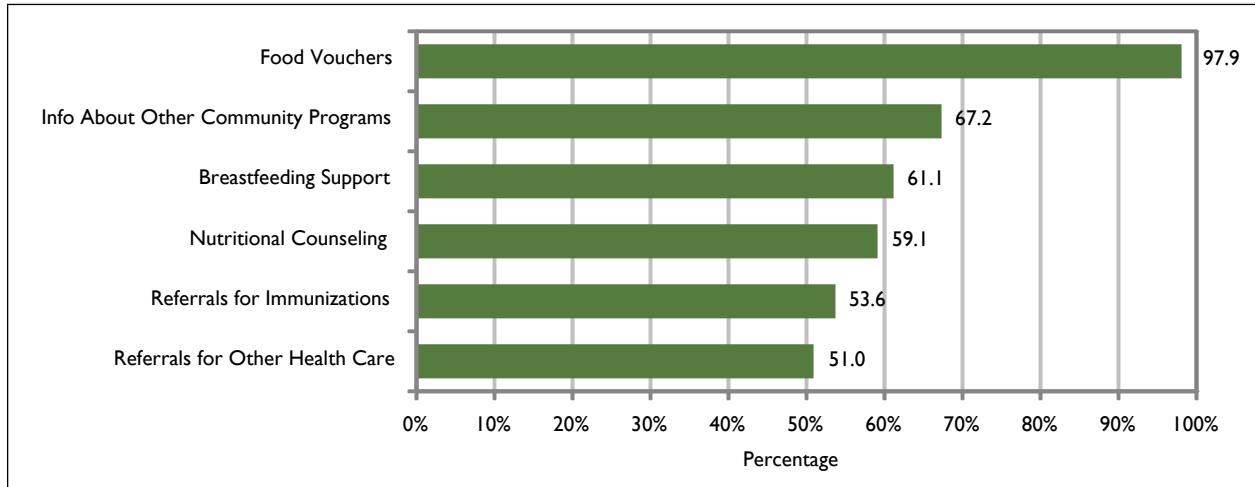
Source	Percent	Unweighted <i>n</i>
Friends/coworkers	33.0	64
Family members	29.4	57
Doctor/health professional	14.9	29
Don’t remember; it’s always been there	5.7	11
Had WIC benefits before	4.6	9
Word of mouth	4.1	8
Military or school	3.6	7
WIC clinic	3.1	6
Work	1.5	3
Other	6.7	13

n = 194 Note: Multiple responses are permitted.

Source: National Survey of WIC Participants II Study

When denied new applicants were asked what benefits they were interested in getting out of the WIC Program, virtually all mentioned WIC food vouchers (97.9%). Other reasons included information about other community programs (67.2%), support for breastfeeding, nutritional counseling, referrals for immunizations, and referrals for other health care. More than half of applicants mentioned all these benefits (see Exhibit 5-3).

Exhibit 5-3: Perceived Benefits of WIC by Denied New Applicants



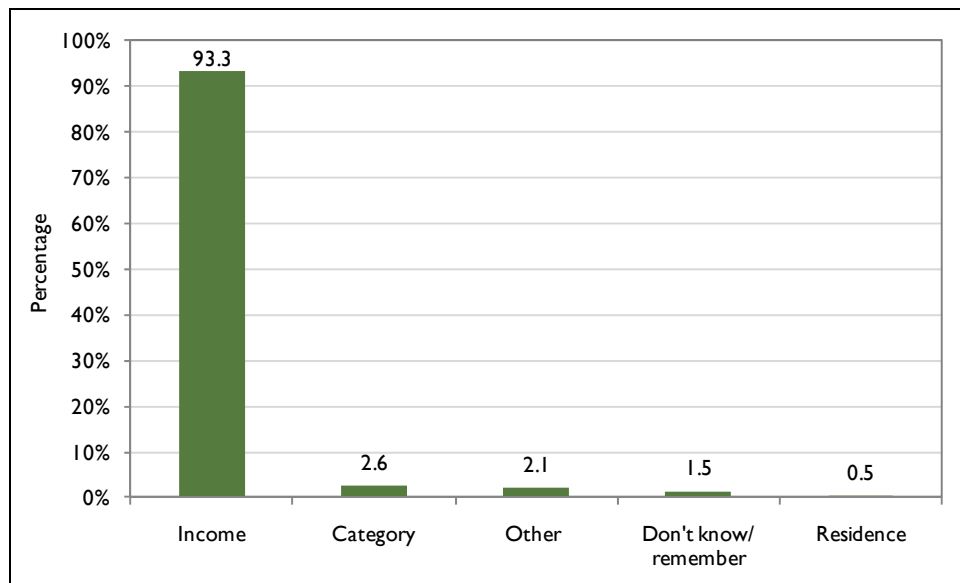
n = 194 Note: Multiple responses permitted.

Source: National Survey of WIC Participants II Study

New Applicant Reasons for Denial

Denied new applicants were asked if the reason for their denial was related to proofs of identification, residence, income, or something else. Although multiple responses were acceptable, all denied applicants cited just one reason each. The responses (Exhibit 5-4) reveal that income was by far the main reason applicants were turned down for WIC benefits (93.3%). Additional problems listed were participant category (2.6%), residence (0.5%), and other problems (2.1%). No one mentioned lack of identification. Other problems cited with very low frequencies related to failed communications between the applicant and the clinic; one applicant noted, “They never got back to me.”

Exhibit 5-4: Reasons for Ineligibility



n = 194 Note: Multiple responses permitted but each respondent only cited one reason.

Source: National Survey of WIC Participants II Study

The reasons why proofs were rejected depended mostly on the type of proof presented. With regard to income proofs, for example, applicants were always ineligible because of excessive income. A total of 174 out of 181 cases of income ineligibility (96.1%) were due to excessive income. Category problems all occurred because applicants were of the wrong participant category. No one reported that their ineligibility ruling was based on unacceptable documents, such as one with an expired date or without an address or a photograph. The various reasons are shown in Exhibit 5-5. Since the base numbers were very small for all groups but the one for the income reason, the actual mentions are shown in lieu of percentages.

Exhibit 5-5: Participant Perceived Main Reason for Determination of Ineligibility, by Type of Proof

Reason	Number of Mentions, by Type of Proof ^a			
	Income (n = 181)	Category (n = 5)	Other (n = 4)	Residence (n = 1)
Income was too high	174	–	–	–
Did not bring proof (e.g. income, residency, identity) to the WIC agency	4	–	–	1
Applicant was out of scope (e.g., too old for child, not pregnant)	–	5	–	–
Expired date on any required proof	–	–	–	–
Proof was missing address or photo	–	–	–	–
Unacceptable type of proof	1	–	–	–
Other	2	–	4	–

n = 191.

^a The three respondents who did not know the reason for their ineligibility were excluded.

Source: National Survey of WIC Participants II Study

With respect to the determination of ineligibility, respondents were asked whether the determination was correct or whether it was a mistake. While 68.6 percent agreed with the WIC agency’s rationale, 25.3 percent felt a mistake was made, and 6.2 percent were unsure or chose not to answer. Those contending the agency made a mistake were all rejected for income reasons. Some of the verbatim responses are listed in Appendix J. It would appear that the most contentious situations occurred among applicants whose incomes had changed but whose documents reflected a situation that no longer existed.

Of those determined ineligible, 64.6 percent confirmed that the clinic told them what would be needed to change the decision, or encouraged them to come back if their situation changes. About one-fourth of all denied applicants (25.2%) said they took follow-up action to get the decision changed. Of those, 71.4 percent reapplied, 4.1 percent asked to speak with a WIC supervisor, and less than 1 percent wrote a letter of appeal to WIC. The three-fourths of those who took no follow-up action said they did not either because they felt there was nothing else they could do, their incomes had risen, or they were too busy.

Characteristics of Denied New Applicants

In terms of race, denied applicants were most likely to identify themselves as White (38.7%), followed by Other (33%). Further exploration of the participants that identified themselves as Other revealed that 93.8 percent of them also classified themselves as Hispanic/Latino. A smaller number of respondents identified themselves as African American (13.4%), Asian/Pacific Islander (11.9%), or multiracial (2.1%) (see Exhibit 5-6). Ethnically, about half say they were Hispanic/Latino (51.1%).

Exhibit 5-6: Race of Denied New Applicants

Race	Percent	Unweighted <i>n</i>
White	38.7	75
Other	33.0	64
African American	13.4	26
Asian/Pacific Islander	11.9	23
Multiracial	2.1	4
American Indian/Alaska Native	0.0	0
Refused	0.9	2

n = 194

Source: National Survey of WIC Participants II Study

More than half of the denied applicants (58.8%) received education beyond high school, such as attending some college, or completing a degree (see Exhibit 5-7). This contrasts with only 33.2 percent of all applicants in the Participant Characteristics report. Most of the remaining denied applicants (33.5%) had a high school diploma, and about 1 in 20 had less education than a high school diploma.

Exhibit 5-7: Highest Level of Education Attained by Denied New Applicants

Level of Education	Percent	Unweighted <i>n</i>
Advanced degree	4.1	8
Bachelor's degree	11.9	23
Associate degree	10.3	20
Some college	32.5	63
High school/GED	33.5	65
Some high school	6.2	12
Elementary school	0.5	1
Refused	1.0	2

n = 194

Source: National Survey of WIC Participants II Study

English is reported to be the primary language of about two-thirds (66.0%) of denied new applicants, while Spanish is spoken by nearly one-fourth (23.3%). The remaining 10.8 percent of denied applicants said they speak other languages or refused to identify their primary language.

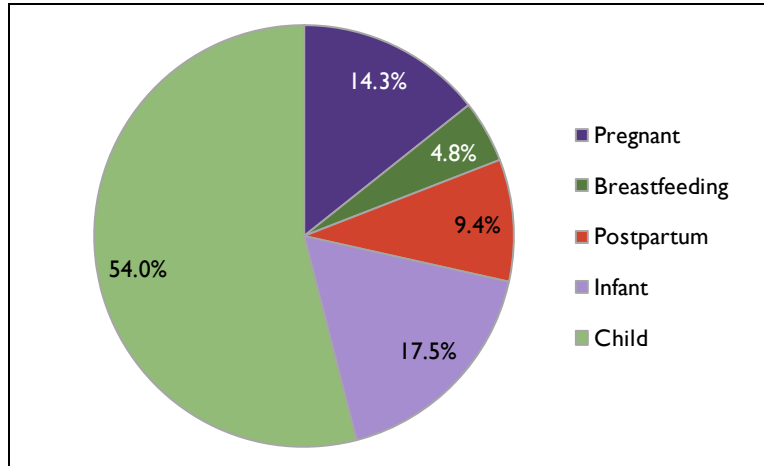
5.2 Terminations/Discontinuations

The termination/discontinuation data collection and analysis was designed to supplement the new applicant denial analysis. As the new applicant denial study encountered difficulties in obtaining sufficient data and generating nationally representative statistics, the termination/discontinuation study provided supplemental information on relevant issues, specifically the proper stop of WIC benefits and other forms of benefit cessation. Most benefits ended, as expected and evidenced by data, by voluntary withdrawal or due to other situation changes (e.g., moved away). The analysis examined reasons why the benefits of this group had ceased as perceived by participants, and provided a description of terminated/discontinued participants' basic demographics. As in the new application denial analysis, this study did not formally determine incorrect termination/discontinuation; instead it only collected data on respondents' perception of agency's mistake in termination/discontinuation.

In this study, terminated/discontinued participants are defined as WIC participants whose eligibility for WIC benefits ended in May 2009 and they were not recertified. The cross-sectional sample that was interviewed was drawn from State agency lists of participants who had received food vouchers in April 2009 but were no longer on the list of participants in May 2009. A total of 607 terminated/discontinued participants were randomly selected from selected clinics (combining the five categories of WIC participants) in the larger NSWP-II sample. Of these selected, 393 responded to the survey, a response rate of 64.7 percent. The probability of selecting the clinic and the termination/discontinuation cases from the clinic were combined to obtain an initial termination/discontinuation sample weight, which was subsequently adjusted for nonresponse using region as the adjustment category. The resulting statistics from the termination/discontinuation analysis were generalizable to the national population of WIC participants who received food vouchers in April 2009 but did not in May 2009 (weighted sample n = 1,066,567).

Terminated/discontinued respondents were similar to the population of all WIC participants in that infants and children comprised almost three-quarters of terminated/discontinued respondents (although infants were somewhat underrepresented compared to the total WIC population), while pregnant, breastfeeding, and postpartum women made up the rest (with pregnant women slightly overrepresented compared to all WIC participants)⁵¹ (see Exhibit 5-8).

Exhibit 5-8: Profile of Terminated/Discontinued Respondents, by Category



n = 393

Source: National Survey of WIC Participants II Study

When asked about how they first learned about the WIC Program, the majority of terminated/discontinued respondents reported hearing about it through their doctor or health professional (39.4%), friends (25.0%), and family members (24.9%). Other sources included through word of mouth, the military, a WIC clinic, or a school (see Exhibit 5-9).

Exhibit 5-9: How Terminated/Discontinued Respondents Heard About WIC

Source	Percent	Unweighted n
Doctor/Health professional	39.4	155
Friends/Coworkers	25.0	99
Family members	24.9	98
Other	13.6	54

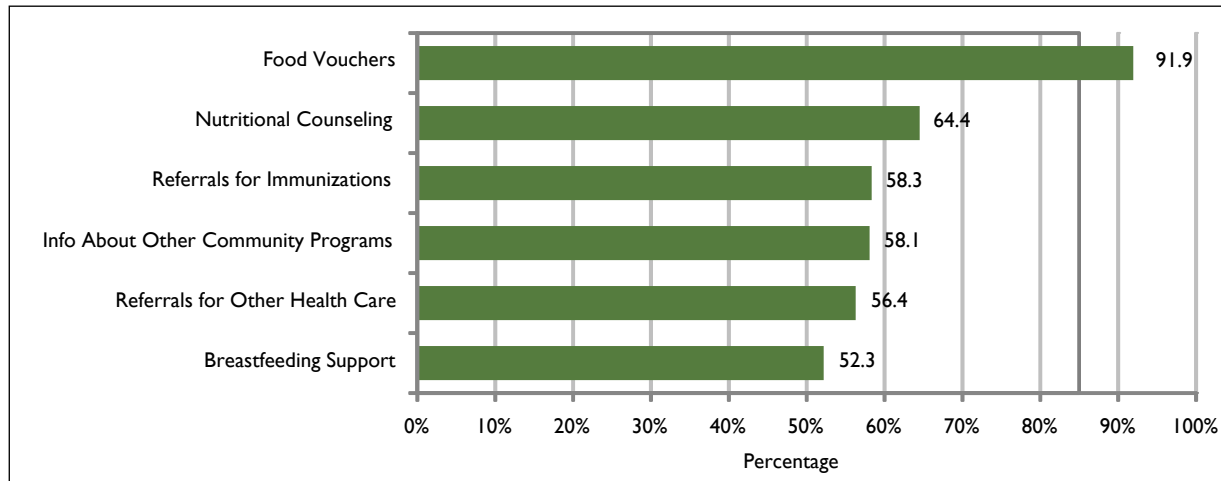
n = 393 Note: Multiple responses accepted.

Source: National Survey of WIC Participants II Study

When asked what benefits they were interested in getting out of the WIC Program, the vast majority of terminated/discontinued participants mentioned WIC food vouchers (91.9%), followed by more than half indicating each of the following: nutritional counseling, referrals for immunizations, information about other community programs, referrals for other health care, and breastfeeding support programs (see Exhibit 5-10).

⁵¹ In the WIC Participants survey, infants made up 24.3 percent and pregnant women 10.5 percent.

Exhibit 5-10: Terminated/Discontinued Respondents’ Perceived Benefits of Applying for WIC



n = 393

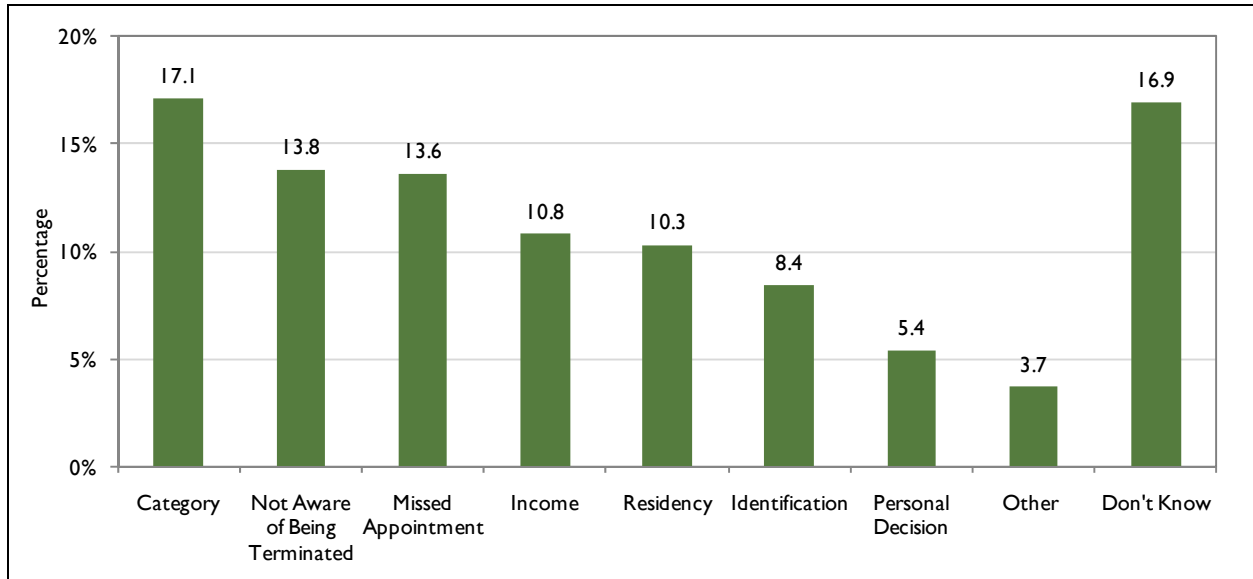
Source: National Survey of WIC Participants II Study

Reasons for Termination/Discontinuation

The reasons for ineligibility were quite different for terminated/discontinued participants than for denied new applicants. Denied new applicants were largely denied based on income eligibility. On the other hand, with regard to terminated/discontinued participants, there was no predominant reason (see Exhibit 5-11). Category changes such as a child aging out of WIC or a mother who has stopped breastfeeding were at the top of the list of reasons (17.1%). Other factors also contributed, including missed appointments (13.6%), income changes (10.8%), residency changes (10.3%), identification issues (8.4%), personal decisions (5.4%),⁵² and others (3.7%). Interestingly, about 13.8 percent were not aware of any ending of or gap in benefits, because they had recertified so quickly.

⁵² Personal decisions not to continue with WIC often revolved around scheduling issues and/or perceived inconvenience of having to go to the clinic to get benefits. It also included decisions to stop because food and services were no longer needed.

Exhibit 5-11: Terminated/Discontinued Participants’ Reasons for Ineligibility



n = 393 Note: Multiple responses allowed.

Source: National Survey of WIC Participants II Study

The various reasons for ineligibility are broken out by category in Exhibit 5-12. With relatively small base sample sizes that made conclusions difficult, the reported major reasons for benefit end were: missed appointments for infants, income change for breastfeeding women, and respondents’ personal decisions (not to continue with WIC) for postpartum women.

Exhibit 5-12: Reasons for Ineligibility for Terminated/Discontinued Participants, by Category

	Pregnant (%)	Breastfeeding (%)	Postpartum (%)	Infant (%)	Child (%)
Identification	4.5	–	6.0	2.9	11.1
Residency	4.3	–	1.6	1.5	14.7
Income change	6.0	24.5	8.1	6.0	12.6
Missed appointment	18.3	11.1	1.7	27.0	11.2
Category change	14.1	17.7	7.4	4.6	19.3
Personal decision	1.8	2.7	31.4	3.7	4.3
Not aware of being terminated	26.0	39.2	25.3	23.9	8.0
Other reason	2.8	24.5	4.5	.7	3.6
Don't know/ remember	11.4	4.8	12.2	28.8	18.6
Refused to answer the question	17.1	–	3.4	2.4	5.9

n=380 Note: For categories other than the “Child,” base sizes were less than 60 respondents.

Source: National Survey of WIC Participants II Study

Very few terminated/discontinued participants (4.3%) disagreed with the decision. Over half (61.4%) of the terminated/discontinued WIC applicants did not take any follow-up action to overturn the decision. When asked why, virtually all reported that they did not believe it would do any good, stating that they no longer met the residency, income, or category requirements. While 30.0 percent of terminated/discontinued WIC participants who did not take action specifically said it would not do any good, another 59.9 percent gave reasons such as their child aging out of the WIC Program, moving outside of the residency boundaries, and earning too much income.

Characteristics of Terminated/Discontinued Participants

In racial and ethnic background, terminated/discontinued participants were not drastically different from the general WIC population.⁵³ The largest proportion of them reported their race as White (43.1%), followed by Multiracial/Other (23.1%), then African American (12.6%). Asian/Pacific Islander and American Indian/Alaskan Native fall under 3 percent. Note that 17.3 percent of terminated/discontinued participants failed to identify their race (see Exhibit 5-13a). As to ethnicity, 34.4 percent of the terminated/discontinued participants identified themselves as Hispanic/Latino, and 11.3 percent did not report their ethnicity (Exhibit 5-13b). Note that the bulk of Hispanic/Latino terminated/discontinued participants identified themselves as Multiracial/Other (58.2%) or White (26.8%, estimates not presented in exhibits).

Exhibit 5-13a: Race of Terminated/Discontinued Participants

Race	Percent	Unweighted <i>n</i>
American Indian/ Alaskan Native	1.5	3
Asian/Pacific Islander	2.4	11
African American	12.6	59
White	43.1	176
Multiracial/ Other	23.1	77
Nonresponse	17.3	67

n = 393

Source: National Survey of WIC Participants II Study

Exhibit 5-13b: Ethnicity of Terminated/Discontinued Participants

Ethnicity	Percent	Unweighted <i>n</i>
Non-Hispanic/Latino	54.3	195
Hispanic/Latino	34.4	159
Nonresponse	11.3	39

n = 393

Source: National Survey of WIC Participants II Study

⁵³ In the Participant Characteristics report, there were 42.3 percent Whites, 19.5 percent African American, 33.4 percent Other/Multiracial, 3.1 percent Asian/Pacific Islander, and 1.8 percent American Indian/Alaskan Native. Hispanics comprised 45.1 percent of the population.

More than one-third of the terminated/discontinued WIC participants (39.3%) reported that they had received education beyond high school—some college, an associate’s, bachelor’s, or advanced degree (see Exhibit 5-14). Another 37.4 percent completed a high school diploma or GED, 15.2 percent attended some high school, and 7.8 percent attended just elementary school.

Exhibit 5-14: Terminated/Discontinued Participants’ Highest Level of Education Attained

Level of Education	Percent	Unweighted <i>n</i>
Advanced degree	1.4	6
Bachelor’s degree	7.1	28
Associate degree	5.6	22
Some college	25.2	99
High school/GED	37.4	147
Some high school	15.2	60
Elementary school	7.8	31
Refused	0.3	1

n = 393

Source: National Survey of WIC Participants II Study

English is the primary language of 64.9 percent of terminated/discontinued WIC participants, while Spanish is spoken by over one-fourth (25.2%). Other languages accounted for the remaining 9.9 percent.

5.3 Summary

Denied new applicants reported that income was by far the main reason they were turned down for WIC benefits (93.3%). The reasons for a new applicant denial depend mostly on the type of proof. Income proofs submitted by the denied new applicants were often considered ineligible because of excessive income (96.1%). Only small proportions of the denied new applicants cited eligibility problems associated with other criteria such as category or residence. Category problems all occurred because the applicants were out of scope—that is, not within the WIC definitions for “Pregnant,” “Breastfeeding,” “Postpartum,” “Infant,” or “Child.” No respondent reported lack of identification as an eligibility problem.

Approximately a quarter (25.3%) of the denied new applicants thought that the agency had made a mistake in determining their eligibility. Importantly, however, as all who reported that the agency made a mistake were rejected for reasons of income, it is possible that some errors were perceived by applicants whose incomes fell recently but who only had proofs showing the higher income levels.

There was no dominating reason for ending benefits across all categories. Category changes, typically the proper stop of the benefit, such as a child who aged out of WIC or a mother who stopped breastfeeding, appeared to be an important reason (17.1%). Other reasons included

missed appointments (13.6%), income changes (10.8%), residency changes (10.3%), identification issues (8.4%), and personal decisions (5.4%).

Few terminated/discontinued participants (4.3%) disagreed with the decision. Many respondents admitted valid reasons for their termination/discontinuation, such as category status changes; missing appointments for recertification; moving to a new clinic location; and self-made decisions to stop WIC for their own reasons. Also, a substantial proportion (13.8 %) of terminated/discontinued respondents were unaware of their benefit ending; others had their eligibility end because of changes in their situation or personal decisions.

The denial and termination/discontinuation data analysis revealed general demographic backgrounds of the denied applicants and terminated/discontinued participants. Comparing two key demographic characteristics—race and education level (available in both denial and termination/discontinuation data)—against the WIC participant population estimated with NSWP-II in-person survey data showed large patterns of denial and termination/discontinuation. Note that such patterns may not reflect complex relationships between denial/discontinuation and demographics because the descriptive statistics did not account for many factors that lead to denial or termination/discontinuation. The following large differences can be observed (see Exhibit 5-15):

- The denial rate of Whites was lower (38.6%) relative to their share in the WIC population (44.6%);
- African Americans' denial and termination/discontinuation rates (13.4% and 12.8%, respectively) were lower than their share in the WIC population (21.5%);
- Asian/Pacific Islanders received a higher denial rate (11.9%) than their share in the WIC population (2.7%); and
- Education level was inversely associated with denial or termination/discontinuation rates. For example, the group with advanced degrees had higher rates of denial and termination/discontinuation (4.1% and 1.4%, respectively) compared with their share in the population (0.9%), whereas the group that had some high school had two rates (6.2% and 15.2%, respectively) lower than the group rate in the WIC population.

Exhibit 5-15 Demographics of the Denial, Termination/Discontinuation, and the WIC Participant Population: Percentages of Race and Education Categories

	Denials (n=194) (%)	Termination/Discontinued (n=394) (%)	WIC Population (NSWP-II n=1,210) ^a (%)
<i>Race</i>			
White	38.7	43.6	44.6
Other	33.0	36.0	30.1 ^b
African American	13.4	12.8	21.5
Asian/Pacific Islander	11.9	2.4	2.7
Multiracial	2.1	1.5	N/A
American Indian/Alaska Native	0	1.3	1.1
Refused or not reported	0.9	2.4	N/A
Total	100.0	100.0	100.0
<i>Level of Education</i>			
Advanced degree	4.1	1.4	0.9
Bachelor's degree	11.9	7.1	4.2
Associate degree	10.3	5.6	5.0
Some college	32.5	25.2	26.4
High school/GED	33.5	37.4	34.9
Some high school	6.2	15.2	21.2
Elementary school	0.5	7.8	6.5
Refused	1.0	0.3	0.5
Total	100.0	100.0	99.7^c

^a Race categories may be different from those presented in the report that entailed consolidation due to low cell frequencies in two-way crosstabs.

^b Includes category of "two and more races."

^c Does not total 100 percent due to rounding.

Source: National Survey of WIC Participants II Study

CHAPTER 6. LIMITATIONS OF THE STUDY

Data collection for NSWP-II was inherently challenging because of frequent changes in WIC participants' contact information, income and employment situation, and program participation status. An inability to speak English and skepticism about government efforts to gather sensitive information also made many WIC participants reluctant to cooperate with data collection. The end result was that it was challenging even to make a first contact with respondents.

Data collection was also hampered by a lack of the most current administrative data from WIC State and local agencies. This was due in part because of the lag time between data retrieval and actual data collection; in part because agencies usually only update participant records at certification or re-certification (i.e., every 6 to 12 months); and in part because updated information is stored in different places, depending on the State WIC Program. Despite extensive efforts in fieldwork and data processing, the NSWP-II data and analysis are subject to a number of limitations. The problems are documented here for the sensible use of the information generated from the study and the improvement of future research.

6.1 Nonresponse and Potential Bias

Complete data were obtained for approximately 81 percent of participants in the *in-person interview* (WIC rates by category ranged from 79.3% for infants to 84.9% for breastfeeding women). Statistical bias, however, may exist because of the low response rate for the *telephone survey* (an overall 51.3%) that provided the pool of respondents for in-person interview sampling. The low completion rate was primarily due to the high rate of “unreachables” across WIC categories (ranging from 30.5% for pregnant women to 39.1% for postpartum women). Data collectors relied on State agency–provided contact information to locate sampled participants and were therefore, unable to locate some sampled participants due to WIC recipients' address and phone number changes.

As required by OMB, analysts conducted nonresponse bias analysis, using the available survey data, State agency data, and WIC administrative data for the participation population. The analysis examined participant race/ethnicity, gender, family size, months since the recent certification, proof of adjunctive income eligibility, and residence locale (metropolitan statistical area [MSA] or a non-MSA). Response rates were compared for each of the categories in these variables, and each variable was cross-tabulated with program outcome variables (e.g., satisfaction with WIC staff and services, attendance at any group nutrition education session, nutrition counseling, various food programs received, and food security). Race and ethnicity were found to be significantly related to both nonresponse and the outcome measures.

The original plan was to use States-provided race/ethnicity data for weight adjustment to compensate for the greater response rates of some groups over others. However, race and ethnicity provided by the States did not match the telephone survey respondents' self-reported race and ethnicity (or were missing) in 31.3 percent⁵⁴ of cases. Self-reported race and ethnicity could not be used for weight adjustments based on response rates (since the variables were not available for nonrespondents). Thus, the weights were adjusted to fit the WIC participant

⁵⁴ Refer to Section 2.3, Non-Response Bias Analysis, of Volume 1 of NSWP-II (Participant Characteristics Report)

population totals based on the WIC administrative data (see Appendix I for details). With the 2008 WIC Participant and Program Characteristics Survey estimates on race and ethnicity as the framework, analysts conducted a form of post-stratification known as raking⁵⁵ to compensate for race/ethnicity-related bias. The raking-generated weights were then applied to the tabulations of the key outcome variables. The resulting statistics were not substantively different from statistics using the original weights for all the outcome variables: The largest difference was 1.5 percent, and the bulk of the differences were under 1 percent.

Nevertheless, failing to include a large proportion of targeted sample units in the telephone survey introduced uncertainties to the statistical analysis. It is questionable as to what characteristics other than those examined in the bias analysis are different between survey respondents and nonrespondents, particularly those who were “unreachable.” It is also unclear as to what extent such potential bias in the telephone sample may affect the in-person interview sample since the latter was an adjusted subsample from the former. Such unknown potential bias calls for caution in interpreting the NSWP-II statistics.

6.2 Potential Errors: Family Income Data

Similar to NSWP-I,⁵⁶ the in-person interview in NSWP-II encountered difficulties collecting income data which may have introduced potential errors relevant to the determination of income eligibility error. First, income measurement errors may exist. Income data were collected for family members on each of 20 or more income sources (depending on States’ discretionary specification of countable incomes), each including dollar amount, pay period, and income documentation availability. The approach was purposely designed to collect the components of income (e.g., amount of payment, frequency) that would later be calculated into an annual dollar amount by researchers. However, it was out of the study scope to re-interview respondents when problems were discovered during data cleaning. Thus, derivation of the measure of family monthly income involved systematic, informed judgments. For example, in 12 cases where a nonstandard pay period was recorded but not detailed, researchers checked similar income sources and dollar amounts to estimate the pay period so the amount could be converted to monthly income.

The problem stems from a dilemma facing income data collection: On the one hand, onsite clarification to maximize income data validity needs more communication between the data collector and the respondent; on the other, respondents’ cooperation is facilitated by data collectors’ role as a neutral agent gathering information with few judgments.

Second, differing methodologies in NSWP-I and NSWP-II resulted in a difference in timing between income data collection and certification in this study that may have affected the determination of eligibility. Data were largely collected on incomes of the month immediately before the in-person interview, rather than for the month when certification was given. This was the case because respondents, in general, were unable to trace income information long enough

⁵⁵ Raking is a form of iterative post-stratification, frequently used when totals come from different tables. In this case, different tables presented race and Hispanic status.

⁵⁶ In NSWP-I, 38.8 percent of the in-home interview respondents did not provide income documents and of these, 74.3 percent changed their income information from what was previously reported in the onsite clinic interview, leading to two sets of income eligibility error estimates (NSWP-I, p. 178 and p. 180).

to cover the time gap between certification and the income data collection. The time gap may have been more than 12 months in some cases: The sample consisted of participants who received a voucher in May 2009 (hence, certified earlier than or in May) and the data collection occurred between June 2009 and early 2010. This time gap may cause discrepancies in determining income eligibility by NSWPII and the agency's certification.

6.3 State Data Quality Concern: Expired Certification Error

NSWP-II explored analysis of expired certification error but did not formally present the results (procedures and tentative results are available in Appendix K) because of data quality concerns. Expired certification errors occur when benefits are awarded and redeemed after the expiration date of the benefit. Accurate certification dates must be made available to identify expired certification error. NSWPII generated tentative statistics of this error using State agencies' data on certification dates. State agencies typically do not have the most updated and reliable information on certification dates. Local agencies actually conduct certification and update certification dates to handle constantly shifting participant status such as WIC benefit issuance, termination, renewal, and category change. Efforts to obtain data from local agencies were made. However, it was difficult to obtain the cooperation of local agencies because of resource restraints and local agency daily work overburden, among other reasons (see Volume 2: State and Local Agencies Report for information on staff shortages). The issue points to the importance of collaboration with local agencies and clinics, perhaps by providing incentives (e.g., compensation for data handling, technical assistance, and legal or regulation requirement).

6.4 Proxy Estimates: Infant Formula Rebate Adjustment

Estimating improper payment (dollar error) with adjustment for infant formula rebate generated more realistic improper payment estimates because participants often do not redeem all the voucher values. The procedure was, however, subject to data restrictions: (1) redemption data do not separate the infant formula amount from other food redemption values; (2) States' negotiated rebate rates differ by formula products, requiring data consolidation that may introduce error; and (3) rebate rates are applied to wholesale prices only, but the survey collected redemption data are based on retail prices, hence requiring complicated procedures of adjustment. In short, post-rebate estimates of dollar error cannot be calculated from the survey data alone.

WIC administrative data and the NSWPII statistics were combined to generate a proxy measure of rebate values for infants (see Appendix L). Subtracting the rebate value from each infant's actual redeemed voucher value, analysts obtained post-rebate food costs, which is the improper payment or dollar error for an infant with identified income ineligibility error. The weighted sum of this measure was the post-rebate improper payment due to income ineligibility error for WIC infants. The proxy estimates based on State average rebate rates and the national average redemption value are likely to be less accurate than estimates based on the actual rebate values for individual error cases, had the data been available.

6.5 Lack of Statistical Generalization: New Applicant Denial Analysis

Only a descriptive new applicant denial analysis was conducted in NSWP-II with limited data collected from WIC agencies because few agencies maintained a data system to keep records for applications that are turned down. Typically, the numbers of denial records are very small in agencies that keep the records, since many potential participants learn about their likely eligibility over the telephone; and do not complete a formal application. The planned 480 interviews (roughly three per clinic) resulted in only 410 denied new applicant interviews. The new applicant denials data was not weighted and, therefore, should not be considered nationally representative.

APPENDICES

**APPENDIX A:
IN-PERSON SURVEY INSTRUMENT
(VERSION A: PREGNANT, BREASTFEEDING, AND
POSTPARTUM)**

Appendix A

IN-PERSON INTERVIEW (Version B: Pregnant, Breastfeeding, and Postpartum)

- Hi. Thanks for agreeing to do the second part of our survey. Your answers are completely confidential and, as I mentioned when we set this up, nothing you say will have any bearing on your benefits. The WIC program is just trying to get a better idea of who participates in the program and their circumstances. I will be giving you \$20 in appreciation of your time.

READ INFORMED CONSENT STATEMENT AND GET CONSENT BEFORE PROCEEDING.

IDENTITY AND RESIDENCY

- The first thing we need is some identification—silly as it may seem—and proof that you live here. [IF R. HAS TROUBLE WITH THIS REQUEST, READ OFF SOME OF THE ACCEPTABLE TYPES OF ID AND RESIDENCY PROOF FROM LIST.]

Identification proofs [CHECK AT LEAST ONE]	Residency proofs [CHECK AT LEAST ONE]
<input type="checkbox"/> State-issued license or ID	<input type="checkbox"/> State-issued license or ID w/address
<input type="checkbox"/> U.S. passport w/photo	<input type="checkbox"/> State/federal correspondence w/address
<input type="checkbox"/> Foreign passport w/photo	<input type="checkbox"/> WIC folder
<input type="checkbox"/> WIC folder	<input type="checkbox"/> Checkbook w/address
<input type="checkbox"/> W-2 form or Tax bill w/name	<input type="checkbox"/> Rent or mortgage receipt, lease w/address
<input type="checkbox"/> Birth certificate	<input type="checkbox"/> Utility or tax bill w/address
<input type="checkbox"/> Social Services letter w/ name	<input type="checkbox"/> Documents from public school w/address
<input type="checkbox"/> Social Security or Green card	<input type="checkbox"/> Written statement from reliable third party (e.g. non-profit aid organization)
<input type="checkbox"/> Hospital or immunization record	
<input type="checkbox"/> Other: SPECIFY _____	<input type="checkbox"/> Other: SPECIFY _____

PRIMARY FAMILY/ECONOMIC UNIT

- Let's begin by having you tell me the names of all the persons who live or stay with you whether they are related to you or not. I will type in the names so I can follow up with some questions. [PROBE: ANYONE ELSE?]

RECORD ALL NAMES IN LIST FORM.

- _____
- _____
- _____
- ETC.

AFTER ALL PERSONS ARE LISTED, ASK FOLLOWING QUESTIONS FOR EACH PERSON:		
4. What is their relationship to you-?	1. Spouse 2. Partner 3. Child 4. Step-child 5. Foster child 6. Parent/ Guardian 7. Step-parent 8. Foster parent 9. Brother/Sister 10. Grandparent	11. Uncle/aunt 12. Cousin 13. Nephew/niece 14. Parent-in-law 15. Brother-in-law/sister-in-law 16. Other relative 17. Other non-relative 18. Child in Temporary Care of Friends/Relatives
5. Is this individual male or female?		<input type="checkbox"/> 1-Male <input type="checkbox"/> 2-Female
6. How old is this person?		_____ YEARS
7. FOR ANY CHILD LESS THAN 5 YEARS OR ANY WOMAN GREATER THAN 14 YEARS ASK: Is this person receiving WIC now?		<input type="checkbox"/> 1-Yes <input type="checkbox"/> 2-No
8. OTHERWISE, IF Q6 \geq 15, ASK: Do you consider [READ NAME] to be part of your family group -- that is, you are sharing income and expenses as if you were a family -- OR do you feel that you each keep your income and expenses and food separately? IF Q6<15, ASK: Do you consider [READ NAME] to be part of your family group -- that is, you are responsible for taking care of them as if you were all in the same family?		<input type="checkbox"/> 1-Share like family <input type="checkbox"/> 2-Separate finances
9. PROGRAM WILL CALCULATE NUMBER OF PEOPLE IN PRIMARY ECONOMIC UNIT PLUS ADD ONE FOR WIC PARTICIPANT [Q4=1,2,3, 4 OR 5] or [Q8=1] and [Q6 \geq 15]		<input type="checkbox"/> NUMBER OF PEOPLE IN PRIMARY ECONOMIC UNIT
10. COMPUTER WILL COMPARE THE NUMBER OF PEOPLE IN PRIMARY ECONOMIC UNIT (Q9) WITH # OF HOUSEHOLD MEMBERS IN WIC RECORDS (P5-TOTAL IN PRIMARY ECONOMIC UNIT). IF Q9=P5, SKIP TO Q11 IF Q9<P5, SAY: The WIC records show that back in [INSERT MONTH/DATE OF CERTIFICATION] you had [INSERT #] adults and [INSERT #] children in this household, which is more than we listed today. Have we left someone off the list? Or perhaps there is someone on our list today who <u>should</u> be counted as part of your main family unit but was not? [PROBE & ADD NEW NAMES OR INFORMATION IN Q2-9 AS APPROPRIATE] IF Q9>P5, SAY: The WIC records show that back in [INSERT MONTH/DATE OF CERTIFICATION] you had [INSERT #] adults and [INSERT #] children in this household, which is fewer than we have listed here. Can I verify that everyone on our list here IS part of your main family unit? [PROBE & DELETE NAMES OR INFORMATION IN Q2-9 AS APPROPRIATE] NOTE: IF RESPONDENT HAS DIFFICULTY RECALLING TIME PERIOD USE NARRATIVE APPROACH IN WHICH A TIME IS LINKED TO A SALIENT EVENT]		
FROM PRIMARY ECONOMIC UNIT LIST, COMPUTER WILL GENERATE A LIST OF "POTENTIAL WAGE EARNERS" – DEFINED AS ALL THE ADULTS AND ALL CHILDREN \geq 15 YEARS		

ADJUNCTIVE OR AUTOMATIC ELIGIBILITY

11. **[IF ADJ ELIGIBILITY IS SHOWN IN RECORDS, ASK:]** The WIC records show that you qualified for WIC because you, or a member of your family, participate in the [FILL IN FROM P4] program. Can you show me the document that you showed to WIC to demonstrate participation in that program such as the certification card, the award letter you got, or an active program voucher? [IF NO, PROBE: Do you have anything at all?]

[IF ADJ ELIGIBILITY IS NOT SHOWN IN RECORDS, ASK:] Did you qualify for WIC by showing that you participated in another benefits program such as Medicaid, SNAP or TANF? [OPTIONAL:] If yes, can you show me the document that you showed to WIC to demonstrate participation in that program such as the certification card, the award letter you got, or an active program voucher?

YES, PROOF SHOWN – ENTER :

a) NAME OF PROGRAM RECIPIENT ON PROOF SHOWN. [MAKE SURE IT MATCHES SOMEONE IN THE PRIMARY ECONOMIC UNIT; OTHERWISE ASK FOR ANOTHER DOCUMENT/CARD AS PROOF]	_____
b) DATE OF DOCUMENT/CARD ISSUANCE (MM/DD/YYYY)	[TYPE IN] _____ 99 NO DATE [PROBE: Do you have anything that shows the dates for your participation in the program? IF NO, ASK FOR DATE OF FIRST ELIGIBILITY.]
c) DATE OF DOCUMENT/CARD OR ELIGIBILITY EXPIRATION (MM/DD/YYYY)	[TYPE IN] _____ 99 NO DATE [PROBE: Do you have anything that shows the expiration date?]
d) NAME OF ISSUING AGENCY	[TYPE IN] _____ 99 NOT EVIDENT [PROBE: Do you have anything that shows the agency name?]
e) NUMBER ON DOCUMENT/CARD	[TYPE IN] _____ 99 NO NUMBER
f) DOCUMENT/CARD SHOWN	<input type="checkbox"/> Certification card [SKIP TO Q13 IF ADJ ELIGIBLE IN RECORDS; CONTINUE TO Q12 IF NOT ADJ ELIGIBLE IN RECORDS.] <input type="checkbox"/> Award letter [SKIP TO Q13 IF ADJ ELIGIBLE IN RECORDS; CONTINUE TO Q12 IF NOT ADJ ELIGIBLE IN RECORDS.] <input type="checkbox"/> Active program voucher [SKIP TO Q13 IF ADJ ELIGIBLE IN RECORDS; CONTINUE TO Q12 IF NOT ADJ ELIGIBLE IN RECORDS.] <input type="checkbox"/> Food Stamp EBT card [SKIP TO Q13 IF ADJ ELIGIBLE IN RECORDS; CONTINUE TO Q12 IF NOT ADJ ELIGIBLE IN RECORDS.] <input type="checkbox"/> Other [IF ANY DOUBTS ABOUT VALIDITY, HAND R. PROGRAM PARTICIPATION RELEASE FORM. THEN CONTINUE TO Q12]

- NO, PROOF NOT SHOWN OR WRONG PROOF SHOWN.
[IF PERSON IS ADJUNCTIVELY ELIGIBLE IN RECORDS: HAND R. PROGRAM PARTICIPATION RELEASE FORM & CONTINUE TO Q12
IF PERSON IS NOT ADJUNCTIVELY ELIGIBLE IN RECORDS, CONTINUE TO Q12]

INCOME ELIGIBILITY

12. Now I am going to ask you about the income earned by you and other primary members of this household. WIC is interested in the accuracy of their data records in this area. The information you share with me will be confidential and will be combined with that from other people, so WIC won't know your or anybody else's personal information.

So let's start with [READ NAME OFF LIST OF PRIMARY ECONOMIC UNIT. RESPONDENT SHOULD BE FIRST ON LIST.]

[NOTE: IF RESPONDENT HAS DIFFICULTY RECALLING TIME PERIOD USE NARRATIVE APPROACH IN WHICH A TIME IS LINKED TO A SALIENT EVENT]

<p>a) Thinking back to [INSERT MOST RECENT CERTIFICATION MONTH/YEAR], did [INSERT you/NAME] receive any income from... [READ FROM BELOW]?</p> <p>CHECK ONLY IF YES</p>	<p>b) FOR EACH ITEM CHECKED IN a), ASK: How much did [INSERT you/NAME] earn?</p>	<p>c) Can you show me some evidence of that income such as [READ FROM LIST ACCOMPANYING EACH ITEM]</p>
<p><input type="checkbox"/> Wages, salary, fees (excluding military pay)</p> <p>YES →</p> <p>NO ↓</p>	<p>\$ _____</p>	<p><input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____</p> <p><input type="checkbox"/> Pay stub/earnings statement <input type="checkbox"/> W-2 form <input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM AND UNDOCUMENTED EMPLOYMENT INFO FORM</p>
<p><input type="checkbox"/> Military pay</p> <p>YES →</p> <p>NO ↓</p>	<p>\$ _____</p>	<p><input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____</p> <p><input type="checkbox"/> Leave and earnings statement <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM</p>

<input type="checkbox"/> Tips and bonuses YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> W-2 form <input type="checkbox"/> Other: _____ <input type="checkbox"/> None
<input type="checkbox"/> Net income from self employment (from farm and non-farm business) YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> Business records <input type="checkbox"/> Expense receipts <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE UNDOCUMENTED EMPLOYMENT FORM
<input type="checkbox"/> Unemployment compensation YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> Copy of check, check stub <input type="checkbox"/> Letter of determination <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> Workers compensation YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> Copy of check, check stub <input type="checkbox"/> Award statement <input type="checkbox"/> Statement from insurance company <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> Child Support YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> Copy of check <input type="checkbox"/> Support agreement <input type="checkbox"/> Divorce/separation decree <input type="checkbox"/> Court order <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM

<input type="checkbox"/> Alimony YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> Copy of check <input type="checkbox"/> Support agreement <input type="checkbox"/> Divorce/separation decree <input type="checkbox"/> Court order <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> Social Security YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> SSA Award letter <input type="checkbox"/> Statement of benefits <input type="checkbox"/> 2007 IRS tax return (line 14a on 1040A) <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> SSI – Fed government YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> Notice of benefits <input type="checkbox"/> Copy of check, check stub <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> SSI—State issued YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> Notice of benefits <input type="checkbox"/> Copy of check, check stub <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> Any private or public pension, annuity or survivor's benefits YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> Notice of benefits <input type="checkbox"/> Copy of check, check stub <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM

<input type="checkbox"/> Medical assistance (any) YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> Notice of benefits <input type="checkbox"/> Copy of check, check stub <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> Veteran's payments YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> Notice of benefits <input type="checkbox"/> Copy of check, check stub <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> Other cash income YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> Benefits statement <input type="checkbox"/> Copy of check, check stub <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> Energy assistance YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> Notice of benefits <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> Net rental income YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> Business records <input type="checkbox"/> Expense receipts <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> Income from trusts YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> Business records <input type="checkbox"/> Expense receipts <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM

<input type="checkbox"/> Commissions YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> Business records <input type="checkbox"/> Expense receipts <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> Income from estates YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> Business records <input type="checkbox"/> Expense receipts <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> Net royalties YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> Business records <input type="checkbox"/> Expense receipts <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> Interest or dividends YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> Earnings statement <input type="checkbox"/> Copy of check, check stub <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM

REPEAT INCOME QUESTIONS (Q12) FOR EVERY ADULT MEMBER OF PRIMARY ECONOMIC UNIT.

CLOSING

13. READ: This completes our survey. It was great talking to you. Thank you so much for helping us out. Here is \$20 in appreciation for your time. [FILL OUT RECEIPT FOR INCENTIVE AND GET SIGNATURE.]

Do you have any questions before I leave?

Have a great day/evening.

APPENDIX B:

**IN-PERSON SURVEY INSTRUMENT
(VERSION B: INFANTS AND CHILDREN)**

Appendix B

IN-PERSON INTERVIEW (Version B: Infants and Children)

- Hi. Thanks for agreeing to do the second part of our survey. Your answers are completely confidential and, as I mentioned when we set this up, nothing you say will have any bearing on your benefits. The WIC program is just trying to get a better idea of who participates in the program and their circumstances. I will be giving you \$20 in appreciation of your time.

READ INFORMED CONSENT STATEMENT AND GET CONSENT BEFORE PROCEEDING.

IDENTITY AND RESIDENCY

- The first thing we need is some identification for the child—silly as it may seem—and proof that you live here. [IF R. HAS TROUBLE WITH THIS REQUEST, READ OFF SOME OF THE ACCEPTABLE TYPES OF ID AND RESIDENCY PROOF FROM LIST.]

Identification proofs [CHECK AT LEAST ONE]	Residency proofs [CHECK AT LEAST ONE]
<input type="checkbox"/> State-issued license or ID	<input type="checkbox"/> State-issued license or ID w/address
<input type="checkbox"/> U.S. passport w/photo	<input type="checkbox"/> State/federal correspondence w/address
<input type="checkbox"/> Foreign passport w/photo	<input type="checkbox"/> WIC folder
<input type="checkbox"/> WIC folder	<input type="checkbox"/> Checkbook w/address
<input type="checkbox"/> W-2 form or Tax bill w/name	<input type="checkbox"/> Rent or mortgage receipt, lease w/address
<input type="checkbox"/> Birth certificate	<input type="checkbox"/> Utility or tax bill w/address
<input type="checkbox"/> Social Services letter w/ name	<input type="checkbox"/> Documents from public school w/address
<input type="checkbox"/> Social Security or Green card	<input type="checkbox"/> Written statement from reliable third party (e.g. non-profit aid organization)
<input type="checkbox"/> Hospital or immunization record	
<input type="checkbox"/> Other: SPECIFY _____	<input type="checkbox"/> Other: SPECIFY _____

PRIMARY FAMILY/ECONOMIC UNIT

- Let's begin by having you tell me the names of all the persons who live or stay with [NAME OF SAMPLED INFANT/CHILD RESPONDENT] whether they are related or not. I will type in the names so I can follow up with some questions. Be sure to include yourself. [PROBE: ANYONE ELSE?]

RECORD ALL NAMES IN LIST FORM.

- _____
- _____
- _____
- _____
- _____
- _____
- _____
- ETC.

AFTER ALL PERSONS ARE LISTED, ASK FOLLOWING QUESTIONS FOR EACH PERSON:		
4. What is their relationship to [NAME OF SAMPLED INFANT/CHILD PARTICIPANT]?	6. Parent/ Guardian 7. Step-parent 8. Foster parent 9. Brother/Sister 10. Grandparent 11. Uncle/aunt 7. Cousin 8. Nephew/niece 9. Parent-in-law	10. Brother-in-law/ sister-in-law 11. Other relative 12. Other non-relative 18. Child in Temporary Care of Friends/Relatives
5. Is this individual male or female? [IF TALKING TO PERSON, DON'T ASK . JUST MAKE NOTE OF GENDER.]		<input type="checkbox"/> 1-Male <input type="checkbox"/> 2-Female
6. How old is this person? [IF LESS THAN ONE YEAR, RECORD "0"]		_____ YEARS
7. FOR ANY CHILD LESS THAN 5 YEARS OR ANY WOMAN GREATER THAN 14 YEARS ASK: Is this person receiving WIC now?		<input type="checkbox"/> 1-Yes <input type="checkbox"/> 2-No
8. OTHERWISE, IF Q6 \geq 15, ASK: Do you consider [READ NAME] to be part of your family group -- that is, you are sharing income and expenses as if you were a family -- OR do you feel that you each keep your income and expenses and food separately? IF Q6<15, ASK: Do you consider [READ NAME] to be part of your family group -- that is, you are responsible for taking care of them as if you were all in the same family?		<input type="checkbox"/> 1-Share like family <input type="checkbox"/> 2-Separate finances
9. PROGRAM WILL CALCULATE NUMBER OF PEOPLE IN PRIMARY ECONOMIC UNIT PLUS ADD ONE FOR WIC PARTICIPANT • Q8=1 and Q6 \geq 15		<input type="checkbox"/> NUMBER OF PEOPLE IN PRIMARY ECONOMIC UNIT
10. COMPUTER WILL COMPARE THE NUMBER OF PEOPLE IN PRIMARY ECONOMIC UNIT (Q10) WITH # OF HOUSEHOLD MEMBERS IN WIC RECORDS (P5-TOTAL IN PRIMARY ECONOMIC UNIT). IF Q10=P5, SKIP TO Q11 IF Q10<P5, SAY: The WIC records show that you had [INSERT #] adults and [INSERT #] children in this household, which is more than we listed today. Have we left someone off the list? Or perhaps there is someone on our list today who <u>should</u> be counted as part of your main family unit but was not? [PROBE & ADD NEW NAMES OR INFORMATION IN Q2-10 AS APPROPRIATE] IF Q10>P5, SAY: The WIC records show that you had [INSERT #] adults and [INSERT #] children in this household, which is fewer than we have listed here. Can I verify that everyone on our list here IS part of your main family unit? [PROBE & DELETE NAMES OR INFORMATION IN Q2-10 AS APPROPRIATE]		
FROM PRIMARY ECONOMIC UNIT LIST, COMPUTER WILL GENERATE A LIST OF "POTENTIAL WAGE EARNERS" – DEFINED AS ALL THE ADULTS AND ALL CHILDREN \geq 15 YEARS		

ADJUNCTIVE OR AUTOMATIC ELIGIBILITY

11. IF ADJ ELIGIILITY IS SHOWN IN RECORDS, ASK: The WIC records show that you qualified for WIC because your child, or a member of your family, participate in the [FILL IN FROM P4] program. Can you show me the document that you showed to WIC to demonstrate participation in that program such as the certification card, the award letter you got, or an active program voucher? [IF NO, PROBE: Do you have anything at all?]

IF ADJ ELIGIBILITY IS NOT SHOWN IN RECORDS, ASK: Did your child qualify for WIC by showing that he/she, or another family member, participated in another benefits program such as Medicaid, SNAP or TANF? [OPTIONAL:] If yes, can you show me the document that you showed to WIC to demonstrate participation in that program such as the certification card, the award letter you got, or an active program voucher?

YES, PROOF SHOWN – WRITE DOWN :

a) NAME OF PROGRAM RECIPIENT ON PROOF SHOWN. [MAKE SURE IT MATCHES SOMEONE IN THE PRIMARY ECONOMIC UNIT; OTHERWISE ASK FOR ANOTHER DOCUMENT/CARD AS PROOF]	_____
b) DATE OF DOCUMENT/CARD ISSUANCE (MM/DD/YYYY)	[TYPE IN] _____ 99 NO DATE [PROBE: Do you have anything that shows the dates for your participation in the program?]
c) DATE OF DOCUMENT/CARD OR ELIGIBILITY EXPIRATION (MM/DD/YYYY)	[TYPE IN] _____ 99 NO DATE [PROBE: Do you have anything that shows the expiration date?]
d) NAME OF ISSUING AGENCY	[TYPE IN] _____ 99 NOT EVIDENT [PROBE: Do you have anything that shows the agency name?]
e) NUMBER ON DOCUMENT/CARD	[TYPE IN] _____ 99 NO NUMBER
f) DOCUMENT/CARD SHOWN	<input type="checkbox"/> Certification card [SKIP TO Q13 IF ADJ ELIGIBLE IN RECORDS; CONTINUE TO Q12 IF NOT ADJ ELIGIBLE IN RECORDS.] <input type="checkbox"/> Award letter [SKIP TO Q13 IF ADJ ELIGIBLE IN RECORDS; CONTINUE TO Q12 IF NOT ADJ ELIGIBLE IN RECORDS.] <input type="checkbox"/> Active program voucher [SKIP TO Q13 IF ADJ ELIGIBLE IN RECORDS; CONTINUE TO Q12 IF NOT ADJ ELIGIBLE IN RECORDS.] <input type="checkbox"/> Food Stamp EBT card [SKIP TO Q13 IF ADJ ELIGIBLE IN RECORDS; CONTINUE TO Q12 IF NOT ADJ ELIGIBLE IN RECORDS.] <input type="checkbox"/> Other [IF ANY DOUBTS ABOUT VALIDITY, HAND R. PROGRAM PARTICIPATION RELEASE FORM TO SIGN. THEN CONTINUE TO Q12]

- NO, PROOF NOT SHOWN OR WRONG PROOF SHOWN.
[IF PERSON IS ADJUNCTIVELY ELIGIBLE IN RECORDS: HAND R. PROGRAM PARTICIPATION RELEASE FORM & CONTINUE TO Q12.
IF PERSON IS NOT ADJUNCTIVELY ELIGIBLE IN RECORDS, CONTINUE TO Q12]

INCOME ELIGIBILITY

12. Now I am going to ask you about the income earned by you and other primary members of this household. WIC is interested in the accuracy of their data records in this area. The information you share with me will be confidential and will be combined with that from other people, so WIC won't know your or anybody else's personal information.

So let's start with [READ NAME OFF LIST OF PRIMARY ECONOMIC UNIT]

[NOTE: IF RESPONDENT HAS DIFFICULTY RECALLING TIME PERIOD USE NARRATIVE APPROACH IN WHICH A TIME IS LINKED TO A SALIENT EVENT]

<p>d) Thinking back to [INSERT MOST RECENT CERTIFICATION MONTH/YEAR], did [INSERT you/NAME] receive any income from... [READ FROM BELOW]?</p> <p>CHECK ONLY IF YES</p>	<p>e) FOR EACH ITEM CHECKED IN a), ASK: How much did [INSERT you/NAME] earn?</p>	<p>f) Can you show me some evidence of that income such as [READ FROM LIST ACCOMPANYING EACH ITEM]</p>	
<p><input type="checkbox"/> Wages, salary, fees (excluding military pay)</p> <p>YES →</p> <p>NO ↓</p>	<p>\$ _____</p>	<p><input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____</p>	<p><input type="checkbox"/> Pay stub/earnings statement <input type="checkbox"/> W-2 form <input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM AND UNDOCUMENTED EMPLOYMENT INFO FORM</p>
<p><input type="checkbox"/> Military pay</p> <p>YES →</p> <p>NO ↓</p>	<p>\$ _____</p>	<p><input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____</p>	<p><input type="checkbox"/> Leave and earnings statement <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM</p>

<input type="checkbox"/> Tips and bonuses YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> W-2 form <input type="checkbox"/> Other: _____ <input type="checkbox"/> None
<input type="checkbox"/> Net income from self employment (from farm and non-farm business) YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> Business records <input type="checkbox"/> Expense receipts <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE UNDOCUMENTED EMPLOYMENT FORM
<input type="checkbox"/> Unemployment compensation YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> Copy of check, check stub <input type="checkbox"/> Letter of determination <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> Workers compensation YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> Copy of check, check stub <input type="checkbox"/> Award statement <input type="checkbox"/> Statement from insurance company <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> Child Support YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> Copy of check <input type="checkbox"/> Support agreement <input type="checkbox"/> Divorce/separation decree <input type="checkbox"/> Court order <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> Alimony YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> Copy of check <input type="checkbox"/> Support agreement <input type="checkbox"/> Divorce/separation decree <input type="checkbox"/> Court order <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM

<input type="checkbox"/> Social Security YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> SSA Award letter <input type="checkbox"/> Statement of benefits <input type="checkbox"/> 2007 IRS tax return (line 14a on 1040A) <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> SSI – Fed government YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> Notice of benefits <input type="checkbox"/> Copy of check, check stub <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> SSI—State issued YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> Notice of benefits <input type="checkbox"/> Copy of check, check stub <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> Any private or public pension, annuity or survivor's benefits YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> Notice of benefits <input type="checkbox"/> Copy of check, check stub <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> Medical assistance (any) YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> Notice of benefits <input type="checkbox"/> Copy of check, check stub <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> Veteran's payments YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> Notice of benefits <input type="checkbox"/> Copy of check, check stub <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM

<input type="checkbox"/> Other cash income YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> Benefits statement <input type="checkbox"/> Copy of check, check stub <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> Energy assistance YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> Notice of benefits <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> Net rental income YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> Business records <input type="checkbox"/> Expense receipts <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> Income from trusts YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> Business records <input type="checkbox"/> Expense receipts <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> Commissions YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> Business records <input type="checkbox"/> Expense receipts <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> Income from estates YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> Business records <input type="checkbox"/> Expense receipts <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM

<input type="checkbox"/> Net royalties YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> Business records <input type="checkbox"/> Expense receipts <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM
<input type="checkbox"/> Interest or dividends YES → NO ↓	\$ _____	<input type="checkbox"/> Per week <input type="checkbox"/> Per 2 weeks <input type="checkbox"/> 2 Times a month <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____	<input type="checkbox"/> 2007 IRS tax return <input type="checkbox"/> Earnings statement <input type="checkbox"/> Copy of check, check stub <input type="checkbox"/> Other: _____ <input type="checkbox"/> None: GIVE INCOME RELEASE FORM

REPEAT INCOME QUESTIONS (Q12) FOR EVERY ADULT MEMBER OF PRIMARY ECONOMIC UNIT.

CLOSING

13. READ: This completes our survey. It was great talking to you. Thank you so much for helping us out. Here is \$20 in appreciation for your time. [FILL OUT RECEIPT FOR INCENTIVE AND GET SIGNATURE.]

Do you have any questions before I leave?

Have a great day/evening.

APPENDIX C:
DENIALS SURVEY INSTRUMENT

APPENDIX C
WIC Denied Applicants Survey—English

PART 1: PRE-CODED FROM AGENCY DATA

P0. Interviewer Name: _____

P1. Sampled Recertificant

- a. Name: _____
- b. Address: _____

- c. Phone number(s): _____
- d. WIC client ID: _____

P2. Information on Sampled Recertificant

- a. Category
 - Pregnant
 - Breastfeeding
 - Postpartum
 - Infant (<12 months)
 - Child (1 - < 5 years)
- b. Parent/Guardian (IF APPLICABLE)
 - Name: _____
 - Address: _____
 - Phone: _____

P3. State where local agency is located: _____

1. Alabama	6. Georgia	11. Maryland	16. New York	21. Texas
2. Arizona	7. Illinois	12. Massachusetts	17. North Carolina	22. Virginia
3. California	8. Indiana	13. Michigan	18. Ohio	23. Washington
4. Colorado	9. Kansas	14. Missouri	19. Pennsylvania	
5. Florida	10. Louisiana	15. New Jersey	20. Tennessee	

P4. Date of Interview (MM/DD/YYYY): _____

P5. Time of Interview: _____:_____ AM PM

PART 2: SCREENER

SA. NAME OF RECERTIFICANT SAMPLED... _____

THIS IS THE “RECERTIFICANT”

SB. NAME OF ADULT PERSON WHO WILL BE
 DOING INTERVIEW [WILL BE THE SAME NAME
 FOR PRG, BF, & PTP] _____

THIS IS THE “INTERVIEWEE”

Hello, may I speak to [INTERVIEWEE]_____?

Yes [CONTINUE]

No [GET TIME AND DATE WHEN R. CAN BE REACHED. TERMINATE.]

This is _____ of ICF Macro calling on behalf of the USDA’s WIC Women, Infants and Children food program. According to the agency’s records, [INSERT “you” OR APPLICANT’S NAME] recently applied for WIC food benefits and, apparently, were/was turned down. We are conducting a confidential survey among people who got turned down so that we can see if the agency is following correct procedures. Your responses are confidential and **will not** be shared with the local WIC agency.

You are under no obligation to answer any question, and you can end the interview at any time. The survey takes approximately 5 minutes. Because it is confidential, it won’t change the decision. However, if in our conversation it appears that the local WIC agency **may have made** a mistake, you may want to apply for the WIC benefits again. And, of course, we will be recommending changes if problems are found.

[IF R. ASKS HOW HE/SHE WAS CHOSEN FOR SAMPLE, SAY: “Your name [OR CHILD’S NAME] was chosen by chance from a list of all WIC applicants. Your answers are confidential; that is, they will not be identified with you but rather will be grouped with answers from hundreds of other WIC applicants to give us a better idea of how WIC is used and ways to make it better.]

P1. May we continue?

___ ACCEPT [SKIP TO Q1]

___ REFUSE [SKIP TO P3]

___ LANGUAGE ISSUES [CONTINUE TO P2]

P2. IF POSSIBLE LANGUAGE DIFFICULTIES, ASK: May we continue in English?

___ YES [CONTINUE TO Q1]

___ NO [ASK “What language do you speak?” AND RECORD ANSWER.

o TELL R. YOU WILL CALL BACK LATER IF NECESSARY.]

P3. IF REFUSAL, SAY: This research is really important to the WIC program – to make sure mistakes don’t get made in changing or ending the benefits people get. We’re actually interviewing lots of people like you all over the country. So your answers and identity will just be grouped with others in your situation. Like I said, it’s confidential and it only takes about 5 minutes.

- YES, NOW [GO TO Q1]
- YES, LATER [RECORD TIME/DATE. THANK & TERMINATE.]
- NO. [THANK & TERMINATE.]

TELEPHONE SURVEY - English

1. Let me start by asking how you heard about the WIC – Women, Infants and Children – program? [CIRCLE ALL THAT APPLY]

- A) FRIEND/COLLEAGUE/CO-WORKER
- B) FAMILY MEMBER
- C) DOCTOR/HEALTH PROFESSIONAL
- D) TELEVISION ADVERTISEMENT
- E) RADIO ADVERTISEMENT
- F) NEWSPAPER
- G) BILLBOARD
- W) OTHER: SPECIFY _____

2. Which of the following benefits were you interested in getting out of the WIC program? You can answer yes or no. Were you interested in...: [CIRCLE 1 FOR EACH]

- a. The food package or vouchers to get healthy food? YES=1 NO=0
- b. Health and nutrition classes and individual counseling? YES=1 NO=0
- c. Support for breastfeeding your baby? YES=1 NO=0
- d. Information about immunizations for your child(ren)? YES=1 NO=0
- e. Information on how to get other health care services for your family? YES=1 NO=0
- f. Information about what other community programs are available to help your family? YES=1 NO=0

3. THIS QUESTION WAS INTENTIONALLY SKIPPED

4. THIS QUESTION WAS INTENTIONALLY SKIPPED

5. When [INSERT “you” OR applicant’s name] were/was turned down for WIC benefits, did the WIC clinic give you any reason for their action that was related to proof of identity, that is showing identification?

- 1) YES
- 0) NO/DON’T KNOW [SKIP TO Q6]

5A. What reason did they give? [IF MORE THAN ONE IS MENTIONED, ASK “WHICH WAS THE MAIN REASON GIVEN?”] [CIRCLE ONE ONLY.]

- 1) DID NOT HAVE PROOF WITH THEM AT WIC AGENCY
- 2) EXPIRED DATE ON PROOF
- 3) UNACCEPTABLE TYPE OF PROOF
- 4) PROOF WAS MISSING NAME
- 5) PROOF WAS MISSING PHOTO
- 8) OTHER: SPECIFY _____

5B. Did you see their point or do you feel they made a mistake?

- 1) SAW THEIR POINT
- 2) MADE A MISTAKE

5C. Did the WIC representative say anything about what you could do to change the decision, such as what items you could bring back to help yourself qualify for benefits?

- 1) YES
- 0) NO

ASK Q5D – Q5F ONLY IF Q5A=3 (UNACCEPTABLE TYPE OF PROOF)

<p>5D. What did you show them to identify yourself? [IF MORE THAN ONE ITEM LISTED, ASK FOR THE MAIN ONE.]</p> <p>5a) DRIVER’S LICENSE 5b) PASSPORT 5c) IDENTIFICATION CARD 5d) OTHER ITEM: PLEASE SPECIFY _____</p> <p>5e) NOTHING [SKIP TO Q6] 5f) DON’T KNOW/ REMEMBER [SKIP TO Q6]</p>	<p>5E. Who issued this item? [CIRCLE ONE]</p> <p>1) FEDERAL GOVT/ AGENCY 2) STATE GOVT/AGENCY 3) LOCAL GOVT/AGENCY 4) PRIVATE COMPANY 5) COURT SYSTEM 6) FOREIGN GOVERNMENT 7) OTHER 8) DON’T KNOW/ REMEMBER</p>	<p>5F. Did it have your name <u>and</u> your photo on it?</p> <p>1) YES 0) NO/ DON’T KNOW</p>
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6. Was a reason given related to showing proof of residency, that is where you live?

- 1) YES
- 0) NO/DON’T KNOW [SKIP TO Q7]

6A. What reason did they give? [IF MORE THAN ONE IS MENTIONED, ASK “WHICH WAS THE MAIN REASON GIVEN?”] [CIRCLE ONE ONLY.]

- 1) DID NOT HAVE PROOF WITH THEM AT WIC AGENCY
- 2) EXPIRED DATE ON PROOF
- 3) UNACCEPTABLE TYPE OF PROOF
- 4) PROOF WAS MISSING NAME
- 5) PROOF WAS MISSING PHOTO
- 6) PROOF WAS MISSING ADDRESS
- 7) ADDRESS WAS NOT IN LOCAL AGENCY’S COVERAGE AREA
- 8) OTHER: SPECIFY _____

6B. ASK: Did you see their point or do you feel they made a mistake?

- 1) SAW THEIR POINT
- 2) MADE A MISTAKE

6C. Did the WIC representative say anything about what you could do to change the decision, such as what items you could bring back to help yourself qualify for benefits?

- 1) YES
- 0) NO

ASK Q6D – Q6F ONLY IF Q6A=3 (UNACCEPTABLE TYPE OF PROOF)

<p>6D. What item did you show them to prove your address? [IF MORE THAN ONE ITEM LISTED, ASK FOR THE MAIN ONE.]</p> <p>6a) DRIVER’S LICENSE 6b) IDENTIFICATION CARD 6c) CURRENT UTILITY/TAX BILL 6d) CHECKBOOK 6e) RENT RECEIPT, MORTGAGE RECEIPT OR LEASE 6f) WRITTEN STATEMENT BY 3RD PARTY 6g) OTHER ITEM: PLEASE SPECIFY _____ 6h) NOTHING [SKIP TO Q7] 6i) DON’T KNOW/ REMEMBER [SKIP TO Q7]</p>	<p>6E. Who issued this item? (CIRCLE ONE)</p> <p>1) FEDERAL GOVT/AGENCY 2) STATE GOVT/AGENCY 3) LOCAL GOVT/AGENCY 4) PRIVATE COMPANY 5) COURT SYSTEM 6) FOREIGN GOVERNMENT 7) NON-PROFIT ORGANIZATION 8) RELIGIOUS ORGANIZATION 9) OTHER: SPECIFY _____ 10) DON’T KNOW/REMEMBER</p>	<p>6F. Did it have your name <u>and</u> address on it?</p> <p>1) YES 0) NO/DON’T KNOW</p>
---	--	--

7. Was a reason given related to household income?

- 1) YES
- 0) NO/DON’T KNOW [SKIP TO Q8]

7A. What reason did they give? [IF MORE THAN ONE IS MENTIONED, ASK “WHICH WAS THE MAIN REASON GIVEN?”] [CIRCLE ONE ONLY.]

- 1) DID NOT HAVE INCOME PROOF WITH THEM AT THE WIC AGENCY
- 2) EXPIRED DATE ON PROOF
- 3) UNACCEPTABLE TYPE OF PROOF
- 4) PROOF WAS MISSING NAME
- 6) INCOME WAS TOO HIGH
- 8) OTHER: SPECIFY _____

7B. Did you see their point or do you feel they made a mistake?

- 1) SAW THEIR POINT
- 2) MADE A MISTAKE

7C. Did the WIC representative say anything about what you could do to change the decision, such as what items you could bring back to help yourself qualify for benefits?

- 1) YES
- 0) NO

- 7D. [IF Q7A=5 INCOME WAS TOO HIGH , SKIP TO Q8. ASK ALL OTHERS:] When it turned out that you didn't have the right document with you at the WIC office...
- a. Were you given a new appointment with WIC after they refused to certify you? YES=1 NO=0
 - b. Did they ask you to describe your income? YES=1 NO=0
 - c. Did they give you a month of temporary WIC food benefits? YES=1 NO=0
 - d. Did they instruct you to come back with the proof in 30 days or so? YES=1 NO=0

ASK Q7D – Q7E ONLY IF Q7A=3 (UNACCEPTABLE TYPE OF PROOF)

7E. What proof or document did you show them to demonstrate income? [IF MORE THAN ONE ITEM LISTED, ASK FOR THE MAIN ONE.]	7F. Who issued this item? [CIRCLE ONE]																								
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8. Did you take any follow-up actions to see if you could get the decision changed?
- 1) YES
 - 0) NO [SKIP TO Q10]
9. What action did you take? [DON'T READ. CIRCLE ALL THAT APPLY. THEN SKIP TO Q11.]
- A) WROTE LETTER OF COMPLAINT, PROTEST TO WIC
 - B) ASKED TO SPEAK TO, OR DID SPEAK WITH, WIC SUPERVISOR
 - C) COMPLAINED TO AN ELECTED PUBLIC OFFICIAL
 - D) MADE A PHONE CALL AFTERWARDS, CHALLENGING THE DECISION
 - W) OTHER: SPECIFY: _____

10. Why not?
- 1) TOO BUSY
 - 2) DON'T SPEAK ENGLISH WELL
 - 3) IT WOULDN'T DO ANY GOOD
 - 9) OTHER: SPECIFY: _____

I just have a couple more questions for categorization purposes only.

11. Are you Hispanic or Latino?
- 1) YES
 - 0) NO
 - R) REFUSED

12. How would you characterize yourself in terms of race? [READ ALL. CIRCLE AS MANY AS APPLY]
- A) American Indian or Alaska Native
 - B) Asian American
 - C) Black or African American
 - D) Native Hawaiian or Other Pacific Islander
 - E) White
 - R) REFUSED

13. What is the highest level of education you have attained? [READ UNTIL R. INDICATES ANSWER]
- 1) Elementary school (6 years or less of education)
 - 2) Some high school (7 – 11 years of education)
 - 3) High school diploma or GED
 - 4) Some college
 - 5) Associate's degree
 - 6) Bachelor's degree
 - 7) Advanced degree
 - 8) REFUSED

14. What is your first language, that is, the language you speak at home?
- | | | |
|------------------------|-------------|--------------------|
| 1) English | 9) Hmong | 16) Spanish |
| 2) Arabic | 10) Khmer | 17) Swahili |
| 3) Cambodian | 11) Korean | 18) Tamil |
| 4) Cantonese/ Mandarin | 12) Laotian | 19) Tagalog |
| 5) Farsi | 13) Punjabi | 20) Urdu |
| 6) French/Creole | 14) Russian | 21) Vietnamese |
| 7) Fulani | 15) Somali | 22) Other: SPECIFY |
| 8) Hindi | | _____ |

Thank you so much for your help in answering this survey. Your feedback, combined with other confidential responses, will help improve the WIC program. Thanks again. Have a great day/evening.

APPENDIX D:
TERMINATIONS SURVEY INSTRUMENT

APPENDIX D

WIC Terminations Survey - English

PART 1: PRE-CODED FROM AGENCY DATA

P0. Interviewer Name: _____

P1. Sampled Recertificant

a. Name: _____

b. Address: _____

c. Phone number(s): _____

d. WIC client ID: _____

P2. Information on Sampled Recertificant

a. Category

- Pregnant
- Breastfeeding
- Postpartum
- Infant (<12 months)
- Child (1 - < 5 years)

b. Parent/Guardian (IF APPLICABLE)

Name: _____

Address: _____

Phone: _____

P3. State where local agency is located: _____

1. Alabama	6. Georgia	11. Maryland	16. New York	21. Texas
2. Arizona	7. Illinois	12. Massachusetts	17. North Carolina	22. Virginia
3. California	8. Indiana	13. Michigan	18. Ohio	23. Washington
4. Colorado	9. Kansas	14. Missouri	19. Pennsylvania	
5. Florida	10. Louisiana	15. New Jersey	20. Tennessee	

P4. Date of Interview (MM/DD/YYYY): _____

P5. Time of Interview: _____:_____ AM PM

PART 2: SCREENER

SA. NAME OF RECERTIFICANT SAMPLED...

THIS IS THE "RECERTIFICANT"

SB. NAME OF ADULT PERSON WHO WILL BE
DOING INTERVIEW [WILL BE THE SAME NAME
FOR PRG, BF, & PTP]

THIS IS THE "INTERVIEWEE"

Hello, may I speak to [INTERVIEWEE]_____?

Yes [CONTINUE]

No [GET TIME AND DATE WHEN R. CAN BE REACHED. TERMINATE.]

This is _____ of ICF Macro calling on behalf of the USDA’s WIC Women, Infants and Children food program. According to the agency’s records, there may have been a change in [YOUR or RECERTIFICANT’S NAME] WIC benefits. Or they may have ended, perhaps temporarily. We are conducting a very short, confidential survey among people who got turned down so that we can see if the agency is following correct procedures. Your responses are confidential and **will not** be shared with the local WIC agency.

You are under no obligation to answer any question, and you can end the interview at any time. The survey takes approximately 5 minutes. Because it is confidential, it won’t change the decision. However, if in our conversation it appears that the local WIC agency **may have made** a mistake, you may want to apply for the WIC benefits again. And, of course, we will be recommending changes if problems are found.

[IF R. ASKS HOW HE/SHE WAS CHOSEN FOR SAMPLE, SAY: “Your [OR CHILD’S] name was chosen by chance from a list of all WIC participants. Your answers are confidential; that is, they will not be identified with you but rather will be grouped with answers from hundreds of other WIC participants to give us a better idea of how WIC is used and ways to make it better.]

P1. May we continue?

- ___ ACCEPT [SKIP TO Q1]
- ___ REFUSE [SKIP TO P3]
- ___ LANGUAGE ISSUES [CONTINUE TO P2]

P2. IF POSSIBLE LANGUAGE DIFFICULTIES, ASK: May we continue in English?

- ___ YES [CONTINUE TO Q1]
- ___ NO [ASK “What language do you speak?” AND RECORD ANSWER.
 - o TELL R. YOU WILL CALL BACK LATER IF NECESSARY.]

P3. IF REFUSAL, SAY: This research is really important to the WIC program – to make sure mistakes don’t get made in changing or ending the benefits people get. We’re actually interviewing lots of people like you all over the country. So your answers and identity will just be grouped with others in your situation. Like I said, it’s confidential and it only takes about 5 minutes.

- YES, NOW [GO TO Q1]
- YES, LATER [RECORD TIME/DATE. THANK & TERMINATE.]
- NO. [THANK & TERMINATE.]

TELEPHONE SURVEY - English

1. Let me start by asking how you heard about the WIC – Women, Infants and Children – program? [CIRCLE ALL THAT APPLY]

- A) FRIEND/COLLEAGUE/CO-WORKER
- B) FAMILY MEMBER
- C) DOCTOR/HEALTH PROFESSIONAL
- D) TELEVISION ADVERTISEMENT
- E) RADIO ADVERTISEMENT
- F) NEWSPAPER
- G) BILLBOARD
- W) OTHER: SPECIFY _____

2. Which of the following benefits were you interested in getting out of the WIC program? You can answer yes or no. Were you interested in...: [CIRCLE 1 FOR EACH]

- | | | |
|---|-------|------|
| a. The food package or vouchers to get healthy food? | YES=1 | NO=0 |
| b. Health and nutrition classes and individual counseling? | YES=1 | NO=0 |
| c. Support for breastfeeding your baby? | YES=1 | NO=0 |
| d. Information about immunizations for your child(ren)? | YES=1 | NO=0 |
| e. Information on how to get other health care services for your family? | YES=1 | NO=0 |
| f. Information about what other community programs are available to help your family? | YES=1 | NO=0 |

3. According to our records, there was a change in [YOUR or RECERTIFICANT'S] WIC benefits back in May [INSERT "July", if North Carolina], First, what do you recall was the change? Was it that...? [READ ALL AND CIRCLE BEST ANSWER.]

- 1) The WIC benefits ended [SKIP TO Q4]
 - 2) The WIC benefits changed [SKIP TO Q4]
 - 3) There was a gap or pause in benefits and you had to prove eligibility again [SKIP TO Q4]
 - 4) DON'T KNOW/DON'T REMEMBER
 - 5) DO NOT READ: THERE WAS NO CHANGE OR INTERRUPTION IN BENEFITS [SKIP TO Q11]
 - 6) DO NOT READ: OTHER. [ASK THEM TO EXPLAIN, THEN SKIP TO Q4]
-
-

3A. You say you don't remember and that's understandable. It *was* 6 months ago. Still, the WIC records indicate there was some kind of a change—perhaps a move from one type of food package to another, a need to recertify with WIC, or a pause or ending of benefits. Can you remember anything?

- 1) YES
- 0) NO [SKIP TO Q11]

4. Do you remember, did the WIC clinic give you any reason for the change that was related to a change in status such as ...
- FOR PRG, BF AND PTP: the delivery of a baby, breastfeeding changes, or eligibility ending?
 - FOR INF AND CHD: a change in the child's age? For example, your baby turning 1 year old or your older child turning 5 years old?
- 1) YES
0) NO/DON'T KNOW [SKIP TO Q5]

4A. Did you see their point or do you feel they made a mistake?

- 1) SAW THEIR POINT [SKIP TO Q5]
0) MADE A MISTAKE

4B. What did you see as their mistake? [WRITE ANSWER CONCISELY AS POSSIBLE]

5. Did the WIC clinic give you any reason for their action that was related to proof of identity, that is showing identification?
- 1) YES
0) NO/DON'T KNOW [SKIP TO Q6]

5A. What reason did they give? [IF MORE THAN ONE IS MENTIONED, ASK "WHICH WAS THE MAIN REASON GIVEN?"] [CIRCLE ONE ONLY.]

- 1) DID NOT HAVE PROOF WITH THEM AT WIC AGENCY
2) EXPIRED DATE ON PROOF
3) UNACCEPTABLE TYPE OF PROOF
4) PROOF WAS MISSING NAME
5) PROOF WAS MISSING PHOTO
9) OTHER: SPECIFY _____

5B. Did you see their point or do you feel they made a mistake?

- 1) SAW THEIR POINT
2) MADE A MISTAKE

5C. Did the WIC representative say anything about what you could do to change the decision, such as what items you could bring back to help yourself qualify for benefits?

- 1) YES
0) NO

ASK Q5D – Q5F **ONLY IF Q5A=3** (UNACCEPTABLE TYPE OF PROOF)

<p>5D. What did you show them to identify yourself? [IF MORE THAN ONE ITEM LISTED, ASK FOR THE MAIN ONE.]</p> <p>5a) DRIVER’S LICENSE 5b) PASSPORT 5c) IDENTIFICATION CARD 5d) OTHER ITEM: PLEASE SPECIFY _____</p> <p>5e) NOTHING [SKIP TO Q6] 5f) DON’T KNOW/ REMEMBER [SKIP TO Q6]</p>	<p>5E. Who issued this item? [CIRCLE ONE]</p> <p>1) FEDERAL GOVT/ AGENCY 2) STATE GOVT/AGENCY 3) LOCAL GOVT/AGENCY 4) PRIVATE COMPANY 5) COURT SYSTEM 6) FOREIGN GOVERNMENT 7) OTHER 8) DON’T KNOW/ REMEMBER</p>	<p>5F. Did it have your name <u>and</u> your photo on it?</p> <p>2) YES 0) NO/ DON’T KNOW</p>
---	---	--

6. Was a reason given related to showing proof of residency, that is where you live?
- 1) YES
 - 0) NO/DON’T KNOW [SKIP TO Q7]

6A. What reason did they give? [IF MORE THAN ONE IS MENTIONED, ASK “WHICH WAS THE MAIN REASON GIVEN?”] [CIRCLE ONE ONLY.]

- 1) DID NOT HAVE PROOF WITH THEM AT WIC AGENCY
- 2) EXPIRED DATE ON PROOF
- 3) UNACCEPTABLE TYPE OF PROOF
- 4) PROOF WAS MISSING NAME
- 5) PROOF WAS MISSING PHOTO
- 6) PROOF WAS MISSING ADDRESS
- 7) ADDRESS WAS NOT IN LOCAL AGENCY’S COVERAGE AREA
- 8) OTHER: SPECIFY _____

6B. ASK: Did you see their point or do you feel they made a mistake?

- 1) SAW THEIR POINT
- 2) MADE A MISTAKE

6C. Did the WIC representative say anything about what you could do to change the decision, such as what items you could bring back to help yourself qualify for benefits?

- 1) YES
- 0) NO

ASK Q6D – Q6F ONLY IF Q6A=3 (UNACCEPTABLE TYPE OF PROOF)

<p>6D. What item did you show them to prove your address? [IF MORE THAN ONE ITEM LISTED, ASK FOR THE MAIN ONE.]</p> <p>6a) DRIVER’S LICENSE 6b) IDENTIFICATION CARD 6c) CURRENT UTILITY/TAX BILL 6c) CHECKBOOK 6e) RENT RECEIPT, MORTGAGE RECEIPT OR LEASE 6f) WRITTEN STATEMENT BY 3RD PARTY 6g) OTHER ITEM: PLEASE SPECIFY _____ 6h) NOTHING [SKIP TO Q7] 6i) DON’T KNOW/ REMEMBER [SKIP TO Q7]</p>	<p>6E. Who issued this item? (CIRCLE ONE)</p> <p>1) FEDERAL GOVT/AGENCY 2) STATE GOVT/AGENCY 3) LOCAL GOVT/AGENCY 4) PRIVATE COMPANY 5) COURT SYSTEM 6) FOREIGN GOVERNMENT 7) NON-PROFIT ORGANIZATION 8) RELIGIOUS ORGANIZATION 9) OTHER: SPECIFY _____ 10) DON’T KNOW/REMEMBER</p>	<p>6F. Did it have your name <u>and</u> address on it?</p> <p>1) YES 0) NO/ DON’T KNOW</p>
---	--	--

7. Was a reason given related to household income?

- 1) YES
- 0) NO/DON’T KNOW [SKIP TO Q8]

7A. What reason did they give? [IF MORE THAN ONE IS MENTIONED, ASK “WHICH WAS THE MAIN REASON GIVEN?”] [CIRCLE ONE ONLY.]

- 1) DID NOT HAVE INCOME PROOF WITH THEM AT THE WIC AGENCY
- 2) EXPIRED DATE ON PROOF
- 3) UNACCEPTABLE TYPE OF PROOF
- 4) PROOF WAS MISSING NAME
- 5) INCOME WAS TOO HIGH
- 8) OTHER: SPECIFY _____

7B. Did you see their point or do you feel they made a mistake?

- 1) SAW THEIR POINT
- 2) MADE A MISTAKE

7C. Did the WIC representative say anything about what you could do to change the decision, such as what items you could bring back to help yourself qualify for benefits?

- 1) YES
- 0) NO

7D. [IF Q7A=5 INCOME WAS TOO HIGH , SKIP TO Q8. ASK ALL OTHERS:] When it turned out that you didn’t have the right document with you at the WIC office...

- a. Were you given a new appointment with WIC after they refused to certify you? YES=1 NO=0

- b. Did they ask you to describe your income? YES=1 NO=0
- c. Did they give you a month of temporary WIC food benefits? YES=1 NO=0
- d. Did they instruct you to come back with the proof in 30 days or so? YES=1 NO=0

ASK Q7D – Q7E ONLY IF Q7A=3 (UNACCEPTABLE TYPE OF PROOF)

7E. What proof or document did you show them to demonstrate income? [IF MORE THAN ONE ITEM LISTED, ASK FOR THE MAIN ONE.]		7F. Who issued this item? [CIRCLE ONE]
7a) MOST RECENT TAX RETURN	7j) MEDICAID	1) FEDERAL GOVT/AGENCY
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7h) WRITTEN STATEMENT FROM RELIABLE THIRD PARTY		8) DON'T KNOW/REMEMBER
7i) FOOD STAMPS		
7q) OTHER ITEM: PLEASE SPECIFY _____		
7r) DON'T KNOW/REMEMBER		
7s) NOTHING		

- 8. Did you take any follow-up actions to see if you could get the decision changed?
 - 1) YES
 - 0) NO [SKIP TO Q10]

- 9. What action did you take? [DON'T READ. CIRCLE ALL THAT APPLY. THEN SKIP TO Q11.]
 - A) WROTE LETTER OF COMPLAINT, PROTEST TO WIC
 - B) ASKED TO SPEAK TO, OR DID SPEAK WITH, WIC SUPERVISOR
 - C) COMPLAINED TO AN ELECTED PUBLIC OFFICIAL
 - D) MADE A PHONE CALL AFTERWARDS, CHALLENGING THE DECISION
 - W) OTHER: SPECIFY: _____

10. Why not?

- 1) TOO BUSY
- 2) DON'T SPEAK ENGLISH WELL
- 3) IT WOULDN'T DO ANY GOOD
- 6) OTHER: SPECIFY: _____

I just have a couple more questions for categorization purposes only.

11. Are you Hispanic or Latino?

- 1) YES
- 0) NO
- R) REFUSED

12. How would you characterize yourself in terms of race? [READ ALL. CIRCLE AS MANY AS APPLY]

- A) American Indian or Alaska Native
- B) Asian American
- C) Black or African American
- D) Native Hawaiian or Other Pacific Islander
- E) White
- R) REFUSED

13. What is the highest level of education you have attained? [READ UNTIL R. INDICATES ANSWER]

- 1) Elementary school (6 years or less of education)
- 2) Some high school (7 – 11 years of education)
- 3) High school diploma or GED
- 4) Some college
- 5) Associate's degree
- 6) Bachelor's degree
- 7) Advanced degree
- 8) REFUSED

14. What is your first language, that is, the language you speak at home?

- | | | |
|------------------------|-------------|--------------------|
| 1) English | 9) Hmong | 16) Spanish |
| 2) Arabic | 10) Khmer | 17) Swahili |
| 3) Cambodian | 11) Korean | 18) Tamil |
| 4) Cantonese/ Mandarin | 12) Laotian | 19) Tagalog |
| 5) Farsi | 13) Punjabi | 20) Urdu |
| 6) French/Creole | 14) Russian | 21) Vietnamese |
| 7) Fulani | 15) Somali | 22) Other: SPECIFY |
| 8) Hindi | | _____ |

Thank you so much for your help in answering this survey. Your feedback, combined with other confidential responses, will help improve the WIC program. Thanks again.
Have a great day/evening.

APPENDIX E:

**COMMUNICATIONS TO STATES FOR
FOOD ISSUANCE AND REDEMPTION DATA AND
DATA ISSUES**

APPENDIX E

Communication to States for Food Issuance and Redemption Data and

OMB# 0584-0484
Exp. 06/30/2012

Data Issues

June 15, 2009

[STATE WIC DIRECTOR NAME]
[TITLE]
[ADDRESS1]
[ADDRESS2]
[CITY,STATE,ZIP]

Dear [MR/MS] [LASTNAME]:

As you may recall from previous letters, Macro International (now known as ICF Macro) is under contract with the U.S. Department of Agriculture/Food and Nutrition Services (FNS) to conduct the second National Survey of WIC Participants. [YOURSTATE] was one of the states selected to take part in the WIC participant survey phase of the project. A brief history is attached, reviewing the study as it was first introduced to you in an April 2008 letter from the director of the Supplemental Food Programs Division.

The success of this national effort depends on your cooperation and we thank you in advance. In order to make this process as clean and efficient as possible, we need your help with the following tasks:

Tasks:	Deadline
1. Fill out the enclosed paper survey on your State's policies and procedures and return in stamped envelope provided. (Attachment A. Estimated completion time: 66 minutes).	July 15, 2009
2. Submit participant-level data for all participants in the specified WIC clinics* who received food issuances at any point during April and May of 2009. (Attachment B has details of this request.)	July 15, 2009
3. Submit data for all applicants who were denied WIC benefits at the specified clinics during May 2009. <ul style="list-style-type: none"> <i>If maintain this information at the State level, please fill out yellow postcard immediately and follow the instructions in Attachment C.</i> 	(Postcard immediate) July 15, 2009
<ul style="list-style-type: none"> <i>If you do not keep this information at the State level, please let us know by returning the enclosed yellow postcard immediately so that we may request the individual clinics to collect this information in July.</i> 	Postcard immediate

Tasks:	Deadline
4. Inform the local agencies and clinics chosen for the study* of the importance of their participation and cooperation with the study. Specifically, let them know they will be contacted by ICF Macro in the near future with details.	June 26, 2009

If you, or any of the staff working on this request, have any difficulties, questions or concerns regarding these requests, feel free to contact Walter Rives via e-mail at WICSurvey@mmail.macroidernational.com or by calling our toll-free WIC Survey hotline at 1-888-285-7976.

Thank you for your continued support in making the Second National Survey of WIC Participants a success.

Sincerely,



Daniel Geller, Ph.D.
 Project Director
 ICF Macro
 11785 Beltsville Dr.
 Calverton, MD 20705

* The specified clinics are as follows:

1. [CLINIC1] - [LOCALAGENCY1]
2. [CLINIC2] - [LOCALAGENCY2]
3. [CLINIC3] - [LOCALAGENCY3]
4. [CLINIC4] - [LOCALAGENCY4]
5. [CLINIC5] - [LOCALAGENCY5]
6. [CLINIC6] - [LOCALAGENCY6]
7. [CLINIC7] - [LOCALAGENCY7]
8. [CLINIC8] - [LOCALAGENCY8]
9. [CLINIC9] - [LOCALAGENCY9]
10. [CLINIC10] - [LOCALAGENCY10]
11. [CLINIC11] - [LOCALAGENCY11]
12. [CLINIC12] - [LOCALAGENCY12]
13. [CLINIC13] - [LOCALAGENCY13]
14. [CLINIC14] - [LOCALAGENCY14]

ATTACHMENT B (Task 2) – Submit data for WIC participants who received food issuances at any point during April and May of 2009

Please submit data by July 15, 2009.

To select the individuals for the WIC Participants survey, ICF Macro needs you to draw the following fields of information, listed on next page, for all food instruments issued (not redeemed) **for April and May 2009** by the clinics specified as follows:

1. [CLINIC1] - [LOCALAGENCY1]
2. [CLINIC2] - [LOCALAGENCY2]
3. [CLINIC3] - [LOCALAGENCY3]
4. [CLINIC4] - [LOCALAGENCY4]
5. [CLINIC5] - [LOCALAGENCY5]
6. [CLINIC6] - [LOCALAGENCY6]
7. [CLINIC7] - [LOCALAGENCY7]
8. [CLINIC8] - [LOCALAGENCY8]
9. [CLINIC9] - [LOCALAGENCY9]
10. [CLINIC10] - [LOCALAGENCY10]
11. [CLINIC11] - [LOCALAGENCY11]
12. [CLINIC12] - [LOCALAGENCY12]
13. [CLINIC13] - [LOCALAGENCY13]
14. [CLINIC14] - [LOCALAGENCY14]

Note that food instruments may have been distributed at an earlier date, for example, in March; what is important is that they were issued for and were valid for April and/or for May 2009.

- By sampling food instruments issued, we realize that WIC clients will appear more than once on the lists submitted.
- We would like **separate lists** for April and May, understanding of course that there will be substantial overlap of individuals.
- We would prefer the data in Excel format, although we will accept data submitted in Access, SAS or SPSS in a CSV (comma separated values) format.
- We will need a list of your State agency's definitions for certain alphanumeric data fields submitted, so that we understand the assigned values for each record.
- **Please read the attached “Directions for FTP Transmittal of Data” document.**
- **Questions? Email Walter Rives at WICSurvey@mmail.macroidernational.com or call the toll-free WIC Survey hotline at 1-888-285-7976.**

Requested Data Fields - WIC Participants

FIELD NAME	Description	Data Type Preferred
PANAME	Name of WIC Local Agency	Alphanumeric
CLNAME	Name of WIC Clinic providing services	Alphanumeric
CLID	WIC Clinic ID (If Assigned)	Alphanumeric
P02A	Client's WIC category (i.e., Pregnant woman, Postpartum woman, Breastfeeding woman, Infant, or Child)	Alphanumeric*
P0601	Type of food package issued	Alphanumeric*
P0602	Month food package was issued	Numeric (1-12)
P0803M	First date voucher can be used (Month).	Numeric
P0803D	First date voucher can be used (Day).	Numeric
P0803Y	First date voucher can be used (Year).	Numeric
P0804	Food package maximum dollar amount value as of date requested	Numeric
P0805	Food package number assigned	Numeric
P0806	Dollar amount of Food package redeemed as of date requested	Numeric
P01A1	WIC client first name	Alphanumeric
P01A2	WIC client last name	Alphanumeric
P01ID	Identification number assigned to individual	Alphanumeric
P02FM	WIC client date of birth-Month	Numeric
P02FD	WIC client date of birth-Day	Numeric
P02FY	WIC client date of birth-Year	Numeric
P02G	WIC client gender (if child or infant)	1=Male 2=Female
P02H	Is client Hispanic or Latino?	1=Yes 0=No
P02R1	WIC client race?	Alphanumeric
P01ID	Identification number assigned to participant	Alphanumeric
P02ID	Family Economic Unit / Household ID number assigned to participant	Alphanumeric
P01B	WIC client street address – line 1	Alphanumeric
P01C	WIC client street address – line 2	Alphanumeric
P01CA	WIC client address – city	Alphanumeric
P01CB	WIC client address – State	Alphanumeric
P01CC	WIC client address – zip code	Numeric
P01D	WIC client primary phone: xxx-xxx-xxxx	Alphanumeric
P01E	WIC client second phone: xxx-xxx-xxxx	Alphanumeric
P01F	WIC client third phone: xxx-xxx-xxxx	Alphanumeric
P02B11	First name of Parent/Guardian of WIC client (if infant or child)	Alphanumeric

FIELD NAME	Description	Data Type Preferred
P02B12	Last name of Parent/Guardian of WIC client (if infant or child)	Alphanumeric
P02B2	Parent/Guardian street address – line 1	Alphanumeric
P02B3	Parent/Guardian street address – line 2	Alphanumeric
P02B3A	Parent/Guardian city	Alphanumeric
P02B3B	Parent/Guardian state	Alphanumeric
P02B3C	Parent/Guardian zip	Numeric
P02B4	Parent/Guardian – phone 1 xxx-xxx-xxxx	Alphanumeric
P02B5	Parent/Guardian – phone 2 xxx-xxx-xxxx	Alphanumeric
P02B6	Parent/Guardian – phone 3 xxx-xxx-xxxx	Alphanumeric
P02AA	What proof of Identification was provided?	Alphanumeric*
P04C9	What proof of residency was provided?	Alphanumeric*
P04AJ	What proof of adjunctive eligibility was provided?	Alphanumeric*
P04BJ	What proof of income was provided?	Alphanumeric*
P0608M	Date of first (original) certification related to this child or pregnancy (Month)	Numeric
P0608D	Date of first (original) certification related to this child or pregnancy (Day)	Numeric
P0608Y	Date of first (original) certification related to this child or pregnancy (Year)	Numeric
P0609M	Date of most recent certification (Month). Should be ≤ 6 months ago except for infants where it could be ≤ 1 year ago	Numeric
P0609D	Date of most recent certification (Day). Should be ≤ 6 months ago except for infants where it could be ≤ 1 year ago	Numeric
P0609Y	Date of most recent certification (Year). Should be ≤ 6 months ago except for infants where it could be ≤ 1 year ago	Numeric
P02J	OPTIONAL: Language spoken by WIC client, if known	Alphanumeric*
P0610	Number of persons in family “economic unit” -- Total number of adult and child household members who are part of economic unit, including the WIC Participant.	Numeric
P0	Current status (participant, denial, termination)	Alphanumeric*
PCH	Is there a change in status in or after the month of food issuance?	1=Yes 0=No
PCHR1	Reason for status change, if applicable?	Alphanumeric
PCHD1	Date of status change (Month)	Numeric
PCHD2	Date of status change (Day)	Numeric
PCHD3	Date of status change (Year)	Numeric

*** PLEASE PROVIDE EXPLANATORY LABELS SO WE UNDERSTAND THE CODES.**

ATTACHMENT C (Task 3) – Submit data for WIC applicants who Were denied eligibility during May 2009

Please submit data by July 15, 2009.

To select the individuals for the Denied Applicants survey, ICF Macro needs you to draw the following fields of information, listed on the next page, for all applicants who were denied WIC benefits during May 2009 OR June 2009, the latest month for which you have this information. We need the data for only the clinics specified as follows:

1. [CLINIC1] - [LOCALAGENCY1]
2. [CLINIC2] - [LOCALAGENCY2]
3. [CLINIC3] - [LOCALAGENCY3]
4. [CLINIC4] - [LOCALAGENCY4]
5. [CLINIC5] - [LOCALAGENCY5]
6. [CLINIC6] - [LOCALAGENCY6]
7. [CLINIC7] - [LOCALAGENCY7]
8. [CLINIC8] - [LOCALAGENCY8]
9. [CLINIC9] - [LOCALAGENCY9]
10. [CLINIC10] - [LOCALAGENCY10]
11. [CLINIC11] - [LOCALAGENCY11]
12. [CLINIC12] - [LOCALAGENCY12]
13. [CLINIC13] - [LOCALAGENCY13]
14. [CLINIC14] - [LOCALAGENCY14]

Note that:

- We would prefer the data in Excel format, although we will accept data submitted in Access, SAS or SPSS in a CSV (comma separated values) format.
- We will need a list of your State agency's definitions for certain alphanumeric data fields submitted, so that we understand the assigned values for each record.
- **Please read the attached “Directions for FTP Transmittal of Data” document.**
- **Questions? Email Walter Rives at WICSurvey@mmail.macroiinternational.com or call the toll-free WIC Survey hotline at 1-888-285-7976.**

Requested Data Fields - Denied WIC Applicants

FIELD NAME	Description	Data Type Preferred
PANAME	Name of WIC Local Agency	Alphanumeric
CLNAME	Name of WIC Clinic providing services	Alphanumeric
CLID	WIC Clinic ID (If assigned)	Alphanumeric
P01A1	WIC client first name	Alphanumeric
P01A2	WIC client last name	Alphanumeric
P02ID	Family Economic Unit / Household ID number assigned to participant (if applicable)	Alphanumeric
P01B	WIC client street address – line 1	Alphanumeric
P01C	WIC client street address – line 2	Alphanumeric
P01CA	WIC client address – city	Alphanumeric
P01CB	WIC client address – State	Alphanumeric
P01CC	WIC client address – zip code	Numeric
P01D	WIC client primary phone: xxx-xxx-xxxx	Alphanumeric
P01E	WIC client second phone: xxx-xxx-xxxx	Alphanumeric
P01F	WIC client third phone: xxx-xxx-xxxx	Alphanumeric
P02A	Client's requested WIC category (if determined) i.e., Pregnant woman, Postpartum woman, Breastfeeding woman, Infant, or Child	Alphanumeric*
D01L	Was a letter of denied benefits sent out?	1=Yes 0=No
D01R	Reason for denied eligibility	Alphanumeric*
D01D	Date of denied eligibility	Numeric

*** PLEASE PROVIDE EXPLANATORY LABELS SO WE UNDERSTAND THE CODES.**

Directions for FTP Data Transfer

We are requesting that the data be returned to ICF Macro in the form of an Excel spreadsheet⁵⁷. ICF Macro understands that not every WIC administration collects and compiles data similarly, so we ask that you comment on any information you cannot access, or that may not be supplied to us in the form requested.

Since these data will contain sensitive information (names, identifiers, etc.), the data needs to be sent in a secure manner. **Please follow these instructions to ensure the secure transmission of data to ICF Macro:**

The data files must be sent by secure FTP (file transport protocol) using a small software package that we have included on the enclosed CD. This software enables you to send your data file to ICF Macro's secure server. The software does not require any installation and is very easy to use. You will be provided a username and password once you contact Walter Rives and notify ICF Macro of a probable date of data transfer.

If you should encounter any difficulties with the FTP application:

The application included on this CD, to transmit the data to ICF Macro, requires the .Net Framework version 2.0. This is normally shipped as part of Windows Vista, and may not be installed on systems using Windows XP or earlier. If an error message is displayed when you first insert this CD, it may be because you do not have a recent enough version of this application installed on your computer.

If such an error message is displayed, the correct version of the .Net Framework should be installed from the CD provided by ICF Macro. The name of this file is DOTNETFX.EXE. To install it, navigate to this file on the CD and double-click it. After the installation is complete, try re-inserting the CD. If the application still does not work, call me at 1-888-285-7976.

Thank you for your continued support in making The Second national Survey of WIC Participants a success.

***IMPORTANT NOTE: FOR ALPHANUMERIC FIELDS WITH ASTERISK, PLEASE PROVIDE EXPLANATORY LABELS SO WE UNDERSTAND THE CODES. FOR EXAMPLE:**

Field Name	Field Description	Preferred Data Type
P0607	WIC women's (or parent of the child/infant) employment status	Alphanumeric*

*Codes Used: 1=Employed full time, 2= Employed part time, 3=Full time student, 4=Not working for pay, 5=On temporary leave, 6=Other

⁵⁷ We prefer the Excel format but will accept Access, SAS or SPSS if provided in a CSV (comma separated values) format.

Texas Redemption Issues

Texas was the only state in the sample that had moved WIC redemption to an electronic benefit transfer (EBT) system.⁵⁸ Initial tabulation found that for most cases in Texas, the redemption values were greater than maximum values permitted for the food package. The State agency explained that Texas redemption data were for the household while the maximum voucher value was for the sampled individual. The agency had no way of separating the individual redemption values from the household value because transactions were made on a common EBT card. Adjustments were made to estimate the sampled individual's redemption values by removing the portion of redeemed values for non-sampled WIC participants in each household from the total household redeemed value.

Using information from the In-person Interview, the SAS program identified household members other than the sampled participant and counted the numbers of household members who were WIC women (no specific program subgrouping), WIC infants, and WIC children, as well as the total number of WIC participants in the household (see Table F-1).

Table F-1: Average Redemption Values by WIC Category

WIC Category	Redemption Value (\$)
Pregnant Woman	44.52
Breastfeeding Woman	43.83
Postpartum Woman	32.47
Infant	116.93
Child	39.87

As indicated, the bulk of difference occurred between infants (average redemption value of \$116.93) and the rest of the categories (average redemption values ranged from \$32.47 to \$44.52). The adjustment applied the ratio of infant average redemption value over the rest of the participants to calculate the portion of redeemed values for the household WIC members other than the respondent. This portion was then removed from the total redemption value of the household. The calculation was done differently depending on the WIC program status of the respondent and the rest of the WIC household members, namely, whether the respondent was an infant, whether one or more other household members were infants, and whether there was no WIC infant in the household.

⁵⁸ Other than New York, State agencies included no new food package cost in their redemption data. See also Section 3.5 *Redemption Data Processing* on ICF's communication with New York State regarding its new food package inclusion.

SAS code for the procedure is cited below (original: ip.sas):

```
/*Count household members of WIC participant by category*/
data ip2; set ip;
HHwicwoman=0; if p02a < 4 then hhwicwoman=1 ; *count R by 3 categories;
HHwicinfant=0; if p02a = 4 then hhwicinfant=1 ;
HHwicchild=0; if p02a = 5 then hhwicchild=1 ;
HH_n_kid=0;
array hhage(20) P0906N_01--P0906N_20;
array HHwic(20) P0907_01--P0907_20; *HH member is in WIC;
array HHsex(20) p0905_01-- p0905_20;
do w =1 to 20; *count total HH members by 3 categories;
if 0 <= hhage(w) <=1 and hhwic(w) =1 then hhwicinfant=hhwicinfant+1;
if 1 < hhage(w) < 6 and hhwic(w) =1 then hhwicchild=hhwicchild+1;
if hhsex(w) =2 and hhage(w) > 6 and hhwic(w) =1 then hhwicwoman=hhwicwoman+1;
if hhage(w) <18 and hhage(w) ne . then HH_n_kid =HH_n_kid +1;
end;
if hhwicchild =. then hhwicchild =0;
HHwicN= hhwicwoman+ hhwicchild+ hhwicinfant;

/*Fix Texas data: redemption for family but maxval for sampled person*/
*Weight infant benefit by 2.9 (ratio of average benefit infant over others);
if state=21 then do;
if p02a=4
then rredeem=redeem-redeem*(((hhwicinfant-1)*2.9+(hhwicn-hhwicinfant))/
((hhwicinfant)*2.9+(hhwicn-hhwicinfant)));
if p02a ne 4 and hhwicinfant>0
then rredeem=redeem-redeem*(((hhwicinfant*2.9+(hhwicn-hhwicinfant-1))/
(hhwicinfant*2.9+(hhwicn-hhwicinfant)));
if p02a ne 4 and hhwicinfant=0
then rredeem=redeem-redeem*((hhwicn-1)/hhwicn);
redeem= rredeem;
drop rredeem;
end;
if redeem> maxval then redeem=redeem/hhwicn;
if redeem> maxval then redeem=maxval;
diff =redeem-maxval;

proc sql; select state, p02a from tx where cat_err =1;
select state, agency, clinic,partic,redeem
from tx where p02a="5" and state=22;
select state, p02a, redeem from tx where state<3;
quit;
```

Caution is called for regarding the adjusted Texas redemption data. A comparison of the adjusted data against other states' average values was performed to provide an external check on the adjustment and the result suggested that the adjusted values appeared in the reasonable range. Note that by the study design, State average estimates are not necessarily representative of the population.

SAS Code for North Carolina Redemption Data Imputation

```
options nocenter nofmterr ls=max ps=max;

libname red '/home/lharding/WIC/RED';
libname inh '/home/lharding/WIC/inhome';
libname tel '/home/lharding/WIC/paper';

data red;
  set red.idmatch;
  if r04m in( . 0) then      r04m_a = p0802m;
  else                      r04m_a = r04m;
run;

data red1;
  set red;
  /*   Some variable Recodes   */

  if p0802m = 5 and r04m_a in(5 6 7 8 9);  * subsetting to the months we requested;

  if r05fpr in( . 999.99 9999.99 99999.99 9999 999 99999 999999.99 999999) then redeemflg = 1;
  if redeemflg = 1 then redeemed = 0;
  else                      redeemed = r05fpr;      * Redeemed Value;

  if r05fmv in( . 999.99 9999.99 99999.99 9999 999 99999 999999.99 999999) then maxflg = 1;
  if maxflg = 1 then maxvalue = 0;
  else                      maxvalue = r05fmv;      * Max value redeemable;

  if r04y = 9                then r04y = 2009;
  if r04y in(0 .)            then r04y = 2009;
  if p0802y = 9              then p0802y = 2009;
  if p0803y = 9              then p0803y = 2009;

  inred = 1;                 * In redemption file flag;
run;

data paper ; *(keep = status state agency clinic partic);
  set tel.pwgt;
  inpap = 1;                 * In telephone weight flag;
run;

proc sort data = paper;
  by state agency clinic partic;
run;

proc freq data = paper;
  tables state/list missing;
run;

proc sort data = red1;
  by state agency clinic partic;
run;

data redall;
  merge paper (in=a) red1 (in=b);
  by state agency clinic partic;
  if a;

  if r04m_a = . then r04m_a = 5;
  if p0802m = . then mnthflg = 1;
  if p0802m = . then p0802m = 5;

  if inred = . then imputeflg = 1;
  else          imputeflg = 0;

  if   redeemed = 0 then   zero = 1;
  else if redeemed = . then zero = 2;
  else          zero = 0;
```

```

/* State = 17 is North Carolina, they did not provided redemption data*/
/* Setting values for NC to . because they will be imputed */

if state = 17      then redeemed = .;
else if zero = 2  then redeemed = 0;

if state = 17      then maxvalue = .;
else if maxvalue = . then maxvalue = 0;
else              maxvalue = maxvalue;

/* Creating a Infant category indicator. Infants redemption values where */
/* different from all other wic categories. */

if wiccat = 4 then wcat2 = 1;
else          wcat2 = 0;
run;

data redx;
set red;

if r05fpr in(. 999.99 9999.99 99999.99 9999 999 99999 999999.99 999999) then redeemflg = 1;
if redeemflg = 1 then redeemed = 0;
else          redeemed = r05fpr;

if r05fmv in(. 999.99 9999.99 99999.99 9999 999 99999 999999.99 999999) then maxflg = 1;
if maxflg = 1 then maxvalue = 0;
else          maxvalue = r05fmv;

if r04y = 9          then r04y = 2009;
if r04y in(0 .)     then r04y = 2009;
if p0802y = 9       then p0802y = 2009;
if p0803y = 9       then p0803y = 2009;

inred = 1;
run;

proc sort data = redx;
  by state agency clinic partic;
run;

data redallx;
merge paper (in=a) redx (in=b);
by state agency clinic partic;
if a;

if r04m_a = . then r04m_a = 5;
if p0802m = . then mnthflg = 1;
if p0802m = . then p0802m = 5;

if inred = . then impute_flg = 1;
else          impute_flg = 0;

if redeemed = 0 then zero = 1;
else if redeemed = . then zero = 2;
else          zero = 0;

if state = 17      then redeemed = .;
else if zero = 2  then redeemed = 0;

if state = 17      then maxvalue = .;
else if maxvalue = . then maxvalue = 0;
else              maxvalue = maxvalue;

if wiccat = 4 then wcat2 = 1;
else          wcat2 = 0;
run;

```

```

proc freq data = redall;
  tables inpap*inred/list missing;
run;

data lastredeem;
  set redallx;
  if redeemed > 0;
  id = state||agency||clinic||partic;
run;

proc sort data = lastredeem;
  by id r04m_a r04d r04y;
run;

data lastredeem;
  set lastredeem;
  by id r04m_a r04d r04y;
  if last.id then last = 1;
run;

data lastredeem;
  set lastredeem;
  where last = 1;
  lredeem_m = r04m_a;
  lredeem_d = r04d;
  lredeem_y = r04y;
  drop r04m r04m_a r04d r04y;
run;

proc print data = lastredeem (obs = 100);
  var id lredeem_m lredeem_d lredeem_y redeemed last;
run;

proc freq data = lastredeem;
  tables state;
run;

proc sort data = redall;
  by state agency clinic partic wiccat impute_flg p0802m;
run;

/* Create the sum of all redeemed amounts and maximum amount for each participant */
proc means data = redall sum noprint;
  by state agency clinic partic wiccat p0802m;
  id impute_flg r04y r04m_a p0802y p0803m p0803y;
  var redeemed maxvalue;
  output out=redall2 sum=redeem maxval;
run;

proc sort data = redall2;
  by state agency clinic partic p0802m;
run;

data test1;
  set redall2;
  id = state||agency||clinic||partic;
run;

proc sort data = test1;
  by id ;
run;

data test;
  set test1;
  by id r04m_a ;
  if first.id then flg1 = 1;
run;

```

```

proc freq data = test;
  tables flg1 flg1*r04m_a/list missing;
run;

proc print data = test;
  where r04m_a = .;
  var state agency clinic partic flg1 redeem maxval wiccat;
run;

      * endsas;

/* North Carolina Imputation */
/* Subset to NC and neighboring States */

data redall3;
  set redall2;
  where state in(1 5 6 17 20);
run;

proc sort data = redall3;
  by wiccat;
run;

proc mi data = redall3
  out = in_imp
  nimpute = 5
  seed = 145
  minimum = 0 ;* noprnt;

  by wiccat;
  mcmc nbiter=50 niter=10;
  var state agency clinic redeem maxval;
run;

proc sort data = in_imp;
  by state agency clinic partic redeem;
run;

proc print data = in_imp (obs=20);
  where impute_flg = 1;
  var _imputation_ impute_flg state agency clinic partic wiccat r04m_a redeem maxval;
run;

data redemption;
  set redall2;
  where p0802m = 5 and state ne 17;
  inredfile = 1;
run;

proc sort data = redemption;
  by state agency clinic partic;
run;

proc sort data = lastredeem;
  by state agency clinic partic;
run;

data redemption;
  merge redemption (in=a) lastredeem (in=b);
  by state agency clinic partic;
  if a;
run;

      proc contents data = redemption;
      run;

      proc freq data = redemption;
      tables last state*last
      /list missing;
      run;

```

```

proc print data = redemption;
  where last = .;
  var state agency clinic partic last redeem maxval;
run;

proc freq data = redemption;
  tables lredeem_m*state
  /list missing;
run;

proc freq data = redemption;
  tables state p0802m p0802m*r04m_a r04m_a
  /list missing;
run;

/* CHECKS */
data check;
  merge redemption (in=a) paper (in=b);
  by state agency clinic partic;
run;

proc freq data = check;
  tables inredfile inredfile*state/list missing;
run;

data check2;
  merge check (in=a) redall2 (in=b);
  by state agency clinic partic;
  if a and inredfile = .;
run;

proc freq data = check2;
  tables r04m_a;
run;

data ncredemption;
  set in_imp;
  where state = 17;
run;

proc sort data = ncredemption;
  by state agency clinic partic wiccat;
run;

proc sort data = ncredemption;
  by wiccat;
run;

proc univariate data = ncredemption;
  by wiccat;
  var redeem maxval;
run;

proc print data = ncredemption;
run;

data red.redemption (keep = impute_flg state agency clinic partic r04m_a r04y p0802m p0802y p0803m p0803y lredeem_m lredeem_d lredeem_y
redeem maxval wiccat);
  set redemption;
run;

data red.ncredemption (keep = _imputation_ impute_flg state agency clinic partic r04m_a r04y p0802m p0802y p0803m p0803y lredeem_m
lredeem_d lredeem_y redeem wiccat maxval);
  set ncredemption;
run;

ENDSAS;

```


APPENDIX F:

COMMUNICATIONS TO STATES FOR DENIALS

APPENDIX F

Communication to States for Denials

July 22, 2009

[NAME OF CLINIC DIRECTOR]
[TITLE]
[AGENCY]
[ADDRESS]
[CITY], [STATE], [ZIPCODE]

You may have recently heard from your Local WIC Agency or State WIC Director that your clinic was randomly selected to participate in the *Second National Survey of WIC Participants* along with many others from throughout the country. We will not require much from your clinic; however, what this means is that between the months of September and December of 2009, our organization, ICF Macro, will be conducting a telephone survey with approximately 15 of your WIC participants and a smaller number of Denied Applicants and Denied Recertificants. About half of the WIC participants will also be asked to take part in an In-person survey for which they will be offered \$20. The information collected is confidential and will be used to improve administration of and services offered by WIC. It will not impact participants' WIC benefit levels.

The survey is being administered on behalf of the United States Department of Agriculture, Food and Nutrition Service. ICF Macro is already working with your State agency to obtain data on participants, from which we will select a random sample of people for interview about their experiences with the certification, re-certification, denial, or termination processes and food instrument selection, preferences and usage.

To help us in the success of this survey we request the help of WIC clinic staff in two ways:

1. Using the enclosed "Denials" log, we need you to keep a record of applicants who apply for WIC but are determined ineligible -- so-called "Denied" Applicants -- during the 30-day period from July 30, 2009 to August 28, 2009.
2. Please help us inform participants who might be selected for interview about the study using the materials enclosed. And reassure WIC clients that their answers will be kept confidential, be grouped with others, and not affect their benefits.

Denied Applicant Log

IMPORTANT – PREPARE FOR THIS IMMEDIATELY

The **only** method of capturing information on Denied Applicants is through documentation at the local level. *Please use the attached Denials Log to provide the information requested for denied applicants.* The period of documenting denials must occur every day your clinic is open from

July 30, 2009 through August 28, 2009. For the purposes of this study, a Denied Applicant is a person who has applied for WIC and been deemed ineligible but does **not** include Denied Recertificants (that is, people who were denied when they reapplied for benefits since we are researching them separately.)

Return the completed log in the postage-paid envelope provided as soon as possible after August 28. (You should retain a photocopy as a record of your compliance with the request.)

Note: Due to data integrity and privacy concerns, the DENIED APPLICANTS information should be collected and recorded legibly by WIC staff persons. Individuals who apply for benefits should not see or record information on the log.

Posters and Information about the Interviews

Enclosed, you will find materials that should help warn WIC participants that they might be contacted and will give them some information and reassurance about the interviews. Included are:

- Posters to be displayed in highly visible areas at the clinic site.
- FAQ sheets to be provided to clinic staff about the purpose and importance of the study. This will help staff answer questions that may arise.
- Half-page flyers for distribution to WIC participants. You may make copies as needed for distribution to individuals who request more information.

Please contact your WIC Local Agency administration if you have any questions or concerns regarding The Second National Survey of WIC Participants. They have been briefed about the study. ICF Macro support staff are also available by email at: WICSurvey@mmail.macroidinternational.com or at the WIC Survey toll free hotline at 1-888-285-7976.

Thank you for your efforts in making The Second National Survey of WIC Participants a success, and in turn, improving the quality of future WIC programs and services.

Sincerely,



Daniel M. Geller, PhD.
Project Director

APPENDIX G:
SAMPLING AND WEIGHTING METHODOLOGY

APPENDIX G

Sampling and Weighting Methodology

The sample design includes the sample allocation, selection of the sample of States, creation and selection of clusters, selection of WIC agencies, clinics, and participants, and weighting.

Sample Allocations

To calculate the needed sample sizes, n , for the required estimates, the sample size needed for a simple random sample of WIC participants across the nation (specifically for the 48 contiguous States and the District of Columbia) was first calculated. This resulted in a simple random sample (SRS) of 609 respondents for the estimate of erroneous payment with a 90 percent confidence interval, plus or minus 2 percent error margin (without a finite population correction). Once we obtained the sample size from an SRS, we multiplied it by the design effect to get the needed sample size given the design.

For all estimates obtained for the In-person survey, a design effect of 1.97 was assumed for the combined WIC categories and 1.63 for the separate WIC categories. Table G-1 shows the sample size requirements. The assumed design effects are based on the average design effects for several key estimates in the NSWP-I survey.

The third column shows the number of cases needed (for the combined WIC categories and each of the separate categories) if a random sample was to be selected. The fourth column shows the cases needed (again for the whole sample or for each category) given the assumed design effects. Finally, the fifth column multiplies the number needed for each category by the number of categories (5) for the separate WIC categories. These numbers represent the number of participants in each category.

Table G-1: Sample Requirements

Parameter	Population	Random Sample	With Design Effect per Cell	Total Needed
Error Rates	Combined WIC Categories	609	1,199	1,199
Error Rates	Separate WIC Categories	97	159	795

Ultimately, the allocations were made for 480 participants per category for the telephone survey (2,400 overall) and 240 participants per category for the In-person survey (1,200 in all). The in-person survey sample had a total of 1,210 completed interviews, and it was a subset of the original telephone survey of 2,538 WIC participants.

Selection of States

The primary sampling units (PSUs) were States, selected with probability proportionate to size (PPS) with probability minimum replacement (i.e. the large PSUs could be selected more than once). A measure of size was used that would yield the same number of participants in each of the five categories.

The following is a description of the sampling approach. Let t_i represent the measure of size for State i . This was defined as the average of the proportion of participants in each category that were found in the state.

$$State\ Size = \frac{\frac{\sum P_{State}}{\sum P_{Nation}} + \frac{\sum B_{State}}{\sum B_{Nation}} + \frac{\sum N_{State}}{\sum N_{Nation}} + \frac{\sum I_{State}}{\sum I_{Nation}} + \frac{\sum C_{State}}{\sum C_{Nation}}}{5}$$

Where for the five categories of WIC participants,

P = Pregnant,

B = Breastfeeding,

N = Postpartum Non-breastfeeding,

I = Infants, and

C = Children.

Let T be the sum of all the measures of size for the 48 States. Now we define—

$$e_i = 40t_i / T$$

—to be the selection expectation of State i .

The expectation is the same as a probability if $e_i < 1$, and if it is greater than 1, the integer part of e represents the minimum number of times the State can be selected, and the fractional part represents the probability that it will be selected an additional time.

To order the 48 PSUs, grouped together by WIC region, given that the States are in the desired order (where the order guarantees proportional representation by the ordering variable), a random number r between 0 and 1 is selected.

If $\lim(x)$ – the limiting value of x – means the largest integer less than or equal to x , then we can define—

$$c_0 = r \text{ and}$$

$$c_i = e_1 + e_2 + \dots + e_i.$$

Finally, let $s_i = \lim(c_i) - \lim(c_{i-1})$, where s_i defines the number of times PSU $_i$ is selected.

Creation and Selection of Clusters

For efficiency in interviewing, the sampled States were divided into regions from which clusters, i.e. combinations of local agencies within a sampled State, were selected. Clusters were created in such a way that no single local agency constituted more than half of the total cluster size and, to the extent possible, were geographically compact. Similarly to the State MOS, the cluster MOS was defined as the average of the proportions of each category of WIC participants within a cluster relative to the State total of each category. An equation parallel to the creation of the measure of size for states was derived:

$$\text{Cluster Size} = \frac{\frac{\sum P_{cluster}}{\sum P_{State}} + \frac{\sum B_{cluster}}{\sum B_{State}} + \frac{\sum N_{cluster}}{\sum N_{State}} + \frac{\sum I_{cluster}}{\sum I_{State}} + \frac{\sum C_{cluster}}{\sum C_{State}}}{5}$$

As previously stated, the number of times a State was sampled determined the number of clusters sampled in that State. Most of the 23 States sampled had only one cluster with probability proportional to size (PPS) based on the cluster size described earlier. Seven of the sample States had two or more clusters sampled.

In preparation for sampling of clusters most States were divided into multiple regions based on geography, administrative areas (if applicable), and number of local agencies. The regions were used for sampling clusters of local agencies in which an interviewer would work. The number of regions per State ranged from 2 to 11. Arizona was divided into only two regions to ensure that no single local agency constituted more than half of the size. New York was divided into 11 regions, with 4 regions in New York City alone; most States had 4 to 7 regions. California and Texas were not divided into regions for sampling of clusters due to the large number of clusters to be sampled in each (7 and 5, respectively) and the magnitude of several local agencies. In these States, we sampled local agencies directly and then grouped them to facilitate interview assignments. Using geographical regions would have been complicated and would not have yielded any gains in efficiency.

Selection of Agencies

Two local agencies were sampled with PPS from each cluster. Calculations of the local agency MOS were similar to the State and cluster size calculation described above. The MOS was multiplied by two in order to sample two local agencies from each research cluster sampled.

As noted, agencies were sampled directly in California and Texas, with two agencies selected for each time the State was sampled with PPS. Calculations for the local agency MOS were done based on State totals instead of cluster totals. Sampling of agencies in these States occurred with probability minimum replacement, so that sampling of very large local agencies could occur more than once.

The goal was to sample 80 local agencies, two for each of the 40 State clusters. One very large California local agency was sampled three times. Thus, across all States and clusters, 78 separate local agencies were sampled.

Selection of Clinics

Thirty participants were allocated for each local agency, with the exception of one large California agency that was sampled three times, and was thus allocated 90 participants. Each local agency was not allocated the same number of participants in each category. The distribution of the 30 participants from a local agency by category depended on the distribution of participants across categories in the local agency relative to the distribution of participants among all sampled local agencies.

The initial allocation was determined as follows:

$$A_i = \frac{30 \left(\frac{N_i}{T_i} \right)}{\sum_{i=1}^5 \frac{N_i}{T_i}}$$

Where A_i = the allocation to category i , and i equals one of the five categories of WIC participants

N_i = the number of participants in category i for the sampled local agency

T_i = the number of participants in category i across all sampled local agencies.

An iterative rounding algorithm was used in order to obtain exactly 480 participants per category. Thus, if for example, a local agency had a larger proportion of participants in the sampled agencies in one category compared with the remaining four categories, or more in a category compared with the remaining sampled local agencies, we would allocate more of the 30 participants to that category.

Once sampling of local agencies occurred, clinic-level data were obtained for each of the five categories of WIC participants. The clinic size is similar to the other size calculations above with a few major differences. Each clinic-level proportion was weighted by the local agency allocation within the category. The adjusted proportions were then divided by 15, half the number of participants within each local agency.

Wherever possible, two clinics were sampled with PPS from each local agency. If a local agency had only one clinic, sampling of that clinic was automatic and the participant allocation at the local agency level remained as before. When local agencies had one extremely large clinic and several small clinics, they were collapsed at the local-agency level. If a local agency had only two clinics and the clinics were both sufficiently large (greater than 60 total participants per clinic), the 30 participants were allocated 15 to each clinic. However, the partial allocations (i.e., the number of participants in each category) could vary from clinic to clinic, with a rounding algorithm used to decide the final allocations. In local agencies with multiple clinics, two clinics were sampled with PPS and the same total number of participants was allocated to each. However, if one of the two sufficiently large clinics selected had 70 percent or more of the total participants in the local agency, the 30 participants were allocated proportionally among the 2 clinics. This occurred once.

Selection of Participants

After the selection of WIC clinics, the lists of respondents were obtained from all the clinics sampled in 2 consecutive months (April and May 2009) – several months before data collection. The later month was the target month.

Participants were classified into the five categories: Pregnant, Breastfeeding, and Postpartum women, Children, and Infants. If a participant changed categories within the target month, the most recent category was used. Thus, if an infant became a child during the month, receiving some instruments as an infant and some as a child, that infant was considered a child for sampling purposes.

Each participant in a clinic was assigned a random number. Sorted by that number, participants underwent a selection process by the first n from each category (where n is the allocation of participants at the clinic level). The remaining participants in a category were retained in their order of selection and acted as replacements; so if a participant (or the participant's mother) refused to respond or could not be located, the next one in line was selected. Once a participant completed a telephone survey they became eligible for the in-person audit. The first $n/2$ respondents were selected to participate in the audit. In other words, if six participants were to be sampled from a given category, each participant in turn was asked to participate in the audit until three agreed. If any refused to participate the next telephone respondent was selected.

Weighting

States were sampled with PPS using a size measure that was the average of the proportion of participants in each of the five participant categories. This average was then multiplied by the number of States (clusters) allocated to the sample (40), and the inverse was as the PSU weight. Note that since it is the inverse, the number will be smaller than 1.00 if selection of the PSU occurred more than once. However, any PSU weight that was lower than 1 was set to 1.

Similarly the clusters were also sampled with PPS using a similar MOS. The MOS was then multiplied by the number of research clusters sampled. For California and Texas, where no regional clustering occurred, this weight is 1. Local agency probabilities of selection were two times that of the local agency MOS divided by the sum of the MOS for the agencies in the cluster. In California and Texas the local agency's probabilities of selection were twice the number of clusters selected (14 and 10, respectively) times the ratio of the local agency MOS to the sum of the MOS for all local agencies in the state. When clinics were selected, their probabilities of selection were two times the ratio of the clinic MOS to the local agency MOS.

For the telephone participants the probability of selection was calculated by dividing the number of participants sampled from the category by the total number of eligible participants from the category receiving WIC benefits from the clinic. Calculations were done for intermediate probability of selection of the clinics as well.

For the In-person audit participants, the probability of selection was calculated by dividing the number of participants sampled from the category by the total number of completed telephone participants from the category of eligible participants receiving WIC benefits from the clinic.

The initial weight for an in-person participant was the inverse of their probability of selection. The probability of selecting a participant P_{ijkrt} , is the probability of selection of a participant in State i , cluster j , agency k , clinic r , participant category t , and telephone participant q . This is equal to the product of the individual probabilities, i.e., $P_i P_j P_k P_r P_t P_q$, which denote the probability of selection of, respectively, the State, the cluster in the selected State, the agency in the selected cluster, the clinic in the selected agency, the telephone participant within the selected agency or clinic, and the in-person participant if selected for the telephone survey.

A nonresponse bias analysis was conducted on the In-person participants sample to detect any nonresponse and coverage problems with the sample, and to adjust the In-person sample weights. Appendix H contains resulting tabulations of nonresponse bias analysis.

The relationship between responding to the In-person survey and key variables in telephone survey and state administrative files was examined. The crosstabs comparing responses to the in-person survey and key variables are presented in Appendix I. The variable “Participated in the food stamp program” (SNAP) was significantly associated with responding to the In-person survey (39.6% of non-respondents to the survey participated in SNAP, in contrast to 51.5% of survey respondents).

The significant relationship between participation in the food stamp program (SNAP) and responding to the In-person survey may lead to a bias in the in-person data. Among in-person respondents, crosstabs comparing SNAP participants and key analysis variables were produced to test for any significant relationship which may indicate a bias. Appendix I contains a table which shows a significant relationship between SNAP participation and several of the key derived in-person variables. A nonresponse bias adjustment was applied to the respondent in-person weights to account for the bias.

This adjustment in essence takes the weights for those telephone participants sampled for the in-person survey and who refused, and spreads their weight over the responding participants in a particular nonresponse adjustment cell. Nonresponse adjustment cells were defined by crossing WIC category and SNAP participation, for a total of 10 cells (see Table G-2).

Table G-2: In-person Nonresponse Adjustment Cells

WIC Category	Participation in SNAP	Cell Number
Pregnant Women	Yes	1
	No	2
Breastfeeding	Yes	3
	No	4
Post Partum	Yes	5
	No	6
Child	Yes	7
	No	8
Infant	Yes	9
	No	10

For example, in the cell defined as pregnant women participating in SNAP, the weight of the non-responding pregnant women would be distributed over the responding pregnant women and the non-respondent's weight would be set to zero.

After the nonresponse adjustment, the in-person survey weights were checked for extreme weights within each WIC category. Large weights, any weights in a WIC category that were greater than three times the median weight, were trimmed. There were 14 cases with large weights and their weights were trimmed, set equal to three times the median⁵⁹. After trimming, the in-person weights were then poststratified to national WIC population totals within the WIC category. The idea is to use relevant population parameters as the reference to adjust the survey data weight and correct the cell frequency distributions of the key variables that are biased or unreliable because of undercoverage and/or nonresponse. With both the nonresponse and poststratification adjustments, we are able to generate estimates with less bias and greater precision. We obtained national totals by WIC category and adjusted the final weights to sum to those known totals.

⁵⁹ This routine process with survey data is frequently needed because of the unequal probability of sample selection and adjustments used to reduce sampling bias, some weights are rather large. As a result, the design effect may be larger and the effective sample size smaller than what the original design intended to achieve. Weight trimming usually reduces the variances by a greater amount, so that the mean squared deviations of the estimate is likely to be reduced.

APPENDIX H:
CASE ERROR AND DOLLAR ERROR
ESTIMATION PROCEDURES

Appendix H

Improper Payment Data Analysis and Estimation

Improper payment estimation entailed identifying case error, which in turn required determining the eligibility of each participant for WIC benefits. Identity and residence errors were straightforward to determine. No such errors were found, as all participants were able to produce the required documentation. The challenge was determining income eligibility and category eligibility in addition to verifying adjunctive eligibility based on specified non-WIC program participation.

We made extensive efforts to verify adjunctive eligibility, largely by checking documents and communicating with State agencies. For participants who were found not adjunctively eligible, we used in-person interview data to determine the economic unit (EU), calculate EU total income, and apply State-specific criteria to identify income eligibility. Based on the estimated case errors, we used participants' actual redemption values to generate improper payment dollar amounts with seasonality and annualizing adjustments.

Special Case Review Study

ICF Macro undertook a series of efforts to process in-person interview data and to integrate various external information for improper payment (IP) analysis. The in-person interview collected information on adjunctive eligibility status among the sampled 1,210 cases by checking documents of adjunctive programs. Respondents who were referred to a recognized program also had to show the interviewer a recognized document as proof that they are participating in that program. These documents included—

- Certification cards;
- Award letters;
- Active program vouchers; and
- EBT cards.

Any respondent who did not display one of the above types of documents was considered adjunctively ineligible. Programs supporting adjunctive or automatic eligibility were identified based on the types of documents used to prove this eligibility. Of the 1,210 respondents, 462 were identified as adjunctively eligible based on an in-person document check.

There were 234 respondents whose adjunctive status and income eligibility were not clear based on the in-person interview data. Case-by-case research ensued to clarify this group's adjunctive status (see *Income Adjunctive Eligibility* in Chapter 3). Staff called State agencies to clarify issues relating to certification and income in determining each case's WIC eligibility. Of the 234 cases flagged for special case reviews, five were identified as ineligible for income certification. The special case review generated an indicator of income eligibility for the 234 cases. Considering the in-depth review entailed, this indicator from the special case study would, for the five ineligible cases, overrule adjunctive eligibility established in the in-person interview as well as the computerized income eligibility check, which would cover all of the 1,210 respondents. Table H-1a shows the distribution of weighted and unweighted respondents by WIC

category and adjunctive status (generated from the in-person interview) and eligibility status (generated from the special case review study). Table H-1b lists the cases under the special case review study by State.

Table H-1a: Number and percentage of respondents by WIC category: Adjunctive eligibility established in the in-person interview and income eligibility determined in the special case review

Adjunctive Eligibility: In-person Interview						
WIC category	Adjunctive eligibility verified by document check	Sample n (unweighted)	WIC participant N	Percent	95% confidence interval	
Pregnant	No	172	677,872	70.75	61.39	80.11
	Yes	79	280,220	29.25	19.89	38.61
Breastfeeding	No	169	401,095	68.80	58.80	78.80
	Yes	89	181,891	31.20	21.20	41.20
Postpartum	No	129	351,420	55.43	42.45	68.41
	Yes	95	282,594	44.57	31.59	57.55
Infant	No	135	1,316,186	59.55	47.94	71.16
	Yes	91	894,065	40.45	28.84	52.06
Child	No	143	2,803,992	59.30	46.99	71.62
	Yes	108	1,924,282	40.70	28.38	53.01
Total	No	748	5,550,565	60.90	50.11	71.70
	Yes	462	3,563,052	39.10	28.30	49.89
Income Eligibility: Special Case Review						
WIC category	Income eligibility by special case review study	Sample n	WIC population N (Weighted sample)	Percent	95% confidence interval	
Pregnant	No	47	183,210	98.42	95.16	100.00
	Yes	1	2,937	1.58	0.00	4.84
Breastfeeding	No	41	113,911	95.13	84.96	100.00
	Yes	1	5,831	4.87	0.00	15.04
Postpartum	No	41	126,278	96.74	89.97	100.00
	Yes	1	4,255	3.26	0.00	10.03
Infant	No	47	431,112	96.38	90.97	100.00
	Yes	2	16,177	3.62	0.00	9.03
Child	No	53	978,346	100.00	100.00	100.00
	Yes	0	.	.	.	.
Total	No	229	1,832,857	98.43	96.89	99.97
	Yes	5	29,199	1.57	0.03	3.11
	Total	234	1,862,056	100.00		

The special case review study on income eligibility identified and flagged five erroneous certification cases out of 234 cases studied, with supporting adjunctive program or income documentation identified. The dataset then was merged with the main dataset, which covered all 1,210 cases, of which 462 cases were verified and flagged as adjunctively eligible by the in-person interview.

Table H-1b: Unweighted number of respondents by State: Special case reviews

State*	For income check	Ineligibility error determined	State total
R	0	0	0
F	18	0	18
G	41	1	42
L	3	0	3
W	6	1	7
B	3	1	4
E	6	0	6
P	0	0	0
V	0	0	0
K	14	0	14
U	6	0	6
A	0	0	0
O	13	0	13
J	0	0	0
Q	20	0	20
C	20	0	20
T	13	0	13
D	29	1	30
M	12	0	12
H	7	0	7
S	11	0	11
N	1	0	1
I	6	1	7
Total	229	5	234

*State names have been de-identified using a random process that also renders comparison between states in other tables impossible.

For all the 1,210 respondents, analysts created an SAS program to measure their income eligibility. The resulting ineligibility identification was modified (i.e., overruled) by the adjunctive eligibility flag and the income eligibility error flag established by, respectively, the in-person interview and the special case review study. For one case that was adjunctively eligible by the in-person interview but not income eligible by special case review study, the conclusion followed the special case review study and treated the case as not eligible. Table H-2 shows a three-way crosstab between adjunctive eligibility (from the in-person interview) and the income eligibility (from computerized income checking), within categories of the special case review study—namely income eligible, income ineligible, and not in special case review study.

Table H-2: Distribution of the unweighted number of respondents by final eligibility status (from modified result of computerized income check) and adjunctive eligibility (from in-person interview), by special case review study category

	In-person interview: Adjunctive status (unweighted n=1,210)	Modified result from computerized income check (unweighted sample n=1,210)	
		Eligible	Not eligible
Special case review: Eligible (unweighted 229)	not adjunctive (179)	170	9
	adjunctive (50)	50	0
Special case review: Ineligible (unweighted 5)	not adjunctive (4)	0	4
	adjunctive (1)	0	1
Not in special study (unweighted 976)	not adjunctive (565)	540	25
	adjunctive (411)	411	0
Column total (final eligibility status)		1,171	39

Economic Unit Determination

Measuring income to determine WIC income eligibility required defining Economic Units (EUs). Using in-person interview data, analysts sorted out each named household member’s relationship with the sampled WIC participant and counted them as an EU member if a named household member reportedly shared financial resources with the respondent.

The SAS routine also attempted to identify household members who were reported to be children under temporary care, as such members are treated differently by the sampled State’s guidelines in defining EUs.⁶⁰ The process, however, did not affect the EU size measurement because sampled EUs had no child under temporary care.

Calculating EU Income/Assets

States differ in counting income sources for determining WIC eligibility. In addition to a State agency survey that collected information on countable incomes, ICF Macro staff called State agencies to ensure accurate documentation of each State’s varying ways of counting income sources. Analysts used this information to differentially count the income dollar amounts by income/asset sources and to generate the total income for the economic unit (see Exhibit 3-2 for details of State discretionary countable income specifications).

The SAS program defined three two-dimensional arrays with in-person interview data that measure, respectively, income dollar amount of each income source by each EU member who had incomes/assets; income evidence presented for each income source by each EU member; and income pay periods for each income sources by each EU member.

⁶⁰ The SAS algorithm counted the children under temporary care into EU size according to State guidelines, including Arizona, California, Colorado, Florida, Indiana, Louisiana, Massachusetts, Missouri, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Texas, Virginia, and Washington. For the rest of the States, children under temporary care were excluded from the EU size counting.

With the three two-dimensional arrays, two SAS program loops were run to total the income dollar amounts from all income sources by all EU members who had incomes/assets and to convert varying measures into *monthly total income for each EU*. For income dollars reportedly paid by specific pay periods (weekly, biweekly, half-monthly, monthly, quarterly, and annually), the calculation was done as below:

- Weekly—multiply by 4.3;
- Biweekly—multiply by 2.15;
- Half-monthly—multiply by 2;
- Monthly—no multiplier;
- Quarterly—multiply by 1/3;
- Annually—multiply 1/12;

Note that the income data were initially only collected from participants who were determined as adjunctively ineligible by the field data collectors. At the beginning of data collection, for those who were able to provide adjunctive eligibility documents, income data were not collected. It was later found that uncertainties occurred regarding onsite determination of the adjunctive status; thus, data collectors were instructed to collect income data from all respondents. For those initially interviewed without income data, data collectors contacted them again via telephone or in-person interview to ensure that income data were collected for all respondents.

Each economic unit's monthly income was compared against the WIC income eligibility guidelines for 2008–09.⁶¹ The monthly mean and median income estimates for the adjunctively ineligible subgroup are presented in Table H-3.

⁶¹ See <http://www.fns.usda.gov/wic/howtoapply/incomeguidelines08-09.htm>.

Table H-3: Mean and median monthly income of economic unit (EU) with and without cases of very high income: Adjunctively eligible vs. adjunctively ineligible participants and EU size

Adjunct verified	EU size	Case inclusion	Sample n (unweighted)	WIC population	EU monthly income mean	95% CI for Mean		EU monthly income median
Not adjunctively eligible	1	All cases	43	213,069	0.00	0.00	0.00	0
		Excluding cases of very high income	43	213,069	0.00	0.00	0.00	0
	2	All cases	152	1,142,342	1,168.78	-412.05	2,749.61	0
		Excluding cases of very high income	151	1,134,322	406.28	231.54	581.02	0
	3	All cases	207	1,425,988	3,309.09	-1,684.13	8,302.30	0
		Excluding cases of very high income	204	1,400,724	465.87	251.84	679.89	0
	4	All cases	162	1,332,434	1,429.18	243.41	2,614.94	0
		Excluding cases of very high income	161	1,310,485	882.53	584.66	1,180.40	0
	5	All cases	100	767,886	1,038.11	628.63	1,447.59	267
		Excluding cases of very high income	100	767,886	1,038.11	628.63	1,447.59	267
	6 or more	All cases	84	737,609	2,685.58	-603.69	5,974.85	860
		Excluding cases of very high income	82	713,424	1,027.76	542.70	1,512.82	0
	Total (Not adjunctively eligible)	All cases	748	5,619,329	1,910.58	-23.23	3844.40	0
		Excluding cases of very high income	741	5,539,909	685.99	500.37	871.61	0

Table H-3 (continued)

Adjunct verified	EU size	Case inclusion	Sample n (unweighted)	WIC population	EU monthly income mean	95% CI for Mean		EU monthly income median
Adjunctively eligible	1	All cases	11	54,068	0.00	0.00	0.00	0
		Excluding cases of very high income	11	54,068	0.00	0.00	0.00	0
	2	All cases	89	628,224	51.23	-20.17	122.63	0
		Excluding cases of very high income	89	628,224	51.23	-20.17	122.63	0
	3	All cases	124	1,012,579	106.70	-17.19	230.59	0
		Excluding cases of very high income	124	1,012,579	106.70	-17.19	230.59	0
	4	All cases	93	764,645	77.64	-53.19	208.47	0
		Excluding cases of very high income	93	764,645	77.64	-53.19	208.47	0
	5	All cases	72	516,928	105.67	-35.08	246.41	0
		Excluding cases of very high income	72	516,928	105.67	-35.08	246.41	0
	6 or more	All cases	73	517,844	11.04	-12.18	34.25	0
		Excluding cases of very high income	73	517,844	11.04	-12.18	34.25	0
	Total (Adjunctively eligible)	All cases	462	3,494,288	74.39	-2.30	151.07	0
		Excluding cases of very high income	462	3,494,288	74.39	-2.30	151.07	0
Grand Total	All cases	1,210	9,113,617	1,206.56	-0.87	2,413.99	0	
	Excluding cases of very high income	1,204	9,034,197	449.43	318.37	580.50	0	

^a Medians were calculated without design effect adjustments.

As WIC certification requires that income be documented with pay stubs or other evidence, the SAS program identified available income sources that had no supporting evidence. Participants who reported one or more incomes and presented evidence of at least one income were treated as valid with income evidence. Only those who reported one or more incomes but had no evidence at all were treated as lacking income evidence. There were 18 such cases lacking income evidence.

Staff conducted case reviews to see if these cases were erroneous certifications. Of these, three cases were found Medicaid adjunctively eligible; whereas the rest were not found adjunctively eligible; hence, the latter were subject to an income eligibility test, which resulted in no eligibility error. Table H-4 lists the 18 cases without income documentation.⁶² It is important to note that lack of income documentation was not used in determining eligibility error; this exercise was only for the sake of data processing documentation.

Table H-4: List of the 18 cases that reported incomes* without any documentation

State**	WIC category	EU monthly income (\$)	Income eligibility error
A	Pregnant	400	No
E	Breastfeeding	0	No
D	Breastfeeding	1,500	No
B	Breastfeeding	0	No
A	Breastfeeding	2,300	No
E	Postpartum	0	No
A	Postpartum	0	No
A	Postpartum	0	No
C	Postpartum	0	No
E	Infant	0	No
E	Infant	1,290	No
B	Infant	6	No
A	Infant	0	No
A	Infant	1,333	No
A	Infant	0	No
C	Infant	0	No
A	Child	3,440	No
A	Child	0	No

*Income amounted to zero because no State-defined countable income reported.

**State names have been de-identified using a random process that also renders comparison between states in other tables impossible.

There were another 12 cases that reported one or more incomes that are countable and the associated income pay periods: “others” without specification of details. The ambiguity made it difficult to convert the reported income into monthly income for determining income eligibility. Staff again conducted case reviews to determine the pay periods. Four cases were determined as receiving monthly pay when identified as receiving medical assistance (\$157), State SSI payment (\$941), and wage/tip (\$1,000 and \$1,239, respectively). The rest (eight cases) that reported wage/tip valued from \$1 through \$12 were determined to have an hourly pay rate.

⁶² To protect respondents’ confidentiality, detailed identification information in this and other listings of individual cases is not presented.

Monthly income conversion was done according to these conclusions. Table H-5 lists these cases with their derived monthly income and resulting income eligibility status.

Table H-5: List of 12 cases that reported incomes with pay periods of “others”

State*	WIC category	EU monthly income (\$)	Income eligibility error
A	Pregnant	2,816	Yes
A	Pregnant	0	No
A	Pregnant	5,280	Yes
B	Pregnant	941	No
D	Pregnant	2,000	No
F	Breastfeeding	1,239	No
A	Postpartum	5,280	No
A	Postpartum	2,816	No
B	Postpartum	1,507	No
E	Infant	800	No
C	Infant	4,224	Yes
A	Child	6,336	Yes

*State names have been de-identified using a random process that also renders comparison between states in other tables impossible.

Another issue emerged with seven cases that were found to have excessively high incomes (see Table H-6). Staff reviewed these cases, and they found one to be Medicaid adjunctively eligible and overruled the income counting result to treat this case as no income eligibility error. The rest (six cases) were found not adjunctively eligible and were treated as certification error in the final income eligibility analysis. It was necessary to document these cases in detail for the reader’s caution, as it was possible that data errors occurred with self-reported incomes; but it was infeasible to confirm and remedy such potential errors because of the limited scope of work.⁶³

Table H-6: List of the seven cases identified as having excessively high incomes

State*	WIC category	EU size	EU monthly income \$	Income eligibility error
B	Pregnant	6	16,045	Yes
D	Breastfeeding	3	182,531	Yes
C	Postpartum	3	267,458	Yes
A	Infant	6	59,555	Yes
C	Child	3	153,636	No
C	Child	4	34,067	Yes
C	Child	2	109,005	Yes

*State names have been de-identified using a random process that also renders comparison between states in other tables impossible.

To examine the difference between cases with very high incomes and the rest of the sample, analysts compared the two groups’ categories for race-ethnicity, education, native language, metro vs. non-metro locale, household size, new experience with WIC, and food security. The only statistically significant difference between the two groups was in food security. For cases of high income, the high food security rate was 98.68 percent (95% CI = 95.88% and 100.00%);

⁶³ Double-checking the reported income entails efforts that are more extensive, such as third-party verification via data collection from the respondent’s employers or social service agencies. Such activities are, however, beyond the scope of this study.

whereas for the rest in the sample, the rate was 81.78 percent (95% CI = 78.311% and 85.25%). Other differences, substantial albeit not statistically significant, are listed in Table H-7a.

Table H-7a: Comparison of six cases with very high income vs. the rest of the sample: Percentage by demographics and food security categories

Demographics	Percent	S. E.	95% CI	
<i>Cases with very high income (unweighted n=6)</i>				
Non-Hispanic or Latino	72.36	28.82	14.12	100.00
Asian Pacific Islander	28.45	29.77	0.00	88.62
English as native language	44.73	57.64	0.00	100.00
High food security	98.68	1.39	95.88	100.00
<i>Other cases in the sample (unweighted n=1,204)</i>				
Non-Hispanic or Latino	54.12	4.75	44.51	63.73
Asian Pacific Islander	2.46	0.70	1.04	3.89
English as native language	64.53	4.08	56.27	72.78
High food security	81.78	1.716	78.31	85.25

For reference, Table H-7b presents estimates of income eligibility case error and pre-rebate annualized dollar error, excluding the very-high-income cases.

Table H-7b: Estimates excluding the six cases of very high income: Income eligibility case error and pre-rebate dollar error

Income eligibility case error					
WIC category	Sample n in error (unweighted)	WIC population in error	Income eligibility case error rate	95% CI	
Pregnant	6	27,321	0.30	-	0.61
Breastfeeding	8	27,906	0.31	0.05	0.57
Postpartum	5	12,492	0.14	0.00	0.27
Infant	10	94,334	1.04	0.36	1.73
Child	4	58,429	0.65	-	1.45
Total	33	220,482	2.43	1.10	3.77
Annualized income eligibility dollar error (pre-rebate)					
WIC category	Sample n in error (unweighted)	WIC total population	Annualized income eligibility dollar error	95% CI	
Pregnant	6	953,664	12,349,855	(1,297,947)	25,997,656
Breastfeeding	8	580,718	23,339,242	3,625,329	43,053,154
Postpartum	5	632,967	5,973,886	422,564	11,525,207
Infant	10	2,138,152	115,522,475	36,032,055	195,012,895
Child	4	4,750,646	21,828,787	(9,910,186)	53,567,759
Total	33	9,056,146	179,014,243	91,684,837	266,343,649

Determining Income Eligibility

The SAS algorithm compared each sampled participant's EU monthly income against the WIC Income Eligibility Guideline by EU size. A total of 39 sampled cases were identified as income ineligible upon incorporating the indicators of income/adjunctive ineligibility from the special case review study and in-person interview file. The six cases with very high income were included in the analysis and were counted as income eligibility errors because there was some

evidence that these cases tended to have higher rates of high food security and better education than the rest in the sample (see Table H-6).

Identifying Other Types of Error

Other types of errors due to identity ineligibility, residence ineligibility, and WIC category eligibility were examined as well. In-person interviews requested the respondents to present evidence of their identity and residence. All of the respondents did so; no identity or residence error was found among study participants.

Category Error

Category errors occur largely when agencies mistake the age of infants/children or the dates of women's pregnancy, breastfeeding, and delivery as required by WIC category eligibility. The available in-person interview data, however, did not contain information on dates of women's pregnancy, breastfeeding, and delivery; hence, category errors for women were not produced. Analysts examined the ages of infants and children (in days) by calculating the length of days between the birth date and the certification date. Six sampled units (weighted to 49,832 WIC participants) were identified as category errors, as they aged over 1 year at certification time (i.e., the difference between the certification date and the birth date was greater than 366 days) but had received infant benefits. Note that none of the category error cases was identified as income eligibility error (i.e., they were all income eligible for child benefits) and therefore are not included in the case and dollar error estimates in Chapter 4. No over-age children (older than 5 years or 1,828 days at the time of certification) were identified.

Dollar error due to category error should be the difference between the erroneously redeemed infant benefit value and the child benefit value that would have been appropriate for the given participant. To measure dollar error due to category error based on the actual redeemed benefit value, analysts calculated the difference for each category error case between respondents' actual redeemed infant benefit and their affiliated clinic's average redeemed value of child benefits. In two cases where clinic average redeemed child benefit value was not available, analysts used their agencies' average value. Five cases had their redeemed infant benefit values greater than the clinic/agency average child benefit redemption value, thus incurring overpayment error. Only one case had redeemed an infant value smaller than the clinic average of child benefit redemption value, incurring no dollar error (i.e., the dollar error was assigned zero).

Table H-8 lists the six cases by State with dollar error amounts calculated and aggregated (annualized) dollar error estimates for category error cases only.

Table H-8: List of category error cases (infant over 12 months) by State: Unweighted dollar error and weighted annualized dollar error

State*	Sample n (unweighted) in error	Category error Dollar error amount (unweighted)	
C	1	1,218	
C	1	166	
B	1	-780 (assigned zero)	
B	1	765	
A	1	985	
A	1	777	
	Weighted annualized total dollar amount	95% CI	
Category error \$	19,888,965	-1,802,465	41,580,395

*State names have been de-identified using a random process that also renders comparison between states in other tables impossible.

Estimate Income Eligibility Dollar Error

Linking income eligibility indicator to the redemption data (see Section 3.5: *Redemption Data Processing*), the SAS algorithm calculated the erroneous payments due to income-ineligible cases. All of the redeemed dollar values by income-ineligible cases were considered as overpayment error. Staff have examined redemption data and found that the May issuances were redeemed in May through July in all sampled States.

To annualize the estimates from May redemption data, we used a multiplier (12.285) derived from the WIC total food costs data (Table H-9), rather than a simple month count of 12 to take monthly variation of redemption values into consideration. Presumably, the error rate is constant across months and the monthly redemption value is closely correlated to WIC monthly food cost reported by the Food and Nutrition Service (FNS). We obtained WIC monthly food costs data for FY 2009 (October 2008 through September 2009) and divided the FY 2009 total cost by the food cost in May to generate the annualizing multiplier 12.285 (see Table H-4 for WIC monthly food cost data used for this purpose).

Table H-9: Monthly and cumulative WIC food benefit costs: FY 2009

State Agency or Indian Tribal Organization	Monthly costs \$
Oct 2008	402,815,721
Nov 2008	392,249,549
Dec 2008	391,525,368
Jan 2009	393,314,732
Feb 2009	378,397,365
Mar 2009	383,695,958
Apr 2009	380,414,599
May 2009	377,758,893
Jun 2009	382,549,508
Jul 2009	381,892,874
Aug 2009	386,878,505
Sep 2009	389,354,241
Cumulative Cost	4,640,847,313
Annualizing multiplier	12.28520996

Analysts produced the total erroneous payment estimates for income eligibility error in FY 2009. The procedure applied sample weighting that adjusted the estimates proportionally to represent the WIC participant universe in 48 States. Replicate weights were used to compensate for the potential error due to the complex sample design. The sample re-weighting was conducted after initial analysis found in-person survey nonrespondents differed from respondents on some variables, particularly participation in SNAP (see Appendix G: *Sampling and Weighting Methodology* and Appendix I: *Nonresponse Tabulations*). The final case error and improper payment estimates were generated using the re-weighted data.

A comparison in demographics, program category, and food security between participants identified as an eligibility error and other participants are presented in Table H-10.

All statistical procedures used SAS 9.2 on UNIX to generate estimates of WIC participant demographics, income, case error counts and rates, and dollar error amounts. PROC SURVEYMEANS and PROC SURVEYFREQ were used, applying sample weights and replicate weights to produce nationwide WIC participant population estimates, with complex sample design effects adjusted.

Table H-10: Demographic and program background variables: Participants with income eligibility error and participants without the error

Income eligibility error	Demographic/program characteristics	Sample (unweighted) n	WIC Population	Percent within group	95% CI for percent	
WIC program category						
No error	Pregnant	244	926,342	10.48	10.13	10.84
	Breastfeeding	249	552,812	6.26	5.98	6.54
	Postpartum	218	620,476	7.02	6.87	7.17
	Infant	210	2,043,818	23.13	22.38	23.88
	Child	250	4,692,217	53.11	52.37	53.84
Error	Pregnant	7	31,750	11.42	0.00	23.62
	Breastfeeding	9	30,174	10.86	0.31	21.41
	Postpartum	6	13,538	4.87	0.16	9.58
	Infant	11	114,091	41.05	22.61	59.49
	Child	6	88,399	31.80	3.83	59.78
Hispanic or Latino						
No error	Hispanic or Latino	520	4,052,747	46.01	36.42	55.60
Error	Hispanic or Latino	15	101,822	36.63	11.14	62.13
Frequency Missing = 5						

Table H-10 (continued)

Income eligibility error	Demographic/program characteristics	Sample (unweighted) n	WIC Population	Percent within group	95% CI for percent	
Race						
No error	American Indian	11	85,976	0.98	0.00	1.99
	Asian Pacific Islander	26	220,020	2.52	1.06	3.98
	African American	234	1,892,474	21.67	13.73	29.60
	white	505	3,905,339	44.71	35.33	54.09
	other	375	2,631,236	30.12	20.98	39.26
Error	American Indian	1	9,220	3.38	0.00	10.54
	Asian Pacific Islander	1	21,949	8.04	0.00	24.74
	African American	9	42,475	15.56	0.80	30.31
	white	17	115,765	42.40	14.26	70.54
	Other	9	83,634	30.63	0.00	64.50
Frequency Missing = 22						
Education*						
No error	less than HS	340	2,615,890	29.66	23.46	35.85
	HS	403	2,850,244	32.31	26.82	37.80
	more than HS	424	3,354,695	38.03	31.67	44.39
Error	less than HS	2	8,702	3.13	0.00	8.17
	HS	19	140,074	50.39	28.93	71.86
	more than HS	18	129,177	46.47	24.15	68.80
Frequency Missing = 4						
Home language						
No error	English	750	5,691,951	64.42	56.28	72.56
	Spanish	371	2,793,402	31.62	23.91	39.33
	Others	50	350,312	3.96	1.44	6.49
Error	English	23	172,977	62.23	43.02	81.45
	Spanish	12	74,677	26.87	2.65	51.08
	Others	4	30,299	10.90	0.00	26.86
Metro area locale						
No error	metro	900	6,756,075	76.46	66.42	86.51
Error	metro	32	207,507	74.66	49.85	99.46
New to WIC						
No error	New to WIC	641	4,209,209	47.64	41.58	53.70
Error	New to WIC	25	190,454	68.52	44.12	92.92
Other assistance program participation						
No error	No Assistance	411	2,668,244	30.55	24.08	37.01
	Yes. Not SNAP	138	1,118,729	12.81	9.52	16.09
	Yes. Includes SNAP	602	4,948,072	56.65	49.86	63.43
Error	No Assistance	23	163,717	59.96	25.59	94.33
	Yes. Not SNAP	4	15,879	5.82	0.00	13.09
	Yes. Includes SNAP	10	93,447	34.22	0.00	68.95
Frequency Missing = 22						

Table H-10 (continued)

Income eligibility error	Demographic/program characteristics	Sample (unweighted) n	WIC Population	Percent within group	95% CI for percent	
EU size						
No error	1	54	267,137	3.02	1.22	4.82
	2	233	1,712,464	19.38	14.67	24.09
	3	320	2,375,301	26.88	22.60	31.16
	4	242	1,983,115	22.44	18.74	26.14
	5	170	1,274,086	14.42	11.08	17.76
	6 or more members	152	1,223,562	13.85	10.55	17.14
Error	1	-	.	.	.	.
	2	8	58,102	20.90	2.76	39.05
	3	11	63,266	22.76	7.53	37.99
	4	13	113,964	41.00	21.41	60.60
	5	2	10,729	3.86	0.00	10.88
	6 or more members	5	31,891	11.47	0.00	27.54
Household with child(ren)						
No error	with child	913	6,441,845	72.91	67.12	78.69
Error	with child	29	188,440	67.80	53.67	81.93
Food security*						
No error	High food security	932	7,194,811	81.43	77.87	84.98
	Marginal food security	21	98,138	1.11	0.25	1.98
	Low food security	115	839,461	9.50	6.92	12.08
	Very low food security	103	703,255	7.96	5.35	10.57
Error	High food security	36	271,610	97.72	94.66	100.00
	Marginal food security	-	.	.	.	.
	Low food security	3	6,342	2.28	0.00	5.34
	Very low food security	-	.	.	.	.

*The two groups' difference was statistically significant at $p < .05$ level.

APPENDIX I:
NONRESPONSE ANALYSIS

Appendix I

Non-response Tabulations: Comparison of In-person Survey respondents with nonrespondents

Table I-1 compares 1,188 In-person survey respondents⁶⁴ and 275 nonrespondents on telephone and administrative variables, without sample weighting. Chi-square tests were used to assess the statistical significance of these differences. This analysis informed the sample re-weighting to remedy potential nonresponse bias for the In-person survey. Three variables were found to be significantly different between the respondents and nonrespondents:

- Participation in SNAP (formerly Food Stamp) program (variable name P0532_1, Chi-square = 12.61, $p < .0001$)—*this was the key concern that motivated the sampling reweighting and nonresponse analysis* (See Appendix G: Sampling and Weighting Methodology).
- Food Distribution Program on Indian Reservations (variable name P0532_4, Chi-square = 5.58, $p = .019$).
- Commodity Supplemental Food Program (variable name P0532_9, Chi-square = 6.42, $p = .012$).

Table I-2 further shows the association between SNAP participation and the key variables used in the improper payment analysis, without sample weighting. As expected, substantial differences were found between the SNAP participants and nonparticipants. Sample re-weighting thus was justified to remedy the bias and the final improper payment estimation was based on the re-weighted sample.

Table I-3 presents a comparison of, by WIC category, participants in the in-person interview against participants in the telephone interview but not in the in-person interview, with sample weighting. The weighted frequency and percentage distribution are statistically equivalent as evidenced by the point estimates and standard errors.

⁶⁴ There were 22 cases that did not complete the telephone interview but were asked and participated in the in-person interview. They were included in the improper payment analysis-- the WIC categories are shown below:

Pregnant	4
Breastfeeding	12
Postpartum	1
Infants	3
Children	2
Total	22

Table I-1 In-person Survey Respondents vs. Non-respondents (Those Who Refused to Participate in In-person Survey): Unweighted Frequencies and Column Percentages

		WAS ASKED FOR IN HOME INTERVIEW		Total
		NO	YES	
IN HOME INTERVIEW	NO	1075 100.0%	275 18.8%	1350 53.2%
	YES	0 .0%	1188 81.2%	1188 46.8%
Total		1075 100.0%	1463 100.0%	2538 100.0%

		IN HOME INTERVIEW		Total
		NO	YES	
P0507 Thinking about the WIC clinic that you are familiar with, how satisfied are you with the people that work there and the services they provide?	Neutral, Not Satisfied	7.3%	7.1%	7.1%
	Satisfied	92.7%	92.9%	92.9%
Total		100.0%	100.0%	100.0%

Note: Chi-square = .01; p = .91, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
P0507A Thinking about the WIC clinic's location and building facility, would you say you are	Neutral, Not Satisfied	12.7%	10.0%	10.5%
	Satisfied	87.3%	90.0%	89.5%
Total		100.0%	100.0%	100.0%

Note: Chi-square = 1.72; p = .19, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
P0508_01 How would you rate the: Customer friendliness of the WIC staff	Not Good	4.4%	5.1%	5.0%
	Excellent, Very Good, Good	95.6%	94.9%	95.0%
Total		100.0%	100.0%	100.0%

Note: Chi-square = .28; p = .60, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
P0508_02 How would you rate the: Quality of service you get	Not Good	2.2%	4.5%	4.1%
	Excellent, Very Good, Good	97.8%	95.5%	95.9%
Total		100.0%	100.0%	100.0%

Note: Chi-square = 3.17; p = .08, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
P0508_03 How would you rate the: Helpfulness of the staff	Not Good	4.0%	4.7%	4.6%
	Excellent, Very Good, Good	96.0%	95.3%	95.4%
Total		100.0%	100.0%	100.0%

Note: Chi-square = .26; p = .61, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
P0508_04 How would you rate the: Staff's ability to speak your language	Not Good	5.1%	4.0%	4.2%
	Excellent, Very Good, Good	94.9%	96.0%	95.8%
Total		100.0%	100.0%	100.0%

Note: Chi-square = .61; p = .44, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
P0508_05 How would you rate the: Safety of the clinic's location	Not Good	4.0%	5.6%	5.3%
	Excellent, Very Good, Good	96.0%	94.4%	94.7%
Total		100.0%	100.0%	100.0%

Note: Chi-square = 1.08; p = .30, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
P0508_06 How would you rate the: Convenience of the clinic's location for you	Not Good	4.0%	6.9%	6.4%
	Excellent, Very Good, Good	96.0%	93.1%	93.6%
Total		100.0%	100.0%	100.0%

Note: Chi-square = 3.16; p = .08, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
P0508_07 How would you rate the: Convenience of its operating hours	Not Good	5.8%	5.9%	5.9%
	Excellent, Very Good, Good	94.2%	94.1%	94.1%
Total		100.0%	100.0%	100.0%

Note: Chi-square = .011; p = .96, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
P0508_08 How would you rate the: Amount of time you must wait until you are seen by WIC staff	Not Good	19.3%	18.1%	18.3%
	Excellent, Very Good, Good	80.7%	81.9%	81.7%
Total		100.0%	100.0%	100.0%

Note: Chi-square = .21; p = .65, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
P0508_09 How would you rate the: Size and space of the waiting area	Not Good	16.7%	18.4%	18.0%
	Excellent, Very Good, Good	83.3%	81.6%	82.0%
Total		100.0%	100.0%	100.0%

Note: Chi-square = .40; p = .53, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
P0508_10 How would you rate the: Activities provided to occupy children while you wait	Not Good	32.4%	28.5%	29.3%
	Excellent, Very Good, Good	67.6%	71.5%	70.7%
Total		100.0%	100.0%	100.0%

Note: Chi-square = 1.58; p = .21, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
P0508_11 How would you rate the: Way they handle paperwork for certification	Not Good	2.5%	5.1%	4.6%
	Excellent, Very Good, Good	97.5%	94.9%	95.4%
Total		100.0%	100.0%	100.0%

Note: Chi-square = 3.21; p = .07, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
P0508_12 How would you rate the: How they deliver your food	Not Good	2.5%	5.1%	4.6%
	Excellent, Very Good, Good	97.5%	94.9%	95.4%
Total		100.0%	100.0%	100.0%

Note: Chi-square = 3.22; p = .07, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
P0509_1 How would you rate the food benefits for Providing the right quantity of food?	Not Good	7.6%	10.7%	10.1%
	Excellent, Very Good, Good	92.4%	89.3%	89.9%
Total		100.0%	100.0%	100.0%

Note: Chi-square = 2.29; p = .13, non-significant.

		IN HOME INTERVIEW		Total
		0	1	
P0509_2 How would you rate the food benefits for Offering foods that you like to eat?	Not Good	9.5%	11.3%	10.9%
	Excellent, Very Good, Good	90.5%	88.7%	89.1%
Total		100.0%	100.0%	100.0%

Note: Chi-square = .76; p = .38, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
P0509_3 How would you rate the food benefits for Offering food choices in sizes and brands that you can find on the shelf?	Not Good	13.5%	11.8%	12.1%
	Excellent, Very Good, Good	86.5%	88.2%	87.9%
Total		100.0%	100.0%	100.0%

Note: Chi-square = .59; p = .44, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
P0518 have you attended any group education sessions that were recommended to you by the WIC staff?	NO	64.0%	60.3%	61.0%
	YES	36.0%	39.7%	39.0%
Total		100.0%	100.0%	100.0%

Note: Chi-square = 1.31; p = .25, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
P0524 How much one-on-one nutrition counseling have you received in person for this most recent pregnancy/baby?	None at all	40.0%	34.3%	35.4%
	One session or more	60.0%	65.7%	64.6%
Total		100.0%	100.0%	100.0%

Note: Chi-square = 3.12; p = .08, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
P0532_1 Food Stamp program?	NO	60.4%	48.5%	50.7%
	YES	39.6%	51.5%	49.3%
Total		100.0%	100.0%	100.0%

Note: Chi-square = 12.61, p<.0001.

		IN HOME INTERVIEW		Total
		NO	YES	
P0532_2 Free or reduced price School Lunch or Breakfast program?	NO	74.5%	70.0%	70.9%
	YES	25.5%	30.0%	29.1%
Total		100.0%	100.0%	100.0%

Note: Chi-square = 2.20; p = .14, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
P0532_3 Summer Food Service program, for kids when not in school?	NO	95.6%	93.9%	94.2%
	YES	4.4%	6.1%	5.8%
Total		100.0%	100.0%	100.0%

Note: Chi-square = 1.30; p = .26, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
P0532_4 Food Distribution Program on Indian Reservations (FDPIR)?	NO	98.9%	99.8%	99.7%
	YES	1.1%	.2%	.3%
Total		100.0%	100.0%	100.0%

Note: Chi-square = 5.58, p=.019.

		IN HOME INTERVIEW		Total
		NO	YES	
P0532_5 Temporary Emergency Food Assistance program?	NO	97.8%	98.1%	98.0%
	YES	2.2%	1.9%	2.0%
Total		100.0%	100.0%	100.0%

Note: Chi-square = .07; p = .79, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
P0532_6 Child and Adult Care Food program, which provides free lunches for children at day care centers?	NO	96.4%	96.9%	96.8%
	YES	3.6%	3.1%	3.2%
Total		100.0%	100.0%	100.0%

Note: Chi-square = .20; p = .66, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
P0532_7 Local/community food bank or pantry?	NO	94.5%	93.5%	93.7%
	YES	5.5%	6.5%	6.3%
Total		100.0%	100.0%	100.0%

Note: Chi-square = .40; p = .53, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
P0532_8 Commodity Supplemental Food Program, which provides food packets that are distributed through State and local agencies?	NO	98.9%	98.8%	98.8%
	YES	1.1%	1.2%	1.2%
Total		100.0%	100.0%	100.0%

Note: Chi-square = .02; p = .90, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
P0532_9 Have you ever participated in Commodity Supplemental Food Program in the past?	NO	98.2%	99.6%	99.3%
	YES	1.8%	.4%	.7%
Total		100.0%	100.0%	100.0%

Note: Chi-square = 6.42, p=.012.

		IN HOME INTERVIEW		Total
		NO	YES	
P0533 Food consumed during last 12 months	Have enough to eat	84.0%	79.9%	80.7%
	do not have enough to eat	16.0%	20.1%	19.3%
Total		100.0%	100.0%	100.0%

Note: Chi-square = 2.43; p = .12, non-significant.

	IN HOME INTERVIEW		Total
	NO	YES	
.00	11.6%	15.5%	14.8%
1.00	18.9%	18.6%	18.7%
2.00	18.9%	15.3%	16.0%
3.00	9.8%	12.2%	11.8%
4.00	10.9%	10.5%	10.6%
5.00	8.4%	8.4%	8.4%
6.00	5.1%	3.7%	4.0%
7.00	16.4%	15.7%	15.9%
Total	100.0%	100.0%	100.0%

Note: Chi-square = 6.30; p = .50, non-significant.

	IN HOME INTERVIEW		Total
	NO	YES	
White	24.0%	26.1%	25.7%
Black of African American	15.6%	13.6%	14.0%
Asian American, American Indian, Alaska Native, Native Hawaiian or Pacific Islander	8.4%	8.9%	8.8%
Other	10.2%	5.4%	6.3%
Hispanic	41.8%	46.0%	45.2%
Total	100.0%	100.0%	100.0%

Note: Chi-square =10.10, p=.04.

	IN HOME INTERVIEW		Total
	NO	YES	
White	34.2%	34.8%	34.7%
Black of African American	18.9%	19.5%	19.4%
Hispanic	46.9%	45.6%	45.9%
Total	100.0%	100.0%	100.0%

Note: Chi-square =.15; p = .93, non-significant.

	IN HOME INTERVIEW		Total
	NO	YES	
Pregnant	21.8%	20.8%	21.0%
Breastfeeding	16.4%	20.7%	19.9%
P02A Postpartum	18.2%	18.8%	18.7%
Infant (<12 months)	20.7%	18.8%	19.1%
Child (1 - < 5 years)	22.9%	21.0%	21.3%
Total	100.0%	100.0%	100.0%

Note: Chi-square = 3.12; p = .54, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
P02G GENDER	MALE	25.1%	20.5%	21.3%
	FEMALE	74.9%	79.5%	78.7%
Total		100.0%	100.0%	100.0%

Note: Chi-square = 2.86; p = .09, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
Family Size	1.00	3.6%	2.4%	2.6%
	2.00	19.6%	19.1%	19.2%
	3.00	31.6%	30.7%	30.9%
	4.00	18.9%	21.3%	20.8%
	5.00	26.2%	26.5%	26.5%
Total		100.0%	100.0%	100.0%

Note: Chi-square = 2.12; p = .71, non-significant.

		IN HOME INTERVIEW		Total
		NO	YES	
MSA	NO	21.7%	23.1%	22.4%
	YES	78.3%	76.9%	77.6%
Total		100.0%	100.0%	100.0%

Note: Chi-square = 4.61; p = .64, non-significant.

Table I-2 Variables differentiated by SNAP Participation Status: Percentages and Chi square tests

Responses to request for Proof by SNAP participation status			
P0812 (Proof shown)	SNAP (receive SNAP)		
	No	Yes	Total
Yes, can show documents (for any qualifying program)	63.6	83.79	
Yes, but no adequate documentation	4.13	2.93	
No, did not qualify based on those programs	32.27	13.28	
Total	533	580	1113
Frequency Missing = 97			
Statistic	DF	Value	Prob
Chi-Square	2	61.2031	<.0001
Document type shown by SNAP participation status			
P0812F (Document shown)	SNAP (receive SNAP)		
	0	1	Total
Certification card	65.98	49.08	
Award letter	7.69	19.1	
Active program voucher	7.69	11.5	
SNAP/Food Stamp EBT card	3.85	12.94	
Other	14.79	7.39	
Total	338	487	825
Frequency Missing = 385			
Statistic	DF	Value	Prob
Chi-Square	4	59.4553	<.0001
WIC Category by SNAP participation status			
WIC Category (WICCAT)	SNAP (receive SNAP)		
	No	Yes	Total
Pregnant	22.24	19.24	
Breastfeeding	25.69	17.41	
Postpartum	17.07	19.4	
Infant	19.66	17.74	
Child	15.34	26.2	
Total	580	603	1183

Frequency Missing = 27			
Statistic	DF	Value	Prob
Chi-Square	4	28.8726	<.0001
N of HH infants in WIC			
	SNAP (receive SNAP)		
	0	1	Total
0	32.26	37.52	
1	64.18	56.84	
2	3.57	4.83	
3	0	0.32	
4	0	0.48	
Total	589	621	1210
Statistic	DF	Value	Prob
Chi-Square	4	10.9758	<.05
N of HH children in WIC			
	SNAP (receive SNAP)		
	0	1	Total
0	74.19	53.3	
1	22.92	35.59	
2	2.72	9.34	
3	0.17	1.77	
Total	589	621	1210
Statistic	DF	Value	Prob
Chi-Square	3	66.7771	<.0001
N of HH member in WIC			
	SNAP (receive SNAP)		
	0	1	Total
1	34.8	27.38	
2	51.44	47.5	
3	10.19	16.43	
4	2.89	6.44	
5	0.68	1.29	
6	0	0.81	
7	0	0.16	
Total	589	621	1210
Statistic	DF	Value	Prob
Chi-Square	6	30.0514	<.0001

N of income sources	SNAP (receive SNAP)		
	0	1	Total
0	60.44	71.66	
1	29.88	23.19	
2	7.64	4.19	
3	1.53	0.64	
4	0.17	0.16	
5	0.17	0.16	
37	0.17	0	
Total	589	621	1210
Statistic	DF	Value	Prob
Chi-Square	6	20.2644	0.0025
Adjunct verified			
	SNAP (receive SNAP)		
	0	1	Total
Not verified	72.84	51.37	
Verified	27.16	48.63	
Total	589	621	1210
Statistic	DF	Value	Prob
Chi-Square	1	59.0165	<.0001
P0549 (Hispanic)			
	SNAP (receive SNAP)		
	0	1	Total
Others	54.61	34.73	
Hispanic	45.39	65.27	
Total	586	619	1205
Frequency Missing = 5			
Statistic	DF	Value	Prob
Chi-Square	1	48.1637	<.0001
Table of Self-identified race by SNAP			
TRACE (Self-identified race)	SNAP (receive SNAP)		
	0	1	Total
American Indian/Alaskan Native	0.52	1.47	
Asian/Pacific Islander	2.08	2.45	
African American	13.89	26.63	
White	44.1	43.79	
Multiracial	2.08	1.14	
Other	37.33	24.51	

Total	576	612	1188
Frequency Missing = 22			
Statistic	DF	Value	Prob
Chi-Square	5	43.8991	<.0001
Table of First time received benefits by SNAP			
P0501(First time received benefits)	SNAP (receive SNAP)		
	0	1	Total
1	65.53	45.09	
2	34.47	54.91	
Total	589	621	1210
Statistic	DF	Value	Prob
Chi-Square	1	51.0677	<.0001
Table of Participate in food programs by SNAP			
p0532 (Participate in food programs)	SNAP (receive SNAP)		
	0	1	Total
0	75.35	0	
1	24.65	0	
2	0	100	
Total	576	612	1188
Frequency Missing = 22			
Statistic	DF	Value	Prob
Chi-Square	2	1188	<.0001
Table of Final eligible status STATE GUIDE) by SNAP			
eligible_ST2 (Final eligible status STATE GUIDE)	SNAP (receive SNAP)		
	0	1	Total
0	4.27	1.29	
1	95.73	98.71	
Total	586	618	1204
Frequency Missing = 6			
Statistic	DF	Value	Prob
Chi-Square	1	9.9645	0.0016

Table I-3 Weighted numbers and percentage distributions by WIC categories: Subsamples that participated in both telephone and in-person interview vs. participants only in telephone interview

Sample components	WIC category	Unweighted n	Weighted ¹ n	Weighted ¹ %	Std Err o weighted ¹ %
In telephone interview but not in in-person interview	Pregnant	266	488,788	10.30	0.39
	Breastfeeding	261	299,075	6.30	0.24
	Postpartum	266	341,510	7.20	0.25
	Infant	269	1,162,180	24.49	0.66
	Child	288	2,454,406	51.72	0.93
	Total	1350	4,745,959	100.00	
In both interviews	Pregnant	251	489,087	10.95	0.38
	Breastfeeding	258	311,365	6.97	0.27
	Postpartum	224	295,577	6.62	0.24
	Infant	226	1,072,430	24.00	0.66
	Child	251	2,299,322	51.46	0.97
	Total	1210	4,467,781	100.00	
Total	Pregnant	517	977,875	10.61	0.10
	Breastfeeding	519	610,440	6.63	0.09
	Postpartum	490	637,086	6.91	0.03
	Infant	495	2,234,610	24.25	0.13
	Child	539	4,753,728	51.59	0.17
	Total	2560	9,213,739	100.00	
Pearson Chi-Square	1.06				
Pr > ChiSq	0.63				

¹ Statistics are weighted by the Telephone Survey weights.

APPENDIX J:

CONTENDING REASONS AGAINST DENIAL

Appendix J

Verbatim Responses Contending Agencies' Denial of WIC Eligibility: Denial Analysis

I hadn't worked for 12 weeks, but my income was calculated anyway.

My income had changed; I was making less.

Many friends told me I would qualify.

It isn't fair. It looks like I'm making more than I am.

I'm still in need of assistance.

People lie about their personal situations. Sometimes we had, and sometimes we didn't.

Someone else told me I was eligible.

The doctor and the hospital said I was entitled because I was pregnant.

She added more than I was making.

They didn't take into consideration how my finances worked.

I didn't understand. I'm not working and they counted my 6 weeks of short-term disability.

My income has been cut by 15 percent.

My husband was only making half of what he used to.

Some people make more than my husband, and they're receiving WIC.

APPENDIX K:
EXPIRED CERTIFICATION ERROR

Appendix K

Expired Certification Error

Expired certification errors occur when benefits are awarded and redeemed after the expiration date of the certification period. Obtaining the most current certification dates for participants is critical to determining expired certification error. ICF Macro explored expired certification error assessment using certification dates collected from State agencies. The resulting statistics should be interpreted with great caution because State agencies are not likely to have the most reliable information on certification dates. Local agencies actually conduct certifications and update certification dates to handle constantly shifting participant status such as WIC benefit issuance, termination/discontinuation, renewal, and category change. Unfortunately, data on certification dates were only collected from State agencies, not from local agencies.

ICF Macro asked States to provide the most recent certification date before or during the targeted months for sampling when food packages were issued (April and May 2009), but some were not able to do so. The bulk of the available data were before or within the two target months, though some stretched to as late as the end of year. The reason for this might be in the data requirements of what agencies must retain and provide to the Food and Nutrition Service (FNS). The Minimum Data Set (MDS) requires that States provide the most recent certificate date. The Supplemental Data Set (SDS), which is voluntary, includes the original certification date. The available certification data from States are likely to be part of the MDS and thus largely represent recent certifications, as revealed by initial tabulation: Of the respondents, 40.28 percent of the respondents had their certification dates after April 1, 2009, and 59.72 percent were certified prior to April 1 (Table K-1).

It seems reasonable to assume that the available certification dates from State agencies' certification status were largely current and useful for examining expired certification error. Uncertainties remain for the following:

- For participants who had certification *before April 1*. Some that are to be identified as expired certification error may in fact have renewed their benefits before April 1, but it may not have been recorded by the State agency—a scenario of false positive.
- Among participants who were certified *after April 1* and who are *all* to be treated as no expired certification error. Some might have had a period in which they received a voucher while certification was expired, but then later renewed before the end of 2009. Again, this may not have been recorded by the State agency—a scenario of false negative.

Nevertheless, analysts may be able to examine expired certification error for those whose certification dates were before April and may be able to treat participants whose certification dates were after April 1 as apparently free of expired certification error. In such an exploratory study, analysts did the following for each case:

- obtained the length in WIC program (LIP) from the available certification dates from State agencies (i.e., days between April 1, 2009 and the certification date). Table K-2 presents descriptive statistics of LIP;
- calculated the official benefit length (BL) specified for each WIC category (see SOW, p. 4). For pregnant women, 9 months and 6 weeks—but considering it is extremely unlikely

for a women to determine pregnancy in the first month, an adjusted 8 months plus 6 weeks (equivalent to 286 days = $30 \times 8 + 7 \times 6 + 4$); for postpartum, 6 months (183 days = $30 \times 6 + 3$); for breastfeeding, infant, and child, 1 year (365 days);

- calculated the difference between the LIP and BL and assigned initial expired certification error status to participants whose LIP was greater than BL, treating participants whose LIP was smaller than BL (including those that had a negative value of the difference—i.e., certified after April 1 as free of expired certification error). Table K-1 documents two categories of participants by certification dates: after April 1, 2009 and before April 1, 2009,
- further qualified expired certification errors by checking redemption records for the month of May 2009: if the redeemed value was greater than zero, then an expired certification error was identified (i.e., the given case not only had received but also redeemed the benefits beyond the official specified program length, hence incurring improper payments; otherwise, no expired certification error was identified). Table K-3 summarizes expired certification error case number and rate by WIC category and Table K-4 is a listing of the 30 cases of expired certification error.

The majority of expired certification errors occurred among breastfeeding women, unweighted equaling 27 of the 30 error cases and weighted equaling 64,992 of a total of 105,023 error cases (61.87% of all the expired certification error cases).

Table K-1: Certification dates collected from State agency: Prior to or after April 1, 2009

Available certification date from state agencies	Sample n (unweighted)	WIC population	Percent	95% CI for percent	
Certified after April 1, 2009	471	3,670,590	40.28	30.90	49.66
Certified before April 1, 2009	739	5,443,027	59.72	50.34	69.10
Total	1210	9,113,617	100.00		

Table K-2: Length in program (days receiving WIC benefits) by WIC category

WIC category	Sample n (unweighted)	WIC population	Minimum	Maximum	Range	Mean	95% CI for mean	
Pregnant	251	958,092	-185	293	478	4.36	-11.80	20.51
Breastfeeding	258	582,986	-244	475	719	47.90	25.03	70.78
Postpartum	224	634,014	-217	316	533	5.35	-17.15	27.85
Infant	221	2,157,909	-192	405	597	127.43	92.16	162.71
Child	256	4,780,616	-218	415	633	12.31	-4.99	29.61

Table K-3: Expired certification error case count and rate by WIC category

WIC category	Sample n in error (unweighted)	WIC population in error	Expired certification error rate	95% CI	
Pregnant	1	3,780	0.04	0.00	0.13
Breastfeeding	27	64,992	0.71	0.18	0.34
Postpartum	0	.	.	.	.
Infant	1	8,531	0.09	0.09	0.00
Child	1	27,721	0.30	0.30	0.00
Total	30	105,023	1.15	0.49	0.15

Table K-4: Listing of 30 cases of expired certification error by State and WIC category

State*	WIC category	Length (day) receiving WIC benefits	Income eligibility error
C	Pregnant	293	No
A	Breastfeeding	244	No
A	Breastfeeding	301	No
A	Breastfeeding	254	No
A	Breastfeeding	184	No
A	Breastfeeding	259	Yes
A	Breastfeeding	197	No
A	Breastfeeding	226	No
A	Breastfeeding	224	No
A	Breastfeeding	251	No
A	Breastfeeding	285	Yes
A	Breastfeeding	210	No
A	Breastfeeding	295	Yes
A	Breastfeeding	244	No
B	Breastfeeding	203	No
B	Breastfeeding	204	No
B	Breastfeeding	243	No
B	Breastfeeding	253	No
B	Breastfeeding	239	Yes
B	Breastfeeding	240	No
E	Breastfeeding	215	No
E	Breastfeeding	216	No
G	Breastfeeding	258	No
C	Breastfeeding	355	No
C	Breastfeeding	202	No
D	Breastfeeding	230	No
D	Breastfeeding	191	No
F	Breastfeeding	226	No
C	Infant	388	No
C	Child	415	No

*State names have been de-identified using a random process that also renders comparison between states in other tables impossible.

APPENDIX L:
INFANT FORMULA REBATE ADJUSTMENT

APPENDIX L INFANT FORMULA REBATE ADJUSTMENT

Estimating improper payment (dollar error) with adjustments for infant formula rebate was necessary to generate more realistic improper payment estimates because participants often do not redeem all the voucher values. The task was subject to data restrictions, including (1) redemption data do not separate the infant formula amount from other food redemption values; (2) States' negotiated rebate rates differ by formula products, requiring data consolidation that may introduce error; and (3) rebate rates are applied to wholesale prices only, but the survey-collected redemption data are based on retail prices, an issue requiring complicated procedures of adjustment. In short, post-rebate estimates of dollar error cannot be calculated from survey data alone.

We integrated WIC administrative data and the NSWP II statistics to generate a proxy measure of rebate values for infants. Subtracting the rebate value from each infant's actual redeemed voucher value, we obtained post-rebate food costs, which is the improper payment or dollar error for an infant identified to have income ineligibility error.

The key is to estimate the infant rebate values. WIC administrative data (WIC Monthly Spreadsheet)⁶⁵ include rebates' billed amounts and numbers of infant participants for each State. This source allows us to obtain the average rebate value per infant for each State. Dividing the State average rebate value by the national average redemption value (estimated from the NSWP sample), we have the proportion of redemption that is due to rebates for each sampled State. Multiplying this rate to the actual redeemed voucher value for each infant in the sample, we have a proxy measure of rebate value for each infant. The details follow.

Let R_s be the rebate total value for a given State and let n_s be the number of infants participating in the program in the same State, both taken from the WIC administrative data. Now R_s / n_s is the average rebate value for the particular State.

For each infant in the survey, we have a redemption value c_j and a weight w_j . Let C be the average redeemed value nationwide, $C = (\sum c_j w_j) / (\sum w_j)$. Let $P_s = (R_s / n_s) / C$ be the proportion of redemptions covered by rebates in State s . Table L-1 lists these parameters.

Table L-1: Constant parameters used in calculation

	<i>Value</i>	<i>Source</i>	<i>Note</i>
Ru	156,877,423	WIC administrative data	48 contiguous States and tribal organizations, not all WIC agencies
Nu	2,150,231	WIC administrative data	ditto
C	110.09	NSWP II	Weighted estimate
P=Ru/Nu/C	0.66		Derived from the above

⁶⁵ Downloaded from: <http://www.fns.usda.gov/pd/wicmain.htm> as of 07/29/2011.

Let $I_j = 1$ if infant j is determined ineligible for benefit (a case error) and 0 if not; let c_j be the infant's actual redeemed value. Thus, for each infant in the sample, $I_j c_j$ is the estimate of the total pre-rebate improper payment, $I_j c_j P_s$ is the infant's proxy rebate value, and $I_j c_j (1-P_s)$ is the estimate of the post-rebate improper payment, where s denotes the state corresponding to infant j .

Summing the weighted estimates, we have $\sum c_j I_j w_j (1-P_s)$ as the estimate of the total post-rebate improper payments for infants identified as having eligibility error. Replacing the P_s by its components, the formula is—

$$\sum c_j I_j w_j (1-(R_s / n_s)) / ((\sum c_j w_j) / (\sum w_j)).$$

Tables L-2a and L-2b show the resulting estimates for May 2009. The estimates are rough because we have used a single estimate of average redemption value across States, C , and have assumed that the average redemption cost for a participant improperly certified will be the same as for one properly certified.

Table L-2a: Estimated WIC infant average rebate value and post-rebate food cost (infant n = 2,157,909)

Variable	Label*	Mean \$	SE of mean	95% CL for mean	
Rebate value	($\sum c_j$)*P, where P=Rs/ns/C; rebate value with state aggregate	73.23	5.91	61.28	85.18
Post-rebate food cost	($\sum c_j$)*(1-P), where P=Rs/ns/C; post-rebate food cost with state aggregate	36.87	3.44	29.91	43.83

Table L-2b: Estimated WIC infant total rebate value and post-rebate food cost (infant n = 2,157,909)

Variable	Label*	National total \$	SE of sum	95% CL for sum	
Rebate value	($\sum c_j$)*P, where P=Rs/ns/C; rebate value with state aggregate	158,030,146	16,084,651	125,495,868	190,564,424
Post-rebate food cost	($\sum c_j$)*(1-P), where P=Rs/ns/C; post-rebate food cost with state aggregate	79,554,959*	8,742,833	61,870,911	97,239,007

*The national total food cost for infants (i.e., pre-rebate total redeemed voucher value for infants in May 2009 is \$237,585,105, estimated from the NSWP II sample).

The difference in the national total rebate value between the estimate (\$158,030,146) and the WIC administrative data (\$156,877,423) for 48 contiguous states and tribal organizations in May 2009 is \$1,152,723 (or 0.73 %). Consequently, the annualized measure between the estimate and the WIC administrative data differed as well.

To match the administrative data on total rebates billed, we made further adjustments. For the May estimate, we applied a ratio, 1.0073 (the total May rebate value from WIC administrative data over the initial May estimate of the rebate total from our sample), to the States' rebate rates (P_s). For annualizing, we used the WIC administrative data to calculate a ratio, 12.1131 (the FY 2009 total rebate values over the May rebate values), and then multiplied this factor to the above-adjusted May estimate. The adjusted results are presented in Table L-3 and the procedures were used in computing the final improper payment estimates.

Table L-3: Infant formula rebate adjusted estimates: May 2009 and annualized rebate values and post-rebate food costs for infants

Measure	Monthly/ annualized	Mean (\$)	95% CI for Mean (\$)		Total (\$)	95% CI for Total (\$)	
Rebate value for infants n= 2,157,909	May	72.7	60.84	84.56	156,877,423*	124,580,461	189,174,385
	Annualized	880.6	736.93	1024.27	1,900,256,225*	1,509,043,120	2,291,469,329
Post-rebate food cost for infants n= 2,157,909	May	37.4	30.36	44.44	80,707,682	62,802,703	98,612,660
	Annualized	453.04	367.76	538.31	977,612,146	760,729,137	1,194,495,156
Total food cost for infants n= 2,157,909	May	110.1			237,585,105		
	Annualized	1333.64			2,877,868,371		

*The WIC administrative data on rebate billed for May and FY 2009 are, respectively, \$156,877,423 and \$1,900,274,589.

Post-rebate food costs for infants were calculated by subtracting the estimated annualized rebate value from the annualized redeemed value for each sampled infant. The aggregated post-rebate food cost for infants that were identified to have certification error was the post-rebate improper payment (dollar error value). The aggregation entailed multiplying the infant post-rebate dollar error values by the sample weights, generating a post-rebate total dollar error estimate for the WIC infant population in FY 2009. For the estimated 114,091 infants who were found to have eligibility error, the estimated total improper payment was \$48,714,683 (95% C.I. = \$16,222,015 and \$81,207,352).

APPENDIX M:

**PRE-REBATE ESTIMATES OF FULL VOUCHER
VALUE ANNUALIZED DOLLAR AMOUNTS OF
INCOME ELIGIBILITY ERROR BY
WIC CATEGORY**

**Pre-rebate Estimates of Full Voucher Value Annualized
Dollar Amounts of Income Eligibility Error by WIC Category**

WIC Category	Number of WIC Participants in Error	Dollar Error (\$)	95% Confidence Interval (\$)	
Pregnant	31,750	19,672,471	1,563,888	37,781,054
Breastfeeding	30,174	37,503,440	8,878,016	66,128,863
Postpartum	13,538	9,374,944	1,102,831	17,647,058
Infant	114,091	208,446,184	67,072,211	349,820,157
Child	88,399	54,935,936	(17,132,701)	127,004,573
WIC Total	277,952	329,932,975	168,451,359	491,414,592