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Adolescent WIC Participants Study

Volume II: Appendices

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Adolescent WIC Participants Study Volume II: Appendices

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APPENDIX A - SAMPLING DESIGN

A.1 Representation

The study design is a nationally representative sample of the 48 contiguous United States, including Indian WIC agencies. This definition excludes WIC clinics and participants in Alaska, Hawaii, Puerto Rico, Guam, and the Virgin Islands. In 1991, Puerto Rico accounted for 2.6 percent of all WIC participants, while Alaska, Hawaii, Guam, and the Virgin Islands accounted for only 0.7 percent. WIC clinics outside of the 48 contiguous United States were not included in the study due to the high cost of including them in the sample and the low percent of the WIC population served by such clinics.

A.2 Target Population

The target population for the Adolescent WIC Participants Study consisted of two components, adolescent WIC clients and directors from the WIC clinics they attend. Clients, between the ages of 14 and 19, were eligible for the study if they were either

1) pregnant and fully enrolled in the WIC program,
2) the mother of an infant less than one year old who was fully enrolled in the WIC program, or
3) both.

WIC clinics were eligible for the study if they provide services to WIC clients who were eligible for the study.

Estimates from the clinic directors survey are representative of the 48 contiguous United States, including Indian WIC agencies. However, representatives from seven States refused to participate in the client portion of the study. The seven non-participating States were Arkansas, Indiana, Nebraska, Nevada, Oklahoma, Tennessee, and Virginia. Therefore estimates from the WIC client survey are representative of the contiguous United States, excluding the seven States.

Over a 60 day period, eligible adolescents were listed on an RTI sampling sheet as they entered a clinic to receive WIC services. Thus, we only included adolescents who received services in a WIC clinic during the study time period. In addition, to maintain the anonymity of the clients, only their first name or initials were recorded on the sampling sheets. Hence, a few adolescents may have had more than one chance to be included in the study if she attended clinic more than once during the 60 day study period. Therefore, the unit of analysis for the client data is technically the client visit. However, this will loosely be referred to as "adolescents" in the discussion of the analysis results.

A.3 Non-English Speaking Participants

Estimates from the 1994 WIC Program and Participant Characteristics Study (PC94) indicated that approximately 24% of WIC participants were of Hispanic origin. Due to large percentage of eligible adolescents who may only speak Spanish, study instruments were developed for English-speaking and Spanish-speaking clients. Adolescents who were not fluent in either language were ineligible for the study.

A.4 Sample Selection

Data were collected from two sources for the Adolescent WIC Participants Study, WIC clinic directors and adolescent WIC participants. A multi-stage design was used since a complete list of clinics and participants was not available during sampling. Eligible local agencies (LAs) were sampled from a

list frame in the first stage. Clinics were selected for the second sampling stage from lists provided by the participating LAs; clinic director data was obtained from the participating clinics. A subset of the participating LAs from the first sampling stage was selected to collect the client data. Adolescent data was obtained from the stage-two clinics within the subset of LAs.

A.4.1 WIC Local Agencies

A.4.1.1 Sampling Frame

The most recent race/ethnicity file from FNS's 1994 WIC Program and Participant Characteristics Study (PC94) served as the sampling frame for the local agencies (LAs). This file contains one record for each WIC local agency and provides information on items such as

1) the local agency's name and ten digit ID,
2) the State and FNS region, and
3) the total number of women, infants, and children serviced in the local agency by race/ethnicity.

This file does not contain the number of clinics within an LA's jurisdiction unlike previous years. Participant totals were used as a proxy measure for the number of clinics within the local agency. Clinic sampling information was obtained from the LAs selected in the first stage of selection.

A.4.1.2 Stage 1 Selection

After eliminating States outside the contiguous 48 States, a probability proportional to size (PPS) sample of 170 LAs was selected from a list of 2,108 eligible LAs. This frame was first sorted by FNS region and State to create an implicitly stratified sample. The size measure for the PPS selection was

$$S_h' = \sqrt{3.70\,B_h + 3.57\,H_h + 2.22\,O_h}$$

where,

- h = LA identifier (h=1,…,170),
- B_h = estimate of the total number of African American WIC infants from the frame for the h-th LA,
- H_h = estimate of the total number of Hispanic WIC infants from the frame for the h-th LA, and
- O_h = estimate of the total number of "Other" race/ethnicity WIC infants from the frame for the h-th LA.

This composite size measure was used to ensure an over-representation of minorities in the sample requested by FNS (Folsom et al., 1987). The percent distribution of women enrolled in the WIC program by race/ethnicity was obtained from the PC94 data file. The WIC client distribution was 27% African American, 28% Hispanic, and 45% other race/ethnicities. Race-specific infant counts (B_h, H_h, O_h above) were multiplied by the inverse of these proportions to obtain the composite size measure formula above. The number of infants was used instead of the number of women since it was believed that this distribution would closely match the distribution of pregnant women.

Some LA records on the frame did not contain information on the number of infants. A conservative estimate of the number of WIC clients less than 20 years old was calculated using the PC94 file. Using the number of women within the LA by race/ethnicity and the estimate that 23% of the women are less than 20 years old, this composite size measure was calculated as

$$S_h' = \sqrt{0.23 \times (3.70\, B_h + 3.57\, H_h + 2.22\, O_h)}$$

where,

- h = LA identifier (h=1,…,170),
- B_h = estimate of the total number of African American WIC clients from the frame for the h-th LA,
- H_h = estimate of the total number of Hispanic WIC clients from the frame for the h-th LA, and
- O_h = estimate of the total number of "Other" race/ethnicity WIC clients from the frame for the h-th LA.

A.4.1.3 Selection For The Client Survey

A subset of the 170 LAs selected in the first sampling stage was selected to collect data on adolescent WIC clients. This information was in addition to the clinic director questionnaire data collected from all 170 LAs. The list of 170 LAs was sorted by FNS region and State to create an implicitly stratified sample. A probability proportional to size (PPS) sample of 53 LAs was selected using the following size measure:

$$T_h = \frac{S_h' \times S_h'}{EXP\_N_h} = \frac{S_h}{\frac{170\, S_h'}{\sum_H S_h'}}$$

where,

- h = LA identifier (h=1,…,170),
- H = summation over the 170 LAs in the study sample,
- S_h' = square root composite size measure for h-th LA used in sampling stage 1, and
- S_h = composite size measure for h-th LA.

For future reference, the 53 LAs will be referred to as the "Clinic/Client" LAs. The remaining 117 LAs will be referred to as the "Clinic-Only" LAs since only data from the clinic directors was gathered. Clinics selected within these two types of LAs will retain the reference.

Directors of the LAs selected in the first stage of sampling were contacted to obtain lists of WIC clinics within their jurisdiction. "Clinic-Only" LAs were asked to provide the name and contact information for the clinics. In addition to the contact information, the "Clinic/Client" LAs were asked to provide the number of pregnant adolescent clients and the number of infant clients with adolescent mothers by race/ethnicity (African-American, Hispanic, and other). For some clinics, the number of infants with adolescent mothers had to be estimated by the LA directors since the age of the mother was not recorded on the infant's file.

A.4.2 WIC Clinics

WIC clinics were selected for the study from the lists provided by the LAs after all information had been obtained. Two different sampling schemes were developed for the "Clinic-Only" clinics and the "Clinic/Client" clinics.

A.4.2.1 Clinic-Only Survey

A simple random sample (SRS) of two clinics was selected from the list provided by the director of the "Clinic-Only" LAs.

A.4.2.2 Clinic/Client Survey

A PPS sample of clinics was selected from the Clinic/Client LAs. After combining the adolescent and infant counts by race/ethnicity into a client count, the following composite size measure was used

$$C_{hi} = 3.70\, B_{hi} + 3.57\, H_{hi} + 2.22\, O_{hi}$$

where,

- h = LA identifier (h=1,…,170),
- i = clinic identifier within the h-th LA,
- B_{hi} = estimate of the number of eligible African American clients from records of i-th clinic,
- H_{hi} = estimate of the number of eligible Hispanic clients from records of i-th clinic, and
- O_{hi} = estimate of the number of eligible "Other" race/ethnicity clients from records of i-th clinic.

Two clinics were selected from most "Clinic/Client" LAs. Additional clinics were selected from some large participating agencies to obtain the desired respondent sample since

1) a few LAs refused to participate in the study (*Appendix D.1.1*),
2) a few clinics refused to participate in the study (*Appendix D.2.1*),
3) client counts were lower than the estimates obtained from the stage 1 frame for some LAs,
4) a few LAs had only one operating WIC clinic within their jurisdiction, and
5) three LAs were selected twice for the "Clinic/Client" sample.

Table A.1 provides the distribution of the LAs by number of clinics selected. Five clinics were sampled from the three double hit LAs; three clinics were sampled from 11 large LAs. To minimize the work load for the WIC staff members, sampling with certainty was used in some LAs to ensure that no clinic was sampled more than once. The selected clinics were contacted for participation in the study.

Table A.1 Distribution Of "Clinic/Client" LAs By Number Of Selected Clinics: 1997 Adolescent WIC Participants Study.

Number Of LAs	Number Of Selected Clinic
5	0*
5	1
29	2
11	3
3	5
53	111

* LAs refused to participate in the study.

A.4.3 Adolescent WIC Participants

Race-specific participant sampling rates were initially set by RTI for each clinic based on the client information provided by LAs. The rates were set to obtain two to three completed interviews per day from a clinic to minimize the burden placed on the WIC clinic staff. Using an estimate of 22 working days per month, each selected clinic was expected to produce approximately 60 completed questionnaires per month. Sampling rates were set to 1.0 for clinics reporting fewer clients than would yield the target of 60 interviews; this includes those clinics operating only a few days per month. Before finalizing the rates, the unequal weighting effect was examined to ensure that the sampling rates would not greatly affect the variation in the sampling weights. The sampling rates were adjusted as the data collection progressed to account for

- differences between the estimated number of clients and the actual number of eligible clients who came into the clinic, and
- the loss in sample due to ineligible and nonresponding clients.

Once satisfied with the sampling rates, RTI staff produced sampling sheets for the clinics The WIC Staff Representative would list the first name or initials of each eligible client on the sampling sheet. Clients were selected for the study if their race was designated for selection.

REFERENCE

Folsom, R.E., F.J. Potter, and S.R. Williams (1987). Notes on a Composite Size Measure for Self-Weighting Samples in Multiple Domains. Proceedings of the American Statistical Association , Survey Research methods Section.

APPENDIX B - DATA COLLECTION

Data collection for the Adolescent WIC Participants Study required the completion of two national surveys, a survey of WIC clinic directors and a survey of adolescent WIC participants. The sections that follow describe the methodologies implemented and results obtained for each survey.

B.1 Methodology

B.1.1 Qualitative Data Collection

Focus group interviews were conducted with both WIC clinic staff and adolescents during the winter of 1996 in order to identify the key issues and areas of need to be included in the nationally-representative survey of adolescents and WIC clinic directors. *Exhibit B.1* depicts the design and distribution of the focus group sessions. Focus group guides and debriefing forms were developed for both the adolescent and clinic staff focus groups. Separate focus group guides were developed for

1) pregnant and parenting adolescents who were not participating in the WIC program;
2) pregnant adolescents enrolled in the WIC program;
3) parenting adolescents enrolled in the WIC program; and
4) WIC clinic staff.

The focus groups were scheduled and participants were recruited during the months of November and December 1995. Twenty-five groups were conducted in seven States: Tennessee, North Carolina, Texas, Missouri, California, Oregon, and Arizona. Eight groups were conducted with WIC clinic staff, eight with pregnant adolescents on the WIC program, eight with parenting adolescents on the WIC program, and group of pregnant and parenting adolescents who were not enrolled in WIC. Groups were conducted in both urban and rural areas and were composed primarily of White, Black, Hispanic, Southeast Asian, and Native American teens. The composition of the groups were as homogenous as possible within each racial and ethnic group. Two groups were conducted in Spanish. A team of two staff members served as the moderators and co-moderators for the groups. All the focus groups were audio-taped and some were transcribed. After each group, staff completed a detailed debriefing form that recorded the content of each session.

After all the groups had been conducted and the debriefing notes shared with all research team members the findings were incorporated into the design of the draft quantitative instruments. Findings from the focus groups were used to further inform the development of the clinic director and adolescent WIC participant questionnaires.

B.1.2 Questionnaire Design

At the same time that the focus groups were being conducted, staff prepared initial drafts of the data collection instruments to be used in the nationally representative survey of WIC clinic directors and adolescents on the WIC program. The questionnaires took shape over several months as drafts were carefully prepared to ensure that the content areas of each instrument explored similar issues. FNS provided comments and suggested revisions to the data collection instruments. After agreeing on a version of both the client and

Exhibit B.1 Distribution Of Focus Group Sessions: 1997 Adolescent WIC Participants Study.

Clinic Staff Focus Groups
8 Total Focus Groups
(1 Per Site)

Type Of Site:

1. American Indian
2. S.E. Asian
3. Urban White
4. Rural White
5. Urban Black
6. Rural Black
7. Urban Hispanic
8. Rural Hispanic

Adolescent Focus Groups
16 Total Focus Groups
(2 per site)

Type of Adolescents

Pregnant Adolescents

	Age <=17	18-19	Total
WIC Participants	3	3	6
Non-participant but WIC eligible	1	1	2
Total	4	4	8

Adolescent Mothers

	Age <=17	18-19	Total
WIC Participants	3	3	6
Non-participant but WIC eligible	1	1	2
Total	4	4	8

clinic directors questionnaire, the instruments were pretested in August and September of 1997. Telephone pretest interviews were conducted with WIC clinic directors in Maryland, Indiana, and Texas. After the pretest interviews, items were deleted to shorten the instrument. Other recommended changes were adopted in accordance with the pretest findings. At the same time, pretests were conducted with adolescents at two sites in North Carolina, one urban and one rural. As a result of the pretesting, the questionnaire was streamlined and the introductory tutorial was shortened. The final versions of the instruments were completed in October 1997. The clinic directors survey was estimated to take approximately 45 minutes and the adolescent survey was estimated to take 35 minutes.

B.1.3 Quantitative Data Collection

The mode of data collection used for the Clinic Director Survey was a computer-assisted telephone interviewing (CATI) system. The questionnaire was programmed into the CATI system and administered over the phone to the clinic directors from the laptop computers of RTI Field Coordinators. As clinic directors answered the questions, the Field Coordinators keyed and verified the responses. To provide additional checks on the data during the interview, the CATI system was designed to automatically examine for proper range, consistency, and completeness. Data were corrected and verified when necessary. Upon completion of each Clinic Director questionnaire, the Field Coordinator electronically transmitted the interview data to RTI's central computer.

The mode of data collection employed for the Participant Survey was an audio computer-assisted self interviewing (ACASI) system. This system combines the use of a computerized questionnaire synchronized with an audio version of the questions. Key features of the ACASI system used for this study were

1) high-quality audio reproduction,
2) instant and complete synchronization of screen and audio,
3) audio "fills" facilitated dynamic construction of audio questions based on previous interview responses,
4) audio responsiveness (a respondent could key her response before the audio finished allowing an immediate jump to the next question), and
5) full participant control through simple PC functions (respondents could turn the sound on and off, repeat the audio of a question, raise or lower the volume, or back up one question).

An additional advantage of the ACASI system was that it handled the entire participant interview, thereby minimizing the amount of time required of the clinic staff for the study.

Adolescents were classified as eligible or ineligible for the study upon entrance in to the clinic. Those selected for the study were escorted to an RTI laptop computer and given a brief introduction to the survey by a clinic staff member. An automated tutorial was provided at the beginning of the questionnaire that instructed the participant on how to use the system. Using the ACASI system and a lightweight headset, the adolescents answered the computerized questionnaire by pressing the appropriate keys. After completing her response by pressing the "Enter" key, the next question was displayed on the screen and played over the headset. After the clinic closed each day, a clinic staff member electronically transmitted all of the interview data through a modem to RTI's central computer.

B.2 Contacts With WIC Officials

Success of the entire data collection effort was dependent upon the cooperation, advice, and assistance of WIC officials at several levels. A four-step process was implemented to inform the respective WIC officials of the survey and to secure their cooperation.

B.2.1 Contacts With FNS Regional Offices

FNS notified the regional WIC offices of the Adolescent WIC Participants Study using various informational materials prepared by RTI. This material described the study and provided a listing of the local agencies selected within the individual regions. The FNS Regional Offices then alerted the States within their jurisdiction to anticipate receipt of study materials from RTI.

B.2.2 Contacts With State WIC Offices

RTI initiated contacts with the State agencies by mailing introductory letters to the respective State WIC directors. This letter requested that the directors call RTI if any questions, potential problems, or special contact procedures needed to be addressed prior to contact with local agencies. RTI responded to all calls, letters, and fax communications from the State WIC offices. Included with the introductory letter were descriptive materials and a listing of the State local agencies selected for participation in the study. The contents of the mailing

1) described the overall nature of the study and its importance,
2) provided details on what would be involved for the local agencies and clinics, and
3) outlined the data collection schedule.

An example of the "Fact Sheet" included in the mailing appears as *Exhibit B.2* at the end of the chapter.

B.2.3 Contacts With WIC Local Agencies

Following the notification of regional and State WIC officials, RTI mailed lead letters and other materials to the selected local agencies. This material

1) described the background and objectives of the study,
2) detailed how local agencies were selected,
3) provided a list of the types of data to be gathered at each level of data collection, and
4) requested specific information for each clinic within the local agency's jurisdiction.

Exhibit B.2 Adolescent WIC Participants Study Fact Sheet: 1997 Adolescent WIC Participants Study.

ADOLESCENT WIC PARTICIPANTS STUDY

FACT SHEET

What is the purpose of this study?

This study will identify and quantify the needs of pregnant and parenting adolescents who participate in the WIC program (a federally funded nutrition program for women, infants, and children). Information will be collected through a national survey about the nutritional knowledge of adolescents, the need for appropriate nutrition education, satisfaction with WIC services, sources of adolescents' information about nutrition, dietary habits, accessibility of WIC, and other subjects. The study will be implemented in two parts. Local clinic directors will be asked to describe what they perceive as the needs of adolescents enrolled in WIC. Additionally, adolescents themselves will be asked to identify their needs.

Who is conducting this study?

The U. S. Department of Agriculture's Food and Consumer Service (FCS), which sponsors the WIC program, is very interested in identifying the needs of pregnant and parenting adolescents served by the WIC program. FCS has contracted with the Research Triangle Institute (RTI) and Health Systems Research, Inc. (HSR) to collect information from both local clinic staff and the adolescents they serve. Data collected from this study will be analyzed by RTI and provided to FCS at the completion of the study. The data will be representative of the aggregate national study with no identifiers for individual respondents, localities, or States.

How were States and local agencies selected for this study?

Figure 1 presents the overall sampling plan for the study. One hundred fifty WIC local agencies (LAs) were selected from across the nation. One hundred of these LAs will participate only in the clinic directors survey, while the other 50 LAs will participate in both the Clinic Director survey and in the Adolescent Participant survey. Each of the 150 LAs will be asked to supply a list of the clinics it operates. From these lists, an average of two clinics from each LA will be selected to participate in the study. All 300 clinics will be asked to participate in the clinic directors survey, while 100 clinics will be asked to participate in both the Clinic Director and the Adolescent Participant survey. To select the local agencies, RTI used scientific sampling methods which reflect the diversity of WIC local agencies across the nation, as well as the number of adolescents participating at each local agency.

Exhibit B.2 Adolescent WIC Participants Study Fact Sheet: 1997 Adolescent WIC Participants Study.

(continued)

How will data be collected from the local clinic directors?

The 300 clinic directors selected to participate in the Clinic Director survey will be contacted and asked to participate by completing a telephone interview related to their perception of adolescent needs, and how they meet those needs currently. Data from this questionnaire will be entered directly into a computer by the interviewer. Each local clinic director will be asked to spend approximately 45 minutes responding to the questions.

How will data from adolescents be collected?

RTI will be using a method of collecting client data that uses the advanced technology of a computer-assisted self-interviewing system combined with audio-assistance. The system is set up in the local clinic, and clients are asked to spend about 30 minutes answering questions directly into a small portable computer.

The questions will be provided both in writing on the computer screen as well as through audio instructions using headsets. This provides the client with an easy and confidential method to answer the needs assessment questions. Data will then be sent to RTI each night by the computer over a telephone line, resulting in the ability to review and analyze data in a short time frame.

The target population for this study will be pregnant and parenting adolescents currently participating in the WIC program. No personal identifiers will be submitted by the adolescent participants, thus maintaining the anonymity of the participants. Each respondent will only be asked to complete the questionnaire once, and there will be no further contact between the participant and RTI staff.

What must clinic staff do to participate in the adolescent survey?

The data collection process at the clinics has been designed to minimize the time and effort required by the local staff. The study will not disrupt the local agency's normal clinic flow. We will, however, ask clinic staff to assist with this study in three ways. First, we will ask the clinic director to help locate space within the clinic site to place a computer that the adolescents will use to answer the survey questions. We would like the placement of the computer to be in an area that will allow for as much privacy as is possible to make the adolescent feel comfortable answering the questions.

Second, we will ask clinic staff to identify adolescents to participate in the survey. As adolescents present themselves for services, they will be listed on a sampling form. The form will indicate which adolescents are to be interviewed. We anticipate that an average of two adolescents per day will be selected for interview. This number will vary depending upon the size of the local clinic and the number of adolescents served, but we do not expect the selection process to be burdensome.

Exhibit B.2 Adolescent WIC Participants Study Fact Sheet: 1997 Adolescent WIC Participants Study.

(continued)

Finally, we will ask clinic staff to explain the study to the selected adolescent participants and provide them with instructions on how to use the computer. Clinic staff will be trained by RTI specialists on how to operate the computers. The computers will be programmed to require very little in the way of explanation or assistance. In addition, staff will be asked to place the computer in a "send" mode at the end of each day in order for the data to be transmitted to RTI headquarters in North Carolina. We will not ask clinic staff to maintain or repair the computers. Help, over the phone or in person, will be available should problems arise. Total staff time required to assist with the study will be about 30 minutes per day.

How long will the study be conducted?

We would like to capture data from a complete voucher cycle at each of the local clinics. If a clinic enrolls clients and issues vouchers on a monthly cycle, the computers will be in a clinic for only that month. If a clinic issues vouchers on a bi-monthly basis, the computers will be in place for the two-month period. We will not ask agencies to collect data past the two month period, even if their voucher cycle extends beyond two months. Each clinic will be scheduled to collect data sometime between January and May, 1997.

Who should I call if I have questions?

The contact for this study is RTI Survey Operations Manager Donald G. Smith who can be reached at (800)334-8571.

Mailings to the local agencies selected for both surveys included materials describing the requirements of the Participant Survey, as well as the Director Survey. Also included in the mailing was

1) a schedule showing the data collection timetable,
2) a date as to when to expect a phone call from RTI, and
3) for the "Clinic/Client" LAs, a form to provide the contact information and the total number of adolescent clients by race/ethnicity and parenting status (pregnant or parenting) for their clinics.

Approximately one week after mailing materials to the local agency officials, RTI placed a call to confirm the receipt of the materials, to answer questions, to enlist cooperation, and to obtain the required information about each clinic. Some officials were able to provide the data during the call but most returned their forms by fax. In many cases, this information was obtained only after placing numerous calls to the local agencies.

B.2.4 Contacts With WIC Clinics

Letters and informational materials were mailed to the directors of the selected WIC clinics following the notification of the local agencies. Along with materials identical to those sent to the LAs, a description of the clinic-level activities associated with participation in the study and the kinds of data to be obtained was also included. Field Coordinators made telephone calls to the clinic directors

1) to verify receipt of the letters and materials,
2) to answer any questions about the study,
3) to obtain cooperation,
4) to schedule appointments for completion of the Clinic Director questionnaire, and
5) (where applicable) to schedule training sessions for implementation of the Participant Survey.

B.3 Informed Consent

Because all respondents to the Participant Survey were 14 through 19 years of age, special procedures were implemented to ensure full compliance with all State-level legislation and regulations related to informed consent, privacy, and confidentiality. The paragraphs below provide a brief description of these procedures.

Prior to any data collection activities, RTI's Institutional Review Board (IRB) reviewed and approved all informed consent procedures and protocols associated with the study. Acting on the advice of the IRB, telephone and written contacts were conducted with all States containing clinics selected for the Participant Survey. The majority of these contacts were with State Attorneys General and/or State Health Directors. The purpose was to verify that our proposed protocol conformed with the laws and regulations of the States; the protocols did conform for most States. However, some officials requested alternatives to bring our survey procedures in line with normal activities for their State. Revisions, all of which were implemented, included using State letterhead instead of RTI's, revising the wording of the consent form, and obtaining signatures from the respondents.

As adolescents were selected for the survey, clinic staff members described the study and its objectives, answered questions, and provided a participant consent form (see *Exhibit B.3*). The consent form was written in English and Spanish. If the adolescent agreed to participate, she was instructed in the use of the ACASI system. The initial questionnaire screen reiterated the anonymous and voluntary nature

of the survey. RTI did not receive the full names of any survey participant and had no way to identify any adolescent with her questionnaire responses.

B.4 Field Staff

Fifteen Field Coordinators, strategically located throughout the U.S., were retained to facilitate data collection activities for both surveys. The sections that follow describe Field Coordinator selection and training, Clinic Director Survey responsibilities, and Participant Survey responsibilities. A description of the responsibilities of the WIC staff representative position is also included.

B.4.1 Selecting And Training RTI Field Coordinators

All Field Coordinators for the Adolescent WIC Participants Study were experienced RTI data collectors, having served as supervisors, interviewers, or both. In addition, all had prior experience as trainers of data collectors for other surveys.

The Field Coordinators traveled to RTI for an intensive three-day training session conducted February 7-9, 1997. The RTI Data Collection Manager for the study and his staff, along with the RTI Project Director, administered the training session. The FNS Project Officer was also in attendance. All trainees were required to demonstrate mastery of all components of their position before they could be "certified" to commence field work activities.
Coordinators were provided with a comprehensive procedures manual that was
a valuable resource during their entire field assignment.

B.4.2 Clinic Director Survey Activities

Using RTI laptop computers, Field Coordinators completed the Clinic Director CATI interviews. Each coordinator was responsible for completing an average of 20 Clinic Director interviews. Interviews required 30 to 45 minutes to complete and were transmitted electronically to RTI‘s central computer for processing.

B.4.3 Participant Survey Activities

The Field Coordinators also had a central role in the Participant Survey. Each was assigned specific clinics to contact, to obtain cooperation from, and to arrange a mutually agreeable date for a field visit. Coordinator assignments ranged from 5 to 15 clinics. The purpose of the field visits was to provide in-person training to the clinic staff member(s) who would oversee the adolescent participant data collection. These clinic staff members were called the WIC Staff Representatives. The WIC Staff Representative at each clinic was equipped with a comprehensive procedures manual, an RTI laptop computer with the ACASI system installed, and all necessary forms and supplies. Following two full days of training at the clinic, Field Coordinators "certified" the WIC Staff Representative(s) and data collection began the next day.

B.4.4 WIC Staff Representative Responsibilities

Participant Survey responsibilities handled by the WIC Staff Representative included

1) listing the initials or first name of all eligible adolescents who came to the clinic during the data collection period on an RTI sampling sheet,
2) selecting respondents according to RTI-prescribed sampling procedures provided on the sampling sheets,
3) explaining the study to the selected participants,
4) obtaining an informed consent for participation in the study,
5) orienting the adolescent to the laptop computer and the ACASI system,
6) re-setting the computer after completion of each interview, and
7) transmitting certain sampling information and all interview data to RTI's central computer on a daily basis.

WIC staff representatives were provided with a toll-free number and pager numbers to call RTI at any time, day or night, for assistance in answering procedural questions or for guidance in resolving problems.

Exhibit B.3

ADOLESCENT WIC PARTICIPANTS STUDY
PARTICIPANT CONSENT FORM

You are being asked to participate in the Adolescent WIC Participants Study. This research study is sponsored by the USDA Food and Consumer Service. The Research Triangle Institute is conducting the study. The purpose of the study is to find out about the needs of teenage participants in the WIC Program. Your participation will help the WIC Program better serve teenagers like you.

If you agree to participate, you will be one of 4,200 teenagers from across the nation asked to answer questions. The questions will be shown to you on a computer screen and read to you by the computer using earphones. No one else at the clinic will be able to see or hear the questions that you are asked or know how you answered the questions. Your answers will be combined with those of other teenagers to produce statistical reports. It will not be possible to identify your answers in these reports.

You will be asked questions about your experience with the WIC Program and how well you feel the WIC Program is helping you. You will also be asked questions about health, and what teenagers and their babies should eat. You may skip any question that you do not want to answer. It will take about 30 minutes to answer the questions.

You do not have to participate in this study. Your WIC benefits will not be affected by your decision to participate or to not participate. Before you decide to participate, you might want to call your parents or a friend to talk about this study. You can also talk to the WIC clinic staff.

If you have any questions about the study, you can call Claudia Squire at Research Triangle Institute for free at 1-800-334-8571, extension 6613. If you have questions about your rights as a study participant, please call Linda Sheldon at Research Triangle Institute for free at 1-800-334-8571, extension 6603.

APPENDIX C - SAMPLING WEIGHTS

Sampling weights are calculated as the inverse of the probability of selection for each stage of the sampling design. The selection probabilities are discussed throughout *Appendix A*. The following sections provide a discussion of the sampling weights for each stage of sampling.

C.1 WIC Local Agency Sampling Weights

A probability proportional to size (PPS) sample of 170 LAs was selected from a list of 2,108 eligible local agencies (LAs) using the composite size measure described in *Appendix A.4.1.2*. The sampling weight, used only in the creation of the clinic-level sampling weight, is

$$SampWt_h = \frac{\sum_H S_h'}{170 S_h'}$$

where,

h = LA identifier (h=1,…,170),
H = summation over the 170 LAs in the study sample, and
S_h' = square root of the composite measure of size for the h-th LA.

C.2 WIC Clinic Director Sampling Weights

Two questionnaires were administered during the Adolescent WIC Participants Study, a Clinic Director Questionnaire (CDQ) and an Adolescent WIC Participant Questionnaire (APQ). Out of the 170 LAs selected for the study, 53 LAs ("Clinic/Client") were selected to collect both types of information. The remaining 117 LAs ("Clinic-Only") collected only CDQ data. The following sampling weights will be used in the analysis of the CDQs after adjusting for nonresponse.

C.2.1 Clinic-Only Clinics

A simple random sample (SRS) of two clinics was selected from the list provided by a contact person from the Clinic-Only LAs. The sampling weight is

$$SampWt_{hi} = SampWt_h \, x \, \frac{M_h}{2} = \frac{M_h \sum_H S_h'}{340 S_h'}$$

where,

h = LA identifier (h=1,…,170),
I = clinic identifier within the h-th LA,
H = summation over the 170 LAs in the study sample,
M_h = total number of clinics within the h-th LA,

S_h' = square root of the composite measure of size for the h-th LA, and
SampWt_h = sampling weight for the h-th LA.

C.2.2 Clinic/Client Clinics

A PPS sample of clinics was selected from the Clinic/Client LAs. The sampling weight is

$$SampWt_{hi} = SampWt_h \, x \, \frac{\sum_{M_h} C_{hi}}{m_h C_{hi}} = \frac{\sum_{H} S_h' \sum_{M_h} C_{hi}}{170 m_h S_h' C_{hi}}$$

where,

h = LA identifier (h=1,…,170),
i = clinic identifier within the h-th LA,
H = summation over the 170 LAs in the study sample,
M_h = total number of clinics within the h-th LA,
m_h = number of clinics selected from the h-th LA,
C_{hi} = measure of size (MOS) for i-th clinic within the h-th selected LA,
S_h' = square root of the composite measure of size for the h-th LA, and
SampWt_h = sampling weight for the h-th LA.

C.3 WIC "Clinic/Client" Clinic Sampling Weights

A subset of the 170 sampled LAs was selected to collect the APQ data, as well as the CDQ data. A PPS sample of 53 LAs was selected using the composite size measure discussed in *Appendix A.4.1.3*. Three LAs were selected twice for the client portion of the study. Five different clinics were sampled from the three LAs. For analysis purposes, the three LAs needed to be treated as six separate first stage sampling units with either two or three clinics within each. The five clinics were randomly allocated to one of the two units with probability d_h / m_h = 2/5 or 3/5. The sampling weight, used only in the creation of the client-level sampling weight, is

$$SampWt_{hi} = SampWt_h \, x \, \frac{\sum_{H^*} T_h}{56 T_h} \, x \, \frac{\sum_{M_h^*} C_{hi}}{m_h C_{hi}} \, x \, \frac{m_h}{d_h} = \frac{\sum_{H^*} T_h \sum_{M_h^*} C_{hi}}{56 d_h S_h C_{hi}}$$

where,

h = LA identifier (h=1,…,170),
i = clinic identifier within the h-th LA,
H = summation over the 170 LAs in the study sample,
H* = summation over the 53 LAs in the "Clinic/Client" sample,
M_h^* = total number of clinics within the h-th "Clinic/Client" LA,
d_h = number of clinics selected for each double hit LA,

m_h = number of clinics selected from the h-th LA,
C_{hi} = measure of size (MOS) for i-th clinic within the h-th selected LA,
S_h = composite measure of size for the h-th LA,
S_h' = square root of the composite measure of size for the h-th LA,
SampWt_h = sampling weight for the h-th LA, and

$$T_h = \frac{S_h}{\frac{170 S_h'}{\sum_H S_h'}}$$

C.4 Adolescent WIC Participant Sampling Weights

C.4.1 Imputation Procedures For Sampling Sheet Codes

Approximately 270 entries on the sampling sheets were missing either the race/ethnicity code, the response code, or both. Entries missing the race/ethnicity code were imputed based on the racial distribution experienced in the clinic. For example, if a clinic was missing two race/ethnicity codes and the remaining entries gave a client distribution of 50% Hispanic and 50% other, then the missing race/ethnicity codes were randomly imputed to one of the categories with probability 0.5. Entries missing the response code were imputed is a similar manner based on the response distribution within race/ethnicity.

C.4.2 Sampling Weight Formula

Eligible adolescents were sampled at different rates within each of the 53 "Clinic/Client" clinics selected for the client portion of the study. Rates varied within clinic based on the adolescents race/ethnicity classification (African American, Hispanic, and other). Adolescents within the same clinic and race/ethnicity category were sampled at the same rate and thus have the same sampling weight. The sampling weight uses the "Clinic/Client" clinic sampling weight from *Appendix C.3*.

$$SampWt_{hij} = SampWt_{hi} \; x \; \frac{N_{hij}}{n_{hij}} = \frac{N_{hij} \sum_{H^*} T_h \sum_{M_h^*} C_{hi}}{56 n_{hij} d_h S_h C_{hi}}$$

where,

h = LA identifier (h=1,…,170),
i = clinic identifier within the h-th LA,
j = racial group identifier (j=1,2,3),
H = summation over the 170 LAs in the study sample,
H* = summation over the 53 LAs in the "Clinic/Client" sample,
M_h* = total number of clinics within the h-th "Clinic/Client" LA,
N_{hij} = total number of adolescents in the j-th racial group in the hi-th clinic,
n_{hij} = number of adolescents selected from the j-th racial group in the hi-th clinic,

d_h = number of clinics selected for each double hit LA,
C_{hi} = measure of size (MOS) for i-th clinic within the h-th selected LA,
S_h = composite measure of size for the h-th LA,
S_h' = square root of the composite measure of size for the h-th LA,
SampWt_{hi} = "Clinic/Client" sampling weight for the hi-th clinic, and

$$T_h = \frac{S_h}{\frac{170 S_h'}{\sum_H S_h'}}$$

APPENDIX D - ANALYSIS WEIGHTS

Nonresponse can introduce a potential bias since survey nonrespondents may behave differently than respondents with respect to items in the questionnaire. Analysis weights were created by adjusting the sampling weights for loss in the sample and thus reducing the potential bias. Respondents are made up of eligible and ineligible sampling units, such as clinics and adolescents. Sampling weights for the ineligible units are adjusted for nonresponse along with the eligible units to represent other ineligible units in the population that were not sampled for the study. These ineligible records are eliminated from the analysis files so that the sum of the analysis weights estimates the total number of eligible units in the population.

D.1 WIC Local Agency Analysis Weights

LA analysis weights were created by adjusting the LA sampling weights (*Appendix C.1*) for nonresponse within the seven FNS regions.

D.1.1 Response Rate Analysis

Table D.1 provides the unweighted response rates for the stage-one LAs within the FNS regions. An LA was considered to be a nonrespondent if either the LA director refused to participate in the study or if all selected clinics within the LA refused to participate in the study. Five LAs refused to participate in the study when the WIC staff were initially contacted. Two LAs had closed by the time attempts were made to contact the agency director and thus were classified as ineligibles. This left 168 (=170-2) LAs in the stage 1 sample.

D.1.2 Analysis Weight Formula

The analysis weight for the 5 (=168-163) nonresponding LAs was set to zero and the responding LA analysis weights were adjusted to account for the loss in sample. First, the total number of LAs within FNS region was estimated from the first stage sampling frame (PC94). The sum of the sampling weights for the responding LAs within FNS region was then adjusted to these frame counts. The LA analysis weight, used only in the creation of the clinic-level analysis weights, is

$$AnalysisWt_h = SampWt_h \times \frac{LA\_FCt_g}{\sum_{h \in R} SampWt_{gh}}$$

Table D.1. Local Agency Response Rates By FNS Region: 1997 Adolescent WIC Participants Study.

FNS Region	# Eligible LAs *	# Eligible Responding LAs	Response Rate
1	21	21	100.0 %
2	16	16	100.0 %
3	34	32	94.1 %
4	28	28	100.0 %
5	28	26	92.9 %
6	18	18	100.0 %
7	23	22	95.6 %
	168	163	97.0 %

* Regions 5 and 7 had one ineligible clinic each

where,

g = FNS Region (g=1,…,7),
h = LA identifier (h=1,…,170),
R = domain of respondents,
$SampWt_h$ = sampling weight for the h-th LA, and
LA_FCt_g = number of LAs by region from sampling frame.

D.2 WIC Clinic Director Analysis Weights

WIC clinic analysis weights were developed to be used in the analysis of the clinic director questionnaire (CDQ) data. These weights were created by adjusting the clinic sampling weights (*Appendix C.2.1 and C.2.2*) for nonresponse to the CDQ within the seven FNS regions.

D.2.1 Response Rate Analysis

Table D.2 provides the unweighted response rates for the clinics within the FNS regions. WIC clinics were designated as nonrespondents if the clinic director either refused to participate in the study or failed to provide a complete questionnaire. Of the 311 clinics selected for the Clinic Director Survey, completed interviews were obtained from 297 directors, or their designees. The reason interviews were not obtained from the remaining 14 directors are provided below.

Table D.2. WIC Clinic Response Rates By FNS Region: 1997 Adolescent WIC Participants Study.

FNS Region	# Eligible Clinics *	# Complete CDQs	Response Rate
1	37	36	97.3 %
2	31	31	100.0 %
3	57	54	94.7 %
4	56	53	94.6 %
5	46	44	95.6 %
6	32	32	100.0 %
7	50	47	94.0 %
	309	297	96.1%

* Region 3 had two ineligible clinics; classified as ineligible after receiving CDQ data

1) Partial Interviews - One questionnaire, although completed in its entirety, was not usable due to a technical problem that arose during the electronic transmission of the interview data from the Field Coordinator's laptop computer to RTI's central computer.

2) Unusable Interviews - Two questionnaires, completed in their entirety, were not usable because we learned (after the fact) that the responses provided in each questionnaire pertained to the entire jurisdiction of the local agencies rather than to the individual clinics.

3) Ineligible Clinics - Two clinics were classified as ineligible after receiving the completed questionnaires.

4) Final refusals - Nine clinics were classified as nonrespondents to the Clinic Director Survey. All of these refusals occurred during the preliminary State or local agency contact period. No clinics declined to participate when they were contacted by a Field Coordinator.

Two "Clinic-Only" clinics in region 3 were selected from lists provided by a local agency staff members. However, these two clinics were actually LAs that were listed on the stage one sampling frame. Thus they were designated as ineligible for the study.

D.2.2 Analysis Weight Formula

The analysis weight for the 12 (=309-297) nonresponding clinics was set to zero; the responding clinic analysis weights were adjusted to account for the loss in sample. As with the LA analysis weight calculation, the total number of LAs within FNS region was estimated from the stage one sampling frame (PC94). The estimated number of LAs from the frame was multiplied by the number of clinics within the LAs selected for the study. This new value was summed across the LAs within FNS region to provide an estimate of the total number of clinics in the target population. The sum of the sampling weights for the

responding clinics was then adjusted to the estimated counts. The clinic analysis weight, used in the analysis of the CDQ data, is

$$AnalysisWt_{hi} = SampWt_{hi} x \frac{Cl\_FCt_g}{\sum_{i \in R} SampWt_{ghi}}$$

where,

g = FNS Region (g = 1,…, 7),
h = LA identifier (h=1,…,170),
i = clinic identifier within the h-th LA,
R = domain of respondents,
$SampWt_{hi}$ = sampling weight for the hi-th clinic, and
Cl_FCt_g = number of clinics by region from sampling frame.

D.3 WIC Clinic/Client Clinic Analysis Weights

D.3.1 Sampling Sheet Imputation Procedures

Sampling sheets were faxed by the WIC Staff Representatives from the clinics to RTI at least every other day. The sampling sheet information, such as the number listed and sampled by race, was keyed into a database. This database was regularly examined to determine which operating days for a clinic were missing a sampling sheet. The WIC Staff Representatives were notified of the missing sampling sheets and attempts were made to provide the information. However, some sampling sheets were lost or were assumed by the Representatives to be days when no eligible adolescent walked through the door of the clinic. After comparing the sampling sheet counts against the number of completed questionnaires, it was determined that 25 clinics had a few more questionnaires than people listed. Sampling sheet counts were increased to account for the difference while maintaining the race-specific response rates derived from the original sampling sheet information. This was to ensure that the nonresponse adjustment was made to the appropriate number of eligible and ineligible respondents.

For example, the percent of incomplete questionnaires out of all the questionnaires for a clinic was calculated. The number of eligible respondents on the sampling sheet was increased to the number of completed questionnaires plus an amount to account for those that did not finish the survey. The number of ineligible respondents and nonrespondents were also increased to maintain the clinic-level response rate.

D.3.2 Response Rate Analysis

Representatives from either the State WIC agency or the local agency in seven States refused to participate in the client-portion of the survey. One reason for the refusals was that clinics were understaffed and could not provide additional personnel to conduct the study. The seven non-participating States were Arkansas, Indiana, Nebraska, Nevada, Oklahoma, Tennessee, and Virginia. Instead of adjusting the sampling weights for the seven missing States and adding a large amount of variation to the client estimates, these States have been excluded from the analyses. In other words, estimates from the client questionnaire represent the contiguous U.S. minus the seven States.

D.4 Adolescent WIC Participant Analysis Weights

Adolescent WIC participant analysis weights were developed to be used in the analysis of the Adolescent Participant Questionnaire (APQ) data. These weights were created by adjusting the client sampling weights (*Appendix C.3.2*) for nonresponse to the APQ.

D.4.1 Race/Ethnicity Imputation Procedures

Sampling and analysis weights were computed for each race/ethnicity category. A completed questionnaire required the presence of the race/ethnicity information to assign the proper weight. For those few cases where race/ethnicity was missing, we imputed a value. Original questionnaire data was never deleted from a record. Instead, relevant missing information was imputed for respondent questionnaires. Logical and unweighted hot-deck imputation procedures were used to impute missing race/ethnicity. For example, race/ethnicity was determined from the following two questions:

D6. Are you of Hispanic origin?
- 1 Yes
- 2 No

D6a. Which of the groups listed below best describes your race?
- 1 White
- 2 Black
- 3 American Indian, Aleut, or Eskimo
- 4 Asian or Pacific Islander, or Asian Indian

If an adolescent was missing question D6 but had specified an answer from 1 to 4 for question D6a, the race/ethnicity was logically imputed to the D6a response value. If an adolescent had declared themselves to be Hispanic (D6=1) but had failed to answer question D6a, the race/ethnicity was logically imputed to Hispanic. Race/ethnicity, for all other cases with missing information, was imputed using an unweighted hot-deck imputation procedure. The imputation classes were formed by crossing parenting status (pregnant, parenting, or both) with the age category (14-15, 16-17, or 18-19). A few classes needed to be collapsed with other classes to create a sufficient number of donor records from which to impute the missing value.

Table D.3. Adolescent WIC Participant Response Rates By Race/Ethnicity: 1997 Adolescent WIC Participants Study.

Race/ Ethnicity	Total # Listed Adolescents	Total # Sampled Adolescents	# Eligible Responding Adolescents	# Ineligible Adolescents	Response Rate 1[1]	Response Rate 2[2]
African American	2,746	1,824	898	133	56.5%	53.1%
Hispanic	4,022	2,369	1,124	170	54.6%	51.1%
Other	1,803	1,487	627	106	49.3%	45.4%
	8,571	5,680	2,649	409	53.8%	50.3%

[1] (Eligibles + Ineligibles) / Total
[2] (Eligibles) / (Total - Ineligibles)

D.4.2 Response Rate

Table D.3 provides the unweighted response rates for the adolescent participants within the three race/ethnicity categories. Adolescents were designated as nonrespondents if they either refused to participate in the study or failed to provide a complete questionnaire. The ACASI questionnaire was programmed in two sections, part A and part B. This was necessary because of the size of the questionnaire. Certain questions were skipped over depending on the adolescent's parenting status (pregnant, parenting, or both). A complete questionnaire contained the appropriate information for all of Part A and at least some information in the last section of part B, the demographic section. Adolescents were considered to be ineligible if they were unable to understand the Spanish or English audio portions of the questionnaire. Proxies, who came to the clinic to pick up WIC vouchers for the adolescent clients, were not permitted to answer the questionnaires for the clients and thus were also considered to be ineligible.

D.4.3 Analysis Weight Formula

The analysis weight for the 2,622 (=5680-2,649-409) nonresponding WIC clients was set to zero; the analysis weights for the responding clients were adjusted to account for the loss in sample. The first adjustment accounted for the nonresponding "Clinic/Client" clinics. The second adjustment accounted for the nonresponding clients. The third adjustment accounted for the missing days in the study calendar.

To account for the loss in sample due to the nonresponding "Clinic/Client" clinics, the total number of LAs was estimated from the stage one sampling frame (PC94). This was similar to the procedure used to calculate the clinic analysis weights except for the exclusion of the seven non-participating States (*Appendix D.3.2*). The estimated number of LAs from the frame was multiplied by the number of clinics within the LAs selected for the study. This new value was summed across the LAs to provide an estimate of the number of clinics in the U.S. minus the seven non-participating States (*CC_FCt*). The sum of the clinic sampling weights (*Appendix C.3*) for the responding clinics was then adjusted to the estimated count.

As discussed in *Appendix D.4.2*, not all eligible adolescent WIC clients agreed to participate in the study. The fraction of the number sampled over the number of respondents by race/ethnicity was used to adjust the responding client sampling weights for the nonresponding clients.

The third source of loss in sample was the number of study days. The Adolescent WIC Participant Study data was to be collected for a 60 day period within each clinic. Based on the clinics operating schedule, the number of days in which clients were served within the 60 day period was estimated. Approximately 75% of the clinics had sampled clients for at least the correct number of days. The resulting adjustment factor for the clinics with excess sampling days decreased the analysis weights for the clients. The remaining 25% of the clinics sampled clients for fewer days; these client analysis weights were increased to account for the loss in study days.

The adolescent WIC participant analysis weight was calculated by applying the three adjustment factors to the race-specific client sampling weights. After calculating the analysis weights, the weights for the "Other" race/ethnicity category were trimmed to minimize the extreme variation caused by one clinic. The formula for these weights, used in the analysis of the APQ data, is

$$AnalysisWt_{hij} = SampWt_{hij} x \frac{CCFCt}{\sum_{j \in R} SampWt_{hi}} x \frac{n_{hij}}{r_{hij}} x Adj60_{hi}$$

where,

h	= LA identifier (h=1,…,170),
i	= clinic identifier within the h-th LA,
j	= racial group identifier (j=1,2,3),
R	= domain of respondents,
r_{hij}	= number of responding adolescents from the j-th racial group in the hi-th clinic,
n_{hij}	= number of adolescents selected from the j-th racial group in the hi-th clinic,
CC FCt	= number of "Clinic/Client" clinics in US (-7 States) from sampling frame,
$Adj60_{hi}$	= 60 day adjustment factor for the hi-th clinic, and
$SampWt_{hi}$	= "Clinic/Client" clinic-level sampling weight from *Appendix C.3.1*.

APPENDIX E - DATA ANALYSIS

E.1 Unit Of Analysis

One requirement of the Adolescent WIC Participants Study was to maintain the anonymity of the eligible adolescents. To meet this requirement, eligible adolescents were listed either by first name or by initials on the sampling sheets (*Exhibit A.1*) upon entrance in to the WIC clinic. One adolescent may have more than one questionnaire in the Adolescent WIC Participant Questionnaire file due to the following:

- incomplete names were used for sampling and the WIC Staff Representative could not verify that the adolescent had already completed the questionnaire, and

- data was collected over a 60-day period and WIC vouchers are given out once a month.

Therefore, the unit of analysis is the client visit and not the adolescent. However, this will loosely be referred to as "adolescents" in the discussion of the analysis results.

E.2 SUDAAN®

The Adolescent WIC Participants Study is a multi-stage survey using a clustered sampling design. Due to the correlations inherent in a clustered design, a design-based statistical package is needed for analysis. SUDAAN®, RTI's software developed for analyzing data from complex sample designs, is used to produce the national estimates from the two questionnaires. *Exhibit E.1* provides an example SUDAAN® program to analyze data from the Clinic Director Questionnaire (CDQ). *Exhibit E.2* provides the resulting output from the SUDAAN® program.

Exhibit E.1 Example SUDAAN Program Using The Clinic Director Questionnaire (CDQ) Data File: 1997 Adolescent WIC Participants Study.

```
PROC FORMAT;
  VALUE  yes_   1="Yes"
                2="No"
                8="Unknown"
                9="Refused"
                .="Missing";
RUN;


PROC CROSSTAB DATA=CDQAFILE DESIGN=WR;
  NEST VARSTRAT VARREP;
  WEIGHT ANLWT_CD;
  SUBGROUP WREGION AC4A;
  LEVELS   7      2;
  TABLES WREGION*AC4A;
  RFORMAT AC4A yes_.;
RUN;
```

Exhibit E.2 Output From Example SUDAAN Program Using The Clinic Director Questionnaire (CDQ) Data File: 1997 Adolescent WIC Participants Study.

```
                                S U D A A N
            Software for the Statistical Analysis of Correlated Data
          Copyright      Research Triangle Institute      September 1997
                                Release 7.50

Number of observations read    :    297    Weighted count :     9075
Denominator degrees of freedom :    152


Date: 01-07-98             Research Triangle Institute                  Page  : 1
Time: 16:51:17               The CROSSTAB Procedure                     Table : 1

Variance Estimation Method: Taylor Series (WR)
by: WIC Region, Teens hear about WIC from food stamp pr.
```

WIC Region		Teens hear about WIC from food stamp pr		
		Total	Yes	No
Total	Sample Size	276	169	107
	Weighted Size	8558.74	4876.48	3682.26
	SE Weighted	809.77	607.33	638.00
	Row Percent	100.00	56.98	43.02
	Col Percent	100.00	100.00	100.00
	Tot Percent	100.00	56.98	43.02
	SE Row Percent	0.00	5.60	5.60
	SE Col Percent	0.00	0.00	0.00
	SE Tot Percent	0.00	5.60	5.60
1	Sample Size	31	17	14
	Weighted Size	806.53	265.05	541.48
	SE Weighted	266.72	70.62	282.13
	Row Percent	100.00	32.86	67.14
	Col Percent	9.42	5.44	14.71
	Tot Percent	9.42	3.10	6.33
	SE Row Percent	0.00	14.57	14.57
	SE Col Percent	2.95	1.53	6.92
	SE Tot Percent	2.95	0.88	3.16
2	Sample Size	30	15	15
	Weighted Size	761.18	424.58	336.59
	SE Weighted	154.88	169.68	119.39
	Row Percent	100.00	55.78	44.22
	Col Percent	8.89	8.71	9.14
	Tot Percent	8.89	4.96	3.93
	SE Row Percent	0.00	15.96	15.96
	SE Col Percent	1.84	3.34	3.33
	SE Tot Percent	1.84	1.97	1.43

Exhibit E.2 (continued)

Variance Estimation Method: Taylor Series (WR)
by: WIC Region, Teens hear about WIC from food stamp pr.

WIC Region		Teens hear about WIC from food stamp pr		
		Total	Yes	No
3	Sample Size	51	33	18
	Weighted Size	1215.57	787.55	428.03
	SE Weighted	145.59	135.97	116.30
	Row Percent	100.00	64.79	35.21
	Col Percent	14.20	16.15	11.62
	Tot Percent	14.20	9.20	5.00
	SE Row Percent	0.00	8.41	8.41
	SE Col Percent	1.97	3.05	3.42
	SE Tot Percent	1.97	1.72	1.40
4	Sample Size	51	32	19
	Weighted Size	1523.73	798.58	725.15
	SE Weighted	348.31	223.25	328.63
	Row Percent	100.00	52.41	47.59
	Col Percent	17.80	16.38	19.69
	Tot Percent	17.80	9.33	8.47
	SE Row Percent	0.00	14.68	14.68
	SE Col Percent	3.67	4.27	7.74
	SE Tot Percent	3.67	2.60	3.65
5	Sample Size	41	24	17
	Weighted Size	1264.29	566.52	697.77
	SE Weighted	367.12	140.60	323.52
	Row Percent	100.00	44.81	55.19
	Col Percent	14.77	11.62	18.95
	Tot Percent	14.77	6.62	8.15
	SE Row Percent	0.00	12.38	12.38
	SE Col Percent	3.86	2.91	7.66
	SE Tot Percent	3.86	1.62	3.53
6	Sample Size	32	23	9
	Weighted Size	1732.48	1321.89	410.59
	SE Weighted	466.83	468.95	149.60
	Row Percent	100.00	76.30	23.70
	Col Percent	20.24	27.11	11.15
	Tot Percent	20.24	15.44	4.80
	SE Row Percent	0.00	9.96	9.96
	SE Col Percent	4.62	7.33	4.07
	SE Tot Percent	4.62	4.84	1.77

Exhibit E.2 (continued)

Date: 01-07-98 Research Triangle Institute Page : 3
Time: 16:51:17 The CROSSTAB Procedure Table : 1

Variance Estimation Method: Taylor Series (WR)
by: WIC Region, Teens hear about WIC from food stamp pr.

WIC Region		Teens hear about WIC from food stamp pr		
		Total	Yes	No
7	Sample Size	40	25	15
	Weighted Size	1254.96	712.31	542.65
	SE Weighted	255.70	164.49	254.22
	Row Percent	100.00	56.76	43.24
	Col Percent	14.66	14.61	14.74
	Tot Percent	14.66	8.32	6.34
	SE Row Percent	0.00	14.33	14.33
	SE Col Percent	2.87	3.37	6.34
	SE Tot Percent	2.87	2.00	2.88

Appendix F

ADOLESCENT DEMOGRAPHICS

Table F.1. Distribution of Respondents' Parenting Status	
Parenting Status	**Percentage**
Pregnant	41.5% (4.0%)*
Parenting	49.5% (4.3%)
Both	9.0% (1.1%)
Total**	100%

* Standard errors for percentage figures are in parentheses
** Percentages may not total to exactly 100% due to rounding.

Table F.2.
Distribution of Respondents' Race/Language

Race/Language	Percentage
White	41.9%* (4.7%)
Black	23.9% (3.8%)
Spanish Speaking Hispanic	7.2% (1.6%)
English Speaking Hispanic	19.1% (2.7%)
Other**	7.9% (4.5%)
Total* **	100%

* Standard errors for percentage figures are in parentheses
** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.
*** Percentages may not total to exactly 100% due to rounding.

Table F.3.
Distribution of Respondents' Age

Age	Percentage
14 years old	3.8%* (0.8%)
15 years old	6.5% (0.9%)
16 years old	17.3% (1.7%)
17 years old	24.3% (2.6%)
18 years old	25.3% (2.2%)
19 years old	22.9% (2.3%)
Total**	100%

* Standard errors for percentage figures are in parentheses
** Percentages may not total to exactly 100% due to rounding.

Table F.4.
Distribution of Last Grade Respondent Completed

Last Grade Completed	Percentage
8th Grade or Less	13.5%* (1.5%)
9th Grade	17.2% (1.7%)
10th Grade	21.1% (2.1%)
11th Grade	20.2% (2.0%)
12th Grade	22.6% (2.2%)
More than High School	5.4% (0.9%)
Total**	100%

* Standard errors for percentage figures are in parentheses
** Percentages may not total to exactly 100% due to rounding.

Table F.5.
Distribution of Number of Times Respondent Enrolled in WIC

Number of Times Enrolled in WIC	Percentage
Not Enrolled	8.9%* (1.1%)
One	73.0% (2.0%)
Two	14.3% (1.7%)
Three or more	3.8% (0.6%)
Total**	100%

* Standard errors for percentage figures are in parentheses
** Percentages may not total to exactly 100% due to rounding

Table F.6.
Distribution of Adolescents by Age and Employment Status

Currently Work for Pay	Respondents Age						Total**
	14 years old	*15 years old*	*16 years old*	*17 years old*	*18 years old*	*19 years old*	
Yes	13.0%* (5.8%)	20.4% (9.3%)	11.6% (2.2%)	19.5% (4.5%)	29.0% (3.5%)	36.5% (4.3%)	24.2% (2.6%)
No	87.0% (5.8%)	79.6% (9.3%)	88.4% (2.2%)	80.5% (4.5%)	71.0% (3.5%)	63.5% (4.3%)	75.8% (2.6%)
Total	100%	100%	100%	100%	100%	100%	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

Note: $X^2 = 23.2$; $df = 5.0$; $p\text{-value}=0$

Table F.7.
Distribution of Adolescents by Parenting Status and Employment Status

Currently Work for Pay	Respondents Parenting Status			Total**
	Pregnant	***Parenting***	***Both***	
Yes	27.8%* (3.9%)	21.8% (3.2%)	20.6% (3.5%)	24.2% (2.6%)
No	72.2% (3.9%)	78.2% (3.2%)	79.4% (3.5%)	75.8% (2.6%)
Total	100%	100%	100%	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

Note: $X^2 = 1.7$; $df = 2.0$; $p\text{-value} = 0.43$

Table F.8.
Distribution of Adolescents by Race/Language and Breastfeeding Status

Currently Breastfeeding	Race/Language					Total**
	White	*Black*	*Hispanic Spanish Language*	*Hispanic English Language*	*Other*	
Yes	18.3%* (5.0%)	22.2% (4.9%)	14.5% (4.5%)	24.4% (6.4%)	20.6% (14.0%)	100%
No	37.1% (5.7%)	28.4% (5.3%)	4.6% (1.1%)	20.3% (2.9%)	9.5% (5.6%)	100%
Total	33.6% (5.2%)	27.3% (4.7%)	6.5% (1.6%)	21.1% (3.2%)	11.6% (7.4%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

Note: $X^2 = 37.0;\ df = 4.0;\ p\text{-value} = 0$

Table F.9.
Distribution of Adolescents by Race/Language and Marital Status

Marital Status	Race/Language					Total**
	White	*Black*	*Hispanic Spanish Language*	*Hispanic English Language*	*Other*	
Married	48.1%* (5.8%)	2.9% (0.8%)	13.1% (3.3%)	28.4% (3.5%)	7.6% (4.6%)	100%
Widowed	20.4% (11.6%)	71.2% (12.5%)	0% (0%)	7.4% (3.1%)	1.0% (1.1%)	100%
Divorced/Separated	55.3% (10.3%)	18.6% (6.8%)	7.2% (4.1%)	18.7% (5.8%)	0.3% (0.3%)	100%
Never Married	40.8% (5.1%)	28.5% (4.4%)	5.5% (1.3%)	16.6% (2.9%)	8.6% (4.9%)	100%
Total	42.2% (4.8%)	24.0% (3.9%)	7% (1.6%)	19.0% (2.7%)	8.1% (4.6%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

Note: $X^2 = 69.3$; $df=12.0$; $p\text{-value} = 0$

Table F.10.
Distribution of Adolescents by Race and Parenting Status

Respondent's Parenting Status	Race				Total**
	White	*Black*	*Hispanic*	*Other*	
Pregnant	53.7%* (4.8%)	19.3% (3.9%)	24.4% (4.5%)	2.7% (0.8%)	100%
Parenting	36.0% (5.7%)	26.6% (5.1%)	26.7% (4.0%)	10.8% (7.0%)	100%
Both	20.4% (5.8%)	30.7% (5.8%)	32.8% (7.5%)	16.2% (9.9%)	100%
Total	41.9% (4.7%)	23.9% (3.8%)	26.3% (3.8%)	7.9% (4.5%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

Note: $X^2 = 37.0$; $df = 6.0$; $p\text{-value} = 0$

Appendix G

TIMING OF WIC ENROLLMENT

Table G.1.
Timing of WIC Enrollment: Pregnancy Status of Adolescent When They First Thought About WIC Enrollment, By Age of Adolescent

Respondent's Age	Number of Months Pregnant When Thought About WIC					Total**
	One	*Two*	*Three*	*Four*	*More Than Four Months*	
14 years old	27.6%* (11.2%)	15.7% (11.4%)	26.2% (14.6%)	7.5% (5.5%)	23.0% (16.4%)	100%
15 years old	2.7% (1.8%)	18.5% (6.6%)	22.0% (6.4%)	25.0% (9.5%)	31.9% (12.0%)	100%
16 years old	14.5% (3.9%)	22.0% (7.3%)	31.2% (6.8%)	8.8% (3.0%)	23.5% (4.7%)	100%
17 years old	25.6% (9.0%)	20.8% (7.8%)	12.7% (5.2%)	14.2% (4.0%)	26.8% (6.7%)	100%
18 years old	23.6% (4.7%)	34.0% (6.1%)	18.9% (4.7%)	11.0% (3.1%)	12.6% 4.3%)	100%
19 years old	37.7% (11.0%)	20.2% (5.9%)	19.2% (4.9%)	12.6% (3.5%)	10.2% (3.5%)	100%
Total	25.3% (4.3%)	23.5% (3.3%)	19.5% (3.4%)	12.6% (1.8%)	19.1% (3.3%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

Note: $X^2 = 122.9$; $df = 20$; $p\text{-value} = .00$

Table G.2.
Source From Which Adolescent First Learned About WIC, By Race/Language

Race/Language	Source for First Learning About Eligiblity for WIC									Total**
	Food Stamp Program	*Medicaid*	*Family Member*	*Social Worker*	*Counselor*	*MD or Nurse*	*Ads*	*Brochure*	*Other*	
White	2.2%* (.7%)	15.1% (2.4%)	61.7% (4.2%)	1.8% (.6%)	1.2% (.5%)	12.0% (2.9%)	0.6% (.6%)	0.4% (.3%)	5.1% (2.3%)	100%
Black	3.5% (.9%)	10.5% (2.0%)	57.1% (4.1%)	4.5% (.9%)	2.7% (1.0%)	17.0% (2.5%)	1.4% (.7%)	1.4% (.8%)	2.0% (.7%)	100%
Spanish Speaking Hispanic	8.3% (3.0%)	6.5% (16%)	57.9% (5.4%)	7.1% (1.4%)	0.1% (.1%)	17.1% (4.5%)	0.8% (.5%)	1.3% (1.0%)	1.1% (.6%)	100%
English Speaking Hispanic	5.3% (1.4%)	7.3% (13%)	64.0% (2.6%)	3.4% (.7%)	2.4% .5%)	13.4% (1.6%)	1.5% (.7%)	0.5% (.3%)	2.3% (.6%)	100%
Other***	0.6% (.5%)	1.7% (1.8%)	60.8% (3.1%)	13.5% (4.2%)	0.5% (.5%)	20.5% (2.7%)	0.0% (0.0%)	1.9% (1.8%)	0.5% (.4%)	100%
Total	3.4% (.5%)	10.8% (17%)	60.7% (2.6%)	4.0% (.8%)	1.7% (.4%)	14.5% (1.6%)	0.9% (.3%)	0.8% (.3%)	3.2% (1.1%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 243.0$; $df = 32$; *p-value = .00*

Table G.3.
Timing of WIC Enrollment: Trimester in Which Adolescent Reported Enrolling in WIC, By Race/Language

Race/Language	Timing of WIC Enrollment in Trimesters				Total**
	First	*Second*	*Third*	*After Baby Was Born*	
White	65.3%* (5.6%)	19.6% (3.5%)	8.4% (2.1%)	6.8% (1.4%)	100%
Black	43.7% (4.8%)	32.6% (4.4%)	8.1% (1.3%)	15.6% (4.7%)	100%
Spanish Speaking Hispanic	62.3% (5.9%)	22.0% (3.7%)	7.1% (2.8%)	8.7% (2.4%)	100%
English Speaking Hispanic	52.5% (3.1%)	30.6% (2.7%)	8.2% (1.5%)	8.7% (1.4%)	100%
Other***	40.5% (3.1%)	36.8% (3.2%)	13.4% (4.5%)	9.4% (6.8%)	100%
Total	55.6% (3.6%)	26.3% (2.6%)	8.7% (1.2%)	9.5% (1.2%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 35.1$; $df=12$; $p\text{-value}=.01$

Table G.4.
Timing of Enrollment: Month of Pregnancy in Which Adolescent Reported Enrolling in WIC

Race/Language	Timing of WIC Enrollment in Months										Total**
	One	*Two*	*Three*	*Four*	*Five*	*Six*	*Seven*	*Eight*	*Nine*	*Postpartum*	
White	13.5%* (3.7%)	24.2% (3.3%)	27.6% (4.5%)	6.3% (1.7%)	5.5% (1.4%)	7.8% (2.3%)	3.7% (1.1%)	4.8% (1.4%)	0.0% (0.0%)	6.8% (1.4%)	100%
Black	9.8% (2.7%)	19.6% (2.7%)	14.3% (1.9%)	12.3% (1.5%)	10.9% (2.8%)	9.4% (1.9%)	4.0% (1.0%)	4.2% (.9%)	0.0% (0.0%)	15.6% (4.7%)	100%
Spanish Speaking Hispanic	7.6% (1.9%)	30.1% (5.9)	24.5% (4.3%)	9.3% (2.0%)	6.6% (2.2%)	6.2% (1.6%)	2.3% (1.1%)	4.8% (2.6%)	0.0% (0.0%)	8.7% (2.4%)	100%
English Speaking Hispanic	9.9% (2.0%)	20.9% (2.0%)	21.8% (2.0%)	12.4% (1.2%)	8.5% (1.5%)	9.8% (1.2%)	5.1% (1.1%)	3.1% (.7%)	0.0% (0.0%)	8.7% (1.4%)	100%
Other***	15.9% (3.5%)	5.3% (3.8%)	19.3% (2.6%)	14.7% (3.6%)	19.2% (2.2%)	2.8% (2.3%)	0.6% (.5%)	12.8% (4.9%)	0.0% (0.0%)	9.4% (6.8%)	100%
Total	11.7% (2.2%)	21.3% 2.3%)	22.6% (2.2%)	9.8% (1.1%)	8.5% (1.4%)	8.0% (1.4%)	3.6% (.6%)	5.0% (1.1%)	0.0% (0.0%)	9.5% (1.2%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 146.7$; $df = 32$; $p\text{-value} = .00$

Table G.5.
Adolescent's Knowledge of WIC Income Requirements Prior to Enrollment by Race

Race	Knew Income Requirements for WIC		Total**
	Yes	*No*	
White	72.4%* (1.8%)	27.6% (1.8%)	100%
Black	60.5% (3.4%)	39.5% (3.4%)	100%
Hispanic	68.5% (2.0%)	31.5% (2.0%)	100%
Other***	60.8% (3.0%)	39.2% (3.0%)	100%
Total	67.6% (1.6%)	32.4% (1.6%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 13.6$; $df = 3$; $p\text{-value} = .01$

Appendix H

NUTRITION AND NUTRITION EDUCATION

Table H.1.
Percentage of Pregnant Adolescents Believing That What They Eat Will Affect Their Baby, By Race/Language of Adolescent

Race/Language	Pregnancy-Eating Will Affect Baby			Total**
	Agree	*Disagree*	*Not Sure*	
White	85.5%* (4.2%)	7.3% (3.9%)	7.1% (2.3%)	100%
Black	79.3% (2.7%)	13.9% (2.5%)	6.8% (2.4%)	100%
Spanish Speaking Hispanic	52.9% (4.2%)	20.7% (5.0%)	26.5% (7.7%)	100%
English Speaking Hispanic	83.9% (2.7%)	9.1% (2.0%)	7.0% (1.5%)	100%
Other***	93.5% (4.4%)	2.5% (2.0%)	4.0% (3.0%)	100%
Total	81.8% (2.2%)	9.8% (2.0%)	8.4% (1.4%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 18.7$; $df=8$; $p\text{-value}=.04$

Table H.2.
Percentage of Adolescents Believing That Their Knowledge of Nutrition Information is Important for Their Child's Health

Race/Language	Nutrition Information is Important for a Child's Health			Total**
	Agree	*Disagree*	*Not Sure*	
White	97.0%* (0.84%)	1.3% (0.7%)	1.8% (0.7%)	100%
Black	96.5% (1.2%)	2.0% (1.0%)	1.5% (0.5%)	100%
Spanish Speaking Hispanic	99.5% (0.3%)	0.0% (0.0%)	0.5% (0.3%)	100%
English Speaking Hispanic	95.8% (1.3%)	1.5% (0.8%)	2.7% (0.8%)	100%
Other***	98.4% (1.4%)	1.2% (0.4%)	0.4% (0.4%)	100%
Total	97.0% (0.5%)	1.4% (0.4%)	1.7% (0.4%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 16.5$; $df=8$; $p\text{-value}= .07$

Table H.3.
Opinion of Pregnant Adolescents of Importance of Weight Gain During Pregnancy, By Race/Language of Adolescent

Race/Language	Weight Gain Not Important			Total**
	Agree	*Disagree*	*Not Sure*	
White	27.4%* (5.0%)	62.4% (4.9%)	10.2% (2.7%)	100%
Black	37.8% (4.1%)	51.1% (4.6%)	11.2% (2.3%)	100%
Spanish Speaking Hispanic	49.8% (7.3%)	33.5% (5.6%)	16.7% (3.7%)	100%
English Speaking Hispanic	39.9% (3.5%)	49% (4.3%)	11.1% (2.3%)	100%
Other***	14.3% (8.3%)	81.8% (9.4%)	3.9% (2.3%)	100%
Total	32.9% (2.7%)	56.3% (2.8%)	10.8% (1.4%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 30.8$; $df = 8$; $p\text{-value} = .00$

Table H.4.
Adolescent Opinion of Their Post-Partum Weight,
By Race/Language

Race/Language	Opinion of Current Weight			Total**
	I need to lose weight	*I weigh about right amount*	*I need to gain weight*	
White	73.6%* (4.5%)	20.6% (4.2%)	5.8% (1.6%)	100%
Black	44.3% (4.9%)	41.5% (5.2%)	14.2% (2.2%)	100%
Spanish Speaking Hispanic	53% (5.2%)	38.4% (4.7%)	8.7% (2.6%)	100%
English Speaking Hispanic	62.6% (3.3%)	25.6% (2.8%)	11.8% (1.8%)	100%
Other***	31.7% (6.1%)	44.9% (4.6%)	23.5% (2.6%)	100%
Total	57.7% (3.8%)	30.9% (3.0%)	11.3% (1.5%)	100%

* Standard errors for percentage figures are in parentheses.
** Row percentages may not total to exactly 100% due to rounding.
*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.
Note: Excludes currently pregnant adolescents.
Note: $X^2 = 29.5$; $df = 8$; $p\text{-value} = .00$

Table H.5.
Opinion of Pregnant Adolescents of How Much Weight Should be Gained During Pregnancy, By Race/Language of Adolescent

Race/Language	Opinion of Weight Gain During Pregnancy				Total**
	5- 14 lbs.	*15- 24 lbs.*	*25- 35 lbs.*	*> 35 lbs.*	
White	3.8%* (0.9%)	39.5% (5.4%)	55.3% (5.1%)	1.4% (0.6%)	100%
Black	13.8% (1.4%)	34.7% (3.5%)	48.1% (3.6%)	3.5% (0.7%)	100%
Spanish Speaking Hispanic	23.1% (2.9%)	36.9% (4.1%)	36.2% (4.3%)	3.8% (1.6%)	100%
English Speaking Hispanic	13.9% (1.7%)	35.7% (2.0%)	47.6% (2.5%)	2.8% (0.8%)	100%
Other***	17.1% (4.8%)	28.8% (3.9%)	53.2% (4.0%)	0.9% (0.8%)	100%
Total	10.4% (1.1%)	36.6% (2.6%)	50.6% (2.4%)	2.3% (0.4%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 78.5$; *df= 12; p-value=.00*

Table H.6.
Reported Sources of Adolescent's Information About Healthy Diet, By Race/Language of Adolescent

Race/Language	Person Adolescent Depends On For Healthy Diet Information											Total**
	Mom/Step-mom	*Dad/Step-dad*	*Grandmother*	*Aunt*	*Baby's Father*	*Sibling*	*Friend*	*Teacher*	*MD or Nurse*	*WIC staff*	*Other*	
White	42.6%* (2.8%)	2.8% (1.0%)	3.0% (1%)	2.4% (0.8%)	7.0% (1.1%)	1.5% (0.7%)	1.7% (0.8%)	0.2% (0.2%)	26.9% (4.0%)	5.7% (1.5%)	6.2% (1.4%)	100%
Black	40.5% (4.7%)	1.5% (0.9%)	10.7% (1.2%)	2.0% (0.7%)	3.0% (0.6%)	2.4% (0.8%)	0.7% (0.3%)	0.1% (0.1%)	27.8% (4.0%)	8.5% (1.5%)	2.8% (0.5%)	100%
Spanish Speaking Hispanic	37.7% (4.4%)	0.7% (0.4%)	4.9% (2.2%)	3.1% (1.3%)	13.9% (2.3%)	3.7% (1.5%)	4.7% (1.5%)	0.4% (0.4%)	12.3% (3.0%)	14.7% (4.6%)	4.0% (2.1%)	100%
English Speaking Hispanic	46.4% (2.7%)	1.0% (0.4%)	2.6% (0.8%)	0.7% (0.2%)	7.5% (1.4%)	2.7% (.8%)	1.8% (0.9%)	0.4% (0.4%)	22.2% (2.6%)	11.5% (1.5%)	3.3% (0.7%)	100%
Other***	40.3% (2.9%)	0.3% (0.3%)	2.0% (2.1%)	0.8% (0.8%)	2.1% (1.7%)	0.3% (0.3%)	0.7% (0.7%)	0.0% (0.0%)	37.1% (3.6%)	14.9% (3.3%)	1.5% (1.3%)	100%
Total	42.3% (2.0%)	1.8% (0.4%)	4.8% (0.8%)	1.9% (0.4%)	6.2% (0.6%)	2.0% (0.4%)	1.6% (0.4%)	0.2% (0.1%)	26.1% (2.3%)	8.8% (1.1%)	4.3% (0.7%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 22851.5$; $df = 38$; $p\text{-value} = .00$

Table H.7.
Reported Sources of Adolescent's Information About Healthy Diet,
By Parenting Status of Adolescent

Respondent's Parenting Status	Who Depend On For Healthy Diet Information											Total**
	Mom/Step-mom	*Dad/Step-dad*	*Grandmother*	*Aunt*	*Baby's Father*	*Sibling*	*Friend*	*Teacher*	*MD or nurse*	*WIC staff*	*Other*	
Pregnant	44.6%* (3.0%)	1.8% (0.7%)	5.5% (1.3%)	2.5% (0.8%)	6.4% (1.0%)	2.8% (1.0%)	2.4% (1.0%)	0.2% (0.2%)	26.6% (3.6%)	3.8% 0.7%)	3.4% (0.7%)	100%
Parenting	41.1% (2.4%)	1.7% (0.6%0	4.5% (0.8%)	1.6% (0.5%)	6.7% (1.0%)	1.6% (0.5%)	0.9% (0.3%)	0.3% (0.2%)	24% (2.1%)	12.6% (1.6%)	5.2% (1.2%)	100%
Both	38.4% (6.0%)	2.4% (1.4%)	3.9% (1.3%)	0.6% (0.4%)	2.2% (0.8%)	0.7% (0.4%)	1.9% (1.1%)	0% (0%)	35% (8.4%)	11.5% (3.8%)	3.5% (1.3%)	100%
Total	42.3% (2.0%)	1.8% (0.4%)	4.8% (0.8%)	1.9% (0.4%)	6.2% (0.6%)	2% (0.4%)	1.6% (0.4%)	0.2% (0.1%)	26.1% (2.3%)	8.8% (1.1%)	4.3% (0.7%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

Note: $X^2 = 74.4$; *df= 20; p-value=.00*

Table H.8.
Type of Nutrition Education Received by Adolescents at WIC Clinics, By Race/Language of Adolescent

Race/Language	Type of Nutrition Education Received at WIC		
	Individual Nutrition Education	***Group Education With All Ages***	***Group Education With Adolescents***
White	73.6%* (4.2%)	61.3% (6.2%)	29.7% (4.3%)
Black	67.4% (3.1%)	66.8% (5.4%)	43.0% (4.1%)
Spanish Speaking Hispanic	53.4% (6.3%)	72.3% (4.3%)	48.3% (4.0%)
English Speaking Hispanic	64.6% (5.0%)	81% (2.6%)	44.3% (3.5%)
Other**	62.0% (3.1%)	75.3% (4.4%)	42.1% (3.3%)
Total	67.8% (2.7%)	68.4% (3.7%)	38.1% (2.6%)
Statistics	X^2=6.6; df=4;p-value=.18	X^2=10.4; df=4;p-value=.05	X^2=13.6; df=4;p-value=.02

* Standard errors for percentage figures are in parentheses.
** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.
Note: Excludes adolescent attending their first WIC clinic visit.

Table H.9.
Nutrition Education Delivery Methods Preferred by Adolescents, By Race/Language

Race/Language	Type of Group Nutrition Education Session Preferred				Total**
	Individual Nutrition Education	***Group Education With All Ages***	***Group Education with Adolescents***	***Don't Like Nutrition Education***	
White	56.1%* (4.5%)	7.3% (1.6%)	22.1% (4.1%)	14.5% (2.8%)	100%
Black	53.2% (4.8%)	7.5% (1.8%)	31.2% (3.6%)	8.1% (2.0%)	100%
Spanish Speaking Hispanic	32.4% (3.7%)	35.4% (3.7%)	29.3% (2.6%)	2.9% (1.2%)	100%
English Speaking Hispanic	47.6% (3.5%)	15.6% (2.6%)	31.7% (3.2%)	5.1% (1.4%)	100%
Other***	43.6% (4.0%)	18.5% (2.5%)	36.2% (3.8%)	1.7% (1.9%)	100%
Total	50.8% (3.0%)	12.1% (1.3%)	28.0% (2.3%)	9.1% (1.6%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 38.4$; $df = 12$; $p\text{-value} = .00$

Note: Excludes adolescents attending their first WIC clinic visit.

Table H.10.
Nutrition Education Methods Preferred by Adolescents, by Race/Language

Race/Language	Type of Nutrition Education Method				
	Group Activities Using Games	***Group with Video***	***Group Demonstrations***	***Group Field Trips***	***Group Talk with Other WIC Participants***
White	28.8* (4.1%)	43.5% (5.1%)	55.6% (5.7%)	24.8% (4.6%)	46.9% (5.1%)
Black	53.3% (4.8%)	58.8% (5.1%)	73.1% (5.9%)	55.6% (5.6%)	65.5% (4.3%)
Spanish Speaking Hispanic	58.5% (5.1%)	82.0% (3.1%)	85.3% (4.5%)	48.8% (3.1%)	82.2% (2.0%)
English Speaking Hispanic	53% (3.4%)	72.8% (3.3%)	73.3% (2.9%)	52.2% (3.4%)	61.3% (3.7%)
Other**	78.5% (15.7%)	82.1% (13.4%)	86.7% (10.1%)	78.8% (15.8%)	53.7% (5.2%)
Total	46.4% (5.1%)	59.5% (3.8%)	68.5% (3.5%)	44.6% (5.4%)	57.2% (2.8%)
Statistics	X^2=50.7; df=4; p-value=.00	X^2=35.3; df=4; p-value=.00	X^2=12.5; df=4; p-value=.03	X^2=34.7; df=4; p-value=.00	X^2=28.5; df=4; p-value=.00

* Standard errors for percentage figures are in parentheses.

** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: Excludes adolescents attending their first WIC clinic visit.

Table H.11.
Percent of Adolescents Who Report They Received Information About Various Nutrition Education Topics at WIC, by Race/Language of Adolescent

	Nutrition Education Topics										
Race/Language	***Breastfeeding***	***Bottle Feeding***	***Feeding Solid Foods***	***How to Use WIC Foods***	***Get Most Food For Money***	***Healthy Eating Habits for Child***	***Weight Gain During Pregnancy***	***Smoking***	***Whole Milk for Baby***	***Substances During Pregnancy***	***Eating Healthy During Pregnancy***
White	87.3% (2.5%)	71.7% (4.5%)	53.9% (4.6%)	83.4% (3.5%)	53.4% (5.5%)	54.3% (5.6%)	77.5% (3.8%)	87.3% (3.1%)	35.2% (4.0%)	82.5% (3.5%)	89.7% (3.6%)
Black	80.4% (3.0%)	81.0% (2.4%)	64.4% (4.5%)	86.9% (1.9%)	51.6% (4.9%)	66.2% (5.4%)	80.7% (3.0%)	88.9% (1.7%)	42.6% (4.1%)	89.1% (2.4%)	96.5% (0.8%)
Spanish Speaking Hispanic	63.8% (7.0%)	54.8% (7.2%)	50.6% (6.3%)	75.8% (3.7%)	19.3% (4.3%)	52.2% (6.0%)	65.8% (5.3%)	75.0% (4.3%)	44.2% (6.9%)	79.4% (4.1%)	86.5% (2.9%)
English Speaking Hispanic	86.9% (2.2%)	75.1% (2.7%)	59.9% (3.1%)	87.0% (2.4%)	43.3% (4.9%)	62.3% (3.8%)	74.9% (2.3%)	83.3% (2.3%)	49.3% (3.3%)	86.4% (1.9%)	96.7% (1.1%)
Other**	94.3% (4.7%)	64.4% (3.7%)	43.9% (4.2%)	80.0% (1.8%)	28.3% (6.9%)	85.8% (10.7%)	90.1% (7.7%)	93.0% (5.5%)	9.6% (7.8%)	92.1% (6.3%)	95.1% (4.2%)
Total	84.7% (2.2%)	72.4% (2.3%)	56.1% (2.8%)	83.9% (1.6%)	46.0% (3.8%)	61.8% (4.6%)	78.3% (2.8%)	86.7% (2.1%)	37.4% (3.8%)	85.5% (2.1%)	92.9% (1.6%)
Statistics	X^2= 8.5; df=4; p-value=.10	X^2=10.8; df=4; p-value=.05	X^2=5.97; df=4; p-value=.22	X^2=9.9; df=4; p-value=.06	X^2=22.1; df=4; p-value=.00	X^2=10.8; df=4; p-value=.04	X^2=8.6; df=4; p-value=.09	X^2=10.0; df=4; p-value=.06	X^2=11.35; df=4; p-value=.04	X^2=7.0; df=4; p-value=.16	X^2=12.2; df=4; p-value=.03

* Standard errors for percentage figures are in parentheses.

** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: Excludes adolescents attending their first WIC clinic visit.

Table H.12.
Percent of Adolescents Who Would Like to Receive Information on Various Nutrition Education Topics, By Race/Language of Adolescent

Race/Language	Nutrition Education Topics										
	Breastfeeding	*Bottle Feeding*	*Feeding Solid Foods*	*How to Use WIC Foods*	*Get Most Food For Money*	*Healthy Eating Habits for Child*	*Weight Gain During Pregnancy*	*Smoking*	*Whole Milk for Baby*	*Substances During Pregnancy*	*Eating Healthy During Pregnancy*
White	47.7%* (6.1%)	57.0% (3.7%)	68.7%* (3.6%)	40.3%* (9.2%)	71.8%* (3.5%)	72.1% (3.8%)	56.0%* (4.2%)	26.9%* (4.1%)	64.9%* (4.0%)	20.6%* (4.0%)	62.3% (2.8%)
Black	34.8% (4.7%)	59.9% (3.9%)	72.5% (4.0%)	50.8% (5.8%)	69.4% (3.4%)	68.8% (6.1%)	56.7% (6.7%)	37.2% (4.9%)	67.6% (4.8%)	33.5% (4.0%)	61.2% (6.9%)
Spanish Speaking Hispanic	65.4% (9.8%)	83.0% (5.6%)	87.7% (3.3%)	77.8% (7.3%)	84.4% (2.5%)	87.3% (4.0%)	84.9% (3.6%)	59.2% (5.7%)	90.5% (2.7%)	58.6% (5.0%)	83.4% (5.8%)
English Speaking Hispanic	49.7% (3.4%)	62.2% (4.3%)	77.5% (2.6%)	62.0% (8.3%)	76.3% (1.9%)	82.0% (2.2%)	58.8% (3.1%)	42.4% (2.3%)	75.1% (2.1%)	36.0% (2.7%)	67.2% (3.5%)
Other**	32.2% (7.7%)	51.6% (4.3%)	91.1% (6.2%)	85.1% (13.0%)	89.3% (8.5%)	79.1% (8.0%)	44.1% (9.2%)	22.0% (4.2%)	90.5% (7.6%)	21.2% (5.8%)	42.0% (11.4%)
Total	45.7% (3.4%)	60.3% (2.5%)	74.2% (2.5%)	55.3% (6.1%)	74.7% (2.3%)	74.6% (2.9%)	58.4% (2.8%)	34.8% (2.4%)	71.4% (3.0%)	29.1% (2.3%)	63.7% (2.4%)
Statistics	X^2=14.5; df=4; p-value=.01	X^2=7.7; df=4; p-value=.13	X^2=11.0; df=4; p-value=.04	X^2=10.8; df=4; p-value=.04	X^2=11.0; df=4; p-value=.04	X^2=6.52; df=4; p-value=.19	X^2=14.9; df=4; p-value=.01	X^2=33.0; df=4; p-value=.00	X^2=21.1; df=4; p-value=.00	X^2=17.9; df=4; p-value=.00	X^2=7.7; df=4; p-value=.13

* Standard errors for percentage figures are in parentheses.

** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: All percentages are among adolescents who had not previously received information on the topic.

Table H.13.
Percentage of Adolescents Reporting Learning Something New from WIC on Various Nutrition Education Topics, By Race/Language of Adolescent

Race/Language	Nutrition Education Topics										
	Breastfeeding	*Bottle Feeding*	*Feeding Solid Foods*	*How to Use WIC Foods*	*Get Most Food For Money*	*Healthy Eating Habits for Child*	*Weight Gain During Pregnancy*	*Smoking*	*Whole Milk for Baby*	*Substances During Pregnancy*	*Eating Healthy During Pregnancy*
White	64.1%* (4.8%)	59.9% (5.8%)	71.6% (5.1%)	71.6% (4.0%)	79.2% (8.4%)	81.0% (4.4%)	85.9% (3.5%)	79.7% (4.0%)	73.8% (5.8%)	71.2% (4.1%)	88.2% (2.7%)
Black	62.1% (5.1%)	59.0% (4.9%)	66.8% (5.4%)	70.5% (4.3%)	78.7% (4.5%)	80.1% (3.0%)	87.3% (2.5%)	81.5% (2.7%)	75.6% (3.7%)	77.2% (3.0%)	86.6% (2.5%)
Spanish Speaking Hispanic	87.2% (3.5%)	88.0% (3.3%)	92.0% (3.3%)	86.8% (3.2%)	86.5% (5.3%)	94.7% (2.5%)	90.1% (3.2%)	96.0% (2.1%)	92.1% (3.2%)	92.2% (2.5%)	88.9% (3.6%)
English Speaking Hispanic	79.7% (2.0%)	66.6% (4.0%)	80.0% (3.9%)	84.0% (2.0%)	84.3% (3.3%)	91.4% (1.9%)	84.6% (2.8%)	88.9% (2.2%)	80.8% (3.2%)	87.1% (2.7%)	91.4% (1.8%)
Other**	75.8% (4.0%)	63.0% (5.0%)	85.8% (10.8%)	88.1% (9.3%)	87.7% (8.8%)	95.3% (4.9%)	80.1% (2.8%)	80.0% (2.7%)	80.2% (8.5%)	79.7% (2.7%)	96.4% (3.9%)
Total	69.3% (2.8%)	63.0% (3.2%)	74.6% (3.2%)	76.4% (2.3%)	80.7% (3.4%)	85.6% (2.2%)	85.6% (1.6%)	82.9% (2.0%)	78.0% (2.8%)	78.1% (2.0%)	89.3% (1.3%)
Statistics	X^2=21.5; df=4; p-value=.00	X^2=15.6; df=4; p-value=.01	X^2=16.9; df=4; p-value=.01	X^2=20.3; df=4; p-value=.00	X^2=3.04; df=4; p-value=.56	X^2=20.4; df=4; p-value=.00	X^2=3.13; df=4; p-value=.54	X^2=22.0; df=4; p-value=.00	X^2=10.8; df=4; p-value=.05	X^2=21.4; df=4; p-value=.00	X^2=2.73; df=4; p-value=.61

* Standard errors for percentage figures are in parentheses.

** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: All percentages are among adolescents who had received information on the topic.

Table H.14.
Percentage of Adolescents Attending Group Nutrition Education Sessions Who Report They Learned New Information, by Race/Language of Adolescent

Race/Language	Learn Anything New During Nutrition Education		Total**
	Yes	*No*	
White	85.4%* (3.0%)	14.6% (3.0%)	100%
Black	83.3% (3.0%)	16.7% (3.0%)	100%
Spanish Speaking Hispanic	99.6% (0.3%)	0.4% (0.3%)	100%
English Speaking Hispanic	93.7% (1.1%)	6.3% (1.1%)	100%
Other***	92.3% (7.0%)	7.7% (6.9%)	100%
Total	88.7% (1.8%)	11.3% (1.8%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 19.1$; $df = 4$; $p\text{-value} = .00$

Note: Excludes adolescents attending their first WIC clinic visit.

Table H.15.
Percentage of Adolescents Attending Group Nutrition Education Sessions That Report They Learned New Information, by Number of Times Attending WIC Clinic

Number of Times Been at WIC Clinic	Learn Anything New During Nutrition Education		Total**
	Yes	*No*	
Once	NA NA	NA NA	NA
Twice	81.1%* (4.0%)	18.9% (4.0%)	100%
Three times	89.5% (3.6%)	10.5% (3.6%)	100%
Four or more times	91.3% (1.9%)	8.7% (1.9%)	100%
Total	89.2% (1.8%)	10.8% (1.8%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

Note: $X^2 = 4.8$; $df = 2$; $p\text{-value} = .11$

Note: Excludes adolescents attending their first WIC clinic visit.

Table H.16.
Percentage of Adolescents Attending Special Adolescent Nutrition Education Sessions That Report They Learned New Information, by Race/Language of Adolescent

Race/Language	Learn Anything New At Teen Nutrition Ed.		Total**
	Yes	*No*	
White	65.7%* (6.8%)	34.3% (6.8%)	100%
Black	69.0% (4.1%)	31% (4.1%)	100%
Spanish Speaking Hispanic	92.5% (3.3%)	7.5% (3.3%)	100%
English Speaking Hispanic	68.3% (4.7%)	31.7% (4.7%)	100%
Other***	84.9% (11.9%)	15.1% (11.9%)	100%
Total	72.1% (4.0%)	27.9% (4.0%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 13.0$; $df = 4$; $p\text{-value} = .02$

Note: Excludes adolescents attending their first WIC clinic visit.

Table H.17.
Percentage of Adolescents Attending One-On-One Nutrition Education Sessions That Report They Learned New Information, by Race/Language of Adolescent

Race/Language	Learn Anything New During One-On-One		Total**
	Yes	*No*	
White	86.4%* (3.0%)	13.6% (3.0%)	100%
Black	87.3% (2.9%)	12.7% (2.9%)	100%
Spanish Speaking Hispanic	96.3% (2.0%)	3.7% (2.0%)	100%
English Speaking Hispanic	90.3% (1.8%)	9.7% (1.8%)	100%
Other***	88.3% (9.3%)	11.7% (9.3%)	100%
Total	88.0% (2.0%)	12.0% (2.0%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 5.7$; *df=1; p-value=.02*

Note: Excludes adolescents attending their first WIC clinic visit.

Table H.18.
Percentage of Adolescents Attending One-On-One Nutrition Education Sessions That Report They Learned New Information, by Number of Times Attending WIC Clinic

Number of Times Been at WIC Clinic	Learn Anything New During One-on-One		Total**
	Yes	*No*	
Once	NA NA	NA NA	NA
Twice	80.4%* (4.6%)	19.7% (4.6%)	100%
Three times	83.3% (4.3%)	16.74% (4.3%)	100%
Four or more times	92.6% (1.6%)	7.4% (1.6%)	100%
Total	88.0% (2.0%)	12.0% (2.0%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

Note: $X^2 = 10.6$; $df = 2$; $p\text{-value} = .01$

Note: Excludes adolescents attending their first WIC clinic visit.

Table H.19.
Percentage of Adolescents Reporting That WIC Teaches Them A lot About Nutrition, by Race/Language of Adolescent

Race/Language	WIC Teaches Me A Lot About Nutrition			Total**
	Agree	*Disagree*	*Not Sure*	
White	83.4%* (2.5%)	6.6% (1.4%)	10.0% (1.7%)	100%
Black	84.4% (2.3%)	7.9% (1.8%)	7.7% (1.3%)	100%
Spanish Speaking Hispanic	89.0% (4.3%)	0.5% (0.4%)	10.5% (4.4%)	100%
English Speaking Hispanic	85.7% (2.2%)	6.3% (1.7%)	8.0% (1.2%)	100%
Other***	89.4% (7.4%)	4.0% (3.2%)	6.6% (5.0%)	100%
Total	84.9% (1.4%)	6.2% (0.9%)	8.9% (1.0%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 21.2$; $df = 8$; $p\text{-value} = .02$

Table H.20.
Percentage of Adolescents Believing WIC Provides the Nutrition Education They Need to be Healthy, By Race/Language of Adolescent

Race/Language	WIC Provides Right Nutrition Education		Total**
	Yes	*No*	
White	94.8%* (1.6%)	5.3% (1.6%)	100%
Black	91.5% (1.7%)	8.5% (1.7%)	100%
Spanish Speaking Hispanic	97.9% (1.0%)	2.1% (1.0%)	100%
English Speaking Hispanic	94.5% (1.3%)	5.5% (1.3%)	100%
Other***	96.5% (2.6%)	3.5% (2.6%)	100%
Total	94.3% (0.8%)	5.7% (0.8%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 11.5$; $df = 4$; $p\text{-value} = .04$

Table H.21.
Percentage of Parenting Adolescents Who Believe WIC Provides Them With The Nutrition Education They Need to Have a Healthy Baby, By Race/Language of Adolescent

Race/Language	WIC Provides Right Nutrition Education To Have a Healthy Baby		Total**
	Yes	*No*	
White	98.6%* (0.6%)	1.5% (0.6%)	100%
Black	94.6% (1.3%)	5.4% (1.3%)	100%
Spanish Speaking Hispanic	98.6% (0.7%)	1.5% (0.7%)	100%
English Speaking Hispanic	96.3% (1.0%)	3.7% (1.0%)	100%
Other***	96.3% (3.0%)	3.7% (3.0%)	100%
Total	97.0% (0.6%)	3.0% (0.6%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 8.6$; $df = 4$; $p\text{-value} = .09$

Table H.22.
Percentage of Adolescents Reporting Their Eating Habits Have Improved Since Enrolling in WIC, By Race/Language of Adolescent

Race/Language	Eating Habits Improved Since Enrolling in WIC		Total**
	Yes	*No*	
White	78.3%* (2.8%)	21.7% (2.8%)	100%
Black	72.2% (2.9%)	27.8% (2.9%)	100%
Spanish Speaking Hispanic	93.8% (2.5%)	6.2% (2.5%)	100%
English Speaking Hispanic	79.7% (2.0%)	20.3% (2.0%)	100%
Other***	62.8% (4.0%)	37.2% (4.0%)	100%
Total	76.9% (2.0%)	23.1% (2.0%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 23.7$; $df = 4$; $p\text{-value} = .00$

Table H.23.
Percentage of Parenting Adolescents Believing Their Baby is Healthier Because of the WIC Food Package, By Race/Language of Adolescent

Race/Language	Baby Healthier		Total**
	Yes	*No*	
White	68.2%* (5.1%)	31.8% (5.1%)	100%
Black	64.0% (4.3%)	36.0% (4.3%)	100%
Spanish Speaking Hispanic	77.8% (6.7%)	22.3% (6.7%)	100%
English Speaking Hispanic	74.3% (4.1%)	25.7% (4.1%)	100%
Other***	89.6% (8.6%)	10.5% (8.6%)	100%
Total	70.9% (2.7%)	29.1% (2.7%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 12.9$; $df = 5$; $p\text{-value} = .04$

Note: Excludes baby's not enrolled in WIC.

Table H.24.
Extent to Which Adolescents Think About Eating Healthy Foods,
By Race/Language of Adolescent

Race/Language	Don't Think About Eating Healthy Foods Much			Total**
	Agree	*Disagree*	*Not Sure*	
White	29.0%* (4.0%)	64.1% (4.3%)	6.9% (1.6%)	100%
Black	22.4% (2.3%)	73.8% (2.5%)	3.8% (0.9%)	100%
Spanish Speaking Hispanic	66.8% (3.5%)	22.8% (3.7%)	10.4% (1.8%)	100%
English Speaking Hispanic	24.0% (1.9%)	67.5% (2.1%)	8.5% (1.3%)	100%
Other***	23.8% (3.9%)	74.2% (4.9%)	2.0% (1.6%)	100%
Total	28.7% (1.7%)	65.0% (2.0%)	6.3% (0.8%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 47.8$; $df=8$; $p\text{-value}=.00$

Table H.25.
Likelihood that Adolescents Will Use Information About Breastfeeding Learned at WIC, By Race/Language of Adolescent

Race and Language of Survey	How Likely to Use Information about Breastfeeding				Total**
	Very Likely	*Somewhat Likely*	*Never Very Likely*	*Already Use*	
White	50.2%* (8.6%)	26.0% (6.8%)	15.2% (4.1%)	8.6% (2.8%)	100%
Black	47.7% (7.4%)	16.9% (3.9%)	29.3% (10.1%)	6.14% (1.8%)	100%
Spanish Speaking Hispanic	60.3% (5.8%)	12.6% (2.8%)	0.4% (0.4%)	26.6% (4.6%)	100%
English Speaking Hispanic	71.9% (3.5%)	13.7% (2.6%)	6.0% (2.4%)	8.4% (1.8%)	100%
Other***	71.6% (4.3%)	26.3% (3.3%)	0.4% (0.5%)	1.8% (1.8%)	100%
Total	58.0% (5.4%)	20.5% (2.6%)	13.0% (3.8%)	8.6% (1.7%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding..

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 34.84$; $df = 12$; $p\text{-value} = 0.0061$

Note: All percentages are among adolescents who reported learning something new on topic.

Table H.26.
Likelihood that Adolescents Will Use Information About Bottle-feeding Learned at WIC, By Race/Language of Adolescent

Race and Language of Survey	How Likely to Use Information about Bottle-feeding				Total**
	Very Likely	*Somewhat Likely*	*Never Very Likely*	*Already Use*	
White	60.7%* (9.0%)	28.9% (8.3%)	0.6% (0.3%)	9.8% (3.1%)	100%
Black	56.2% (8.6%)	26.8% (10.0%)	0.9% (0.5%)	16.1% (4.7%)	100%
Spanish Speaking Hispanic	58.5% (6.7%)	8.8% (2.4%)	4.4% (2.7%)	28.3% (5.6%)	100%
English Speaking Hispanic	72.4% (4.0%)	13.4% (3.0%)	0.7% (0.5%)	13.6% (2.4%)	100%
Other***	23.6% (18.2%)	39.0% (8.8%)	0.0% (0.0%)	37.4% (9.7%)	100%
Total	58.2% (5.8%)	24.6% (5.0%)	1.0% (0.3%)	16.3% (2.8%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 23.14$; $df = 12$; $p\text{-value} = 0.0617$

Note: All percentages are among adolescents who reported learning something new on topic.

Table H.27.
Likelihood that Adolescents Will Use Information About How To Feed Their Babies Solid Foods Learned at WIC, By Race/Language of Adolescent

Race and Language of Survey	How Likely to Use Information about Solid Foods				Total**
	Very Likely	*Somewhat Likely*	*Never Very Likely*	*Already Use*	
White	69.4%* (6.3%)	18.2% (5.2%)	1.6% (1.4%)	10.9% (3.2%)	100%
Black	68.1% (7.0%)	14.4% (3.7%)	4.5% (3.5%)	13.0% (4.7%)	100%
Spanish Speaking Hispanic	51.7% (6.1%)	8.3% (3.3%)	0.6% (0.4%)	39.5% (7.3%)	100%
English Speaking Hispanic	71.1% (3.6%)	16.5% (3.4%)	0.6% (0.4%)	11.8% (2.4%)	100%
Other***	57.1% (6.5%)	1.8% (2.3%)	0.7% (0.9%)	40.4% (8.4%)	100%
Total	66.6% (3.7%)	14.5% (2.7%)	1.9% (0.9%)	17.0% (3.0%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 21.87$; $df = 12$; $p\text{-value} = 0.0793$

Note: All percentages are among adolescents who reported learning something new on topic.

Table H.28.
Likelihood that Adolescents Will Use Information About How to Use WIC Foods, By Race/Language of Adolescent

Race and Language of Survey	How Likely to Use Information Using WIC Foods				Total**
	Very Likely	*Somewhat Likely*	*Never Very Likely*	*Already Use*	
White	62.6%* (5.1%)	22.4% (5.7%)	1.5% (1.0%)	13.5% (5.4%)	100%
Black	56.3% (6.4%)	30.1% (7.8%)	0.3% (0.2%)	13.3% (3.7%)	100%
Spanish Speaking Hispanic	56.6% (10.1%)	8.1% (3.0%)	0.9% (0.6%)	34.4% (8.6%)	100%
English Speaking Hispanic	64.0% (3.3%)	25.1% (3.3%)	0.2% (0.1%)	10.7% (1.8%)	100%
Other***	34.8% (8.7%)	42.9% (6.4%)	0.0% (0.0%)	22.3% (2.8%)	100%
Total	57.7% (4.3%)	25.9% (4.2%)	0.8% (0.4%)	15.6% (2.5%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 33.05$; $df = 12$; $p\text{-value} = 0.0086$

Note: All percentages are among adolescents who reported learning something new on topic.

Table H.29.
Likelihood that Adolescents Will Use Information Learned at WIC About Getting the Most Food For Their Money, By Race/Language of Adolescent

Race and Language of Survey	How Likely to Use Information Regarding Most Food For Dollar				Total**
	Very Likely	*Somewhat Likely*	*Never Very Likely*	*Already Use*	
White	71.2%* (5.0%)	13.8% (3.3%)	0.0% (0.0%)	15.0% (7.4%)	100%
Black	47.4% (8.7%)	40.3% (11.2%)	0.4% (0.3%)	11.9% (4.6%)	100%
Spanish Speaking Hispanic	58.2% (6.7%)	20.0% (6.2%)	3.7% (3.2%)	18.2% (5.8%)	100%
English Speaking Hispanic	62.3% (5.8%)	28.0% (5.2%)	0.2% (0.2%)	9.5% (3.7%)	100%
Other***	32.1% (21.5%)	5.9% (5.2%)	0.0% (0.0%)	62.1% (24.2%)	100%
Total	60.2% (4.8%)	22.9% (4.0%)	0.3% (0.2%)	16.6% (4.9%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 25.68$; $df = 12$; $p\text{-value} = 0.0373$

Note: All percentages are among adolescents who reported learning something new on topic.

Table H.30.
Likelihood that Adolescents Will Use Information Learned from WIC About Healthy Eating Habits for Child, By Race/Language of Adolescent

Race and Language of Survey	How Likely to Use Information Regarding Healthy Eating Habits for Child				Total**
	Very Likely	*Somewhat Likely*	*Never Very Likely*	*Already Use*	
White	78.0%* (4.9%)	14.4% (4.2%)	0.1% (0.1%)	7.5% (3.0%)	100%
Black	72.9% (4.5%)	17.8% (3.5%)	0.6% (0.3%)	8.7% (2.6%)	100%
Spanish Speaking Hispanic	65.0% (6.5%)	12.6% (4.1%)	0.0% (0.0%)	22.4% (4.9%)	100%
English Speaking Hispanic	68.7% (3.5%)	21.1% (2.4%)	0.9% (0.6%)	9.2% (2.5%)	100%
Other***	45.5% (5.3%)	19.0% (1.5%)	0.0% (0.0%)	35.6% (4.3%)	100%
Total	68.6% (4.5%)	17.1% (1.9%)	0.4% (0.2%)	13.9% (3.7%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 41.20$; $df = 12$; $p\text{-value} = 0.0018$

Note: All percentages are among adolescents who reported learning something new on topic.

Table H.31.
Likelihood that Adolescents Will Use Information Learned from WIC About Weight Gain During Pregnancy, By Race/Language of Adolescent

Race and Language of Survey	How Likely to Use Information Regarding Weight Gain During Pregnancy				Total**
	Very Likely	*Somewhat Likely*	*Never Very Likely*	*Already Use*	
White	61.7%* (4.0%)	23.3% (4.4%)	1.4% (1.4%)	13.7% (5.1%)	100%
Black	70.8% (4.9%)	18.5% (3.3%)	2.2% (1.0%)	8.5% (2.0%)	100%
Spanish Speaking Hispanic	62.1% (3.7%)	12.8% (2.7%)	0.0% (0.0%)	25.2% (4.1%)	100%
English Speaking Hispanic	63.8% (3.7%)	24.2% (3.6%)	1.0% (0.9%)	11.1% (1.9%)	100%
Other***	33.9% (8.0%)	25.1% (1.9%)	0.0% (0.0%)	41.0% (7.5%)	100%
Total	61.1% (3.3%)	21.7% (1.6%)	1.3% (0.6%)	15.9% (3.6%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 23.51$; $df = 12$; $p\text{-value} = 0.0575$

Note: All percentages are among adolescents who reported learning something new on topic.

Table H.32.
Likelihood that Adolescents Will Use Information Learned at WIC About The Effects of Smoking on Their Health, By Race/Language of Adolescent

Race and Language of Survey	How Likely to Use Information Regarding Smoking				Total**
	Very Likely	*Somewhat Likely*	*Never Very Likely*	*Already Use*	
White	50.3%* (7.2%)	24.3% (5.6%)	8.7% (2.8%)	16.7% (9.8%)	100%
Black	60.0% (6.3%)	24.8% (7.3%)	4.2% (1.4%)	11.0% (2.2%)	100%
Spanish Speaking Hispanic	54.8% (6.8%)	7.6% (2.8%)	0.8% (0.7%)	36.7% (5.9%)	100%
English Speaking Hispanic	78.2% (3.0%)	10.0% (2.5%)	1.2% (0.4%)	10.6% (2.0%)	100%
Other***	18.3% (15.3%)	40.0% (8.3%)	0.0% (0.0%)	41.7% (7.4%)	100%
Total	54.7% (5.9%)	22.1% (4.4%)	4.7% (1.2%)	18.5% (4.6%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 57.84$; $df = 12$; $p\text{-value} = 0.0001$

Note: All percentages are among adolescents who reported learning something new on topic.

Table H.33.
Likelihood that Adolescents Will Use Information Learned at WIC About How To Start Their Children on Whole Milk, By Race/Language of Adolescent

Race and Language of Survey	How Likely to Use Information Regarding Whole Milk				Total**
	Very Likely	*Somewhat Likely*	*Never Very Likely*	*Already Use*	
White	79.3%* (7.1%)	18.0% (6.5%)	0.0% (0.0%)	2.7% (1.8%)	100%
Black	68.5% (5.9%)	22.7% (5.4%)	0.2% (0.2%)	8.6% (3.2%)	100%
Spanish Speaking Hispanic	59.4% (5.6%)	8.2% (2.4%)	1.9% (1.5%)	30.5% (6.3%)	100%
English Speaking Hispanic	69.3% (4.1%)	18.0% (3.9%)	1.9% (1.9%)	10.8% (3.5%)	100%
Other***	81.6% (8.5%)	11.9% (8.5%)	2.6% (2.6%)	3.8% (3.8%)	100%
Total	71.9% (3.5%)	17.9% (2.7%)	0.8% (0.5%)	9.4% (1.6%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 34.72$; $df = 12$; $p\text{-value} = 0.0062$

Note: All percentages are among adolescents who reported learning something new on topic.

Table H.34.
Likelihood that Adolescents Will Use Information Learned from WIC About How To Avoid Substances Such as Drugs and Alcohol During Pregnancy, By Race/Language of Adolescent

Race and Language of Survey	How Likely to Use Information Regarding Substance Use				Total**
	Very Likely	*Somewhat Likely*	*Never Very Likely*	*Already Use*	
White	66.8%* (7.5%)	15.2% (6.8%)	1.4% (0.8%)	16.7% (6.5%)	100%
Black	70.3% (8.0%)	14.8% (8.6%)	4.0% (1.5%)	10.9% (2.7%)	100%
Spanish Speaking Hispanic	54.9% (5.7%)	9.8% (3.0%)	0.4% (0.3%)	34.9% (5.1%)	100%
English Speaking Hispanic	74.5% (3.8%)	13.7% (3.4%)	0.8% (0.4%)	11.0% (2.4%)	100%
Other***	38.4% (11.2%)	20.8% (3.8%)	0.2% (0.2%)	40.6% (7.8%)	100%
Total	64.8% (5.4%)	15.0% (4.5%)	1.7% (0.5%)	18.5% (3.8%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 18.25$; $df = 12$; $p\text{-value} = 0.1594$

Note: All percentages are among adolescents who reported learning something new on topic.

Table H.35.
Likelihood that Adolescents Will Use Information Learned at WIC About How To Eat Healthy During Pregnancy, By Race/Language of Adolescent

Race and Language of Survey	How Likely To Use Information Regarding Eating with Pregnancy				Total**
	Very Likely	*Somewhat Likely*	*Never Very Likely*	*Already Use*	
White	56.3%* (7.8%)	29.3% (7.8%)	0.7% (0.7%)	13.7% (4.9%)	100%
Black	66.9% (6.3%)	20.2% (6.9%)	1.1% (0.5%)	11.8% (2.2%)	100%
Spanish Speaking Hispanic	65.2% (6.7%)	12.5% (3.3%)	1.3% (0.9%)	20.9% (4.1%)	100%
English Speaking Hispanic	71.3% (3.2%)	15.0% (2.2%)	0.3% (0.3%)	13.3% (2.1%)	100%
Other***	48.5% (7.1%)	17.1% (2.6%)	15.4% (3.9%)	19.1% (1.4%)	100%
Total	61.5% (4.6%)	21.7% (4.5%)	2.5% (1.6%)	14.3% (2.1%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 24.69$; $df = 12$; $p\text{-value} = 0.0455$

Note: All percentages are among adolescents who reported learning something new on topic.

Table H.36.
Extent to Which Adolescents Would Spend More Time at the WIC Clinic If Nutrition Education Topics Were More Interesting, By Race/Language of Adolescent

Race/Language	More Time At WIC If Topics Interesting			Total**
	Yes	*No*	*WIC Topics Already Interesting*	
White	38.5%* (4.9%)	26.8% (5.6%)	34.7% (3.5%)	100%
Black	44.6% (2.9%)	23.6% (3.8%)	31.8% (2.5%)	100%
Spanish Speaking Hispanic	46.4% (4.4%)	6.0% (1.7%)	47.6% (5.2%)	100%
English Speaking Hispanic	51.8% (2.4%)	16.5% (1.5%)	31.7% (2.1%)	100%
Other***	39.8% (2.8%)	9.9% (6.9%)	50.4% (6.7%)	100%
Total	43.2% (2.4%)	21.2% (3.0%)	35.6% (2.2%)	100%

* Standard errors for percentage figures are in parentheses.

** Row percentages may not total to exactly 100% due to rounding.

*** The "other" category includes American Indian, Alaskan native, Asian, and Pacific Islander.

Note: $X^2 = 18.8$; $df = 8$; $p\text{-value} = .04$