

# **Hispanic Community Children's Health Study of Latino Youth**

*SOL-Youth*

## **Manual Diet and Supplement August 2012**

Study website - <http://www.csc.unc.edu/hchs/>

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# **DIETARY INTAKE, SUPPLEMENTS, AND BOTANICALS ASSESSMENT**

## **1 Introduction**

This manual of procedures has been developed for the Hispanic Community Children’s Health – Study of Latino Youth (SOL Youth). The manual of procedures was adapted from that developed for the Hispanic Community Health Study/Study of Latinos (HCHS/SOL) by the Nutrition Coordinating Center (NCC) at the University of Minnesota. NCC has been designated as the Nutrition Reading Center (NRC) for SOL-Youth and works in collaboration with the Collaborative Studies Coordinating Center (CSCC) at the University of North Carolina to direct overall dietary assessment activities for the field centers. The purpose of the manual is to describe the data collection and quality assurance procedures for the dietary and supplement intake assessment. It is essential that any person who is involved in the dietary and supplement data collection fully reads and understands this manual.

## **2 Dietary Data Collection Staff**

At least two dietary interviewers are needed at each field center to collect the dietary and supplement intakes. A lead interviewer is designated to provide supervision to the dietary data collection team. The lead interviewer may also be a regular data collector or may not, depending upon local personnel arrangements. All must complete the training and certification program conducted by the NRC staff.

### **2.1 Characteristics and Responsibilities of the Lead Interviewer**

The lead interviewer has training in dietetics, food science, human nutrition, or home economics. He/she ideally is fluent in both Spanish and English and has skills to anticipate or detect possible problems that may affect the overall dietary data quality. He/she is responsible for supervising the collection and management of the dietary data and conducts local quality assurance of the dietary recalls, reviewing each intake record for completeness, data entry decisions, and identifies and corrects errors. He/she ensures the correct flow of data collection in each visit, and contacts the NRC SOL-Youth coordinator as needed with questions about the Nutrition Data System for Research (NDSR) database or program. The lead interviewer at each field center is responsible for submitting NDSR-back up files (electronic copies of the dietary intake records) to the NRC on a weekly basis.

### **2.2 Characteristics and Responsibilities of the Dietary Interviewers**

The dietary interviewers at all field centers should be bilingual (in written and spoken Spanish and English). He/she has knowledge of the different names of the Hispanic foods and preparations in the Latin American countries represented in the SOL-Youth. Dietary interviewers are responsible for conducting the dietary and supplement recalls according to the SOL-Youth dietary and supplement data collection protocols. They welcome the participant and have all materials ready for each interview. It is essential that the interviewer is comfortable with the NDSR software, and able to locate foods within the system with ease. On a regular basis, they review the Hispanic Foods Glossary and are aware of the language translations, because the same food may be referred to using different words. Dietary interviewers review the information collected immediately after finishing each dietary recall. They will also print the Record Properties Report, Foods Report, and Dietary Supplements Report for future reference.

### **3 NDSR Training and Certification**

#### **3.1 Overview of Training Program**

All individuals involved in the dietary collection are required to be trained and certified by the NRC prior to using NDSR dietary data collection software to collect dietary and supplement recalls. Training includes: use of the NDSR software, conducting the research interview, protocol for dealing with Hispanic foods and use of the SOL-Youth glossary, data review and documentation, data back-up, record management, and quality-control procedures. Interviewers trained for the HCHS/SOL study who have been collecting dietary data regularly, and who will be retained for the SOL-Youth study will not require face-to-face training on NDSR procedures but will participate in a training webinar/conference call with NRC staff to review protocols particular to SOL-Youth..

#### **3.2 Certification Requirements**

All dietary interviewers must be certified by the NRC prior to collecting dietary data from participants. The certification process evaluates the trainee in the following areas: ability to conduct the dietary and supplements recalls according to set standards, ability to use the software appropriately and to locate hard-to-find foods, identify and enter missing foods and supplements, use notes appropriately, probe for details of ingredients added to foods, and handle difficult data entry problems such as a food with two different amount units or two different added fats. Certification of the dietary interviewers includes practice data collection for a minimum of ten study-appropriate participants, with review by the NRC SOL-Youth coordinator in-person or by telephone. All dietary interviewers need to complete the following requirements:

**3.2.1 Attend a NCC-Sponsored NDSR Training Workshop.** Initial centralized training will be organized with the Coordinating Center and the NRC. Subsequent trainings are provided at the University of Minnesota as needed. All dietary interviewers who did not attend central training must be trained by personnel from the NRC.

**3.2.2 Conduct a Baseline Recall with the NRC SOL-Youth Coordinator.** The baseline recall provides an opportunity as part of the training to receive individualized instructions for using NDSR: navigating the software and database and conducting the research interview. The baseline recall may be conducted in-person on the last day of training or by the telephone following the training. The NRC trainer observes this interview and provides immediate feedback.

**3.2.3 Conduct at Least Ten Practice Recalls.** Dietary interviewers complete at least ten practice recalls with volunteer Hispanic participants who are similar to potential participants in the study. This provides an opportunity for practice using the NDSR software to conduct dietary and supplement interviews and related data management activities. Backup files of the practice NDSR projects are sent to NRC for review and feedback. At least five practice interviews should be conducted in Spanish and five in English. At least one of the practice interviews must be completed in Spanish with the NRC SOL-Youth coordinator.

**3.2.4 Conduct a Final Recall with an NRC Trainer.** The final recall allows the dietary interviewers to demonstrate the skills mastered and provides yet another opportunity to ask questions about the software, database, and other issues encountered to date. The final recall is

conducted in Spanish and/or English by telephone. The NRC trainer and the NRC SOL-Youth coordinator participate in the final recall.

### **3.3 Continuing Education**

After completing the certification, dietary interviewers must continue to practice using the NDSR program to feel comfortable conducting the actual interviews.

### **3.4 Daily Usage of the NDSR Program**

Daily usage of the NDSR program is highly encouraged to maintain NDSR skills learned during the training and certification process. Prior to study start-up, dietary interviewers (including the lead interviewers) will use the NDSR program to conduct at least one practice interview each day they work at the field center for the SOL-Youth. Backup files of practice recalls are sent to the NRC SOL-Youth coordinator every week until the SOL-Youth data collection starts. The SOL-Youth coordinator reviews and provides feedback as needed. This regular use of the software maintains familiarity with the software in case of prolonged time between training and examination of the first participants.

**3.4.1 Monthly Updates from NRC.** Regular written communications from NRC are distributed by email to each field center throughout the study, with information on data collection and management, common data-entry problems, and updates for new foods and dietary supplements not currently found in NDSR.

**3.4.2 Dietary Inquiries.** Field centers are contacted on a regular basis regarding questionable items noted during the NRC quality-control review. The queries address immediate questions and alert the dietary interviewers to the type of issues that are questioned and require confirmation and documentation on the NDSR dietary intake record.

**3.4.3 Visits to the Field Centers.** During the first year of data collection, the Nutrition Reading Center staff visit each field center to provide an opportunity to observe the dietary and supplement data collection and answer questions from local field center staff. Dietary interviewers are encouraged to review the Manual of Procedures throughout the project period to remain knowledgeable concerning dietary- and supplement-specific protocols.

## **4 Space, Hardware, NDSR Software and Materials**

Each field center is responsible for providing the dietary interviewers with a location that is free from distractions and that includes the tools necessary to complete the dietary and supplement assessments for the SOL-Youth. Requirements include adequate computers, telephones, and secure storage for participant files and materials related to the dietary interviews. A participant file with information relevant to the dietary assessment must be available to the dietary interviewer until after the completion of the telephone recall. Access to a photocopy machine and printer is necessary for routine data collection activities.

### **4.1 NDSR Software**

Copies of the NDSR are provided by NCC. Each field center has at least two copies of the software with use limited to SOL-Youth. Copies of NDSR are returned to NCC at the completion of the study. The Coordinating Center receives one copy of the software to be



retained throughout the study. Updates of NDSR are provided with each new release of the software, which occurs annually.

#### **4.2 Computers**

At least two computers are available for the dietary data collection at each field center. Portable storage devices or network backup systems should be in place to ensure that copies of the dietary and supplement recall interviews are protected from loss.

#### **4.3 Computer Printers**

At least one printer should be available at each field center. At the end of each dietary and supplement recall, the dietary interviewer prints NDSR reports that are used for local quality assurance and that serve as a secondary backup of the dietary and supplement recall.

#### **4.4 Headset for the Telephone Interview**

Each dietary interviewer should have his/her own headset for use in conducting the telephone dietary and supplement recall.

#### **4.5 Calendar**

A calendar should be available for each dietary interviewer. This can be used at the beginning of each dietary interview to assist the participant in recalling yesterday's dietary intake and in looking at the month ahead when completing the Telephone Recall Availability form.

#### **4.6 Amount Estimation Tools**

NRC provides each field center with two sets of amount estimation tools which are used during the in-person interview. Included in this set are an assortment of household cups, glasses, spoons, bowls, a ruler, replicas of select foods (Nasco models), and a laminated copy of the Food Amounts Booklet. Accurate quantification of foods and beverages is essential for obtaining useful dietary data. Some participants are much more adept than others in accurately estimating amounts of foods and beverages. To promote participant understanding of how to use the amount estimation tools, the dietary interviewers describe the use of each amount estimation tool at the clinic visit before proceeding to collect the 24-hour recall. No other food models or measuring devices are used for SOL-Youth dietary and supplement recalls. If one or more of the food models are damaged throughout the study, the lead interviewer contacts the NRC for replacement.

#### **4.7 Food Amounts Booklet**

NRC provides each field center with copies of the Food Amounts Booklet for distribution to each participant for use in the telephone recall. During the in-person interview, orientation to the Food Amounts Booklet occurs in conjunction with other amount estimation tools to help the participant understand how to recall and estimate the quantities of foods consumed. At the end of the in-person interview, the dietary interviewer provides a Food Amounts Booklet to each participant with a reminder to keep it until the telephone recall has been completed.

#### **4.8 Dietary Recall Forms**

Dietary recall forms have been developed to assist the dietary interviewers in the data-collection process. The Dietary and Supplement Recall Checklist (**Appendix 1**) documents each step in the process of dietary data collection and local quality assurance. The Telephone Recall Availability

Form (**Appendix 2**) and the Telephone Contact Log (**Appendix 3**) are used to facilitate contacting the participant to conduct the telephone recall.

SOL-Youth Dietary and Supplement Recall Checklist: The Dietary and Supplement Recall Checklist is initiated with each dietary recall and serves to document each step of local quality control. (One per dietary and supplement recall collected).

Telephone Recall Availability Form: At the end of each dietary recall a Telephone Recall Availability form is completed for each participant listing several possible days and times to receive the telephone recall. The participant must identify several best days and times since the telephone recall is unannounced. Instructions for completing this form are provided in Spanish and English.

Telephone Contact Log: A telephone contact log is kept for each participant to record all attempts to contact him/her. Detailed notes should be made about special situations including difficult-to-reach participants. If the dietary interviewer is not able to collect the telephone recall in the designated time window, the Telephone Contact Log serves as a record of his/her attempts.

## **5 General Guidelines for Working with SOL-Youth Participants**

Since the SOL-Youth involves Hispanic participants with heritages from different Latin American countries, dietary interviewers need to be familiar with the traditions and dietary practices of the local Hispanic community and aware of the different names of foods, and plates in the different countries. Dietary interviewers should be enthusiastic about their job and have the ability to motivate the participant throughout the dietary interview, being sensitive to the overall length of the visit at the field center and the importance of the contribution from each participant.

### **5.1 Establishing Rapport**

Because each participant is the primary respondent for the dietary and supplement recall, it is important for the dietary interviewer to be able to motivate him/her to provide complete and accurate information. He/she must always remain neutral and not let anything in words or manner express criticism, surprise, approval, or disapproval related to the participant's responses during the recall interview. Dietary interviewers should be sensitive by adapting a style and approach to make the participant comfortable. Every effort should be made to keep the dietary and supplement data collection as objective and non-judgmental as possible. He/she should avoid congratulating participants for eating certain foods or reacting with dismay to reports of other foods. The dietary interviewer should stress that he/she wants to know what the participant really ate and took as supplements and that honesty is appreciated. He/she should look for both verbal and non-verbal responses, be a good listener, and thank the participant for the information provided.

### **5.2 Privacy and Confidentiality**

The dietary interviewer gains trust by assuring, before the recall begins, that everything the participant says is all right, and that there are no correct or wrong answers. Dietary intakes will not be discussed with other participants. Any necessary discussion between the dietary and lead interviewers about a specific dietary and supplement recall should be conducted in private and

not in the presence of others. Furthermore, the participant's personal information, such as contact information, is kept in folders in a secure location at the field center.

## **6 Field Center Procedures and Standardization of the Recalls**

Dietary data collection takes place at each of the four sites across the U.S. (Bronx, Chicago, Miami, and San Diego). The first dietary recall is conducted in person at the field center, and the second interview is conducted over the telephone. Interviews may be conducted in Spanish and/or English at the discretion of the participant. It is essential to conduct the interviews in a space that is quiet and free from distractions. Dietary interviewers at all field centers follow the procedures provided by this manual, including the use of the food models, prompts and scripts to promote standardization and accuracy of the dietary and supplement data at all field centers.

### **6.1 The Visit 1 Dietary and Supplement Recall Interview**

The Visit 1, in-person interview takes place at each field center. The dietary data collection includes both the dietary and supplement recalls. The combined interview may last approximately 45 minutes. The dietary interviewer conducts the interview using direct data entry into NDSR software, and refers to the amount estimation tools to aid in quantifying amounts of foods and beverages. Due to the need to fast prior to the clinic visit, the interval covered by the in-person dietary interview is that 24-hour period preceding 10:00 pm of the night before the interview. At the end of the interview the dietary interviewer provides the participant with the Food Amounts Booklet and explains what to expect during the follow up telephone interview. The importance of their participation in the phone interview should be stressed. The interviewer then completes the Telephone Recall Availability form to identify available days and times for the second interview. The interviewer should get as much information as possible about the participant availability, as this will help to minimize the number of follow up calls that are needed before the participant is successfully reached.

### **6.2 The Visit 2 Dietary and Supplement Recall Interview**

The second interview is collected at least five days and ideally within 45 days, following the initial examination interview, most typically by telephone. When 45 days have passed after the first recall, interviewers may continue calling the participant if needed. The collection of complete study data should take priority over the 45-day time line. Up to 10 calls can be made to try and reach the participant. These calls should be made at different times of the day and week, in order to maximize the chances of making contact. If after several attempts a participant can still not be contacted, interviewers should consult other staff members who may know the participant to develop another strategy. An unannounced second recall is preferred but a scheduled interview may need to be set up and this is acceptable. The type of interview (scheduled or unscheduled) should be recorded on the NDSR recall header.

The 24-hour interval covered by the second recall is the 24 hours preceding 12:00 midnight of the previous night. The telephone interview lasts approximately 20 to 35 minutes. The exact day of the week for the telephone recall is chosen by field center staff from available participant times, with an aim that the distribution of days across participants includes all days of the week possible given clinic schedules. The second recall is ideally collected over the phone, but if the participant comes back to the clinic to return the SOL-Youth equipment or to complete an unfinished exam and he/she agrees to complete the interview at that time, the interviewer may complete the recall in-person, provided that at least 5 days has passed since the last interview.

The type of interview conducted (telephone or in-person) should be recorded in the NDSR header, using the field for Site ID. The first interview will always be scheduled and in-person. For the in-person interview record 1, in-person. The second interview is usually unscheduled but may be scheduled for the convenience of the participant. For the second interview, record 2U, phone unscheduled, 1U, in-person unscheduled or 2S, phone scheduled, 1S, in-person scheduled. The 24-hour dietary recall should not be collected without the Food Amounts Booklet. If at the time of the call the participant no longer has the Food Amount Booklet, a replacement should be mailed to him/her and the telephone recall should be attempted a few days later.

### **6.3 Prior to Conducting the Dietary Interview**

On the day of the interview, before the participant arrives for the dietary interview, the dietary interviewer completes the NDSR Header tab using information from the participant file. Yesterday's date is recorded on the Header tab as the date of intake. The interviewer checks the interview station to ensure that the amount estimation tools are appropriately organized, that all necessary forms are in place, and that a current calendar is available for use in the in-person dietary recall and in planning for the telephone recall. When the participant arrives, the dietary interviewer welcomes the participants to the dietary and supplement recall portion of the visit. He/she introduces himself/herself in a friendly but professional manner and gives basic information about the dietary and supplement interview to the participant and responds to any questions the participant may have.

### **6.4 Setting the Language**

Before starting the interview, the dietary interviewer sets the language with the participant. This process facilitates the flow of the interview. The dietary interviewer must be aware that it may be necessary to change the language to either Spanish or English at any time depending on the specific foods or supplements reported by the participant. In the event the participant chooses to have the interview in Spanish, the dietary interviewer may ask him/her if he/she prefers to be addressed as "tú" or "usted."

### **6.5 Introduction of the Interview**

The dietary interviewer explains the importance of collecting complete and accurate information and how the interview will be conducted. Because the participant arrives at the examination centers fasting since 10:00 pm the night before the interview, the dietary interviewer explains that the focus of the interview is to recall everything he/she has to eat or drink during the 24 hours preceding the last meal (from 10:00 pm two days before the interview until 10:00 pm the night before the interview). The interviewer explains that after the dietary recall, he/she will ask about the dietary supplements taken. Dietary interviewers reassure participants that all information they collect is private and confidential.

### **6.6 Demonstrating the Amount Estimation Tools**

Briefly, the dietary interviewer demonstrates how to use the amount estimation tools, including the Food Amounts Booklet, which is used during the interview. The dietary interviewer shows the food models, measuring cups, spoons, grid, geometric shapes, and rulers, and explains that they can also be used to estimate fractions or multiple amounts such as half amounts or twice the amount. The dietary interviewer explains that many of the items he/she has shown can be used to describe the same amount and the participant can use whatever item best describes the amount eaten or drunk. The dietary interviewer also emphasizes that these items are not always needed

to estimate amounts as many foods can be easily quantified as 1 can (soda), 1 small apple, or 1 MacDonald's hamburger. The dietary interviewer should reassure the participant that they do not need to worry about this part of the interview as they will help to guide them when the computer program is ready for the information.

## **7 General Guidelines for Conducting the Dietary and Supplement Interview**

Procedures for administering the dietary and supplement interview have been established to help ensure standardization across field centers and to facilitate gathering of the data. Many of these procedures are imbedded in the NDSR program and documented in the NDSR User Manual. SOL-Youth-specific procedures to ensure consistency of data collection among field centers are highlighted at the NDSR training workshop.

### **7.1 Using a Script**

A standard script is used to introduce the dietary and supplement interview and to start the recall process. The dietary interviewer explains that the interview will last approximately 45 minutes and that all information he/she collects is confidential. The scripts provide consistency between dietary interviewers. The remainder of the dietary recall is guided by the NDSR on-line interview prompts which help to standardize the dietary interviewer questions.

### **7.2 Special Procedures for Interviewing Members of the Same Household**

In situations where the dietary interviews are collected the same day for multiple participant children of the same household who may have consumed similar foods and beverages, the dietary interviewer collects information only from the participant he/she is interviewing. While a parent may be consulted for clarification of a specific child's intake, no dietary and supplement data are collected for one child from another child, nor should the intake of a child be modified based on another's report. Each dietary recall is a record of what the participant reported and for the most part should not be changed after the interview to reflect information in another dietary recall.

### **7.3 Guidelines for Probing**

Probing is the technique used by the dietary interviewer to stimulate discussion and to obtain more information about foods, beverages, and supplements reported. He/she probes when a participant's response is not meaningful or is incomplete, i.e., when it does not adequately answer the question or provide the information required by NDSR. Probing can be used to gather information about additional meals and snacks as well as additions to reported foods. The quality of the interview depends a great deal on the interviewer's ability to probe meaningfully and successfully. Probing techniques are covered extensively in the training workshop.

**7.3.1 Unconsumed Portions.** The amount the participant actually consumed is what should be entered, not what he/she was served or cooked for the entire family. Double check to ensure that the amount reported is what was consumed. Asking "Were you able to finish that?" ¿Pudiste terminarte todo? or "Did you eat all of it?" ¿Comiste todo? help to identify the unconsumed portions.

**7.3.2 Unusual Portions.** If something sounds unusual, the dietary interviewer should question it and not blindly accept the initial response. Redirecting questions and presenting appropriate alternatives from the amount estimation tools permit the participant to restate his/her

initial response and allow the interviewer to verify, confirm, or correct an unusual portion. Confirmation of any unusual intake or portions should be documented using the NDSR Notes field by stating which amount estimation tool or picture in the Food Amounts Booklet was used. Specific information about confirming portions and documenting unusual portions is provided at the training workshop.

## **7.4 NDSR Food Search**

The NDSR database is extensive, detailed and complex, with more than 18,000 foods and recipes, and it includes over 8,000 brand-name products. NDSR uses the food search text on information provided during the initial part of the interview when the participant first mentions the food. For example, if a participant reported “tacos” the food search results would include a number of items with “taco” in the name such as filled tacos, Taco Bell, taco meat, taco salad, taco sauce, and many others. The dietary interviewer selects the appropriate food from the available choices. If the NDSR food search cannot match the search text with a database food, NDSR returns a “no foods found” message suggesting that the dietary interviewer needs to check the spelling of the word, revise the search text, select “search all”, or select the hierarchy button and begin the food search at a general level.

**7.4.1 Hispanic Foods.** Many Hispanic foods are included in NDSR. Most of them are mixed dishes and have been included with their Spanish names and their description in English. To locate Hispanic mixed dishes in NDSR, the dietary interviewer may write the name of the dish either in Spanish or in English depending on the situation. For example, if a participant reports “arroz con pollo” the dietary interviewer types “arroz” and all mixed dishes that contain the text arroz appear on the Food Search window. In the event the dietary interviewer types “rice” he/she must select the option for “rice...” and in the next Food Search window an option for “Hispanic...” will appear. The dietary interviewer selects this option and he/she is able to choose “arroz con pollo.” NDSR 2011 includes over 300 Hispanic foods, and additional Hispanic foods will be added as needed during the study.

**7.4.2 Missing Foods.** The dietary interviewer uses the Missing Food window to describe food details and to specify amounts of a food not found in NDSR. The lead interviewer uses the NCC New Food Request Form (**Appendix 4**) to submit a missing commercial, packaged and any food other than prepared dishes to NRC for resolution. The form is available online at <http://www.ncc.umn.edu/services/newfoodrequestform.php>. The lead interviewer includes all possible information about the missing food including the client number for the SOL-Youth. NRC will resolve the missing food using the information provided in this form. For all mixed dishes (home- or restaurant-prepared dishes) not found in NDSR, the dietary interviewer collects as much information as possible from the participant regarding name of the dish or food, country of origin, ingredients, amount eaten, method of preparation, and others and uses the Missing Food window to include those details. After performing quality control tasks for the dietary recall, the lead interviewer submits the weekly project including recalls that contains missing foods (mixed dishes) through the FTP program. Each month NDSR backup files of User Recipe projects with new food resolution for commercial products and mixed dishes, and User Product projects with new dietary supplement products are posted on the ftp site to make them available for all field centers.

## **7.5 Dietary Supplement Search in NDSR**

The dietary interviewer uses the Product Search window to locate and describe dietary supplements in NDSR. NDSR prompts help the dietary interviewer obtain the complete name of the product. The dietary interviewer types the name of the dietary supplement and selects it or enters it as a Missing Product.

**7.5.1 Missing Dietary Supplements.** The dietary interviewer uses the Missing Product Detail window to add ingredient information for products not found in the Dietary Supplement Assessment Module (DSAM) database. The dietary interviewer completes the fields with information provided from the product label. It is important to enter as much information as possible from the product label during the in-person interview because this is the only opportunity to positively identify the exact supplement taken. The dietary interviewer selects “Add Ingredients” to insert all the ingredients listed on the label of the container, including the amounts and units. If the product has a long list of ingredients, the dietary interviewer includes at least the first three ingredients. He/she must always write a note specifying if all the ingredients listed on the container were entered or if the complete list was not entered due to time or other constraints. After performing local quality control of the dietary and supplement interview, missing products are resolved at NRC. Periodically, backup NDSR User Product projects are provided to the field centers to facilitate the entry of supplement products missing from the database.

## **7.6 Use of the Amount Estimation Tools**

Participants are allowed to freely select any items from the amount estimation tools. Assistance is provided as needed during each interview to make sure that usage is appropriate. Participants may select a cup, bowl, replica food model, or specific page in the Food Amounts Booklet to quantify a food. Interviewers may need to suggest alternative options if the participant needs assistance or specifies an amount option that is not reasonable for the specific food. Notes should be made to indicate how the amount was estimated in the NDSR Notes field.

**7.6.1 Standard Measuring Cups: ¼ cup, ⅓ cup, ½ cup, 1 cup.** These four cup sizes may be used to describe amounts of any liquid or non-liquid food, including mixed dishes that can be easily visualized in a cup (e.g., cooked vegetables, soup, rice, sauce, ice cream). The dietary interviewer asks the participant whether or not the container was filled to the top. If not, he/she asks what proportion of the cup was filled. For example, the participant might indicate that the amount eaten was about a half of the ¼ measuring cup. This would be entered into NDSR as ⅛ cup. Measuring cups may also be turned over for estimating the volume of mound shapes for some foods, e.g. mashed potatoes.

**7.6.2 Standard Measuring Spoons: ⅛ TS, ¼ TS, ½ TS, 1 TS, ½ TB, 1 TB.** When using the measuring spoons, express the amount in terms of level spoonfuls. The amount contained in a rounded spoonful can vary considerably depending on the consistency of the food and how the spoon was lifted or shaken. If the participant specifies a rounded spoonful, the dietary interviewer asks him or her to quantify the rounded part of the spoonful separately. For example, the participant says he/she sprinkled a tablespoon of powder sugar on his fruit. The dietary interviewer asks him if the tablespoon was about level. If he/she indicates that it was rounded or heaping tablespoon, the dietary interviewer asks the participant to estimate how much more than a level tablespoon this was. His answer might be an additional one-half of a level tablespoon. If the measuring spoon was not filled to the top, the interviewer asks the participant to estimate the

proportion that was filled or to use a smaller measuring spoon. Measuring spoons may also be turned over for measuring small mounds or “dollops” of foods such as sour cream.

**7.6.3 Representative Household Eating Bowls.** Bowls have been selected to correspond with the pictures of bowls in the Food Amounts Booklet including: ½-cup bowl (small) (marked at ⅛ cup, ¼ cup, and ⅜ cup); 1 ½-cup bowl (medium) (marked at ⅜ cup, ¾ cup, and 1 ¼ cup); 3-cup bowl (large) (marked at ¾ cup, 1 ½ cup, and 2 ¼ cup); and 8-cup bowl (extra large) (marked at 2 cups, 4 cups, and 6 cups). Bowls may be used for quantification of any food that was eaten in a bowl of similar size to one of the bowls available for amount estimation. The dietary interviewer asks the participant to carefully estimate how full the bowl was. If the amount was between two of the markings, the dietary interviewer estimates the amount appropriately. For example, if the amount was between the 1 cup marking and the 1 ½ cup marking, calculate the difference and enter 1 ¼ cups.

**7.6.4 Representative Household Drinking Glasses and Mugs.** Glasses and mugs/cups have been selected to correspond to the pictures of glasses in the Food Amounts Booklet including: 5 fluid ounce glass (marked at 1 ¼ FO, 2 ½ FO and 3 ¾ FO,); 10 fluid ounce glass (marked at 2 ½ FO, 5 FO, and 7 ½ FO); 12 fluid ounce glass (marked at 3 FO, 6 FO, and 9 FO); 32 fluid ounce glass (marked at 8 FO, 16 FO, and 24 FO); 11 fluid ounce mug (marked at 2 ½ FO, 5FO, and 7 ½ FO); and 8.5 fluid ounce wine glass (marked at 2 FO, 4FO, and 6 FO). The dietary interviewer asks the participant to estimate at what level the selected container was filled and how much of that amount was actually consumed. Then the dietary interviewer estimates the number of fluid ounces based on the markings. For example, if the participant indicates that the 12 fluid ounce glass was filled to about half way between the 9 and 12 FO markings, and that about half of this amount was consumed, the dietary interviewer enters 5 ¼ FO (half of 10 ½ FO). Three paper cups have been added for SOL-Youth to aid in quantifying beverages obtained at restaurants that are not included in the NDSR database. These include: 12 fluid ounce cup (marked at 3 FO, 6 FO, 9 FO and 12 FO), 16 fluid ounce cup (marked at 4 FO, 8 FO, 12 FO and 16 FO), and 20 fluid ounces (marked at 5FO, 10 FO, 15 FO, and 20 FO). A single 45 FO beverage cup has been provided to each field center with along with instructions to obtain 2-3 additional cups from local convenience stores/gas stations where these are commonly used for self-service beverages.

**7.6.5 Geometric Shapes.** Geometric shapes, circles (1 ¾”, 2”, 3”, 4”, and 5” diameters), wedges (4” radius x 4.2” arc, 4.5” radius x 4.7” arc, 5” radius x 3.9” arc, 6” radius x 4.7” arc, and 8”radius x 4.2” arc), and squares (1 ¾”, 2”, 3”, 4”, and 5” square) are not intended to represent any one food. They are to be used to estimate portion size for any food that may be accurately described by a specific geometric shape. NDSR allows entering many solid foods using geometric shapes. Examples of foods that may be entered by shape include cornbread, pizza, and meatballs.

**7.6.6 Container of Loose Dried Beans.** One pound of navy beans is provided in a bowl-shape plastic container with lid. The purpose of the container of dried beans is to estimate the amount eaten when a participant expresses the amount in one or more handfuls (e.g. peanuts, sunflowers seeds, dry cereals, or raisins). The dietary interviewer asks the participant to grab a handful of beans of about the same amount that he/she grabbed a handful of that particular food.



The beans are transferred from the hand of the participant to one of the measuring cups or spoons to estimate the approximate amount eaten.

**7.6.7 Ruler.** The ruler is used to estimate dimensions in inches or centimeters. For example, the ruler may be used to describe the length, width, and height of a piece of cornbread.

**7.6.8 Nasco Food Models.** Replica models of foods are used for foods that are difficult to quantify and to help the participants learn to estimate amounts for foods using the 2-dimensional Food Amounts Booklet. Each dietary interviewer has available a set of the following Nasco food models:

- 1 Bolillo (Mexican bread) 5 ½" x 3", 2 ¼ oz;
- 1 set of two beef enchiladas, 3 ¾ oz;
- 1 broiled hamburger, 3 oz;
- 1 brownie, 2" square;
- 1 yellow frosted cake, 2" x 2" x 1 ¾" ;
- 1 refried beans, ½ cup;
- 1 roast beef, 3 oz;
- 1 boneless, skinless chicken breast, 3 oz;
- 1 roasted spareribs, 2 ½ oz.
- 1 French fries, 1 medium order

**7.6.9 Representative Dinner Plate.** The dinner plate is used for displaying food models; it is not to be used for estimating amounts.

**7.6.10 Bags of Rice.** Three bags of rice are provided. These are not meant to represent rice or another specific food but to help realize the amounts that the pictures in the FAB represent. Two bags contain one cup of rice to use for comparison with Mound 1 in the FAB to help interviewers and participants realize the quantity of Mound 1 and both may be placed in the bowls to help realize the volume that those contain. The third bag contains the amount equal to Mound 3 and would be used in the same way.

## **7.7 Guidelines for Amount Probing**

After introducing the SOL-Youth amount estimation tools, the dietary interviewer emphasizes that these tools are not always needed for estimating amounts, he/she gives examples of amounts that can be expressed using food-specific unit such as a "large" apple, a "thin slice" of tomato.

Interviewers should not specify to the participant a particular method to use to estimate the amount of food or beverage. First, he/she asks a completely open-ended question such as, "how much juice did you drink?" "¿Cuánto jugo tomó?" the dietary interviewer encourages the participant to express the amount in his/her own words. If the participant appears to be having difficulty answering the question, the dietary interviewer may then suggest that he/she try to visualize the juice container and compare the amount with one of the amount estimation tools. If the participant continues having difficulty expressing the amount, the dietary interviewer might mention one or more of the options listed on the NDSR "Amounts Screen." The choice of available food specific unit options varies depending on the specific food item.)

The dietary interviewer reminds the participant that he/she needs to know the amount actually eaten or drunk, not the total amount on the plate or in the glass, or the amount that was prepared for the entire family. When an amount is given by the participant, the dietary interviewer asks if he/she ate all or only a part of that amount.

When using measuring cups or the bowls or beverage containers with markings, dietary interviewers do not assume that the container was full. Always, ask “To what line?” or “¿Hasta qué línea?” before entering the amount information.

If the participant reports eating more than one of an item that could be different sizes, the dietary interviewer needs to remember to ask if they were the same size.

When a participant reports drinking a beverage that may have contained ice, the dietary interviewer needs to remember to ask if ice was included in the amount reported. When the beverage is with ice and this is an option in NDSR, the interviewer specifies the amount with ice and NDSR calculates the amount without ice. If an automatic calculation is not available in NDSR, the participant is asked to specify the amount of beverage without ice. If he/she is unable to do this, a note is entered for subsequent resolution at NRC using the NDSR Data Entry Rules.

For many foods, the food-specific units such as small, medium, and large are further described using dimensions. It is not necessary to probe further for dimensions once the participant has specified a size because the dimensions are meant to be guidelines and do not need to be exact. However, if participants ask what is meant by small, medium, or large, the dietary interviewer may share this information with them. He/she must ask if the participant ate the entire piece, if not, indicate the proportion of the small, medium, or large piece that was consumed.

## **8 Conducting the Interview Using the Multiple-Pass Approach**

The NDSR program automatically guides the dietary and supplement interview through the standard passes for collecting the dietary data.

### **8.1 PASS 1: Using the NDSR Quick List**

The Quick List is used to collect an outline of the previous day’s intake. It is designed to get participants to begin thinking about what and when they ate. Foods and beverages as reported by the participant are entered on the Quick List window along with the time eaten and meal name if provided by the participant at this time. If the participant does not volunteer the time of the meal or give a specific meal name during the Quick List, the dietary interviewer does not interrupt to ask for this information. NDSR will prompt for this information during the third pass.

### **8.2 PASS 2: Reviewing the Quick List**

A review of the Quick List permits the dietary interviewer to obtain an overview of the day’s intake and to note if there are large gaps in time, missed meals or missing beverages, and to insert the additional meals, snacks and foods or beverages recalled during this pass.

### **8.3 PASS 3: Collecting Complete Meal, Food, and Amount Detail**

Pass 3 helps the participant remember specific details about what they ate. Information about the time, name, and location of the meal are provided in the Meal Information window. The dietary interviewer completes descriptive details for foods and beverages obtained during the first pass.

At this point, the participant is asked about additions to foods and beverages entered on the Quick List. The dietary interviewer asks probing questions based on the information displayed in the NDSR window and utilizes the NDSR food search feature to locate foods, and to obtain complete details for food descriptions, preparation methods, and variable ingredients. After specifying the food, an open-ended question “How much did you eat (drink)?” “¿Cuánto comió ó (tomó)?” is asked to obtain the amount eaten. The participant may use any of the food amount estimation tools for the in-person interview, and he/she will be referred to the Food Amounts Booklet during the telephone interview, to describe the amount consumed. The dietary interviewer should allow the participant to freely select from the available amount estimation tools. If they have any difficulty or select an inappropriate item, they should be encouraged to use a more appropriate item for the food eaten. The dietary interviewer should always refer the participant to the ruler when the participant gives dimensions in inches or centimeters. After entering the amount specified by the participant, NDSR displays a conversion to a common unit. The dietary interviewer needs to be able to visualize the amount reported and subsequently confirm with the participant any questionable amounts by using the amount estimation tools (e.g., 1 fluid ounce of juice or 4 cups of ice cream). The NDSR Note field is used to enter information to confirm atypical amounts as well as other unusual information (e.g., no beverage with a meal or any condiments and/or bread for sandwiches).

#### **8.4 PASS 4: Reviewing the Recall**

The fourth and final pass of the NDSR multiple-pass approach occurs after entering all of the food detail. During this review, the dietary interviewer probes for missed meals, beverages, and snacks and any other information that may have been overlooked earlier. Edits are made as needed and notes are provided. Foods not found in NDSR are flagged as missing and complete details are collected from the participant and recorded on the NDSR Missing Food window. Information recorded includes detailed descriptions of what the food looks like as well as ingredients and the amount eaten.

#### **8.5 Documentation Using NDSR Note Field**

NDSR notes are used to clarify contradictory, questionable, or unusual food items or amounts, or to document cases where typical companion foods are not consumed. Notes serve as communication between the dietary interviewers and the NRC SOL-Youth coordinator. NDSR forces a note when the amount reported exceeds what has been established in the database as more than the usual amount consumed at one time; such amounts should be confirmed with the participant. Small amounts are also flagged to alert the interviewer to potential data entry errors. In this case, the amount is corrected or a meaningful note is added to explain how the very large or very small amount was determined. NDSR food notes should match the information in the data entry. For example, if the dietary interviewer enters 6 cups of ice cream, the note should describe how the participant determined that he/she ate 6 cups and the number 6 should be re-typed in the note field to ensure that a typographical error did not occur. Further probing might reveal that the ice cream was scooped into the bowl and consequently a reduction in the 6 cups to account for the air space between the scoops needs to be factored in. Redirecting the participant to the mounds or measuring cups might result in a more realistic amount for the ice cream. Important information to be included in notes might concern missing meals or beverages, reference to the specific amount estimation tools picture and size used to estimate unusually large or small portions, missing condiments, and modifications of foods such as a McDonald’s cheeseburger, when only half of the bun was eaten. Notes that warrant the attention of the lead

interviewer and/or the quality assurance staff at the NRC should be identified as priority by selecting the Priority Note field on the Food tab or the Dietary Supplement tab. Notes allow the lead interviewer and the NRC to make appropriate changes to the recall to reflect what was actually eaten as well as confirming that the interviewer entered what the participant reported.

## **8.6 Consulting Parent to Clarify Child Intake**

The SOL-Youth study has children 8-14 years of age as participants. [**Note:** Protocol revision for increasing the eligible age range from 8-14 to 8-16 years old for SOL Youth was unanimously approved by the HCHS/SOL Ancillary Study Subcommittee and HCHS/SOL Steering Committee on August 8, 2012. All subsequent reference to the eligible age range in the remainder of this MOP will indicate the approved protocol change to 8-16 years old.] Available data indicate that children at these ages can reliably report what they ate the previous day. Nevertheless, for SOL-Youth the protocol allows that a parent may be consulted after the diet interview to clarify gaps in the child's report or further details on what was eaten. Interviewers should complete the dietary interview without the parent present, and then determine if a parental consultation is required based on the completeness of the child's record. This may be particularly useful for the younger children. The basic data are what the child reports. The purpose of the parental consultation is to help complete the child record not to change it to be what the parent thinks is "more healthy."

## **8.7 Printing or Saving NDSR Reports**

As soon as possible following the dietary interview, the Record Properties Report (**Appendix 5**), the Foods Report (**Appendix 6**), and the Dietary Supplements Report (**Appendix 7**) should be printed, attached to the Dietary and Supplement Recall Checklist and placed in the respective participant folders. Alternatively these reports may be saved as Pdf and archived electronically for future reference.

# **9 Instructions for Conducting the 24-Hour Dietary Recall**

## **9.1 Entering Meal Time**

In general, the approach to collecting the 24-hour dietary recall is to find out when people eat and what they eat, versus asking what they ate for specific meals. The NDSR program does require a time for each eating occasion. Exact eating times are not important. A general time frame may be given with approximate times. When participants are not able to provide the time of meals and snacks, dietary interviewers may use the following times for a general framework, using additional times as needed for other meals or snacks reported:

Morning Meal: 7 am

Noon Meal: 12 pm

Afternoon Meal: 5 pm

Evening Snack: 8 pm

## **9.2 Entering the Meal Name**

NDSR meal names include Breakfast, Lunch, Dinner/Supper, Snack, School Lunch, and Other (Desayuno, Almuerzo, Cena, Merienda o Colación, Almuerzo en el Colegio, y Otros). If the meal name is not stated by the participant, the dietary interviewer may ask the participant the meal name saying: "Was this your (insert most obvious meal name)?" Or "What would you call

this meal? “¿Fue este/esta tu (insert most obvious meal name)?” or ¿Cómo llamarías a esta comida? A meal name may be repeated several times in the context of a 24-hour intake. For example, the participant may report snacks several times throughout the day. If the name of the meal is obvious to the dietary interviewer, it is not necessary to ask the participant this question. For example, the first meal of the day may be labeled as breakfast and between-meal items may be labeled as snacks without probing.

### **9.3 Entering the Meal Location**

NDSR meal locations include Home, Work, Friend’s Home, School, Day Care, Restaurant/Cafeteria/Fast Food, Deli/Take-out/Store, Community Meal Program, Party/Reception/Sporting Event, and Other (Casa, Trabajo, Casa de un amigo, Escuela, Guardería, Restaurante/Cafetería/Comida Rápida, Deli/Para Llevar/Tienda, Programa de Alimentación Comunitaria, Fiesta/Recepción/Eventos Deportivos, y Otros). The meal location helps to determine which food variables to enter during the 24-hour dietary recall. For example, many foods in NDSR differentiate between home prepared and restaurant prepared foods. Collecting information on the source of the meal aids in the food description process. Meal name and locations also identify the source of the food.

### **9.4 Entering the Visit Number**

Visit 1 is used for the in-person interview. Visit 2 is used for the second interview (in-person or telephone) interview.

### **9.5 Entering the Site ID**

Site ID refers to the location for the diet and supplement interview. 1, in-person is used for the interview completed in-person. 2, phone is used for the interview completed by telephone. This field is also used to record the type of interview, scheduled (S) or unscheduled (U).

### **9.6 Minimize the Response Burden by Knowing When and How to Probe**

It is important to be sensitive to responses of the participant in terms of the overall length of the interview and to be able to determine the level of information that the participant can reasonably provide. The following lists a number of ways in which the response burden can be minimized for the participant without compromising the overall quality of the dietary data.

**9.6.1 Selecting NDSR Default Foods.** As a general rule, the dietary interviewer should accept the participant’s level of detail or opinion about the foods and beverages eaten. When it becomes clear that the participant is unable to provide the level of detail that the NDSR requires, an NDSR unknown should be selected. For example, if the participant had a meat empanada from a restaurant, the percent of fat will be unknown. In the event that the child eats meals at home but does not know the level of detail about home-prepared foods, defaults should be selected during the interview. Following the interview, the parent may be consulted to provide information if they are at the field center for the in-person interview or available at home for the phone interview. Defaults selected for foods prepared at home should be flagged with a Priority Note to serve as a reminder to ask the parents. Priority Notes can be de-selected after obtaining the information.

**9.6.2 Preparation Methods and Details.** When participants would not be expected to be able to provide the answers to the NDSR prompts, especially regarding preparation methods or

other details as part of a restaurant meal, interviewers should select the “unknown” defaults provided in NDSR. For example, asking too many questions that cannot possibly be answered may lead the participant to respond inappropriately just to provide an answer to the question.

**9.6.3 Unknown Brand Name Products and Fast Food Items.** If a category of foods within the NDSR database includes a brand-name or fast food listing and the specific item reported is not available, it should be entered as NDSR missing food and submitted to NCC.

**9.6.4 Entering Assembled Foods.** While NDSR contains many default sandwiches, tacos, and similar assembled foods, it is important for the dietary interviewer to probe to find out if the participant can describe the item eaten in terms of the ingredients and the amounts of each ingredient. If the participant can report each component of the sandwich, it is entered using the NDSR Assembled Food feature, entering each ingredient and amount. If the sandwich or taco is reported to be from a national fast food restaurant chain, the corresponding NDSR entry is selected. Any modifications made to national fast food restaurant meals, such as not eating the bun for a McDonald’s hamburger or ordering a Subway sandwich with only ham and lettuce should be recorded in the Note field for later adjustment by the lead interviewer or the dietary interviewer.

**9.6.5 Entering Tossed Salads, Mixed Dishes, Soups, and Similar Foods.** If a participant reports a tossed salad, mixed dish, or soup, the dietary interviewer will select the closest database match, based on the description of the food. As a rule, amounts of the individual ingredients in these foods should not be entered. The dietary interviewer will have the participant estimate the total amount consumed and the NDSR standard recipe will determine the amounts of the individual ingredients. For most food combinations, generic entries based on the types of ingredients are available. When unable to find a database food that is a good fit, the dietary interviewer should collect as much detail as possible from the participant, including the amount eaten. This detail is entered as an NDSR Missing Food. It is critical that with the written description, other reviewers can visualize the food and the amount eaten. Vague descriptions and incomplete amounts are unlikely to be interpreted correctly during data cleaning and quality assurance.

**9.6.6 Become Familiar with Foods that Hispanics Frequently Report.** Since Hispanic foods may be an important part of the diet of the SOL-Youth participants, it is recommended that dietary interviewers visit the local supermarkets and fast food restaurants to become familiar with the Hispanic foods available at their location, especially if dietary interviewers do not normally have exposure to these types of foods.

**9.6.7 Supplements Reported During the 24-Hour Recall.** The dietary interviewer should NOT enter any dietary supplements when recording the 24-hour dietary recall. If a participant reports a supplement during the 24-hour dietary interview, the dietary interviewer should thank the participant and tells him/her, that he/she will be asked about the use of dietary supplements later in the interview.

## **9.7 Entering Amounts**

There are four types of units provided by NDSR for describing foods amounts. These include: food-specific units, geometric food shapes, weight, and volume. The availability of units

depends on the particular food item. Weight is always an option, and volume is an available option for nearly all foods and beverages in NDSR. Each of the four unit types is described below.

**9.7.1 Food-Specific Units.** Food-Specific Units (FSU) (e.g., slice, each, small, single serving bag, piece) are available for many foods in NDSR. FSU are most frequently available for packaged items such as one piece of hard candy or an ice cream bar. However, foods that may seem “standard” can come in several sizes (e.g., nugget, regular, extra large). These units are all options in NDSR. In general, it is preferable to have the participant describe the portion consumed using the amount estimation tools and amount unit options in NDSR as a guide to help quantify the food. Because the use of the Food Amounts Booklet often results in using dimensions and suggesting the food shapes, the dietary interviewer should look at the dimensions associated with the FSU to get a sense of how realistic the dimensions reported might be. In general, it is better to use the “small”, “medium” or “large” FSU to describe pieces of chicken and fruit. These foods tend to be overestimated when dimensions are used because the visual image includes refuse (e.g., bone, core, peel). FSU should also be considered for many baked goods when dimensions result in unrealistic amounts as compared with the standard amounts in NDSR.

**9.7.2 Geometric Food Shapes.** Shapes (e.g., circle, rectangle, wedge, cube) allow the participant to use two or three dimensions to describe the amount of food eaten. Food shapes in NDSR are measured using inches to describe the length, width, height or diameter depending on the food. In the event a participant reports the food shape in centimeters, the dietary interviewer refers him/her to the ruler that has inches and centimeters. Notes should be used for any unusual dimensions, making clear that the dietary interviewer has visualized the food and is aware of any unusual dimensions and has probed sufficiently to be sure the participant has given the best description for the amount consumed. Shapes are not permitted for describing liquid and in many situations the FSU is a better way to quantify the food item because few foods have true geometric shapes.

**9.7.3 Weight Measures.** Weight measurements (e.g., ounce, pound, gram) should only be used if the exact weight is available from a package label or if the participant reports an amount using an amount estimation tool that represents weight for that specific food. Pictures or meat replicas can be used to assist participants in describing their portion sizes of cooked meat including roast, steak, pork chop, and ham. (Note: chicken parts/pieces in the Food Amounts Booklet do not have weights associated with them and are considered food-specific units.) The meat replica pictures (page 16 of the Food Amounts Booklet) should not be used to represent cold cuts, sausage, meat loaf, or fish because the same volume for these items (meat replicas) will have different weight. NDSR will require the dietary interviewer to determine if the meat portions include either bones or fat, and if the fat was eaten. Consequently, the dietary interviewer should clarify with the participant if the amount of meat or fish envisioned by looking at the picture or the replica includes bone or other refuse.

**9.7.4 Volume Measures.** Volume measures (e.g., cup, fluid ounce, tablespoon, pint) are used to describe amounts for all liquid items, beverages, and non-liquid foods served or quantified in bowls, cups, or glasses. Examples in the Food Amounts Booklet include pictures of measuring cups and spoons, bowls, and glasses. When volume measurements are being used to

describe non-liquid foods, NDSR will first prompt the interviewer to select an amount unit (e.g., cup, teaspoon, tablespoon), and then the quantity and form in which the food was eaten (e.g., sliced, diced, solid). The form determines the amount that can be placed in a particular container and factors in the density of the food item. For most beverages, NDSR will prompt the dietary interviewer to ask if the amount included ice, consequently he/she should clarify if the amount the participant reports includes ice.

### **9.8 Entering Quantity**

Once the unit is selected, the NDSR prompts for the quantity which may be entered as whole numbers, fractions or decimals. A “common unit” is assigned to each food item in NDSR. If the unit entered is not the common unit for that particular food, the amount displayed will include the common unit in parentheses. This information helps the dietary interviewer judge the appropriateness of the amount entered. Also, every food in NDSR is associated with a “maximum serving” amount, if the amount exceeds the established maximum serving size, the system will flag the amount and require a note.

### **9.9 Confirming the Amount**

When the dietary interviewer is recording the intake of each food, it is important to confirm that the participant is describing the amount eaten, not the amount served. Additional probes to confirm amounts include: “Did you eat/drink all of the milk on your cereal?” “Were you able to finish that sandwich?” ¿Tomaste toda la leche asi como el cereal? “¿Terminaste todo el sandwich?”

## **10 Instructions for Conducting the Dietary Supplement Recall**

### **10.1 Overview**

The goal of the dietary supplement recall is to assess use of all types of dietary supplements and over-the-counter antacids. Over-the-counter antacids are included in this assessment because many of these products contain calcium. For the in-person interview, the period covered for dietary supplement intake is the same time period covered by the 24-hour dietary recall and the past 30 days. For the telephone (or second interview) this will be limited to the same time period as covered by the 24-hour dietary recall but will not include past 30 days. First, seven questions are asked to assess whether any dietary supplement or over-the-counter antacids were taken during the recall period (Tier 1). If one or more products are reported in response to these questions the interviewer enters the full product name into a search window in NDSR to identify a matching product in the database. Information from the product container is useful in conducting this search. After the product is entered, the participant is asked how many times they used the product during the recall period and how many pills/tablets he/she took each time they used the product (Tier 2). The final step (Tier 3) involves reviewing the information collected to allow for corrections and additions.

### **10.2 Pre-interview Activities for In-Person Interviews**

Participants are asked to bring to the interview the bottles/containers for all of the dietary supplements and over-the-counter antacids they use. They are also asked to bring the bottles/containers for any over-the-counter and prescription medications they use (for the medication inventory which is conducted separate from the dietary recall and supplement assessment). To encourage compliance with these requests, participants are mailed a letter that



includes a listing of the types of products they should bring to the interview, with a bag provided for transporting the bottles/containers. As part of a reminder telephone call made to participants the day prior to the in-person interview, participants are reminded to bring product containers/bottles to the clinic visit.

### **10.3 Period of Dietary Supplement Recall**

For the first in-person interview, the dietary supplement recall covers the same period of time as the 24-hour dietary recall and the past 30 days. For the telephone interview (or second interview) it covers only the 24-hour dietary recall period. In the event the participant brings a dietary supplement container to the in-person interview that was not taken during the past 24 hours or the past 30 days, it is NOT to be recorded during the recall, even when the participant reports he/she typically takes it but just forgot to take it yesterday (the day previous to the interview). Conversely, if a participant forgets to bring the bottle/container for a supplement used during the recall period, the product should still be recorded.

### **10.4 Completing Tier 1**

Once the 24-hour dietary recall has been completed, the dietary interviewer tells the participant that they will now be asked about their use of dietary supplements and non-prescription antacids. Then, a series of seven questions are asked to screen for use of dietary supplements during the recall period. All screening questions must be asked even if the participant reports that he/she did not take any supplements. If this situation arises the dietary interviewer should say: “Although you didn’t take any supplements over the past 24 hours and/or 30 days, I still need to ask each of these questions” “A pesar de que usted no consumió ningún suplemento dietético en las últimas 24 horas y/o 30 días, yo necesito que (me) responda cada una de las siguientes preguntas” All questions must be asked because some products, such as fiber supplements, may not be perceived as dietary supplements by some people.

If the participant answers ‘no’ to each of the seven screening questions, the dietary and supplement interview is completed. If one or more products are reported in Tier 1, the next stage of questioning (Tier 2) is initiated.

### **10.5 Completing Tier 2**

During the second tier of the supplement recall, the dietary interviewer refers to the containers the participant brought for the in-person interview for use in the selecting the supplement products from the DSAM database. For interviews conducted over the telephone, the participant must be asked to gather the bottles/containers for the products he/she reported in Tier 1. If the participant did not bring the container (in-person interview) or cannot find the container (telephone interview) for a product, the dietary interviewer should first try to find a matching product in the database based on the descriptive information the participant is able to provide. If the participant cannot recall enough detail about the product to allow for finding a match in the database, a generic or default supplement available in the database should be selected, and a note should be provided in the “notes” field to indicate that this was done. A generic supplement is selected when the participant knows the composition of the supplement (e.g., a calcium tablet with 1,200 mg of calcium). A default supplement should be selected when the participant does not know the composition of the supplement (e.g., a calcium tablet of unknown composition). If a generic or default product cannot be located in the database, the interviewer should enter the supplement as a missing product.

After a matching product in the database has been selected or the Missing Product window has been completed, the participant is asked how many times he/she took the product during the recall period and how many pills/tablets they took each time they used the product.

### **10.6 Completing Tier 3**

The final Tier of the DSAM database occurs after entering all of the product details. During Tier 3, the dietary interviewer reviews with the participant the name and details about all products reported during the supplement recall. During Tier 3, the dietary interviewer can add a product and make any correction.

### **10.7 Including the Ingredients of a Missing Product**

The dietary interviewer enters a Missing Product when a reported supplement cannot be found in the Dietary Supplement Assessment Module (DSAM) database. He/she uses the product label to include all possible information about the missing supplement, including a list of the ingredients. The dietary interviewer should list at least the first three ingredients found in the container and a note should be made specifying if all the ingredients were added or not in the Missing Product window. The list of ingredients should include amounts and units of each ingredient. If the unit cannot be selected because is not available, the dietary interviewer makes a note of the unit on the product label.

## **11 Conducting the 24-Hour Dietary Recall**

### **11.1 Introduction**

The dietary interviewer introduces him/herself to the participant. He/she should be friendly and calm. The dietary interviewer should always give neutral responses to whatever the participant tells them. He/she starts the interview by saying: “Hi (insert participant’s name). My name is (insert your name). How are things going today?” “Buenos días/tardes (insert participant’s name). Mi nombre es (insert your name). ¿Cómo ha estado?”

Pause, wait for their response, spend a minute or so to establish rapport, and proceed: “I’m going to be asking you about what you ate and drank. I’ll enter the information on a computer to get what we need. This is easy because it’s just about what you ate yesterday. There are no right or wrong answers. Whatever you ate is okay. Do you have any questions for me? Are you ready? I’m sure you’ll do a great job of helping me!” “Yo le voy a preguntar sobre todo lo que comió y bebió ayer. Voy a ingresar la información en la computadora para obtener lo que necesitamos. Esto es fácil porque es sólo sobre lo que usted comió ayer. No hay respuestas correctas o incorrectas. Lo que sea que haya comido está bien. ¿Tiene alguna pregunta? ¿Está listo/a? ¡Estoy segura de que usted hará un buen trabajo ayudándome!”

### **11.2 Entering the NDSR Quick List**

The dietary interviewer proceeds by asking the participant to make a list of all the foods and beverages he/she had yesterday. He/she says: “First, we’ll make a list in the computer of what you ate and drank. Then I will ask you some more questions and we’ll figure out how much you had to eat. Do you have any questions?” “Primero, vamos a listar en la computadora todo lo que comió y bebió ayer empezando desde que se levantó. Luego le haré otras preguntas y determinaremos cuánto comió. ¿Tiene alguna pregunta?”

Pause, wait for and respond to questions, and proceed: “What was the first time you had something to eat or drink?” “¿Cuándo fue la primera vez que comió o bebió algo?” Enter the response then as needed say: “What did you have at that time?” “¿Qué comió a esa hora?” The interviewer enters the information reported by the participant on the NDSR Quick List screen, not requiring the participant to give time, meal name, or meal location. A slash must be used for each eating occasion but no further detail is needed because NDSR will prompt later for the time and meal name. Above all, the interviewer should let the participant think and say whatever comes to mind about the previous day’s intake, avoiding interruptions that may be distracting to the participant.

### **11.3 Reviewing the NDSR Quick List**

During the review of the Quick List, it is important that the dietary interviewer try to visualize the entire 24-hour period in terms of what has been reported so far. This is a good opportunity to identify and ask about gaps of time when nothing has been reported and to check for frequently forgotten foods, such as beverages and snacks throughout the day. The dietary interviewer verifies all of the entries on the Quick List and probes for missed items by reading the list back to the participant and asking as appropriate: “I am going to read back what you have told me. Let me know if you want to add or change anything. Can you think of anything else you ate or drank yesterday that we haven’t put on the list? Do you remember if you got up during the night (after 10:00 pm or midnight) and had anything to eat or drink? Did you have any snacks after school or before bed?” “Le voy a leer lo que me ha dicho. Avísame si quiere cambiar o añadir algo. ¿Puedes pensar en algo mas de lo que comiste o bebiste ayer que no hayamos listado? ¿Recuerdas si te levantaste durante la noche (después de las 10 de la noche o la medianoche) y comiste o bebiste algo ?¿Comió alguna merienda/bocado/colación después de la escuela o antes de ir a dormir?” Any errors should be corrected, and any additional foods the participant may report are added at this time.

### **11.4 Collecting Meal Information Detail**

The dietary interviewer begins by saying: “Next we’ll go over our list and I will ask you some questions about each food. You can use the amounts estimation tools at any time to let me know how much you had.” “Ahora vamos a repasar nuestra lista y le haré algunas preguntas sobre cada uno de los alimentos listados. Puedes usar los modelos de alimentos en cualquier momento para decirme cuanto comió.” NDSR brings up the Meal Information window. The dietary interviewer uses this opportunity to ask questions about meal time, meal name, and meal location if this information was not provided earlier during the Quick List.

### **11.5 Asking About Additions**

The dietary interviewer asks about additions to every food. An on-line prompt reminds him/her to say: “The first thing on your list is (NDSR inserts the name of each food).” “Lo primero en su lista es (NDSR inserts the name of each food):” Then, reading from the NDSR screen the dietary interviewer says: “Did you add anything to the (NDSR inserts the name of the food)?” “¿Le añadió algo a (NDSR inserts name of the food)?” The dietary interviewer continues asking the additions question for each food until a “no” response is received.

### **11.6 Collecting Complete Food and Amount Detail**

The NDSR Food Search window prompts the dietary interviewer for each available level of detail during this third pass. An on-line prompt reminds him/her to begin by saying: “What type of (insert name of food) was it?” “¿Qué tipo de (insert name of the food) era?” The dietary interviewer continues defining the food, selecting food variables as required on each screen. “Unknown” should be entered if the participant cannot describe the food in detail (e.g., if it was prepared at a restaurant).

An on-line prompt for the amount reminds the dietary interviewer to say: “How much did you eat (drink)?” “¿Cuánto comió? o tomó?” Some foods require additional quantity details, with required fields indicated in yellow. After entering the amount provided by the participant, the NDSR displays a conversion to a common unit. At this time, the dietary interviewer must be able to visualize the amount reported and confirm as needed any questionable amounts using the amount estimation tools or by making reference to other familiar items or recognizable standards. For example, 1/16 of a hamburger should have a note saying, “ate only one bite” or 8 cups of popcorn should have a note saying, “ate entire box.” The dietary interviewer should ask if the entire amount described was eaten: “Were you able to finish that? or the (insert name of food)?” “¿Se terminó todo el/la (insert name of the food)?”

Note: Foods that do not have complete descriptive and/or complete amount information are indicated on the screen with a blue question mark to the left of the food. When the dietary interviewer has completely described a food, NDSR replaces the question mark with a green check mark to the left of each completed item. As the dietary interviewer conducts the 24-hour dietary recall, he/she provides positive reinforcement by stating things like “you are doing a good job” as appropriate. “Estas haciendo un muy buen trabajo” The dietary interviewer should maintain a pleasant tone of voice and avoid responding to the participant in any negative ways. If it is necessary to ask the participant to repeat what he/she said, the dietary interviewer should ask him/her to do so in a gentle way and take ownership by saying: “Sometimes it’s hard for me to hear things. Could you please tell me that again?” “A veces se me hace difícil escuchar. ¿Podría repetirme eso otra vez?”

### **11.7 Reviewing the Recall**

During the fourth and final pass, the dietary interviewer probes for missed meals, beverages, and snacks, making sure no information was inadvertently overlooked. He/she tries to get a mental picture of the day, looking especially for time gaps of more than four hours between eating. Notes should be made to indicate skipped meals or to explain large time gaps. Notes are also used to record the absence of foods, beverages or typical condiments served with food. During the review, the dietary interviewer reads back each food and amount, asking for confirmation from the participant. For example: “Now we’ll go over what I’ve put in the computer one last time. The first thing that I have is at (insert meal name and time) when you had (insert food name).” “Ahora, vamos a revisar lo que escribí en la computadora por última vez. Lo primero que tengo en mi lista es (insert meal name and time) cuando comiste (insert food name).”

When the dietary interviewer notices a large time gap he/she should ask: “Did you have anything to eat or drink after the last meal? Anything before your (insert time e.g., evening meal) and (before bed)?” “Comiste o bebiste algo antes de (insert time e.g., evening meal) o (antes de ir a dormir)?” “¿Comió o bebió algo antes de (insert time e.g., evening meal) o (antes de ir a dormir)?” Additional foods and meals are inserted at any time. If the participant hesitates and

can't remember eating anything for a long period of time, the dietary interviewer may say: "Can you think of what you were doing (after school at dinner/supper time, etc.)? Sometimes if we think about what we were doing, where we were or whom we were with, it helps to remember what we ate." "¿Puedes pensar que hiciste (después de ir a la escuela, durante la cena, etc)? A veces si pensamos que estábamos haciendo, dónde estábamos o con quién estábamos, nos ayuda a recordar lo que comimos." The process continues until each meal and food has been reviewed and documented as needed in the NDSR notes.

### **11.8 Completing the Trailer Tab**

When the 24-hour dietary interview is completed, the system presents the Trailer tab and the dietary interviewer ends the recall saying: "Next (insert name of participant), in terms of the amount of food you ate, would you say this was close to the amount that you usually eat, a lot more than you usually eat, or a lot less than you usually eat?" "¿En relación a la cantidad de alimentos que comió, dirías que la cantidad de hoy es parecida a lo que usualmente come, fue mucho más de lo que comúnmente come, o fue mucho menos de lo que usted comúnmente come?" This question refers to the overall amount of food for the day, not the type of food. The dietary interviewer records the participant response to the last question on the Trailer tab. If the participant reports a lot more, check "considerably more than usual" or a lot less than usual, check "considerably less than usual." In either case, NDSR requires the dietary interviewer to provide a note that briefly states why the intake was not usual. For example, a celebration meal with a lot of foods or a participant not feeling well and not eating much can result in eating a lot more or a lot less than usual. If needed the dietary interviewer can say: "What makes you say it's (a lot more or a lot less than usual)?" "¿Qué le hace decir que (lo que comió fue mucho más o mucho menos de lo usual)?"

The dietary interviewer will determine the reliability of the data. If the dietary recall is unreliable because the participant was unable to recall one or more meals or for some other reason, he/she clicks the appropriate NDSR button and adds the required NDSR Note. Dietary interviewers do not ask the participant this question, nor share their selection with him/her.

## **12 Conducting the Dietary Supplement Recall**

The NDSR provides for an automated interview which prompts for the direct entry of the dietary supplements and their frequency of use. Collection of the dietary supplement takes place immediately following the entry of a 24-hour dietary recall and covers the same period. The in-person interview also includes the past 30 days. The dietary interviewer asks the participant about all dietary supplements and over-the-counter antacids he/she took during the recall period.

### **12.1 Introduction**

The dietary interviewer explains the next questions are about all of the dietary supplements and over-the-counter antacids the participant took during the recall period. The dietary interviewer says: "Now I have questions about dietary supplements." In the case, the participant says he/she is not taken any supplement or vitamin, the dietary interviewer says: "Although you didn't take any supplements over the past 24 hours / 30 days, I still need to ask each of these questions" "A pesar de que usted no consumió ningún suplemento dietético en las ultimas 24 horas/ 30 días, yo necesito que usted responda cada una de las siguientes preguntas."

### **12.2 Tier 1 - Screening for Dietary Supplements**

Tier 1 involves a series of questions to screen for use of dietary supplements and non-prescription antacids. The dietary interviewer asks about each of the dietary supplements the participant may have taken. He/she also explains that during Tier 1 he/she will record only the name of the products, later he/she will include the details for each dietary supplement. The dietary interviewer begins the recall by saying: “Now I have questions about dietary supplements you took over the past 30 days” “Ahora, le voy a hacer preguntas acerca de los suplementos dietéticos que usted ha consumido durante los últimos 30 días.” For each of the seven screening questions, examples are given. It is only necessary to list the examples if the participant does not understand the question and listing the examples would help them know how to respond.

The dietary interviewer proceeds by asking the participant: “Did you take any vitamins or minerals?” (Like One-A-Day, calcium, vitamin C or Centrum.) “¿Usted consumió alguna vitamina o mineral?” (Como One-A-Day, calcio, vitamina C o Centrum.) If the participant answers “No”, the dietary interviewer clicks “continue” and goes to the next question. In the case the participant has taken more than one multivitamin, the dietary interviewer asks for the complete name of the each product and lists each on a separate line. The dietary interviewer does this for all the questions in Tier 1.

The next question is about amino acid supplements, the dietary interviewer asks: “Did you take any amino acids? (Like glutamine, arginine or lysine.) “¿Usted consumió algún aminoácido?” (Como glutamina, arginina o lisina.)

Next, the dietary interviewer asks: “Did you take any supplements containing oils or omega-3 fatty acids? (Like fish oil, flaxseed oil, EPA or DHA.) “¿Usted consumió algún suplemento que contenía aceites o acidos grasos Omega-3?” (Como aceite de pescado, aceite de linasa, EPA or DHA.)

“Over the past 30 days did you take any herbal or botanical products? (Like Echinacea, ginseng, ginkgo or St. John’s Wort.) “¿En los últimos 30 días, consumió usted algún producto herbal o botánico?” (Como equinácea, ginseng, ginko o hierba de San Juan [St. John’s Wort].)

The next question is about fiber supplements, the dietary interviewer asks: “Did you take any fiber supplements?” (Like Metamucil, Benefiber or Fibercon.) “¿Usted consumió algún suplemento de fibra?” (Como Metamucil, Benefiber o Fibercon.)

The next question records any supplement that has not been mentioned by the participant. The dietary interviewer asks: “Did you take any other dietary supplements that you haven’t told me about? (Like garlic extract, brewer’s yeast, coenzyme Q-10, glucosamine chondroitin, or weight loss supplements.) or “¿Usted consumió algún otro suplemento dietético que no me haya dicho? (Como extracto de ajo, levadura de cerveza, coenzima Q-10, glucosamina condroitina o un suplemento para bajar de peso.)

The last question is about antacids. The dietary interviewer asks the participant: “Did you take any over-the-counter antacids?” (Like Tums, Roloids or Mylanta)” “¿Usted consumió algún antiácido que compra en la tienda” (Como Tums, Roloids o Mylanta.) These over-the-counter

antacids provide a source of calcium but many people do not perceive antacids as dietary supplements

### **12.3 Tier 2 - Requesting the Dietary Supplement Containers**

If a participant reports using one or more products in response to Tier 1 screening questions, Tier 2 is initiated. Tier 2 requires information to be obtained from the product bottle or containers. For the in-person interview, the dietary interviewer has the containers available in a labeled bag for completing Tier 2. For the in-person interview, the dietary interviewer says: “Now I’ll ask for detail about each of the products you reported. It will be helpful to have the containers for as many of these products as possible.” If the participant has not already removed the containers from the bag, they do so at this time. “Ahora le voy a hacer preguntas acerca de los detalles de los productos que usted reportó. Nos va a ayudar tener los botes de la mayoría de estos productos si le es posible.”

For the telephone interview, the dietary interviewer needs to wait until the participant gathers the containers for the interview. The dietary interviewer asks: “Now I’ll ask for detail about each of the products you reported. It will be helpful for you to have the containers for as many of these products as possible. I can wait while you gather them.” “Ahora le voy a hacer preguntas acerca de los detalles de los productos que usted reportó. Nos va a ayudar tener los botes de los productos de la mayoría de estos productos si le es posible. Yo esperaré mientras usted los va a buscar.”

### **12.4 Entering Complete Information of Dietary Supplements in Tier 2**

NDSR Product Search window is used to locate and describe dietary supplements products. Prompts that appear are specific to the Dietary Supplement preferences set for the NDSR project. During the first interview (visit 1, in-person) the dietary interviewer reads the information of the products and records it in NDSR. A prompt assists the dietary interviewer to begin by saying: “You said that you took (insert dietary supplement name) in the past 24 hours / 30 days. I’ll take a look of the product label to know the complete name.” “Usted dijo que consumió (insert supplement name) en las últimas 24 horas/ 30 días. Voy a mirar la etiqueta del envase para saber el nombre completo del producto.” The dietary interviewer enters the name of the dietary supplement in the Find field and proceeds to select the appropriate supplement product.

After the product is found in NDSR, the Product Detail Windows prompts for additional information about product consumption. The dietary interviewer asks: “In the past 30 days, on how many days did you take this product?” “¿Cuántos días tomó este producto en los últimos 30 días?” “On average about how many (insert the unit, e.g. tablets, capsules, etc.) did you take each day you used the product over the past 30 days?”. “¿En promedio, cuántas (insert the unit, e.g. tablets, capsules, etc.) tomó cada vez que usted tomó este producto en los últimos 30 días?”

The next question is: “For how long have you been taking this product or a similar type of product?” “¿Por cuánto tiempo ha estado usted tomando este producto o uno similar a este?”

The next question is: “Did you take this product yesterday?” “¿Ayer tomó este producto?”

The next question is an open-ended question, so the dietary interviewer needs to collect accurate and complete information from the participant. The dietary interviewer asks: “Why do you take this product?” “¿Por qué toma usted este producto?”

During the second interview (visit 2, telephone interview) the participant has to report the information on the label of the product. The dietary interviewer says: “You said that you took (insert dietary supplement name) in the past 24 hours . Do you have the container for this product?” “Usted dijo que consumió (insert supplement name) en las últimas 24 horas. ¿Tiene el envase de este producto?”

Next, the dietary interviewer asks: “Please provide the complete name.” “Por favor dígame el nombre completo del producto.” The dietary interviewer enters the name of the dietary supplement in the Find field and proceeds to select the appropriate supplement product.

After the product is found in NDSR, the Product Detail window prompts for additional information about product consumption. The dietary interviewer asks: “In the past 24 hours, how many times did you take this product?” “¿En las últimas 24 horas, cuántas veces usted tomó este producto?” The dietary interviewer records the number on the box and clicks “continue.”

The next question is: “On average about how many (insert the unit, e.g. tablets, capsules, etc.) did you take each day you used the product over the past 24 hours? “¿En promedio, cuántas (insert the unit, e.g. tablets, capsules, etc) tomó cada vez que usted usó este producto en las últimas 24 horas?”

The next question is: “For how long have you been taken this product or a similar type of product?” “¿Por cuánto tiempo usted ha estado tomando este producto o uno similar a este?”

The next question is an open-ended question, so the dietary interviewer needs to collect accurate and complete information from the participant. The dietary interviewer asks: “Why do you take this product?” “¿Por qué toma usted este producto?”

### **12.5 Tier 3 - Reviewing the Information Collected**

Tier 3 is the final step during supplement data collection and includes reviewing the information collected in tier 2 to make corrections or additions. The dietary interviewer says: “Now we will review the products you have taken. Tell me if I have missed anything.” “Ahora revisaremos los productos que usted ha consumido. Dígame si no he registrado algún producto.” After reviewing the list with the participant, the dietary interviewer says: “This completes the interview. Thanks for your participation!” “Con esto hemos terminado la entrevista. ¡Muchas gracias por su participación!”

## **13 Ending the Dietary Interview**

After finishing the interview, the dietary interviewer explains to the participant she/he will have a second dietary and supplement interview by telephone. The dietary interviewer identifies the days generally available for the telephone interview with the participant or parent (Telephone Recall Availability Form) and provides a copy of the participant Food Amounts Booklet. The dietary interviewer explains that the telephone interview is similar to this interview and that the



Food Amounts Booklet is used during the telephone interview for estimating amounts. The dietary interviewer thanks the participant and ends the dietary recall: “Thank you so much for your help. Do you have any questions for me?” “Muchísimas gracias por su ayuda. ¿Tienes alguna pregunta?” Pause, wait for and respond to questions, and proceed: “You did a great job and I really enjoyed talking with you. Remember to keep the Food Amounts Booklet in a safe place because we will use it when we do this again by telephone.” “Usted hizo un excelente trabajo, fue un placer hablar con usted. Recuerde mantener el Folleto de las Cantidades de Alimentos en un lugar seguro porque lo vamos a necesitar cuando hagamos esta entrevista otra vez por teléfono.”

“Thanks. Bye.” “Muchas gracias. Adiós.”

### **13.1 Obtaining Additional Information from the Parent**

After the in-person interview with the child, use screening questions to determine if a parent is available to provide additional information about things the child didn’t know. For example ask: “Who brought you to the clinic today?” Quien te trajo a la clinica el dia de hoy? “Will he know about the foods and drinks you had yesterday?” El conoce acerca de los alimentos y bebidas consumidas el dia anterior? If the child responds yes, arrange to have the parent come to the diet interview room. Ask for clarification for the foods and drinks that the child reported where they did not know the details. During the phone interview, the child may offer to ask Mom or Dad during the recall, if so, you may say “it’s okay to ask your Mom or Dad for help.” “Esta bien si preguntas a tu Mami o Papi por ayuda”

### **13.2 Recording the Language Used during the Interview**

After completion of the dietary and supplement recalls, the dietary interviewer determines and registers the language used during the interview. The decision is made by the dietary interviewer based on the predominant language the interviewer utilized to ask questions during the recall. There are three categories to specify the language:

- 1, Mainly Spanish
- 2, Mainly English
- 3, Combination of English and Spanish

The dietary interviewer selects one of the three options listed above and registers the information on the Record Information window on the Header Tab under Notes. The following is an example of an entry into the note field after interview completed: “3, combination of English and Spanish.” Include both the number and the language so there will not be misunderstanding.

Header	Food	Trailer	Dietary Supplements
Participant ID:	NRC008		
Date of intake: (mm/dd/yyyy)	07/19/2009	Day:	Sunday
Participant name:			
Date of birth: (mm/dd/yyyy)	10/10/1946		
Gender:	Female		
Life Stage Group:	Females, age 51-70 y		
Interviewer ID:	001		
Visit number:	1		
Site ID:	1, in-person		
Notes:	3, combination of English and Spanish		
Date of entry: (mm/dd/yyyy)	07/20/2009	Day:	Monday
Database Version:	2009		

### 13.3 Checking and Editing Recalls

The dietary interviewer should review and edit the dietary and supplement recall as soon as possible after its administration. During editing, special attention is paid to NDSR Missing Foods, Missing Products and NDSR Notes. Foods not found in the database are indicated by NDSR as missing with red capital M. Complete detail about the missing food should be reviewed and edited to ensure that adequate information has been provided by the dietary interviewers for future resolution. The dietary interviewer must remember that another person should be able to picture the reported food, so information about the color, size, shape, ingredients and preparations should be included in the note field.

The dietary supplements not found in the database are indicated as missing dietary supplements and all ingredients listed in the Supplements Facts panel on the product containers should be included. The NDSR Note field provides on-line documentation to clarify or confirm contradictory, questionable, or unusual food items. Notes serve as communication among the dietary interviewer, the lead interviewer, and the NRC SOL-Youth coordinator. Notes should be made to clarify unusual portion sizes, modifications to foods (e.g., not eating the crust of a piece of pizza), and eating foods without anticipated companion foods (e.g., hamburger without a bun or ketchup).

### 13.4 Special Considerations for Telephone Interview

Because the exact day for the telephone interview is not scheduled in advance, the Telephone Recall Availability Form is used to identify best potential days and times for the participant to be reached within the next month, beginning five days from the in-person interview. After the completion of the in-person dietary interview, the participant is asked to confirm their availability in the upcoming weeks. Notes should be made of any special plans, trips, or activities. The dietary interviewer can attempt to obtain another telephone number if the participant indicates that he/she will be at another location.

The Telephone Introduction Script for the Telephone Recall is used to start the recall and serves to remind the dietary interviewer that the participant must have the copy of the Food Amounts Booklet for use in estimating food amounts during the this recall. If the participant does not have the Food Amounts Booklet, the dietary interviewer says that he/she will send another one and will call back in a few days. The telephone interview should not be collected without the Food Amounts Booklet. The Telephone Contact Log is completed each time the dietary interviewer attempts to contact the participant. The lead interviewer reviews the Telephone Contact Logs daily or consults daily with the dietary interviewers to monitor the progress toward collection of the dietary and supplement recall for each eligible participant within the time window. He/she may need to confirm that a recall was not collected because yesterday was atypical, e.g. the participant was ill and did not eat. Sometimes it is not clear until completion of the recall that the day was atypical. The dietary interviewer should consult with the lead interviewer regarding the possible need to collect an additional recall if the intake reported represents extreme under-reporting and an additional day should be collected.

## **14 Data Management Procedures**

Since the dietary and supplement recalls collected for SOL-Youth should flow from the field centers to the NRC on a regular, recurring basis, NDSR projects are set up to facilitate and direct that process. Each dietary interviewer should have two NDSR projects (one for Visit 1, in-person recalls, one for Visit 2, telephone recalls). All of the recalls collected by that interviewer within that week reside in those projects. Projects are backed-up on a daily basis and stored in a secure location, separate from the hard drive of the computer on which the NDSR program resides.

Each week, the lead interviewer restores all projects of data for the week and combines the recalls to begin preparing them for shipment to the NRC. The backup of the original data collected remains in archive storage. After cleaning and local quality assurance tasks have been completed by the lead interviewer, a backup of these new projects with the merged data are made and forwarded to NRC. A backup of these projects also remain in archive storage at the field center. NDSR backup files are password protected compressed files that cannot be read without first restoring them to the NDSR program.

### **14.1 Create the Dietary Interviewer NDSR Projects**

Before beginning data collection each week, two new projects are created for each interviewer. One project contains the Visit 1, in-person recalls and another is for the Visit 2, telephone or in-person recalls (this is necessary because different NDSR preferences are specified for the supplement in-person and telephone recalls).

The requirements for the Project Information are as follows:

Folder: *Interviewer Name Recalls*

Project Name: *Interviewer Name SOL-Youth Recalls MM/DD/YY* (e.g., Alejandra's SOL-Youth In-person Recalls 09/06/09)

Project Abbreviation: Interviewer ID (3 digits) Data Collection Week (e.g., NNN083109V1)

Record Type: Recall

Dietary Supplement Assessment Module: 24-hour and past 30 days intake

Note: Recalls at the Nutrition Reading Center week beginning August 31, 2009.

See the following Project Information window:

**Project Information**

Folder: Mary's Recalls

Project Name: Visit One recalls

Project Abbreviation: N001083109

Record Type: Recall

Dietary Supplement Assessment Module:

None

24-hour intake

24-hour and past 30 days intake

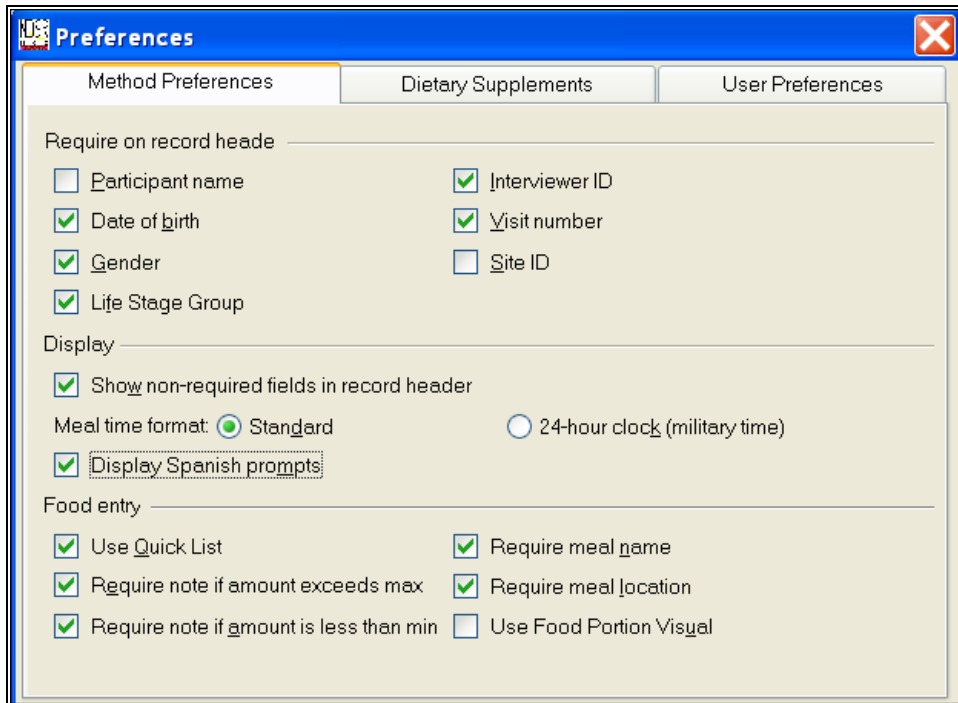
Notes: Recalls at the Nutrition Reading Center week beginning August 31, 2009

Help Preferences OK Cancel

## 15.2 Set the Preferences

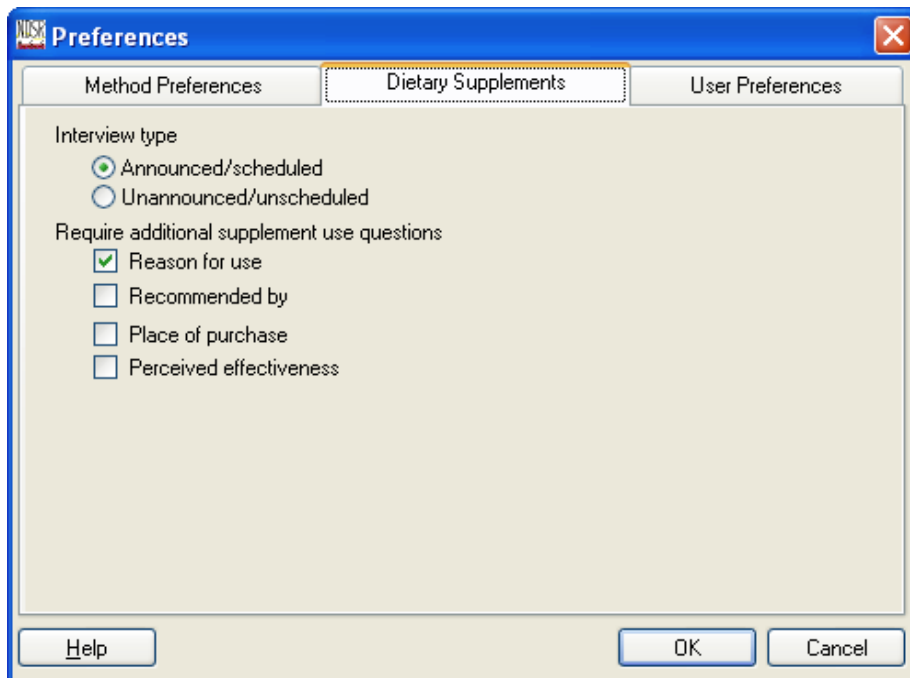
Preferences are set when creating each project. The SOL-Youth preferences are described below.

**15.2.1 Method Preferences.** Deselect the Participant name and the Site ID per the following screen shot. The dietary interviewer enters the first name only for use during the collection of the dietary and supplement recall. After local quality assurance tasks are completed and before sending the data to NRC, the name of the participant must be deleted. The first name of the participant provides a valuable cross check against the participant identification number. In addition, when conducting the telephone recall the participant's name ensures the data is being collected correspond to the right participant. Select Display Spanish prompts to view prompts in Spanish along with English.

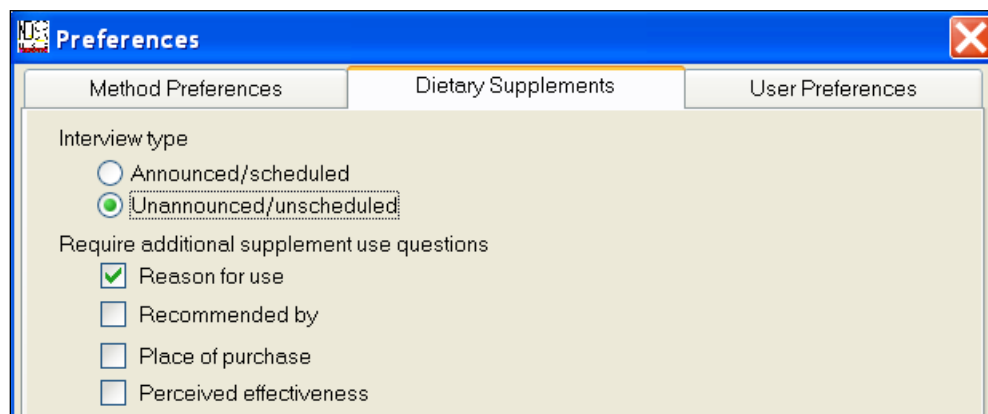


**15.2.2 Dietary Supplements Preferences.** For the Visit 1, in-person interview select Announced/scheduled for the Interview type. The Interview type determines the prompts for the dietary supplement interview and differs for the in-person interview and the telephone interview. Announced/scheduled is the interview type selected for the in-person interview or if the second recall is scheduled rather than unannounced. Unannounced/ unscheduled is selected for the interview type for the second or telephone recall. The additional supplement use question “Reason for use” should be selected. See the following Dietary Supplement Preferences window for the in-person interview:

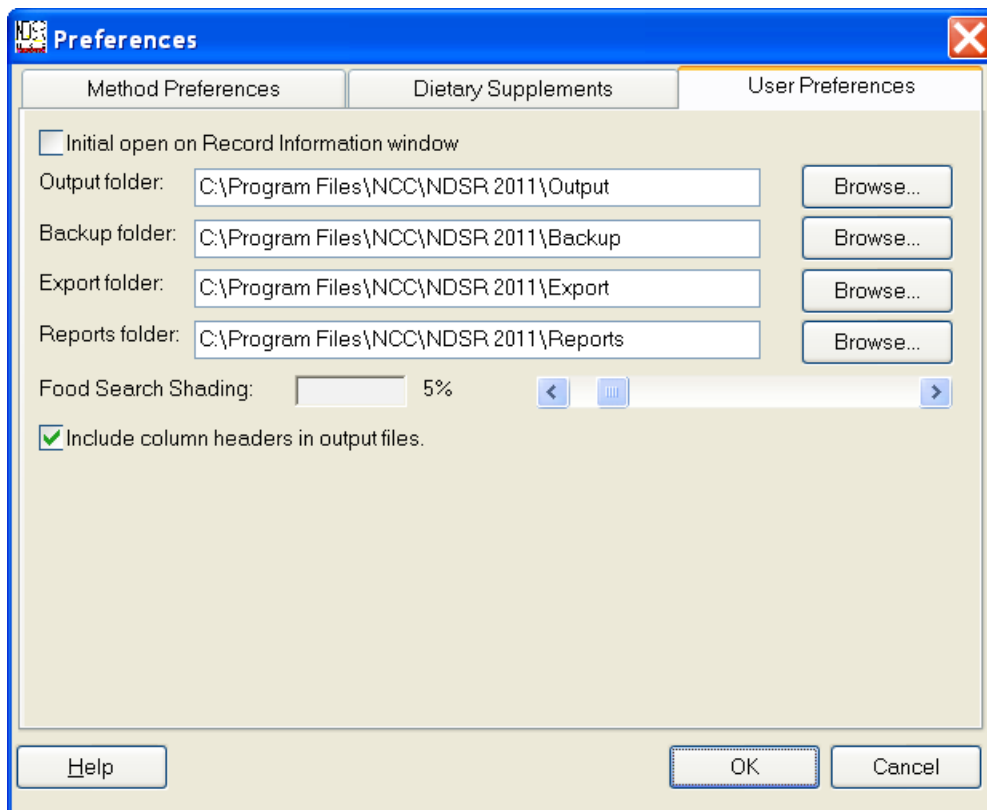
### Visit 1, In-Person Interview Dietary Supplements Preferences



### Visit 2, Phone Interview Dietary Supplements Preferences



**15.2.2 User Preferences.** The User Preferences designate the location for the backup files. If the computer used to collect SOL-Youth recalls is on a network server, it may be desirable to designate that as the backup folder location. In this example, backup files are stored in C:\Program Files\NCC\NDSR 2011\Backup. If this backup location is used, the backup files should be copied to a second secure storage location.



### 14.3 Create an Intake Record

Using the information obtained about the participant during the screening and recruitment process, the dietary interviewer completes the record header on the day of the visit. Because the NDSR automatically generates the date of entry, if the participant does not complete the dietary recall on the date the header is entered, the record is deleted and a new record is inserted the next time the participant is scheduled for an interview. All information set in the header preferences is required and the recall cannot continue until the header is complete. The requirements to complete the header preferences are as follows:

**Participant ID:** Centrally assigned by the CSCC. 8 characters beginning with the first letter of the field center (B=Bronx, C=Chicago, M=Miami, S=San Diego), a sequential number (NNNNNN) and a check digit based on the preceding sequential number.

**Date of intake:** mm/dd/yyyy

**Date of birth:** mm/dd/yyyy

**Gender:** Male or Female

**Life Stage Group:** NDSR automatically completes this field.

**Interviewer ID:** 3 digits designated by the CSCC.

**Visit number:** 1 for in-person interview; 2 for second interview (usually conducted by telephone)

**Site ID:** location and interview type, scheduled or unscheduled

**Notes:** Use to record the language of the interview

### 14.4 Backup of Dietary and Supplement Recall Data

Backup of the dietary and supplement recall data is routinely conducted by the dietary interviewer to ensure the security of the data. Ideally, a backup of the project is made after each recall is completed. At a minimum, daily backup copies of the data are made to a field-center-designated location per the NDSR preferences set. Each daily backup overwrites the backup from the day before. At the end of the week, the backup copy of each project is turned over to the lead interviewer for local quality assurance activities. Upon completion of those activities, another backup is made and sent off to NRC for final quality assurance tasks.

#### **14.5 Printing NDSR Reports**

Three NDSR reports are printed immediately following the dietary interview. These reports serve two purposes: first, in the event that there is computer system failure, and the file is corrupt or lost, the recall can be re-entered using the NDSR Foods Report, the Record Properties Report, and the Dietary Supplements Report. The second use is for the field center quality assurance activities.

#### **14.6 Restoring Dietary and Supplement Recall Data**

The lead interviewer restores the individual dietary recall projects to a computer with NDSR program installed. Recalls from individual dietary recall projects are merged and checked prior to submission to NRC.

#### **14.7 Creating the Lead Interviewer NDSR Projects**

Two projects are created for the lead interviewer. One project contains all Visit 1 recalls and the second contains all Visit 2 recalls ready for submission to NRC.

The requirements for the Project Information for the completed Visit 1, in-person recalls are as follows:

Project Name: *Field Center MM/DD/YY Visit 1 Recalls* (e.g., Bronx 12/07/09)

Project Abbreviation: *First letter of field center Date V1* (e.g., B120709V1)

Record Type: Recall

Dietary Supplement Assessment Module: 24-hour and 30-day intake

The requirements for the Project Information for the completed Visit 2, phone recalls are as follows:

Project Name: *Field Center MM/DD/YY Visit 2 recalls* (e.g., Bronx 12/07/09)

Project Abbreviation: *First letter of field center Date V2* (e.g., B120709V2)

Record Type: Recall

Dietary Supplement Assessment Module: 24-hour intake

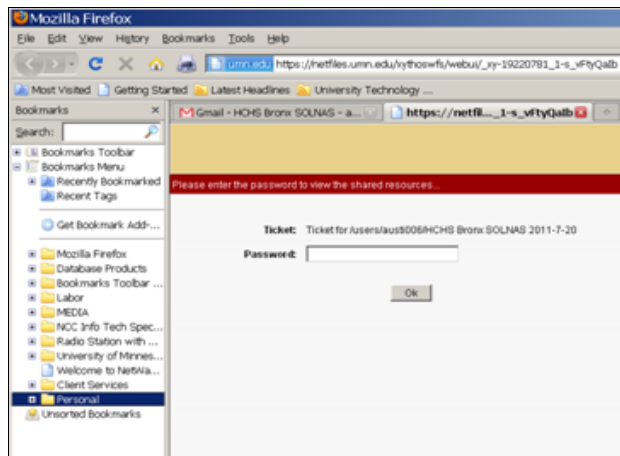
#### **14.8 Transmission of the Dietary and Supplement Recall Data to NRC**

The completed recalls are transmitted to the NRC. NetFiles, an online file storage tool will be used to transfer the NDSR backup files to the NRC. NetFiles enables secure storage and sharing of files on a University server that has been approved for storing private and protected data. NetFiles can be accessed using most web browsers and allows sharing of content with people outside the University of Minnesota.

The NRC data manager will initiate NetFiles sharing by creating a ticket for each field center and will email the link to each lead interviewer. Upon receipt of the link, the lead interviewer will



click on the link and follow prompts insert the password and upload weekly NDSR backup files or download NDSR User Recipes and User Product projects. The following screen shot shows a sample ticket:



If a password appears, replace it with the password provided by the NRC in the email you received notifying you that User Recipe and User Product projects are ready to download.

Select the checkbox to the left of the file name(s) and then select Download from the banner at the top. If you select multiple projects, they will be downloaded a single zip file. Save to the desired location, extract and then restore the backup file in NDSR2011.

**14.8.1 Send Backup Files to NRC.** After local quality assurance activities have been completed the lead interviewer moves the completed recalls to a single project. Next, the project is backed up to: C:\Program files\NCC\NDSR2011\Backup, and submitted to NRC via NetFiles. Immediately after sending the backup file to the NRC, the interviewer sends an email to the NRC SOL-Youth coordinator. The subject of the email should state: “(month-day-year) backup file from (name of field center)” and the message should include the following:

- Project abbreviation
- Number of recalls in a project
- NDSR version (the current version is NDSR 2011)

**14.8.2 Receive Backup Files from NRC.** The NRC provides backup files of User Recipes and User Products to the field centers using NetFiles. The NRC SOL-Youth coordinator posts the backup file on the ftp site and sends an email to the lead interviewer stating that a new backup file has been posted on the ftp site. The lead interviewer accesses the site, obtains the backup file, and confirms receipt with the NRC by email (**Appendix 10**).

### **14.9 Archive Dietary Recall Data at the Field Center**

Upon receipt of recalls at NRC, the field center is notified as to which projects can be removed from within the NDSR program and locally archived. An archived copy of all data should be kept until the study is complete. Frequent archiving keeps the number of stored recalls at a minimum, increasing the efficiency of the NDSR and the dietary interview.

### **14.10 Site Storage of Paper Documentation**

The lead interviewer files copies of the all materials related to the dietary interview. The participant ID number is used for record retrieval in the event of questions.

#### **14.11 Computer Failure**

NDSR automatically saves all data as entered. In the event of a temporary interruption in operating NDSR, recovery likely goes unnoticed by the participant. Field centers should make provisions for long-term power failure problems. In the event of computer hardware or software problems, dietary interviewers notify the lead interviewer or information technology support staff at the field center immediately.

### **15 Dietary and Supplement Quality Assurance at the Field Center**

The lead interviewer at each field center is responsible for ensuring the overall local quality of the dietary data collection. The dietary interviewers review the interviews, document unusual foods and amounts, and flag unreliable recalls.

On-site quality control includes two steps: Review and editing of each dietary recall by dietary interviewers within one or two days of collection, and review and editing of dietary recalls by lead interviewers within one week, with feedback provided to the respective dietary interviewer.

#### **15.1 Daily Review of Dietary Recalls**

With the collection of each recall, the dietary interviewer initiates the Dietary and Supplement Recall Checklist and upon completion of the recall, proceeds to review the data on the computer screen. Obvious errors may be corrected on the spot (e.g., entry of 10 hamburgers consumed when the dietary interviewer recalls that is was only one or entry a cup of instant coffee powder instead a cup of coffee prepared with instant powder). When the dietary interviewers have questions, they should discuss these with the lead interviewer to reach a consensus. Lead interviewers may consult with the NRC SOL-Youth coordinator for more information about the NDSR database entries that would help in making a decision. The following steps are taken during the daily review by the dietary interviewers:

- Check the Header tab. The Header tab is reviewed for complete and correct information including participant ID, date of intake, interviewer ID, visit number, interview type, and the language used during the interview.
- Check the Food tab. Each food and amount is carefully reviewed and confirmed. Unusually small or large portions are verified and any justification or rationale is documented in the Note field. Missing food information is checked for completeness.
- Check the Trailer tab. Ensure that notes provided for atypical intakes are complete.
- Check the Dietary Supplements tab. Entry of each dietary supplement and amount is carefully reviewed and confirmed. Missing product information is checked for completeness.
- Edit the dietary recall. The dietary interviewer conducts edits for each intake record within one to two days of initial data collection or after input from the lead interviewer.

## **15.2 Weekly Review of Dietary Recall Data**

At least once per week, the lead interviewer reviews all dietary and supplement recalls collected at the field center. The lead interviewer may make or recommend changes in the dietary and supplement recalls only after discussing the proposed change(s) with the dietary interviewer. It is the responsibility of the lead interviewer to document and communicate site-specific consensus decisions to the NRC SOL-Youth coordinator and to the dietary interviewers within his/her field center. NDSR Quality Assurance Reports to be generated for these weekly checks include:

**15.2.1 Check the Record Properties.** The Records QA Report is used to check information entered in the header and trailer fields. It is important that the participant ID and date of intake are correctly entered. After reviewing the Records QA Report, anything unusual about the dietary and supplement recall should be recorded in the NDSR notes field. Outliers for target nutrients are flagged to identify potential data entry problems related to the intake.

**15.2.2 Check the Foods QA Report.** The Foods QA Report lists each food and amount. Priority notes are flagged. All notes should be reviewed and information clarified as needed with the dietary interviewer. Key nutrients are listed for each food and may indicate problems with selecting the wrong food or entering an incorrect amount.

**15.2.4 Check the Dietary Supplements using the DSAM Product QA Report.** The DSAM Product QA Report lists each dietary supplement reported. Priority notes are flagged and should be reviewed and adjustments made as necessary. It is important to verify the product and amounts are correctly selected and the answer to the question “why taken” and notes are meaningful.

## **15.3 Submitting a New Food Request**

If any food other than mixed dishes is not in NDSR, the lead interviewer accesses the NCC New Foods Request form on the NCC website and completes the necessary information. If a mixed dish is missing in NDSR, the dietary interviewer enters all the information for the dish on the Missing Foods window. NRC resolves the New Food Request and edits the recall with the new information. At the end of each month, the field centers will receive an updated User Recipe project to be used for conducting the recalls.

## **15.4 Submitting the NDSR Recalls to NRC**

On a weekly basis, after quality assurance activities have been completed, the lead interviewer combines the recalls collected in two projects, creates a new backup file for each with the following information:

- Project name: Name of the field center and the date of the week intended to submit the backup file. For example: San Diego 01/11/2008 Visit 1 Recalls
- Project abbreviation: The first letter of the field center and the date. For example:  
S011108V1

The lead interviewer transmits the backup file to the NRC via the website. The NRC SOL-Youth receives the backup file and confirms receipt with the lead interviewer by email.

## **16 Annual NDSR Updates**

With each new release of NDSR, the field centers installs and transitions to the new database to take advantage of the more current, market reflective database and the added Hispanic foods. The timing for this transition is directed by the NRC SOL-Youth coordinator.

## **NUTRITION READING CENTER**

### **17 Introduction**

The Manual of Procedures has been developed by the Nutrition Coordinating Center (NCC) at the University of Minnesota. This manual contains the procedures for the dietary data management of the Hispanic Community Children's Health Study of Latino Youth (SOL-Youth) at the Nutrition Reading Center (NRC). The purpose of this manual is to document the NRC responsibilities for the dietary and supplement data collected at the four field centers (Bronx, Chicago, Miami and San Diego) including the standardization of the quality assurance review of data. All at NCC who are involved in the processing of SOL-Youth dietary and supplement data should be familiar with the contents of this manual and know their responsibilities for the study.

### **19 Nutrition Reading Center Personnel and Responsibilities**

#### **19.1 John Himes, Principal Investigator and Project Director**

Dr. Himes is responsible for the overall coordination of the SOL-Youth, NRC. He is on the ASOL-Youth Steering Committee, and is responsible for all communications with the University of North Carolina's Collaborative Studies Coordinating Center (CSCC) and financial officials at the University of Minnesota. He works closely with the dietary and supplement group to identify Hispanic foods and recipes to be added to the NDSR Food and Nutrient Database. Dr. Himes meets regularly with the NCC Service Center manager, SOL-Youth project nutritionist and database scientist to review work priorities, assess work progress, and overview timelines.

#### **19.2 Mary Stevens, Service Center Manager**

Ms. Stevens is responsible for the general oversight of the NRC activities related to dietary and supplement recall data collection for the SOL-Youth. She works with NRC staff to develop the data collection and quality assurance procedures. She supervises the NRC development of all related data collection forms and materials for the SOL-Youth. She also provides oversight for the quality-control procedures specific to the study. She customizes the NDSR training to meet the needs of the SOL-Youth protocol and leads the training and certification of the dietary interviewers. She edits the study Manual of Procedures with each NDSR version. Ms. Stevens manages the efforts of and works closely with the project nutritionist to ensure the quality of the dietary and supplement data collection.

#### **19.5 Alejandro Peralta, Project Nutritionist**

Mr. Peralta is responsible for the external quality control for the dietary and supplement data collected by the dietary interviewers at each field center. He provides expertise for the identification of the Hispanic foods and recipes to be added in NDSR Food and Nutrient Database. He maintains close communication with the SOL-Youth field centers and is involved in the implementation of the dietary and supplement data collection and processing. Mr. Peralta assists in the training and certification of the dietary interviewers. He coordinates the monthly calls with the lead interviewers and writes the monthly newsletter for dietary interviewers.

#### **19.6 Janet Pettit, Database Scientist**

Ms. Pettit leads the effort to update the NDSR to accommodate Hispanic foods. She coordinates the addition of new foods to the NDSR database. She contributes to the process of selecting

foods for addition to the database and ensures that the new recipe information meets NCC criteria for addition to the NDSR database.

### **19.7 Susan Seftick, Database/Quality Control Nutritionist**

Ms. Seftick is responsible for the resolution of new and missing database food requests for the SOL-Youth. She also researches food composition tables, websites, and other sources to obtain ingredient and nutrient information for foods not found and submitted for resolution by the field centers. She uses the NCC FoodCalc software to enter nutrient label and/or ingredient information for brand-name foods and for missing Hispanic foods and recipes. She provides expert guidance for the project nutritionist in conducting the NRC review of dietary and supplement recalls. Ms Seftick assists with the NDSR training and certification.

### **19.8 Mary Austin, Data Manager**

Ms. Austin is responsible for the overall flow of data for the SOL-Youth at NCC. She communicates with the field centers, ships all study materials and provides clerical support as needed. Ms. Austin will receive the NDSR dietary and supplement recalls from the field centers and prepare them for quality control processing. She ensures that the dietary and supplement data receive appropriate security and privacy protection during the processing at NCC. She prepares monthly data processing status reports for the CSCC and is responsible for transmission of data, NDSR backup and output files to the CSCC after NRC processing.

## **20 Communication and Data Transmission**

The NRC personnel maintain regular and close communication internally and with both the lead interviewers at each field center and with the CSCC. Information, study materials, forms and data are transmitted on a regular and ad hoc basis.

### **20.1 SOL-Youth Website**

Routine updates of the Diet and Supplement Manual of Procedures and related forms will be uploaded to the SOL-Youth website to make them available for all field centers.

### **20.2 Email and Telephone**

The lead interviewers call or send email messages to the SOL-Youth Project Nutritionist at NCC when he/she has questions or concerns regarding the dietary and supplement data collection. If the questions or concerns apply to all field centers, the Project Nutritionist addresses the issues on the monthly newsletter, so all interviewers receive the same information. The monthly newsletter will be sent via email to each dietary interviewer at the field centers.

### **20.3 Courier and US Mail**

Courier services will be used to ship study materials to the field centers. Shipments will be tracked to ensure delivery to the appropriate personnel at the field centers. Materials to be sent include the Food Amounts Booklets for the participants and amount estimation tools for the in-person interview.

### **20.4 NCC Website**

The NCC website ([www.ncc.umn.edu](http://www.ncc.umn.edu)) is used by the field centers to report a missing commercial, packaged and any food other than prepared dishes. The New Food Request Form is

completed with the information about the food or beverage and submitted to NCC for resolution. The New Food Request Form is filled out with the following information:

- Client Name: Name of the lead interviewer
- Client Number: 10801
- Institution: Name of the field center (Bronx, Chicago, Miami or San Diego)
- E-mail: [sefti001@umn.edu](mailto:sefti001@umn.edu)
- Phone Number: Phone number of the lead interviewer

## **20.5 NRC FTP Site**

NetFiles, an online file storage tool utilized by the University of Minnesota Office of Information Technology, will be used to transfer the NDSR backup files to the NRC. NetFiles enables secure storage and sharing of files on a University server that has been approved for storing private and protected data. NetFiles can be accessed using most web browsers and allows sharing of content with people outside the University of Minnesota.

## **20.6 Meetings at NRC**

NRC personnel meet at least once a week to discuss the materials that are developed and improved for the data collection, the standardization of procedures, and the identification of challenges before the study starts. They also discuss timelines and any issues related to the NDSR software and database. During active data collection, weekly meetings are held to discuss the status of processing of incoming dietary and supplement recalls and to note any issues that need to be communicated to the field sites or to the CSCC.

## **21 Forms and Databases Utilized at the NRC**

A number of forms are used to record information and to track data, monitor progress, and to ensure the overall quality and security of the dietary and supplement data received from the field centers. Information is recorded electronically in a Dietary Recall database for easy retrieval and reporting purposes.

### **21.1 SOL-Youth Dietary and Supplement Recall Interview Assessment Form**

This form (**Appendix 11**) is completed for the baseline and final recalls and is used to evaluate each interviewer during the certification process. It also is used during the field site visits when interviews are observed. Copies of the completed Interview Assessment Forms are maintained on file by interviewer at NRC for the duration of the study.

### **21.2 SOL-Youth Dietary Inquiry Form**

The SOL-Youth Dietary Inquiry Form (**Appendix 12**) is used by the NRC personnel during routine review of the dietary and supplement recalls during data collection. Questionable items found in the recalls are recorded on this form which is sent to the field center as email attachments. The lead interviewer at each site follows up in obtaining the needed information and returns the completed form via email to the NRC for inclusion in the dietary and supplement data as warranted.

### **21.3 SOL-Youth Field Center Visit Checklist**

This form (**Appendix 13**) is completed by the NRC personnel at the time of the field center visit. It provides information about the use of the materials and forms as well as the adherence to overall dietary and supplement procedures as noted in the Field Center Manual of Procedures.

#### **21.4 SOL-Youth Recall Database**

The SOL-Youth Recall Database includes information about the dietary and supplement recalls received at NRC and is used to track the incoming recalls and to generate the monthly status report for the CSCC. The information provided in the SOL-Youth Recall Database includes: participant ID, date of intake, visit number, interviewer ID, and number of inquiries, number of missing foods and missing dietary supplement products for each dietary and supplement recall collected.

#### **21.5 SOL-Youth Monthly Processing Status Report**

Every month the Data Manager generates a report to be sent to the CSCC. The purpose of this report is to inform the CSCC about NRC activities for the study. This report includes a summary of the information that is kept in the Recall Database, including the number of recalls received at NRC and the status of NRC processing of dietary and supplement recall data.

#### **21.6 NCC Service Center Quality Assurance Reports**

A number of customized NDSR reports are used to facilitate the review of the recalls received at NRC in a standardized manner, and to allow NRC staff to generate dietary inquiries to detect possible data-entry errors, missing foods and missing dietary supplements. These reports include:

**21.6.1 Records QA Report.** The Records QA Report lists all intake records; includes header and trailer notes. Nutrients that exceed nutrient maximum values (95% of NHANES 2005-06 intake distributions) and/or do not meet nutrient minimum values (5% of NHANES 2005-06 intake distributions) are flagged. Recalls are subsequently checked for accuracy of food selection or amount entry.

**21.6.2 Foods QA Report.** The Foods QA Report lists all foods and identifies foods with Notes and Priority Notes. Displays database amount maximum and minimum values for all foods and calculates percent of each, flagging food amounts that are > 100% of maximum value or < 100% of minimum value. Priority notes are reviewed and the dietary recall is edited as appropriate.

**21.6.3 Quick List Report.** The Quick List Report is printed and reviewed for diet and supplement recalls identified as part of the 10% quality assurance sample. The Quick List Report is compared to the Food Report to ensure that the foods listed during the first pass of the interview are accounted for either by food selection or notes that describe why a food reported on the Quick List has not been entered.

**21.6.4 Missing Food Report.** The Missing Food Report identifies all recalls with foods flagged by NDSR as missing during the diet and supplement interview. The recalls submitted to the NRC may have missing mixed dishes that cannot be found in NDSR. This report will be



used to identify frequently reported missing foods which should be considered for inclusion in the upcoming NDSR release.

**21.6.5 Missing DSAM Product Report.** The Missing DSAM Product Report identifies all recalls with dietary supplement products flagged by NDSR as missing during the diet and supplement interview.

**21.6.6 Meal QA Report.** The Meal QA includes all notes reported on the meal information window. Dietary interviewers use this field to document additional information reported by the participant such as the name specific name of the restaurant, other meal location or the eating occasion. Information in the meal note is reviewed used as warranted.

### **21.7 SOL-Youth New Food Request Form**

The NCC New Food Request Form (**Appendix 4**) is used to submit a missing commercial food to NCC for resolution. The form is available on-line at the NCC website which can be accessed from within the NDSR program or at [www.ncc.umn.edu](http://www.ncc.umn.edu). NCC will resolve the missing commercial food using the information provided on this form.

## **22 Annual Updates of the NDSR Program**

Every year, NCC releases a new version of the NDSR software including a new version of the NDSR food and nutrient database to more currently reflect the food marketplace. NCC makes adjustments and changes to improve the NDSR database, e.g. new foods and mixed dishes will be added, obsolete foods are deactivated, foods are reformulated and nutrient values are updated with improved information. Each year, with the release of the updated NDSR database, NCC provides the new version of the NDSR software to the field centers and communicate to the field centers as to the exact day that the new version should be installed and used for dietary and supplement collection.

## **23 NRC Training, Monitoring and Continuing Education of Field Staff**

Central training of the dietary interviewers ensures the standardization and quality of the dietary and supplement data collection at the four field centers. NRC staff develops and maintain the dietary and supplement training materials for the field centers. Prior to the start of the study, NRC staff trains all dietary interviewers at a central training workshop. All dietary interviewers must be certified by NRC staff following the training. Ad hoc training workshops for new field staff are conducted as needed by NRC staff. With each new release of the NDSR software, the SOL-Youth training materials are updated to reflect any changes in the new version.

### **23.1 NRC Training and Certification Process**

The training and certification includes the all aspects of the dietary and supplement interview; using the multiple-pass approach, dietary interview techniques, the use of the amount-estimation tools, use of scripts and interview prompts, and reviewing, making edits and corrections after each recall. It is intended that the dietary interviewers complete their baseline recall at the end of the last day of training. This allows the dietary interviewer to use all dietary and supplement materials to simulate an actual interview in a setting with the trainer. If some dietary interviewers do not complete the baseline certification recall the last day of training, they will

schedule the baseline recall with an NRC trainer for another day and this will be conducted by telephone.

### **23.2 Evaluating the Certification Baseline Recall**

Before the baseline recall is conducted, the NRC trainer prepares the SOL-Youth Dietary and Supplement Recall Interview Assessment Form with the appropriate information for the dietary interviewer. A copy of the Baseline Certification Script and the Participant Food Amounts Booklet are ready to be used during the interview. To standardize the certification process, the NRC trainer uses the same baseline and final scripts for all dietary interviewers. The scripts are available in English as well as in Spanish. The Recall Interview Assessment Form is used to assess the overall skills of the dietary interviewer in using the NDSR software and database, interviewing techniques, use of the amount estimation tools, and establishing rapport with the participant. After the completion of the baseline recall, the NRC trainer reviews the interview with the dietary interviewer and provides feedback about interviewing, finding foods and dietary supplements in NDSR, and adherence to the SOL-Youth protocols. This is also an opportunity to answer any additional questions the interviewer may have. Certification records for dietary interviewers will remain on file at NRC for the duration of the study.

### **23.3 Management and Assessment of the Certification Recalls**

Backup files containing at least ten practice recalls are submitted via the ftp site. Email notification is sent to the NRC data manager who retrieves the NDSR backup file from the ftp site. The backup file is restored to NDSR and receipt is confirmed via email to the lead interviewer and the dietary interviewer. Next, the final recall session is scheduled with the dietary interviewer. After restoring the backup file with the ten recalls, the data manager prints the Quick List, Record Properties Report, Foods Report, and the Dietary Supplements Report. She will also generate the Quality Assurance Reports as listed above. Each report is reviewed and evaluated by the NRC trainer and the project nutritionist. The NRC staff provides feedback in the form of written comments, as needed, on each of the above mentioned reports and discusses issues as needed before proceeding to the final recall with the dietary interviewer. Once the dietary interviewers are certified the lead interviewer and the CSCC are notified. An ad hoc report is provided to the CSCC with the names and interviewer identification numbers for interviewers as each group is trained and certified.

### **23.4 Conducting the Final Certification Recall**

In preparation for the final recall the NRC trainer gathers the materials including the SOL-Youth Recall Interview Assessment Form, the Final Certification Script, and the Participant Food Amounts Booklet. Before the dietary interviewer starts the interview, the NRC trainer provides feedback about the ten practice recalls and responds to any questions from the dietary interviewer. After completing the final interview, the NRC trainer highlights the important issues identified during the interview, provides recommendations for improvement, as needed, and reinforces the good practices noted.

### **23.5 Monitoring**

NRC personnel visit each field center during the first year of the data collection to evaluate adherence to the SOL-Youth Field Center Manual of Procedures, observe dietary and supplement interviews, evaluate local quality control procedures, understand field center challenges, check for confidentiality of dietary and supplement data and respond to questions

about overall NDSR data management and collection issues. Following the visit to the field center, the NRC staff will submit a detailed report to the CSCC about the progress and issues noted during the site visit. The SOL-Youth Field Center Checklist (**Appendix 13**) is used to document dietary and supplement data collection procedures.

## **23.6 Continuing Education**

At all times during the SOL-Youth, it is imperative that the dietary and lead interviewer practice the skills learned at training and use the NDSR program on a regular basis. During the study, the NRC will have an opportunity to provide information about general issues that will be useful for all dietary and lead interviewers. Specific problems identified during the review of recalls will be communicated directly to the dietary and lead interviewers so that they can learn from their experiences.

**23.6.1 Additional Practice Diet and Supplement Recalls.** Prior to the start of the full-scale study each dietary interviewer is required to collect one recall per day he/she is working for the diet and supplement section of the SOL-Youth and submit at the end of each week the recalls via the ftp site during the time period before the startup of data collection.

**23.6.2 Monthly Newsletter.** General issues noted during the review of recalls and during site visits are documented and communicated to the dietary interviewers on an ongoing basis in the form of a newsletter. This is sent monthly via email to all the field centers.

## **24 Preparing Materials for the Field Centers**

NRC staff has developed materials to be used by the dietary interviewers and participants to ensure the standardization and quality of the diet and supplement data collection at the four field centers.

### **24.1 Dietary Interviewer Training Manual**

The Training Manual has been generated as a guide to be used during diet and supplement workshop. Each dietary interviewer receives a Training Manual that includes information regarding the use of NDSR, procedures for conducting the diet and supplement recall, the use of interview materials, practice with NDSR, and quality assurance of the interviews. The Training Manual should be available at the field center to be consulted by the dietary interviewer when necessary.

### **24.2 Dietary Interview Notebook**

A Dietary Interview Notebook is provided to each dietary interviewer. Pages of the notebook are protected in plastic so that they may be used with each participant. Included in the notebook are the Participant Food Amounts Booklet, pictures of foods from the Hispanic Food Glossary, and calendar pages for discussing the upcoming telephone recall. The Interview Notebook is used during the in-person interview and should be kept at the field center.

### **24.3 Food Amounts Booklet**

The Food Amounts Booklet is used during the in-person and telephone dietary and supplement recalls. This booklet was developed for use in the Dietary Intervention Study in Children in 1993 and has been modified by the NRC staff for the SOL-Youth. The graphics are converted to volume or weight amounts to be entered into NDSR amounts. Each interviewer receives a copy

of the booklet with labels on the pictures and a conversion chart to facilitate the amount data entry. On a quarterly basis, the NRC provides copies of the Participant Food Amounts Booklet to each field center for distribution to the participants.

#### **24.4 Food Models**

The NRC has provided each field center with two sets of 3-dimensional food models to be used during the in-person interview to aid in estimating amounts and to educate the participant in the use of the Food Amounts Booklet. The household food models have been selected to reflect the 2-dimensional pictures of the Food Amounts Booklet and include cups, bowls, glasses and replica foods for items that are not easily measured using cubic volumes or dimensions. A small container with a cover is provided by the NRC. This is to be filled with loose dried beans which are purchased locally.

**24.4.1 Labeling of Food Models.** Each 3-dimensional food model is measured and labeled with the same markings as the 2-dimensional pictures. The amount to enter in NDSR is marked on the bottom of each model. These markings are intended to be used only by the dietary interviewer.

**24.4.2 Additional Food Model Sets.** Each field center has been provided with two sets of food models and an inventory list to keep track of the sets. If any items are damaged throughout the study, the lead interviewer contacts the NRC staff for replacement. No other food models or measuring devices will be used to conduct the diet and supplement recalls.

#### **24.5 Hispanic Food Glossary**

A Hispanic Food Glossary has been developed for the SOL-Youth to guide and facilitate the process of data collection for the dietary interviewers. The glossary lists 208 foods including many fruits, vegetables, and Hispanic dishes. The Hispanic Food Glossary is not intended to be an exhaustive listing of Hispanic foods. Rather, the intent is to have a tool that will help the dietary interviewers to consistently choose the correct food when entering dietary data into the NDSR. The glossary should be reviewed frequently by the dietary interviewers so the dietary interviewers will become familiar with the Hispanic foods, NDSR data entry, and uncommon names of foods. There are two types of listing available for the interviewers: the PDF file that is organized by alphabetical order (Spanish), does not contain accent marks, and includes hyperlinks. The purpose of this glossary is to be a searchable document available for the dietary interviewer. The other type of glossary is organized by alphabetical order in Spanish with accent marks. A hard copy of the glossary is provided to each dietary interviewer during training.

### **24 Nutrition Reading Center Procedures for Dietary and Supplement Data**

#### **24.1 Receipt of NDSR Backup Files at NRC**

On a weekly basis, after quality control is conducted at each field center, the lead interviewers send the backup files of completed records to NRC via the ftp site. If no backup files are received from a field center, NRC personnel contacts the lead interviewer regarding the status of the expected dietary and supplement recalls shipment to identify any possible problems that have been encountered with completing and submitting the recalls.

**24.1.1 Restoring Data Sent from the Field Centers.** The backup files are downloaded from the ftp site and restored to NDSR. The NRC data manager generates the NDSR Record Listing and confirms receipt.

**24.1.2 Confirmation of the Data Received at NRC.** The NRC data manager sends an email confirming receipt with the field center. The email contains information regarding the name of the project, the date of receipt and the number of records included in the project.

## **24.2 Quality Assurance and Editing of Dietary and Supplement Recalls**

NRC quality assurance reports are generated for incoming recalls. Reports identify recalls that need further examination, may require editing and/or further information from the field center. A random sample of 10% of recalls is identified for a detailed review. During the quality assurance review, the NRC generates Dietary Inquiries for the field center about questioned items. Therefore, dietary interviewers learn from their own experience to improve the quality of future dietary and supplement data collected. Missing foods and missing dietary supplement products are resolved and recalls are edited as needed. All edits made to the diet and supplement recalls are documented at NRC with the date and identification number of the person who made the change.

**24.2.1 Missing Foods and Dietary Supplement Products.** Foods and dietary supplements may be identified as missing during the diet and supplement recall. These missing items include new brand name food products that are submitted by the lead interviewer using the NCC website to transfer information required for resolution. NCC generate a resolution for these missing foods and the recall is edited accordingly at the NRC. Hispanic foods, mixed dishes and dietary supplement products reported and not included in the database are flagged by the NDSR program during data entry and resolved during the quality assurance review at the NRC. Editing of these missing items is completed at the NRC and the information is available for all field centers at the end of each month for use potential use in future recalls.

**24.2.2 Resolving New Brand Name Foods.** NCC resolves each new-food request using nutrient and ingredient information provided by the field centers and matching to foods in NDSR. Primary nutrients for comparison include: calories, protein, fat, carbohydrate and sodium. Fortification nutrients are also matched. When complete nutrient and ingredient information is available, new-food requests are resolved using a calculation. In this calculation, amounts of the major ingredients are adjusted so that the nutrient values of the ingredients best match the nutrient information and fall within NCC established nutrient tolerances. When complete nutrient and ingredient information is not provided, new-food requests are resolved using a variety of resources, including the most current (unreleased) database version, manufacturer information, and previously resolved requests. When information is not available, NCC judgment is used to resolve the missing item.

**24.2.3 Resolving New Hispanic Foods.** Before the study starts, the NRC will provide the field centers with User Recipes for the most common Hispanic dishes not in NDSR 2011. Each month of the study when new dishes are reported, additional User Recipes will be provided. The recipes not in NDSR 2011 will be submitted for possible inclusion in NDSR 2011. NRC staff use a variety of Hispanic/Latino cook books located at NCC serve as primary sources of information to generate user recipes. The lead interviewers may be consulted prior to final

selection of a recipe to determine if the one selected at the NRC is the most representative for the food in question. Since a recipe may widely vary in preparation, ingredients and preferences, NCC uses the most representative recipe to generate the user recipe. However, this rule may not apply to all cases because there are Hispanic dishes that have the same name in two countries or regions but the preparation and ingredients are different in this case, the country name would be included in the recipe name to differentiate between these two types of foods.

**24.2.4 Missing Dietary Supplement Products.** Missing dietary supplement are resolved at the NRC by checking information entered by the dietary interviewer against product information sources whenever possible. NRC staff save the Missing Product as a DSAM User Product, verify the information by checking against available resources including dietary supplement product websites. The diet and supplement recall is edited to include the validated User Product. If the information entered for a product cannot be validated by the NRC, information collected during the recall is used; however this product is used only in the resolution of the dietary supplement recall for this particular participant and is not included in the NDSR User Product backup file for the other field centers because it has not been validated.

**24.2.5 Data-Entry Rules.** NCC has developed rules about food entry which are essential to maintain consistency in data entry among the dietary interviewers over time. These rules are used when a participant is no longer available for clarification, or after all probing during the dietary recall fails to elicit the required information. Since NRC data-entry rules may not cover every data-entry situation, NRC staff will regularly provide updates of the data-entry rules for the field centers.

**24.3 Providing Missing Food and Missing Product Resolutions to the Field Centers**  
Each month NDSR backup files of User Recipe projects with new food resolution and Hispanic Recipes and User Product projects with new dietary supplement products are posted on the ftp site to make them available for all field centers.

#### **24.4 Archive of the Final Dietary and Supplement Data Files at NRC**

Electronic copies of the final dietary and supplement recalls are stored in a computer with access only for the personnel working for the SOL-Youth at NRC. Backup copies are stored on a secure server at the University of Minnesota, Division of Epidemiology and Community Health. All printed reports and forms are kept in folders at the NRC in a locked file cabinet until such time that the CSCC advises the NRC of the disposition of these files.

### **25 Transmission of the Final Dietary and Supplement Data Files to the CSCC**

Each month NRC submits a backup file and an output file with the final dietary and supplement data to the CSCC via the ftp. The Status Report informs the CSCC of the number of recalls that are in process either at NRC. Those recalls are not sent to the CSCC until they are completed. Therefore, any outstanding recalls are sent with a subsequent batch, usually at the end of the following month.

# Appendices





## Appendix 1: SOL-Youth Dietary and Supplement Recall Checklist

Participant ID: \_\_\_\_\_

In-Person Recall (check): \_\_\_\_\_

Telephone Recall (check): \_\_\_\_\_

Dietary Interviewer	Complete review on the day the recall is collected	Check (✓)	Date	ID**
Header tab reviewed (see instructions on the back of checklist).				
Food tab reviewed.				
Trailer tab reviewed.				
Dietary Supplement tab reviewed.				
Missing foods and notes edited. Questions noted.*				
Unusual portions verified and documented. Questions noted.*				
Daily backup copy made and copied to the site designated location.				
Reports are printed				
Dietary and Supplement Recall Checklist forwarded to the lead interviewer				
Lead Interviewer	Completes review within 1 week of collection			
NDSR QA Reports generated. Lead Interviewer notes made on electronic copies of reports. Reports saved at field center.				
Record QA Report reviewed. Participant ID and date of intake confirmed. Documentation for atypical or unreliable recall is checked.				
Foods QA Report reviewed. Documentation for unusual foods/amounts and notes is checked.				
Missing Foods submitted through NCC website.*				
Dietary Supplements QA Report reviewed. Check (✓) each supplement as reviewed. NDSR Notes are checked.				
Sign off (bottom right hand corner) on each report and attach to this form.				
Dietary Interviewer	Complete edits within 1 week of data collection			
Edits made as noted from the lead interviewer.*				
Backup copy made and copied to the site designated storage location.				
Lead Interviewer	Prepares for submission to NCC			
Check edits.				
Move the completed record to designated project.				
NDSR Backup file submitted to NCC through the NetFiles Program				

\*Use NA if not applicable.

\*\* Dietary or Lead interviewer identification number (3 digits)

## Instructions for SOL-Youth Dietary and Supplement Recall Checklist

**Note:** Remember to check (✓) as you verify each item checked.

### **Header Tab (Record Properties Report)** (For more information see MOP Section 11.17.1)

✓ Check the following:

- Participant ID is correctly entered as four digits as assigned: *First letter of the field center following by a sequential number and a check digit. Participant ID assigned by the CC.*
- Date of Intake is correctly entered as the day before the recall is conducted.
- Interviewer ID is correctly entered as: **3 digits given at the diet and supplement training.**
- Visit Number is correctly entered as: **1 (in-person interview) or 2 (telephone interview).**
- Language of the interview is correctly entered. **Include number and language separated by a comma.**

### **Food Tab (Foods Report)**

- READ** each food and beverage name aloud to yourself so that you don't start looking over the information without actually seeing it.
- Read each food amount aloud and **VISUALIZE** what was entered.
- Read **notes** for completeness and accuracy.
- Check Servings Made and Servings Eaten for Assembled Foods.
- Use the study approved amount estimation tools and a ruler to “re-create” the portions.
- Study approved amount estimation tools used correctly for all foods or beverages.
- Portion sizes of meat, poultry, fish and cheese are described appropriately and are reasonable.
- Unusually small or large portions verified and rationale documented.
- Missing foods include a complete description of the food and amount eaten.

### **Trailer Tab (Record Properties Report)**

- Read notes for completeness and accuracy.

### **Nutrients Per Food Report**

- Check the gram weight for unusual amounts. Reference points include:
- 28g cheese = 1 oz; 454g steak = 1 pound; 250 g chili = 1 cup
- Check individual food items that are >400 kcal, >25 grams of fat, or >500 grams.

### **Dietary Supplement Tab**

- Check the Dietary Supplement Report.
- Read notes for completeness and accuracy.
- Check the missing products for entire description of the product and list of ingredients.
- Verify the days, times, and amounts the product has been taken.
- Read and check the “Why taken” field for a meaningful answer.

## Appendix 2: SOL-Youth Telephone Recall Availability Form

Participant Name: \_\_\_\_\_

(English Version)

Participant ID: \_\_\_\_\_

<b>SOL-Youth Telephone Recall Availability Form</b>
-----------------------------------------------------

**Instructions:** In the space below, indicate the best days and times you would be available to receive a call for the 24-hour dietary recall. Because this call is unannounced, it is necessary that you list multiple days and times. This call may take 30-45 minutes of your time to complete. The dietary interviewer can call you from \_\_\_\_am to \_\_\_\_pm. Please keep your Food Amounts Booklet near your telephone for use during the telephone interview. A second copy of the Food Amounts Booklet can be provided to keep at work if you can be interviewed at work as well as at home.

Days	Best times of day to call	Check best times	Phone number (Include area code)
<b>Monday</b>	Morning (8AM-12N)		Day: _____
	Mid day (12N-5PM)		Evening: _____
	Evening (5PM-8PM)		Other: _____
<b>Tuesday</b>	Morning (8AM-12N)		Day: _____
	Mid day (12N-5PM)		Evening: _____
	Evening (5PM-8PM)		Other: _____
<b>Wednesday</b>	Morning (8AM-12N)		Day: _____
	Mid day (12N-5PM)		Evening: _____
	Evening (5PM-8PM)		Other: _____
<b>Thursday</b>	Morning (8AM-12N)		Day: _____
	Mid day (12N-5PM)		Evening: _____
	Evening (5PM-8PM)		Other: _____
<b>Friday</b>	Morning (8AM-12N)		Day: _____
	Mid day (12N-5PM)		Evening: _____
	Evening (5PM-8PM)		Other: _____
<b>Saturday</b>	Morning (8AM-12N)		Day: _____
	Mid day (12N-5PM)		Evening: _____
	Evening (5PM-8PM)		Other: _____
<b>Sunday</b>	Morning (8AM-12N)		Day: _____
	Mid day (12N-5PM)		Evening: _____
	Evening (5PM-8PM)		Other: _____

Please don't call before \_\_\_\_\_ am or after \_\_\_\_\_ pm.

Participant Name: \_\_\_\_\_  
 Participant ID: \_\_\_\_\_

(Spanish Version)

**SOL-Youth Forma de Disponibilidad de Horario para el Recordatorio Telefónico**

**Instrucciones:** Por favor, indique los mejores días y horas en los que usted estaría disponible para recibir un llamado para completar el recordatorio de 24-horas. Debido a que este llamado no es anunciado, es necesario que usted liste múltiples días y horas. Este llamado puede tomar unos 30-45 minutos de su tiempo en ser completado. El entrevistador puede llamarlo desde la(s) \_\_\_ a.m. hasta la(s) \_\_\_ p.m. Por favor mantenga el Folleto de las Cantidades de los Alimentos cerca de su teléfono para usarlo durante la entrevista telefónica. Usted puede recibir una segunda copia del Folleto de las Cantidades de los Alimentos para que lo mantenga en su trabajo, en el caso que usted sea entrevistado en su lugar de trabajo así como también en su casa.

Días	Mejores horarios para llamar	Seleccione Horarios	Numero telefónico (Incluya código de área)
<b>Lunes</b>	Mañana (8AM-12N)		Día: _____
	Mediodía (12N-5PM)		Tarde: _____
	Tarde (5PM-8PM)		Otro: _____
<b>Martes</b>	Mañana (8AM-12N)		Día: _____
	Mediodía (12N-5PM)		Tarde: _____
	Tarde (5PM-8PM)		Otro: _____
<b>Miércoles</b>	Mañana (8AM-12N)		Día: _____
	Mediodía (12N-5PM)		Tarde: _____
	Tarde (5PM-8PM)		Otro: _____
<b>Jueves</b>	Mañana (8AM-12N)		Día: _____
	Mediodía (12N-5PM)		Tarde: _____
	Tarde (5PM-8PM)		Otro: _____
<b>Viernes</b>	Mañana (8AM-12N)		Día: _____
	Mediodía (12N-5PM)		Tarde: _____
	Tarde (5PM-8PM)		Otro: _____
<b>Sábado</b>	Mañana (8AM-12N)		Día: _____
	Mediodía (12N-5PM)		Tarde: _____
	Tarde (5PM-8PM)		Otro: _____
<b>Domingo</b>	Mañana (8AM-12N)		Día: _____
	Mediodía (12N-5PM)		Tarde: _____
	Tarde (5PM-8PM)		Otro: _____

Por favor no llame antes de \_\_\_\_\_ a.m. o después de \_\_\_\_\_ p.m.

### Appendix 3: SOL-Youth Telephone Contact Log

Primary Day(s) to Call:        M   T   W   Th   F   Sa   Su  
 Primary Time(s) to Call:    am (8a-12p)    mid day (12p-5p)    pm (5p-8p)  
 Primary Phone Number:        \_\_\_\_\_

Collect Recalls from:  
 Participant ID:  
 Alternative Phone Number: \_\_\_\_\_

Line #	Date (mm/dd)	Time (am/pm)	Comments	Phone Contact Code	End Time (am/pm)	Interviewer ID
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

PENDING telephone contact codes

- |                              |                                      |
|------------------------------|--------------------------------------|
| 1- No answer/message left    | 5- Call back another day             |
| 2- No answer/no message left | 6- Participant refusal/wants to drop |
| 3- Busy signal               | 7- Needs new Food Amount Booklet     |
| 4- Call back later today     | 8- Other (add a note)                |

FINAL telephone contact codes

- 9- Recall completed (record end time for recall)  
 10- Other (add a note)

## Appendix 4: New Food Request Form

Fields marked with an asterisk (\*) are required.

Client Name*	<input type="text"/>
Client Number*	<input type="text"/>
Institution	<input type="text"/>
E-mail*	<input type="text"/> Resolution returned to this address.
Phone Number	<input type="text"/>
NDSR Version*	<input type="text"/>
New Food Name*	<input type="text"/>
Web Page	<input type="text"/>
Amount Consumed	<input type="text"/>
Serving Size	<input type="text"/> from label
Weight per Serving	<input type="text"/> from label
Calories	<input type="text"/> kcal
Fat	<input type="text"/> g
Saturated Fat	<input type="text"/> g
Trans Fat	<input type="text"/> g
Cholesterol	<input type="text"/> mg
Sodium	<input type="text"/> mg
Potassium	<input type="text"/> mg
Carbohydrate	<input type="text"/> g
Dietary Fiber	<input type="text"/> g
Sugars	<input type="text"/> g
Protein	<input type="text"/> g
Ingredients	<input type="text"/>
Vitamin A	<input type="text"/> %DV <input type="text"/> IU
Vitamin C	<input type="text"/> %DV <input type="text"/> mg

Calcium	<input type="text"/>	%DV	<input type="text"/>	mg
Iron	<input type="text"/>	%DV	<input type="text"/>	mg
Vitamin D	<input type="text"/>	%DV	<input type="text"/>	mcg
Vitamin E	<input type="text"/>	%DV	<input type="text"/>	mg
Vitamin K	<input type="text"/>	%DV	<input type="text"/>	mcg
Thiamin	<input type="text"/>	%DV	<input type="text"/>	mg
Riboflavin	<input type="text"/>	%DV	<input type="text"/>	mg
Niacin	<input type="text"/>	%DV	<input type="text"/>	mg
Vitamin B6	<input type="text"/>	%DV	<input type="text"/>	mg
Folic Acid	<input type="text"/>	%DV	<input type="text"/>	mcg
Vitamin B12	<input type="text"/>	%DV	<input type="text"/>	mcg
Pantothenic Acid	<input type="text"/>	%DV	<input type="text"/>	mg
Phosphorus	<input type="text"/>	%DV	<input type="text"/>	mg
Magnesium	<input type="text"/>	%DV	<input type="text"/>	mg
Zinc	<input type="text"/>	%DV	<input type="text"/>	mg
Selenium	<input type="text"/>	%DV	<input type="text"/>	mcg
Manganese	<input type="text"/>	%DV	<input type="text"/>	mg
Copper	<input type="text"/>	%DV	<input type="text"/>	mg

Other Information

# Appendix 5: Record Properties Report

## Record Properties Report

Nutrition Data System for Research 2007

Project Abbreviation: 09W001

Participant ID: TBD

Date of intake: 05/14/2007

---

Project Name: Alejandra's HCHS In-Person Recalls 10/01/07

Project Abbreviation: 09W001

Record Type: Recall

Data collected in NCC database version: 2007

Data collected in software version: 2007

Dietary Supplement Assessment Module: Yes

NHANES Dietary Supplement Database Version:2003-2004

Participant ID: TBD

Participant Name:

Date of Birth: 03/01/1954

Gender: Male

Life Stage Group: Males, age 51-70 y

Date of Intake: 05/14/2007

Day of Intake: Monday

Date of Entry: 05/15/2007

Interviewer ID: TBD

Visit Number: TBE

Site ID: TBD

Notes: Week 1 of data collection October 1-7-2007. In-person recalls TBD: To be determined

Amount of Intake Was: Usual

Information Was: Reliable

Notes:



# Appendix 6: Food Report

## Foods Report

Nutrition Data System for Research 2007

Project Abbreviation: 09W001

Participant ID: TBD

Date of Intake: 05/14/2007

---

✓ 8:00a BREAKFAST HOME

- ✓ 1. orange, fresh

1 medium - 2 5/8" diameter

- ✓ 2. milk, 1% fat or lowfat

1 1/2 CP

- ✓ 3. Poptart, other toaster pastry, regular, regular

1 each

✓ 10:30a SNACK WORK

- ✓ 4. chips - snack type, Doritos Tortilla Chips - Salsa Verde!

1 bag - single serving - each 1 OZ (1.00 OZ)

- ✓ 5. cola, diet, with caffeine, sweetened with aspartame

1 can - each 12 FO (12.00 FO)

✓ 1:00p LUNCH WORK

- ✓ 6. burrito, bean (meatless), with cheese

1 each - 6" long, 8" diameter tortilla folded

Food Variables:

6.v1 I: tortilla, white flour, commercial type - plain

6.v2 I: refried beans - unknown

6.v3 I: cheese - unknown

- ✓ 7. banana, fresh or ripe

1/2 small - 6" to 6 7/8" long (0.43 medium - 7" to 7 7/8" long)

- ✓ 8. water - tap

8 FO, without ice (1.00 CP)

✓ 4:30p SNACK WORK

- ✓ 9. corn flakes, presweetened (frosted)

## Foods Report

Nutrition Data System for Research 2007

Project Abbreviation: 09W001

Participant ID: TBD

Date of Intake: 05/14/2007

---

1/2 CP

Additions:

✓ 9.a1 milk, 2% fat or reduced fat

3/4 CP

Confirmed 2% fat milk purchased at work.

✓ 8:00p SNACK HOME

✓ 10. tea, spearmint

2 CP, without ice (16.00 FO)

no sugar or sweetener was added

✓ 11. cookies and bars, chocolate chip, without nuts, commercial package, regular

2 small (1.00 medium - approx 2 1/4" diameter)

✓ 9:00p DINNER/SUPPER HOME

✓ 12. salad, lettuce, tossed, with dressing, with tomatoes and/or carrots, without avocado, cheese or egg

1 1/2 CP

Food Variables:

12.v1 I: salad greens - mixed greens

12.v2 I: dressing for salads - oil and vinegar, homemade

12.v2v1 I: fat used in recipe - oil, Mazola Vegetable

12.v2v2 I: salt - regular

✓ 13. spaghetti - main dish (noodles and sauce), with tomato sauce, with meat, from recipe

1 CP

Food Variables:

13.v1 I: spaghetti sauce, with meat - homemade, unknown preparation

✓ 14. water - tap

12 FO, without ice (1.50 CP)

## Foods Report

Nutrition Data System for Research 2007

Project Abbreviation: 09W001

Participant ID: TBD

Date of Intake: 05/14/2007

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✓ 10:00p SNACK HOME

✓ 15. tea, camomile

1 CP, without ice (8.00 FO)

Additions:

✓ 15.a1 brown sugar

1 TS, unpacked

[End of Record]

*Legend: a = addition; i = component/ingredient; v = variable; check = complete; ? = incomplete; m = missing food*

# Appendix 7: Dietary Supplements Report

## Dietary Supplements Report

Nutrition Data System for Research 2007

Project Abbreviation: 09W001

Participant ID: TBD

Date of Intake: 05/14/2007

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✓ 1. NATURE'S WAY ALIVE! WHOLE FOOD ENERGIZER MULTI-VITAMIN TABLETS

Taken 30 times in the last 30 days, 1 tablet/day, and 1 time (1 tablet) yesterday

Taken for: 2 Months

Why taken: Health purposes, to prevent cold

✓ 2. TUMS REGULAR STRENGTH ANTACID / CALCIUM 200 MG

Taken 10 times in the last 30 days, 2 tablets/day, and 1 time (2 tablets) yesterday

Taken for: 3 Months

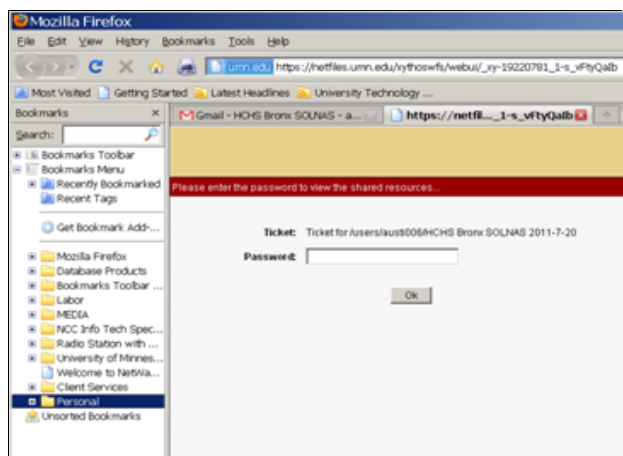
Why taken: heartburn

*Legend: check = complete; ? = incomplete; m = missing product*

## Appendix 8: Send NDSR Backup Files to NRC and Receive NDSR Backup Files from NRC

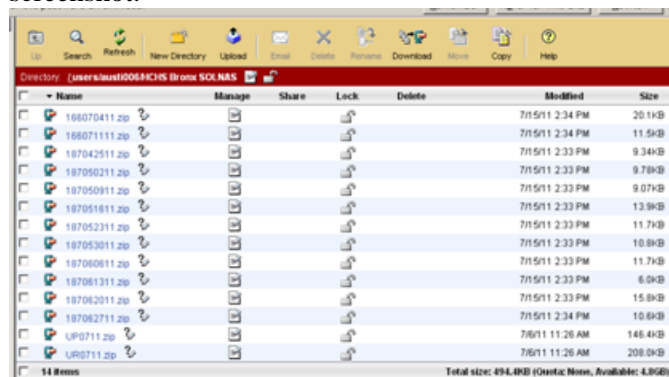
The following steps describe how to transfer NDSR backup files from the Field Centers or Coordinating Center to the Nutrition Reading Center (NRC).

The NRC data manager will initiate NetFiles sharing by creating a ticket for each field center and will email the link to each lead interviewer. Upon receipt of the link, the lead interviewer will click on the link and follow prompts insert the password and upload weekly NDSR backup files. The following screen shot shows a sample ticket:



If a password appears, replace it with the password provided by the NRC via email.

Select Upload and search/browse your computer for the NDSR backup file(s) to send. See the following screenshot:



After uploading files, a notification email should be sent to the NRC data manager, Mary Austin and the Project Nutritionist, Alex Peralta. The notification email should state the names of the backup files and the number of recalls in each backup file. Select the checkbox to the left of the file name(s) and then select

Download from the banner at the top. If you select multiple projects, they will be downloaded a single zip file. Save to the desired location, extract and then restore the backup file in NDSR2011.

When uploading files from the field center to the NRC, logon to NetFiles following the process described above.

Send an email with the subject line “(month-year) Backup file from (name of field center)” to Mary Austin at austi006@umn.edu and Alex (Alejandro Peralta Reyes) reyes067@umn.edu and include the following information:

- a. Project Abbreviation
- b. Dates of recalls (collected from – to)
- c. Number of recalls in the project
- d. NSDR version (in NDSR click on Help → About NDSR)

You will receive a confirmation email from NRC.

The same process is used to receive backup files for User Recipe and User Product Projects. Use the Checkbox to the left to select the monthly User Recipe and User Product Projects. Select the Download from from the banner at the top of the window. If you select multiple projects, the download will occur as a single zip file. Save this to a location on the hard drive of your computer and extract the projects from the zip file. Restore to the NDSR program.

## Appendix 9: SOL-Youth Dietary and Supplement Recall Interview Assessment Form

Dietary Interviewer ID: _____ Field Center: _____ NRC Staff participant: _____ Date of Observation: _____ Language: _____ 1. Baseline or 2. Final ( <i>circle</i> ) 1. In-person or 2. Telephone recall ( <i>circle</i> )
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<b>Set-up and Introduction</b>	Satisfactory (S) Needs Improvement (NI) Not Applicable (NA)
1. Computer set-up and NDSR program loaded and ready-to-go	
2. Forms and materials available	
3. Introduces himself/herself, establishes rapport	
4. Explains task and set the language	
5. Shows or references participant to the amount estimation tools	
6. Thanks the participant	
<b>Comments or Concerns on Set-up and Introduction</b>	

<b>Quick List</b>	Satisfactory (S) Needs Improvement (NI) Not Applicable (NA)
1. Follows interviewer prompts on quick list	
2. Prompts for additional food and beverage items with meals	
3. Prompts for items or snacks where there are time gaps	
4. Conducts review of Quick list, probing for omissions	
<b>Comments or Concerns on the Quick List</b>	

## SOL-Youth Dietary and Supplement Recall Interview Assessment Form

<b>Meal Information Window</b>	Satisfactory (S) Needs Improvement (NI) Not Applicable (NA)
1. State back appropriate time given during quick list (am, pm)	
2. Uses appropriate questions for meal name and location	
<b>Comments or Concerns on the Meal Information Window</b>	
<b>Food Additions and Food Search/Variable Windows</b>	Satisfactory (S) Needs Improvement (NI) Not Applicable (NA)
1. Asks about additions until they receive a “no” response	
2. Collects complete food detail per NDSR prompts	
3. Asks appropriate variable and ingredient questions	
<b>Comments or Concerns on the Food Additions and Search/Variable Windows</b>	

<b>Food Detail Window</b>	Satisfactory (S) Needs Improvement (NI) Not Applicable (NA)
1. Collects complete food detail per NDSR prompts	
2. Collects amount detail per NDSR prompts	
3. Uses NDSR units and types appropriately	
4. Uses amount estimation tools appropriately	
5. Confirms unusual amounts with the participant	
6. Leaves appropriate and clear notes as necessary	
<b>Comments or Concerns on the Food Detail Window</b>	



## SOL-Youth Dietary and Supplement Recall Interview Assessment Form

<b>Review of Record and Trailer Tab</b>	Satisfactory (S) Needs Improvement (NI) Not Applicable (NA)
1. Uses the interviewer prompts to review the record	
2. Asks for missing foods/beverages with each eating occasion	
3. Asks for missing items between meals	
4. Reviews the record reading back items, amounts, and details	
5. Asks the trailer tab questions appropriately	
<b>Comments or Concerns on the Review of the Record or Trailer Tab</b>	

<b>Dietary Supplement Assessment Module</b>	Satisfactory (S) Needs Improvement (NI) Not Applicable (NA)
1. Uses prompt to continue the recall with the DSAM	
2. Explains the next 10 questions need to be answer	
3. Collects product information per NDSR prompt	
4. Collects details of the product appropriately	
5. Collects a meaningful answer for the question “Reason for Use”	
6. Collects complete information of the missing products	
<b>Comments or Concerns of the Dietary Supplement Assessment Module</b>	

<b>Interviewing Technique and Overall Assessment</b>	Satisfactory (S) Needs Improvement (NI) Not Applicable (NA)
1. Motivates the participant and leads the interview	
2. Uses open-ended questions	
3. Maintains a comfortable pace	
4. Remains neutral throughout the interview	
5. Uses NDSR notes to document questionable foods and amounts	
6. Understands the NDSR database and can find foods quickly	
<b>General Comments or Concerns of Overall Assessment and Interviewing</b>	

<b>Dietary Behavior Questionnaire</b>	Satisfactory (S) Needs Improvement (NI) Not Applicable (NA)
1. Asks questions properly	
2. Reads all the choices for each question	
3. Records the answer the participant selected	
<b>General Comments or Concerns on the administration of the Dietary behavior Questionnaire</b>	



## Appendix 10: SOL-Youth Dietary and Supplement Inquiry Form

NRC Staff Name:  
Field center:  
Project abbreviation:

Date of inquiry:  
Lead interviewer:

**Instructions:** Review the following and provide a response if warranted. Return this form by e-mail to [reyes067@umn.edu](mailto:reyes067@umn.edu) or by fax to 612-626-9444 to Alex Peralta within one week of receipt.

Participant ID	Date of intake	Food number	Supplement number	Inquiry/Reminder	Response

For use by NRC only  
Date of Receipt:

## Appendix 11: SOL-Youth Field Center Visit Checklist

NRC observer name: \_\_\_\_\_ Mode (*circle*): 1 In-person interview

Date (*mm/dd/yyyy*): \_\_\_\_\_ 2 Telephone Interview

Interviewer ID: \_\_\_\_\_ Field Center: \_\_\_\_\_

**Instructions:** Check the following fields using one of the three key letters listed below that best describe the observations during the dietary and supplement recall. Any additional observation, please use the notes field.

**S:** Satisfactory **U:** Unsatisfactory **NA:** Not Applicable

1.

The dietary interviewer has all the material ready for the dietary and supplement recall

Please check:

\_\_\_\_ SOL-Youth Dietary and Supplement Recall Checklist

\_\_\_\_ SOL-Youth Telephone Recall Availability Form

\_\_\_\_ SOL-Youth Telephone Contact Log

\_\_\_\_ Nasco and household food models

\_\_\_\_ Computer set with the participant's information

\_\_\_\_ Bag with the dietary supplements

\_\_\_\_ Headset for the telephone interview

\_\_\_\_ Food Amount Booklet

\_\_\_\_ SOL-Youth Food Glossary

\_\_\_\_ Comfortable and private environment

NOTES:

### 2. Establishing Rapport

\_\_\_\_ Establishes and maintains a friendly and trusting atmosphere

\_\_\_\_ Sets the language with the participant

\_\_\_\_ Presents questions appropriately without biasing the interview

\_\_\_\_ Remains objective during the interview and accepts information in a non-judgmental manner

\_\_\_\_ Encourages active participation

### 3. Providing Clear and Simple Instructions

\_\_\_\_ The dietary interviewer provides an overview about the dietary and supplement recall and also explains how the food models and the Food Amounts Booklet will be used during the interview.

Opportunity for questions is provided

\_\_\_\_ Dietary interviewer does not get bogged down with details

### 4. General Interview Skills

\_\_\_\_ Develops a natural conversational flow and talks at a good pace

- \_\_\_ Uses prompts and probes effectively to get accurate answers from the participant
- \_\_\_ Uses transitions as necessary
- \_\_\_ Is prepared and knows the materials
- \_\_\_ Repeats or rephrases question if participant did not hear or is confused
- \_\_\_ Ask every question and option on the Dietary Behavior Questionnaire...does not assume he/she knows the answer the question
- \_\_\_ Remains patient

### **5. Fill out the Forms**

- \_\_\_ Completes the Telephone Recall Availability Form and explains the purpose of it
- \_\_\_ Registers each attempt to contact the participant during the second interview on the Telephone Contact Log

### **6. Quality Control**

- \_\_\_ Takes time to edit and review the interview immediately after its administration
- \_\_\_ Prints the Record Properties, Foods and Dietary Supplement Reports and place them on the participant's folder

### **7. Confidentiality of the Information**

- \_\_\_ Printed reports are stored in a secure location
- \_\_\_ The dietary interviewer does not discuss information collected with other participants
- \_\_\_ Any discussion between interviewers is conducted in private
- \_\_\_ The name of the participant is not included on the recalls

### **NOTES:**