

**24-HOUR DIETARY AND SUPPLEMENT RECALL COLLECTION
MANUAL OF PROCEDURES
[SAMPLE]**

1. Introduction

The purpose of this manual is to describe the data collection and quality assurance procedures for 24-hour dietary and supplement intake assessment for study x. It is essential that any person who is involved in the dietary and supplement data collection fully read and understand this manual.

2. Overview of the 24-Hour Dietary Recall Collection Schedule and Interview Procedures

Three 24-hour dietary and supplement recall interviews (2 weekdays and 1 weekend day) will be collected from each study participant. The first recall will be collected in-person during the study clinic visit. The second and third recalls will be collected over the telephone. The dates and times of these recalls will be unannounced (unscheduled) so that participants do not change their normal eating pattern. However, during the clinic visit the participant will be asked to indicate the preferred days of the week and times of day to be called and the telephone number(s) at which they may be reached. Email addresses will also be collected and used when participants are difficult to reach by phone.

The 24-hour dietary and supplement recall interview elicits a detailed summary of all foods, beverages, and dietary supplements consumed by participants during a complete 24-hour period (from midnight-to-midnight) for the day preceding the interview. Information is obtained on the *time* of each eating occasion, the *type of meal* (breakfast, lunch, supper, snack), and the *location* of the meal (home, school, other), as well as *what* and *how much* was consumed. The data obtained from the 24-hour dietary recall can be used to examine food patterns and nutrient intake estimates from foods and dietary supplements.

The information collected during the 24-hour recall interview will be entered directly into the Nutrition Data System for Research (NDSR). This software includes comprehensive food and supplement databases NDSR has built-in, standard prompts for guiding the interviewer in obtaining from the study participant detailed information about the foods they ate and supplements used. The NDSR requires specialized training and extensive practice in order to effectively utilize it conduct a research interview. Consequently, all interviewers will be required to complete NDSR training and certification prior to collection dietary and supplement recalls from participants. The NDSR User Manual will be used by interviewers as a resource. The Manual provides documentation on program features as well as Data Entry Rules (DER) which assist in standardizing decisions for situations when participants cannot provide information. NDSR was developed and is supported by the University of Minnesota Nutrition Coordinating Center (NCC). NCC may be contacted for NDSR related questions.

3. Dietary Data Collection Staff

Three dietary interviewers will conduct the dietary and supplement intake interviews. One of these individuals will be designated to serve as a lead interviewer to provide oversight for dietary data collection, including overseeing and carrying out quality assurance.

3.1 Lead Interviewer. The lead interviewer will have training in dietetics, food science, human nutrition, or home economics. He/she will have skills to anticipate or detect possible problems that may affect the overall dietary data quality. He/she will be responsible for supervising the collection and management of the dietary data and the development of study data entry rules to be used in conjunction with NDSR DER. He/she will conduct quality assurance of the dietary recalls. Errors identified may be corrected by the lead interviewer or communicated to the dietary interviewer for correction. He/she will be responsible for data management. Data management tasks will include generating and securely storing NDSR-back up files (electronic copies of the dietary intake records) on a daily basis. The lead interviewer will serve as the study liaison with NCC, contacting the Center with questions about the Nutrition Data System for Research (NDSR) program and database.

3.2 Dietary Interviewers. The dietary interviewers will have knowledge of the dietary intake patterns of the study population. The interviewers will be responsible for conducting the dietary and supplement recalls according to the dietary and supplement data collection procedures. They welcome the participant and have all materials ready for each interview. It is essential that the interviewers be comfortable with the NDSR software, and able to locate foods within the system with ease. On a regular basis, they will review the study data entry rules. Dietary interviewers will review the information collected immediately after finishing each dietary recall. He/she will generate the Quick List, Record Properties, Foods, and Dietary Supplements Reports for future reference. These reports will be printed and stored in the study participant's folder.

4. NDSR Training and Certification

4.1 Overview of Training Program. All interviewers will complete a two-day training workshop held by NCC. This training includes: use of the NDSR software, conducting the research interview, data review and documentation, data back-up, record management, and quality-control procedures. After completion of this training, a four hour training will be lead by study staff to orient the interviewers to study specific procedures.

4.2 Overview of Certification Process. The certification process, which is completed after the training, evaluates the interviewer 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. Requirements for NCC certification include the following:

4.2.1 Conduct a Baseline Recall with an NCC Trainer. The baseline recall provides an opportunity to receive individualized instructions for using NDSR: navigating the software and database and conducting the research interview. The baseline recall will be conducted by telephone following the training. The NCC trainer observes this interview and provides immediate feedback.

4.2.2 Conduct at Least Ten Practice Recalls. Dietary interviewers complete at least ten practice recalls with volunteer participants who are similar to potential study participants. 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 NCC for review and feedback.

4.2.3 Conduct a Final Recall with an NCC 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 by telephone with the NCC trainer. NCC notifies the study coordinator of the certification status and the interviewer identification number is assigned by the study.

5. Space, Software, Hardware and Materials

5.1 Space. The dietary interviews will be conducted in a location that is free from distractions and that includes the tools necessary to complete the dietary and supplement assessments for the study. Secure storage will be available for participant files and materials related to the dietary interviews. A participant file with information relevant to the dietary assessment will be available to the dietary interviewer for each recall.

5.2 NDSR Software. Three copies of NDSR will be licensed through NCC and loaded onto the computers to be used by the interviewers. Updated versions of NDSR will be installed as they become available.

5.3 Computers. Each interviewer will be assigned a computer that meets the system requirements specified in the NDSR User Manual. The computer will have a connection to the study computer network folder for use by the interviewer in backing up copies of the dietary and supplement recall interviews for protection from loss.

5.3.1 Computer Failure. NDSR automatically saves all data as entered. In the event of a temporary interruption in operating NDSR, restart the computer and program as quickly as possible and resume the interview by opening the participant record and clicking the 'Continue' button.

5.4 Computer Printers. At the end of each dietary and supplement recall, the dietary interviewer prints NDSR reports that are used for quality assurance and that serve as a secondary backup of the dietary and supplement recall. Consequently, at least one printer will be available for each computer used in collecting the recalls.

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

5.6 Calendar. A calendar should be available for each dietary interviewer. This can be used at the beginning the in-person 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 (see Appendix 1) to check on availability for future recalls.

5.7 Amount Estimation Tools for In-person Interviews. Accurate quantification of foods and beverages is essential for obtaining useful dietary data. Some participants are more adept than others in accurately estimating amounts of foods and beverages but all should have access to the same tools to aid in this process. For in-person interviews, each interview station should have a complete set of amount estimation tools. This set will include an assortment of household cups, glasses, spoons, bowls, a ruler, replicas of select foods (Nasco models), and a copy of the Food Amounts Booklet (FAB) available from NCC. To promote participant understanding of how to use the FAB, the dietary interviewers will briefly describe each page before proceeding to collect the 24-hour recall. Also, the participant will be given a copy of the FAB to take home for use during the telephone recalls. No other food models or measuring devices should be used for study dietary and supplement recalls.

5.8 Amount Estimation Tool for Telephone Interviewers. The Food Amount Booklet given to participants at the in-person interview will be used during the telephone interviews. As mentioned earlier, during the in-person interview orientation to the FAB will occur in conjunction with other amount estimation tools to help the participant understand how to recall and estimate the quantities of foods consumed.

5.9 Dietary Recall Forms. Several forms will be used to assist the dietary interviewers in the data-collection process. The Dietary and Supplement Recall Checklist (see Appendix 2) documents each step in the process of dietary data collection and local quality assurance. The Telephone Recall Availability Form (see Appendix 1) and the Telephone Contact Log (see Appendix 3) are used to facilitate contacting the participant to conduct the telephone recall. These forms are stored in each participant's folder which is returned to the locked file cabinet at the end of the work shift.

Dietary and Supplement Recall Checklist: The Dietary and Supplement Recall Checklist is initiated with each dietary recall and serves to document quality control carried out by the dietary interviewer. (One per dietary and supplement recall collected). (See Appendix 2)

Telephone Recall Availability Form: At the conclusion of the in-person interview each participant will be asked to complete the Telephone Recall Availability (see Appendix 1) to indicate possible days and times to complete the telephone recalls. The participant must identify several best days and times since the telephone recall is unannounced.

Telephone Contact Log: A telephone contact log will be kept for each participant to record all attempts to contact him/her. Detailed notes will be made about special situations including difficult-to-reach participants. If the dietary interviewer is not able to collect the telephone recall, the Telephone Contact Log (see Appendix 3) will serve as a record of his/her attempts.

6. NDSR Project Set-up.

The lead interviewer should set-up two NDSR projects on each interviewer's computer for the collection and storage of the three dietary recalls that will be collected for each participant. One of the projects will be used to collect the first recall (collected in-person). The other project will be used for collection of recalls two and three (collected by phone). The project type selected for both projects should be 'Recall'.

For the first recall (in-person recalls) the following NDSR preferences should be set:

Method Preferences

Require on record header: name of participant, interviewer ID, and visit number.

Select meal time format: standard

Select for Food entry: use quick list, require note if amount exceeds max., require meal name, and require meal location

Dietary Supplements

Time period for supplement intake: 24-hour intake

Interview Type: announced/scheduled

User Preferences

No changes need to be made- use all of the default settings

For the second and third recalls (telephone recalls the following NDSR preferences should be set:

Method Preferences

Require on record header: name of participant, interviewer ID, and visit number.

Meal time format: standard

Food entry: use quick list, require note if amount exceeds max., require meal name, and require meal location

Dietary Supplements

Time period for supplement intake: 24-hour intake

Interview Type: unannounced/unscheduled

User Preferences

No changes need to be made- use all of the default settings

7. General Guidelines for Working with Study Participants

7.1 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.

7.2 Privacy and Confidentiality. The dietary interviewer gains trust by assuring there are no wrong answers and that the information provided 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 a secure location.

7.3 Advance Preparation for Conducting the In-person 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.

7.4 Advance Preparation for Conducting the Telephone Dietary Interviews. Before dialing the participant's phone number complete 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 interviewer's copy of the Food Amount Booklet is available and that all necessary forms are in place. If the participant is reached, the dietary interviewer introduces him/herself, explains why he/she is calling, and asks the participant if it is a good time for them to complete the interview, which should take about 30 minutes of their time.

8. Conducting the NDSR 24-hour Dietary Recall Interview

8.1 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?"

Pause, wait for their response, spend a moment 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!"

When conducting a telephone interview ask the participant if they have the Food Amounts Booklet (FAB) with them or can take a minute to go find it for use during the interview. If the participant can't find the booklet, write down the participant's mailing address and let him/her know that a new booklet will be mailed to them. Thank them for their time and let them know you'll call them back after the booklet has been mailed. If the participant has been difficult to reach by phone (e.g. repeated attempts have been made to reach

the participant for the telephone recalls), proceed with the interview without the booklet. In the notes field in the trailer tab record that the 'Interview was conducted without FAB'.

8.2 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.

8.3 Probing on 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?" Pause, wait for and respond to questions, and proceed: "What was the first time you had something to eat or drink?" Enter the response then as needed say: "What did you have at that time?" 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.

8.4 Reviewing the 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 work or before bed?" Any errors should be corrected, and any additional foods the participant may report are added at this time.

8.5 Collecting Complete Meal, Food, and Amount Detail. Next the participant is asked to recall 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 detail for each food, an open-ended question "How much did you eat (drink)?" is asked to obtain the amount eaten.

8.5.1 Collecting Meal Information. 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." 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.

8.5.2 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

8.5.3 Entering the Meal Name. NDSR meal names include Breakfast, Lunch, Dinner/Supper, Snack, School Lunch, and Other. 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? 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.

8.5.4 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. 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

8.5.5 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).” Then, reading from the NDSR screen the dietary interviewer says: “Did you add anything to the (NDSR inserts the name of the food)?” The dietary interviewer continues asking the additions question for each food until a “no” response is received.

8.5.6 Collecting Complete Food 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?” 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).

8.5.7 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 New Food Request Form <http://www.ncc.umn.edu/services/newfoodrequestform.php> to submit a request to NCC. The lead interviewer includes all possible information about the missing food including the client number for the study. NCC 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.

8.5.8 Collecting Food Amount Information: An on-line prompt for the amount reminds the dietary interviewer to say: “How much did you eat (drink)?” 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)?”

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. 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?”

Guidelines for Amount Probing. After introducing the study 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 units such as a “large” apple, a “thin slice” of tomato. 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.

Using NDSR Amount Prompts. 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?” This type of question 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.

Using NDSR Food Specific Units. 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.

Using the Marked Containers. 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?” 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.

Ice in Beverages. 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 NCC using the NDSR Data Entry Rules.

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?” or “Did you eat all of it?” help to identify the unconsumed portions.

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.

8.6 Reviewing the Dietary Intake Recall. After completing the last food or beverage reported, the dietary interviewer makes one last pass to probe for missed snacks, meals, foods or beverages, 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).”

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)?” 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 work, 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.” The process continues until each meal and food has been reviewed and documented as needed in the NDSR notes.

8.7 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 lead interviewer. 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. In this case, the amount is corrected or a meaningful note is added to explain how the large 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 larger or small portions, missing condiments, and modifications of foods such as a McDonald’s cheeseburger, when only half of the bun was eaten. Notes allow the lead interviewer and the NCC 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.

8.8 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?” 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)?”

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.

9. Conducting the NDSR Dietary Supplement Recall

9.1 Overview. 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. This includes the all types of dietary supplements and over-the-counter antacids. Over-the-counter antacids are included because many of these products contain calcium.

9.2 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. 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.

9.3 Introduction to the Dietary Supplement Interview. 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. As I ask each question, please list any product that you have taken over the past 24 hours.” The dietary interviewer asks the participant if he/she has any questions. 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 supplement over the past 24 hours, I still need to ask each of these questions.”

9.4 Probing Questions for Dietary Supplements. The dietary interviewer proceeds by asking the participant: “Did you take any multivitamins like One-A-Day or 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. Next, the dietary interviewer asks about the other product categories included in the NDSR probes.

9.5 Requesting the Dietary Supplement Containers. If a participant reports using one or more products in response to the screening questions, information must 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 the telephone interviews the dietary interviewer asks: “Now we need the label information for the products that you reported. Do you have the containers available? I will wait while you gather them.”

9.6 Entering Complete Information of Dietary Supplements. Next, the dietary interviewer refers to the containers the provided for use in the selecting the supplement products from the DSAM database. 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.

9.7 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.

9.8 Final Supplement Questions. 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.

9.9 Reviewing the Information Collected

The final step during supplement data collection and includes reviewing the information collected and 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.” After reviewing the list with the participant, the dietary interviewer says: “This completes the interview. Thanks for your participation!”

9.10 Ending the Dietary Interview

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?” Pause, wait for and respond to questions, and proceed: “You did a great job and I really enjoyed talking with you.” If subsequent recalls will be collected by phone, a reminder is given to keep the Food Amounts Booklet in a safe place

10. After the Recall Interview

10.1 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 NCC study 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).

10.2 Printing NDSR Reports. As soon as possible following the dietary interview, the Record Properties Report, the Foods Report, and the Dietary Supplements Report should be printed, attached to the Dietary and Supplement Recall Checklist and placed in the respective participant folders.

10.3 Creating NDSR Backup Files. On a daily basis backup files should be created and copied to the study network folder for security purposes.

11. Additional Considerations for Conducting the 24-Hour Dietary and Supplement Recall

11.1 Entering the Visit Number. The visit number field should be utilized to indicate whether the recall is the first, second, or third of the three recalls to be conducted with the participant (enter 1, 2, or 3).

:

11.2 Interviewer ID: Each interviewer will be assigned a three digit ID by the study coordinator. This code should be entered in the 'Interviewer ID' field of the header tab for each recall completed by the interviewer.

11.3 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.

11.3.1 Selecting NSDR 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.

11.3.2 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.

11.3.3 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.

11.3.4 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.

11.3.5 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.

11.3.6 Become Familiar with Foods That May be Frequently Reported. Since fast foods, snack foods, and school foods may be an important part of the diet of the study participants, dietary interviewers will visit the local supermarkets and fast food restaurants to become familiar with the choices available.

11.3.7 Supplements Reported During the 24-Hour Recall. The dietary interviewer should NOT enter and 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.

12. Additional Information for Qualifying and Entering Amounts in NDSR

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.

12.1 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.

12.2 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.

12.3 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 in 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.

12.4 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.

12.5 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.

12.6 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?”

13. Special Considerations for Telephone Interview

Because the exact day for the telephone interview is not scheduled in advance, the Telephone Recall Availability Form (see Appendix 1) 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 a 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.

14. Dietary and Supplement Quality Assurance

The lead interviewer 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 the lead interviewer within one week, with feedback provided to the respective dietary interviewer.

14.1 Daily Review of Dietary Recalls by the Interviewers. With the collection of each recall, the dietary interviewer initiates the Dietary and Supplement Recall Checklist (see Appendix 2) 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 it 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 NCC study 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.

14.2 QA to be carried out by the lead interviewer

14.2.1 Overview of QA process to be carried out on batches of recalls

1. Missing Foods and Missing Products in the records are resolved by selecting a close matching food/supplement in NDSR, creating a User Recipe or User Product, or submitting food to NCC as a missing food resolution and entering resolution provided by NCC.
2. Lead interviewer reviews all priority notes (PN) and corrections are made to the recall as appropriate.
3. NDSR QA reports are used to identify additional data entry issues.
4. DER are updated throughout QA process as needed
5. The lead interviewer communicates any issues or questions regarding the recall to the interviewers for future reference and education.

14.2.2 Resolving Missing Foods and developing data entry rules

1. The NDSR Missing Food List Report is generated for records in the batch.
2. Each Missing Food in the list is resolved one of three ways- a close matching food in NDSR is identified; a User Recipe is created; or food is submitted to NCC as a Missing Food and a User Recipe is created for the resolution provided by NCC.
3. When a Missing Food is resolved with a new User Recipe, the User Recipe is saved to the User Recipe project in NDSR at [INSERT STUDY SPECIFIC NAME].
4. Edits are made to the recalls in NDSR to address all missing foods in the records.

14.2.3 QA Review and QA Reports to be carried out for all records

1. NDSR QA Reports are used to identify data entry errors and missing dietary supplement products. The QA reports are not saved. NDSR automatically saves a text file for each report. To remove these after completing the batch QA, go to the location where the QA report is being saved (check the NDSR Project Preferences to confirm) and delete these text files.
2. Decisions made during the QA review are documented in the appropriate NDSR Note field to help support decisions made when future inquiries are received about the data.

Foods QA Report

- a. Generate and Open the Foods QA report.
- b. Sort by Food Detail Note. Read all notes and make changes to data as needed.
- c. With each problem identified, return to the NDSR to make changes to the recall. If significant changes are made to foods, it may be necessary to generate a new Foods QA report before checking the nutrient outliers.
- d. Go to Data tab and select Filter or Sort for each of the following items.

The following filters/sorting to identify common data entry problems:

- i. Filter **Unit Selected** for OZ and FO entered. (Deselect “select all” and check FO and OZ.) Assure all beverages are reported in FO and proper documentation is present for foods reported in OZ.
- ii. Filter **Unit Selected** and look for shapes (3D wedges, cube, cylinder or sphere). Shapes entered in NDSR are solid and may overestimate foods since foods are not typically perfect geometric shapes. Use the reference amount to gage under and over estimation.
- iii. Filter **Food Name** for Food industry additives and ingredients (CING) and Nutrients (NTRN). These should not be selected except as part of missing foods.
- iv. Filter **Food ID** for blanks to identify User Recipes or assembled foods. Assure that the serving sizes are correct and the assembled foods have been portioned correctly.

The following filters identify food and nutrient outliers:

- i. Filter for Database Maximum and Minimum Amount flags. Check the Food notes to assure proper documentation for amount warnings and assure documentation matches amount entered.
- ii. Filter for kcal greater than 800 kcal for adults. Review foods and amounts selected.
- iii. Filter for sodium greater than 3000 mg for adults. Review foods and amounts selected.

Meal QA Report – used to identify meal times and locations

- a. Generate and Open Meal QA Report.
- b. Check to assure am and pm have been entered correctly
- c. Read all Meal notes and respond as needed.
- d. Sort by energy and look for extreme amount of calories per meal
- e. Sort by sodium and look for extreme amount of sodium per meal

Record QA Report – use to identify extreme nutrient outliers.

- a. Generate and Open Record QA Report.
- b. Check Header for notes that belong on the foods. Make sure that you already identified and dealt with the issue. Check for other notes that need attention.
- c. Read all Trailer notes and respond as needed.
- d. Review record for <500, >5000 kcals, review sodium and caffeine for large amounts that may indicate problems with user recipe yields not caught in Foods QA report review. If values for these nutrients are much larger than most other days, look deeper into record for errors.
- e. Edit Records and indicate items to include in DER and staff communication.

DSAM Reports – use to identify missing products that require resolution and interviewer notes

- a. Generate and Open the Missing DSAM Products List Report.
- b. Create a DSAM User Product for each missing product.
- c. Replace missing DSAM products in the records with appropriate DSAM User Products
- d. Generate and Open the DSAM Products QA Report.
- e. Review the notes in the reports to identify any issues that need to be addressed.

14.2.4 100% QA on sample

1. A 20% sample is selected using the random numbers table. The lead interviewer compares the Quick List report to the Foods tab or Foods report looking for discrepancies between the two.
2. The lead interviewer assures there are interviewer notes demonstrating probing for long gaps between meals and no beverages with meals. The record is reviewed for likely additions to coffee or cereal. The reference amounts are reviewed to assure they seem plausible in comparison to the rest of the day or previous eating patterns of the participant.

Appendix 1

Name:

Participant ID:

Sample Telephone Recall Availability Form

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 should only take 20-30 minutes of your time to complete. 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. Use the Note section to record dates of vacation or work related travel when you would be unavailable.

		Best times of day to call (Indicate all possible times)	Phone number (Include area code)
Monday	<input type="checkbox"/>	morning (8AM-12N)	Day: _____
	<input type="checkbox"/>	mid day (12N-5PM)	Evening: _____
	<input type="checkbox"/>	evening (5PM-8PM)	Other: _____
Tuesday	<input type="checkbox"/>	morning (8AM-12N)	Day: _____
	<input type="checkbox"/>	mid day (12N-5PM)	Evening: _____
	<input type="checkbox"/>	evening (5PM-8PM)	Other: _____
Wednesday	<input type="checkbox"/>	morning (8AM-12N)	Day: _____
	<input type="checkbox"/>	mid day (12N-5PM)	Evening: _____
	<input type="checkbox"/>	evening (5PM-8PM)	Other: _____
Thursday	<input type="checkbox"/>	morning (8AM-12N)	Day: _____
	<input type="checkbox"/>	mid day (12N-5PM)	Evening: _____
	<input type="checkbox"/>	evening (5PM-8PM)	Other: _____
Friday	<input type="checkbox"/>	morning (8AM-12N)	Day: _____
	<input type="checkbox"/>	mid day (12N-5PM)	Evening: _____
	<input type="checkbox"/>	evening (5PM-8PM)	Other: _____
Saturday	<input type="checkbox"/>	morning (8AM-12N)	Day: _____
	<input type="checkbox"/>	mid day (12N-5PM)	Evening: _____
	<input type="checkbox"/>	evening (5PM-8PM)	Other: _____
Sunday	<input type="checkbox"/>	morning (8AM-12N)	Day: _____
	<input type="checkbox"/>	mid day (12N-5PM)	Evening: _____
	<input type="checkbox"/>	evening (5PM-8PM)	Other: _____

Note:

Appendix 2

Sample 24-hour Recall Checklist

Participant ID: _____ Date of Intake: _____
(Day before the 24-hour dietary recall interview)

NDSR Project Abbreviation: _____ Visit / Recall Number: _____

Start Time: _____ End Time: _____

Completes review and initials on the day the recall is collected.	Initials	Date
Record Properties, Food, and Dietary Supplements Reports printed		
Header, Food, and Trailer tab reviewed (see instructions on page 2)		
Questionable foods and/or amounts indicated with a Priority Note flag*		
Forward recall with reports to lead interviewer		

*If not applicable, write "X" in "Initials" column.

Instructions for Data Quality Control Conducted by the DR Interviewer

Header Tab (Record Properties Report)

Verify the following:

- ρ Record Type is Recall (without supplements)
- ρ Participant ID is correctly entered as assigned
- ρ Date of Intake is correctly entered as the day before the recall is conducted
- ρ Name Field is the participant title and last name (i.e. Ms Austin)
- ρ Date of birth is entered
- ρ Gender is entered
- ρ Lifestage is auto-completed
- ρ Interviewer ID is correctly entered as assigned
- ρ Visit Number is correctly entered
- ρ Site ID is correctly entered
- ρ Enter Header Note as needed. Read Header Note for completeness and accuracy.

Food Tab (Foods Report)

- ρ **READ** each food name
- ρ Read each food amount and **VISUALIZE** what was entered
- ρ Use the study approved amount estimation tools and a ruler to “re-create” the portions
- ρ Read notes for completeness and accuracy

Verify the following:

- ρ Interviewer-entered recipes include a complete description of the food
- ρ Study approved amount estimation tools used correctly for all foods or beverages
- ρ Portion sizes of meat, poultry, fish and cheese are described appropriately and are reasonable
- ρ Missing foods include a complete description of the food and amount eaten
- ρ Use the Priority Note to flag any questionable items for the lead interviewer

Trailer Tab (Record Properties Report)

- ρ Enter Trailer Note as needed and read for completeness and accuracy

Dietary Supplements Tab (Dietary Supplements Report)

- ρ **READ** each supplement name
- ρ Read each supplement amount and **VISUALIZE** what was entered
- ρ Read notes for completeness and accuracy

Appendix 3

Sample Telephone Contact Log

Intake Day(s) collected: M T W Th F Sa Su
 (X out intake days collected)

Best time(s) to call:

Expires:

Preferred Method of Contact:

Email:

Home Phone :

Work Phone :

Cell Phone :

*Collect two weekday intakes and one weekend intake
 (preferably not 2 in a row)*

Participant ID #:

Participant name:

Participant date of birth:

Gender:

Visit: 1 2 3

Line #	Date (mm/dd)	Time (am/pm)	Comments (Write the <u>intake</u> day of the week on the line below when a recall is collected; Mon, Tues, Wed, etc.)	Phone Contact Code	Interviewer ID
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Telephone contact codes

- 1 – No answer/answer machine/left message
- 2 – Busy signal
- 3 – Call back w/no appointment
- 4 – Reschedule call back for convenience
- 5 – Refusal to participate in recall

- 6 – Participant cannot be located
- 7 – Participant too ill to talk
- 8 – Participant deceased
- 9 – Change of phone # or name
- 10 – Tried to drop

- 11 – Needs new Food Amounts Booklet
- 12 – Other