Guidelines for Nutrition Assessment

(CS:17.0 Documentation of a Complete Nutrition Assessment)

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Weighing and Measuring

Texas WIC Program
Procedure Guidelines – CS:17.0

Instructions for Obtaining Current Weight

Pediatric beam-balance scale: Weigh infants and small children on a pediatric beam balance scale.

Preparation:

1. Cover the scale with scale liner or table paper. Change liner paper for each participant.
2. Slide the weights to the left to zero balance the scale. Adjust the scale if out of balance.
3. An infant may be weighed in a dry diaper and/or lightweight t-shirt; it is not necessary to remove these articles of clothing.
   a. It is not necessary to subtract the weight of the diaper or t-shirt.
   b. It is the responsibility of the LA staff to ask the parent/caretaker to check for a dry diaper.
4. For infants and children older than 12 months, remove shoes and heavy outer clothing such as coats, jackets, and bulky sweaters.

Obtaining Weight:

1. Gently place the infant or child in the center of the covered scale bed. The infant should be placed lying down on their back in a comfortable position, unless he/she can sit up alone. Make sure the child is not holding on to the scale, and do not let the caretaker touch the child or the scale during the procedure.
2. Start with the weights at zero and slowly move the pound weight to the right until the balance arm begins to tip, then move it back one pound.
3. Move the ounce weight until the balance arm is centered.
4. Read the measurement to the nearest ounce.
5. Record the measurement on the growth chart and Participant form. If the weight data is unknown or not available, enter 999 pounds and 0 ounces.

Adult beam-balance scale: Weigh children whose weight exceeds the weight limit of a pediatric beam-balance scale and prenatal and postpartum women on the adult beam balance scale.

Preparations:

1. Have the applicant remove shoes, and heavy outer clothing such as coats, jackets, and bulky sweaters.

2. If a child is wearing a diaper, have parent/caretaker check for a dry diaper.
3. Zero balance the scale.

Obtaining Weight:

1. Have the applicant step onto the center of the scale platform with feet slightly apart for better balance.
2. Move the pound weight slowly to the right until the arm is centered. For older children and adults, move the 50-pound weight until it fits into the proper groove, and then move the pound weight.
3. Read the measurement to the nearest ounce. Record the measurement on the growth chart and Participant form. If the weight data is unknown or not available, enter 999 pounds and 0 ounces.

Weighing Equipment

1. Weight should be obtained with a beam-balance scale with non-detachable weights and a "zero-balance adjuster" (screw-type preferred). NOTE: Bathroom and other spring-type scales are NOT to be used.
   a. Women and children's weights are to be obtained using a floor-model, beam-balance scale. The measurements should be readable to the nearest ounce.
   b. Infants are to be measured on a pediatric, beam-balance scale. The measurements should be readable in increments of one-half ounce.
   c. Electronic digital scales may be used if they meet the following USDA guidelines (Bid specifications for electronic scales must be such that the below criteria are met):
      i. Accuracy of measurements are within one-half ounce for pediatric scales, and within four ounces for adult scales.
      ii. The scale has zero adjustment.
      iii. Measurements are linear with minimum error at both low or high ranges.
      iv. The scale provides measurement reproducibility.
      v. The scale is durable and easy to maintain.
2. To assure the accuracy of the adult beam-balance scale, place the scale on an uncarpeted floor, where possible. If the floor is carpeted, place the scale on a ¾ inch thick hard surface. Place the pediatric beam balance scale on a sturdy table.
3. Each day before clinic begins, balance all scales using the following procedures:

a. Remove everything from the scale. If scale paper is used, balance with scale paper.
b. Place the upper (ounce weight) and the lower (pound weight) directly over their respective zeros.
c. Turn the adjustment screw on the left side of the beam until the balance indicator is centered. The arm is centered when it rests in the center of the movement range.
d. For beam-balance scales, which do not have an adjustment screw, follow the manufacturer's directions for zero balancing.
e. Return scales to zero after <u>each</u> use.

4. LAs shall calibrate scales annually using standardized weights (e.g., 20, 25, and 50 pounds). Documentation of the calibration should be maintained at the clinic site.

Instructions for Obtaining Current Length / Height

Recumbent length: Infants and children younger than 24 months shall be measured on the recumbent length board. Older children, who require assistance to stand or have difficulty following directions, shall be measured on the recumbent length board.

<u>Preparations</u>:

1. Cover the board with scale liner or table paper. Change paper liner for each applicant.
2. Remove shoes and heavy/bulky outer clothing such as coats, jackets or bulky sweaters.
3. Ask parent/caretaker to remove all hats, hair barrettes or anything else in the child's hair that could prevent obtaining an accurate measurement from the crown of the head.

<u>Obtaining Length:</u>

1. Place the infant or child on his back on the recumbent board.
2. Ensure the proper head position using the **Frankfort Plane**. The Frankfort Plane is an imaginary straight line drawn from the bottom of the bone of the eye socket to the hole in the ear. This line should be perpendicular to the surface of the recumbent measuring board.
3. Have the assistant or parent/caretaker hold the infant's or child's head firmly against the headboard until the measurement is complete. Instruct the assistant or parent/caretaker to hold the infant's or child's head securely with cupped hands over the ears, and if possible, with straight arms.
4. Check to make certain that the infant or child is looking up and his chin is not tucked in against his chest or stretched too far back. Ensure that the head, body, and toes are centered and in a straight line and flat on the measuring board.

5. Place an open hand (palm and fingers flat) firmly on the infant's or child's knees (do NOT force the knees together) and gently push both legs flat down against the recumbent board, fully extending the legs.
6. Using your other hand, slide the footboard against the infant's or child's feet until the heels of both feet are firmly against the footboard.
7. Read the measurement to the nearest ⅛ inch. (If the measurement falls between ⅛ inch increments, round up.)
8. Record the reading on the growth chart and Participant form. If the length data is unknown or not available, enter 99 0/8 inches.

Standing Height: Children 2 years of age and older who can stand without assistance and prenatal and postpartum women shall be measured standing.

Preparation:

1. Have the applicant remove shoes and heavy/bulky outer clothing such as coats, jackets, and bulky sweaters.
2. Have the applicant remove hat and hair barrettes or anything else in the hair that could prevent obtaining an accurate measurement from the crown of the head. Document if applicant has braids or weaves that were not removed.

Obtaining Height:

1. Have the applicant stand directly in front of the measuring device facing outward. The tape should run directly down the center of the back.
2. To correctly position the body, use the **mid-axillary line**, an imaginary straight line that runs through the side of the body from mid-shoulder through the ankles.
3. Make sure the mid-axillary line is perpendicular to the floor, or the base of the board. The correct body stance in relationship to the measuring board is established when the applicant touches at least one part of the body against the measuring board. Proper placement of the body using the **mid-axillary line** may result in only one part of the body touching the back of the measuring board; this may include the buttocks, shoulder blades and/or the heels. The applicant's heels may not touch the back of the measuring board, particularly in overweight or obese applicants. Once proper body contact is established, do not force any other part of the body to touch the measuring board.
4. Make sure the feet are in the correct position in relation to the measuring board or tape. There are several possible correct positions: Knees together and feet together; Knees together and

feet apart; Knees apart and feet together; or Thighs touching, knees and feet apart. Note: The correct position is determined by which body part touches first when the applicant draws their legs together.

5. Ensure the applicant's head is positioned correctly using the **Frankfort Plane.** The Frankfort Plane is an imaginary straight line drawn from the bottom of the bone of the eye socket to the hole in the ear. This line should be parallel to the floor.
6. To correctly position the head it is recommended to place your hand along the chin and jaw line to help the applicant position their head correctly. Obtain the applicant's permission to touch their face, or guide them with verbal instructions.
7. Make sure that the shoulders are level; re-check the feet and body position, the mid-axillary line, and the head position (Frankfort Plane).
8. Place the headpiece flat against the wall so it forms a right angle. Lower it until it firmly touches the crown of the head.
9. Hold the right-angle headpiece steady and have the person move out from under it. Make sure the headpiece does not move.
10. Read the measurement at eye level where the lower edge of the headpiece intersects the measuring tape or where specified on equipment. Read it to the nearest ⅛ inch. (If the measurement falls between ⅛ inch increments, round up.) If the individual is taller than the measurer, the measurer should use a stool to read the measurement at eye level.
11. Record the measurement on the growth chart and Participant form. If the height data is unknown or not available, enter 99 0/8 inches.

Measuring Equipment

1. **Infants and children from birth to 24 months**, or young children who need assistance standing or have difficulty following directions:
   A recumbent board is used to obtain an accurate length measurement of an infant or a young child. NOTE: A pediatric exam table is NOT acceptable for measuring length.
   a. Recumbent Board: Consists of three parts, 1) a flat, calibrated board, 2) a stationary headboard, and 3) a moveable footboard.
      i. The stationary headboard is at a right angle to the measuring surface and is wider and taller than the infant's head.
      ii. The moveable footpiece is at a right angle to the measuring surface.

b. The measurement should be read while infant is on the board.

2. **Adults and children**, 24 months and older who can stand without assistance and can follow directions:
   Standing height measurements are obtained by using a metal or other non-stretchable measuring tape used in conjunction with a 6-inch deep right angle headpiece, or a full length measuring board mounted to the wall.
   a. Minimum standards for equipment for measuring standing height are as follows (Non-stretchable measuring tape or full-length measuring board – DO NOT use the hinged headpiece on a beam-balance scale to measure standing height. This will not give an accurate measurement of a participant's height):
      i. The measuring tape should be flat, made of non-stretchable material, and readable in increments of 1/8 inch.
      ii. The tape should be firmly attached to a true vertical, flat surface.
      iii. If attached to a wall, select an area without a baseboard or carpet. If an area without a baseboard is not available, wall spaces shall be used to compensate for the baseboard and to ensure the measuring board is mounted parallel to the wall.
      iv. The "zero" mark of the tape should be exactly at the point where the floor and the vertical surface meet.
      v. The headboard should be wide and deep enough (at least 6 inches) to assure measurement at the crown of the head.
      vi. The headboard should have one right angle so it can be held parallel with the floor and perpendicular to the measuring surface while height is measured.
   b. Follow manufacturer's instructions for operation, care, and maintenance of the equipment.

Plotting of Data on Growth Charts and Prenatal Weight Gain

1. **Infants and children**: The current weight and height/length shall be plotted on the appropriate growth charts for infants and children.
2. **Recumbent length** shall be plotted on the length-for-age percentiles growth charts, Birth to 36 months. **Standing height** shall be plotted on the stature-for-age percentiles growth charts, 2 to 20 years.
3. **Premature infants**: Use the standard 0-36 months chart to plot premature infants. Plot the "adjusted" gestational age, the age that has been "corrected" to allow for prematurity until the infant is 2 years of age. Do not plot weight-for-age or length-for-age until the premature infant has reached the equivalent age of 40 weeks

gestation. Document "Unable to plot" on the growth chart and record gestational age. It may be recommended to plot the growth of extremely premature infants, or very low birthweight (VLBW) infants on the 0-36 months growth charts until they are 3 years of age. **Note**: Premature infants (infants born at 37 weeks gestation or less) must be weighed and measured the same as full-term infants; document growth data on the participant form.

4. **Pregnant women**: The current weight gain shall be plotted on the appropriate prenatal weight gain grid.

Special Considerations

1. When **non-standard procedures** are used to obtain length or weight, or when **accurate measurements cannot be obtained from a healthcare provider**, document the situation.

2. **Wheelchair-bound** participants who cannot be weighed or measured using standard clinic equipment, refer to CS:17.0, section II.A, and section III - use of medical data obtained from other health care source. If the participant is unable or unwilling to bring this data from a physician and other conditions of nutrition risk can be identified, the height and weight may be omitted. The reason for the omission must be documented in the medical record, "999 lbs., 0 ounces" for weight and "99 0/8 inches" for height/length shall be entered in the Texas WIN system.

Diet History
(Dietary Recall and Assessment)

Texas WIC Program
Procedure Guidelines - CS:17.0

1. **Instructions for completing dietary forms:** The dietary recall and diet history questions shall be completed on the appropriate category specific state agency forms.

   Infants (WIC 42, 42a)
   Assessment Questions for Infants
   1) The parent/caretaker may answer all the questions on the left side on ***both*** sides of the form by placing a check mark in the appropriate "Yes" or "No" blank. Instruct them to list all the foods and beverages, in addition to breastmilk and/or formula, consumed in the past 24 hours or on a typical day if more appropriate (e.g., if the infant was sick or the parent/caretaker was not with the infant in the past 24 hours). ***The shaded areas on this form are intended for staff use only.*** If the parent/caretaker is unable to complete the questions, the CA should obtain information through client interview. Some LAs may opt to have staff complete the form instead of the applicant.

   Women and Children (WIC 44, 44a, 45, 45a)
   List All Foods
   1) Either the applicant, parent/caretaker or WIC staff can list the foods and beverages the applicant consumed in this section.
   2) *List* all the foods and beverages consumed in the **past 24 hours or a typical day** if more appropriate (e.g., if the applicant was sick or if it was a holiday).
   3) The list should include all foods, beverages, between meal snacks and before bed snacks eaten during this period. Indicate the amount consumed of each food or beverage.

   Food Habit Questions
   1) Either the applicant, parent/caretaker or WIC staff can complete the Food Habits Questions by checking "Yes" or "No" by the questions listed.

2. **Dietary recalls shall be obtained** by local agency (LA) staff that have completed the *Diet History/Dietary Recall & Assessment* self paced training guide. Applicants/participants may be asked to keep a 24-hour diet record to submit at certification for assessment by the

CA. This dietary record can then be attached to the appropriate assessment form without rewriting the information. **The portion sizes consumed must be documented**. Portion sizes documented by the applicant/participant shall be reviewed and verified by the LA staff.

3. **Scoring of the dietary recall/record** shall be completed on the appropriate assessment form according to the following procedures:
    a. Compare the foods eaten and the amounts consumed to the Dietary Recall Assessment Guidelines, or "Serving Sizes Reference Guide." If the amounts consumed differ from the serving sizes, divide the amounts consumed by the amounts listed for one serving in the Guidelines to determine the number of servings or portion of a serving eaten. If a food or beverage is not listed on the Reference Guide, determine if it is similar to any other food or beverage listed, and then score appropriately. The diets of women and children are compared to the USDA Food Guide Pyramid. For each food group and category of applicant, there are recommended numbers of servings. The number of servings are represented by the boxes within the corresponding sections of the Pyramid. Check one box for each full serving of a food consumed.
    Note: Partial servings (less than 1 serving) throughout the day may be combined to form complete servings in all food groups.
    b. Scoring of the diet is not required if the applicant is determined to have a risk condition other than "inadequate diet."
    c. If "Inadequate Diet" is not utilized as a condition and/or there are less than three deficiencies, "00" shall be recorded on the form, or the actual number of deficiencies.
    d. When the dietary recall/record must be scored (no other risk condition exists), the LA has the option to stop scoring after three deficiencies are found.
    e. The LA continues to have the option to score the diet recall/record completely.
4. **Assessment of the dietary recall** shall be performed by a CA. If applicant completes the diet history and/or the food habit questions, go over the list of foods and beverages consumed and confirm amounts during the interview. Ask open-ended questions if information seems incomplete. When necessary, ask probing questions to obtain more information. Wait to counsel until all information has been obtained.
5. **Documenting** the date and name of the staff member/s taking and/or assessing the diet recall on the Diet History form is optional and at the discretion of the LA director.

6. **All risk codes identified** on the Diet History form must be transferred to the appropriate WIC Participant Form/WIC Nutrition Risk Codes Form (WIC-36, 38, 39, 40 or 41). The risk codes must be identified by either checking or circling the appropriate code.

Hemoglobin and Hematocrit

Texas WIC Program
Procedure Guidelines - CS:17.0

Instructions for Determination of Hemoglobin/Hematocrit

1. Obtain a sample from the applicant's finger or heel. Because the heel has a larger surface area and is easy to grasp, it is recommended that the heel be used for infants and children who are between seven and eighteen months of age.
2. All WIC staff performing hematological testing must be trained on the manufacturer's instructions for the particular brand(s) of equipment being used at the local agency.
3. For applicants who provide medical data from their health care source, including hemoglobin or hematocrit level, refer to CS:17.0, section II.C.4.iii, and section III.

For additional information on performing fingersticks and hemoglobin/ hematocrit tests refer to the WIC video and self-paced training guides on obtaining hemoglobin/hematocrit and the manufacturer's instructions for the particular brand(s) of equipment being used at the local agency.

Obtaining blood sample**:**

1. Wash hands prior to obtaining blood sample. Wear disposable gloves on both hands. Only after the entire procedure is completed remove and immediately dispose of gloves; this includes handling cuvettes or capillary tubes to determine readings, and disposing of all used blood collecting supplies. After disposing gloves, wash hands before continuing with assessment.
2. Gloves should not be reused: Wear a fresh pair of gloves to collect blood samples for each participant; this includes family members. Gloves should not be washed or disinfected for continued use.
3. Cleanse the skin with a 70% alcohol swab. When determining whether to air dry or wipe dry before puncturing, follow the manufacturer's instructions for the particular brand of hemoglobin or hematocrit equipment being used.
4. Using a sterile, disposable lancet, make a quick but firm jab that is deep enough to allow blood to flow freely. Follow manufacturer's instructions if a mechanical lancet is used (such

as autolets). Mechanical lancets must have disposable lancets and platforms.

a. Dispose of used needles, lancets and platform in a puncture resistant container.
b. Never reuse a needle or lancet.

5. When determining the number of drops of blood to wipe away with dry gauze or cotton ball, follow the manufacturer's instructions for the particular brand of hemoglobin or hematocrit equipment being used.
6. Wait for a spontaneous flow of blood and collect the blood. If blood does not flow freely, puncture a different finger or site in the heel. Do not milk or squeeze the puncture as this may cause tissue fluids to mix with the blood and dilute the sample.
7. When obtaining a blood sample, place the end of a clean capillary at the point of puncture and fill the tube. An uncalibrated tube should be filled ½ to ¾ full. A calibrated tube should be filled from the end opposite the calibration mark, and filled to the calibration mark. Whenever possible, fill two tubes.
8. Do not allow airflow below the calibration mark in a calibrated tube.
9. Gently rotate the blood sample 5 to 10 times to mix the heparin (anti-coagulant) in the tube with the blood, or follow manufacturer's instructions.
10. When blood collection is complete, press a sterile gauze pad or cotton ball to the puncture site until bleeding has stopped. Adhesive strips should be used if there is excessive bleeding.
11. Seal the tube with plastic clay.

<u>Determining hematocrit level</u>:

1. Follow the manufacturer's instructions for spinning the samples.
2. If a tube has air bubbles after spinning and a second sample was not taken, discard the tube and take another blood sample.
3. Use a hematocrit reading device or manually calculate the hematocrit percentage. Do <u>not</u> use the 'Readacrit' on top of the centrifuge.
4. Record the reading to the nearest whole number in the applicant's or participant's assessment form. If the hematocrit data is unknown or not available, enter 99.

<u>Determining hemoglobin level</u>:

1. Obtain blood using procedures described above.
2. Use a hemoglobinometer or Hemocue® and follow manufacturer's instructions on use, including calibration and reading sample results.

3. Record the reading in the applicant's or participant's record. If the hemoglobin data is unknown or not available, enter 99.9.

Equipment for Determination of Hemoglobin and Hematocrit

Hemoglobin

1. Hemoglobinometer or photometer.
2. Reagent cuvettes or microcuvettes for performing hemoglobin tests when using the Hemocue® photometer only.

Hematocrit

1. Microcentrifuge.
2. Capillary tube.
3. Plastic clay capillary tube sealer.
4. Hematocrit reading device.

Supplies: The following supplies will be used when performing fingersticks:

1. Disposable latex gloves on both hands.
2. Alcohol (70% isopropyl) or alcohol prep pads.
3. Gauze squares or cotton balls.
4. Lancet.
5. Adhesive strips (band-aids) when needed.
6. Puncture-resistant disposal container designed for contaminated materials ("Sharps" container).

Equipment: Calibration of Hemoglobin and Hematocrit Equipment

Equipment shall be maintained and calibrated according to Clinical Laboratory Improvement Amendments (CLIA) requirements in the Federal Regulations, 42 CFR PART 493.1215, 493.1217.

1. Calibration of equipment shall be done in accordance with the manufacturers' recommendations and instructions in order to comply with CLIA regulations.
2. If the clinic has a certificate of moderate complexity, a quality control test shall be performed twice a day and results recorded in a maintenance log.
3. All actions taken for proper preventive maintenance on equipment shall be recorded in a maintenance log.

Health History

Texas WIC Program
Procedure Guidelines - CS:17.0

Health History (Medical/Maternal History)

1. Assessment of the health history shall be performed by a Certifying Authority (CA).
2. Review the responses; identify any and all problems and clarify/document answers in the shaded areas on the Health History Form. "Yes" responses need to be clarified; the shaded area provides a Comments section to clarify/document answers. If you identify the client responded "Yes" to a health question, but further probing reveals that it really is not a risk condition, document the clarification in the "Comments" section and place a check mark in the NV (not valid) column. The Code column is for applicable risk codes. It is optional, but highly recommended, to circle the identified risk codes and/or to write in the risk codes not listed on the form.
3. Transfer the risk codes from the Health History form to the appropriate WIC Participant Form.
4. Local Agencies may use other local assessment forms, if required by the local agency, but only in addition to the SA assessment forms.