

Infant

The following categorical nutrition management guidelines should be used when certifying infant WIC clients. The required information must be assessed and documented in the KWIC system for a WIC certification. Elements indicated by an asterisk (*) are useful but not required to assess WIC eligibility. Underlined items indicate WIC risk factors, which should be assigned as identified or autocalculated by the KWIC system. See the Nutrition Risk Factors Manual for a complete definition of each risk factor. In addition, the nutrition management guidelines for specific conditions should be used as determined appropriate by risk factor assessment.

DEFINITION: A person from birth to the first birthday.

RATIONALE: Nutritional status is an important factor affecting growth and development. Nutritional assessment techniques help to identify clients at risk and provide the basis for nutritional management, monitoring and evaluation.

MANAGEMENT:

1.0 GOAL:

- 1.1 To promote optimal nutritional status through an adequate intake of essential nutrients and to maintain desirable growth parameters throughout the first year of life.
- 1.2 To provide adequate support of the breastfeeding dyad to encourage a positive breastfeeding experience and increase duration of breastfeeding. All infants should be seen within 10 days after birth for proper breastfeeding assessment. A program to contact breastfeeding dyads, provide mothers a self-screening tool and/or some other form of contact prior to 10 days for breastfed infants is encouraged. The Breastfeeding Peer Counselor Program is a structured way to provide contacts.

2.0 GUIDELINES:

- 2.1 Demographic information is collected at each certification.
- 2.2 Income information is assessed at each certification.
- 2.3 Identity of both the child and caregiver is documented at certification.
- 2.4 The Rights and Responsibilities Statement is read and signed at each certification.
- 2.5 The caregiver is provided the opportunity to register to vote at each certification.
- 2.6 Immunization records are screened at certification and mid-certification.
- 2.7 Nutritional risk is assessed at each certification and mid-certification.

- 2.8 Nutrition counseling is provided at each certification and mid-certification.
 - 2.9 Appropriate referrals should be made at each certification and mid-certification.
 - 2.10 Infants certified before 6 months old must be given the opportunity to attend two additional appropriate nutrition education contacts.
 - 2.10.1 The first opportunity should be between the first certification and the mid-certification visits.
 - 2.10.2 The second opportunity should be between the mid-certification and the infant's first birthday.
 - 2.11 Infants certified after they are 6 months old must be given the opportunity to attend one additional appropriate nutrition education contact.
 - 2.12 WIC checks will be issued at each certification, as appropriate.
- 3.0 COLLECT DEMOGRAPHIC INFORMATION:
- 3.1 Assess client identity.
 - 3.1.1 Name.
 - 3.1.2 Date of birth.
 - 3.1.3 * Social Security Number.
 - 3.1.4 * Medicaid Number.
 - 3.2 Ethnicity / Racial Background.
 - 3.3 Assess residency for the family group.
 - 3.3.1 Telephone information.
 - 3.3.2 Address.
 - Street Address.
 - Mailing Address, if different.
 - 3.4 Primary language of caregiver. The primary language spoken in the caregiver's home.
 - 3.5 Need for interpreter.
 - 3.5.1 The caregiver's need for an interpreter.
 - 3.5.2 Need for written communications in Spanish - selecting Spanish in the interpreter field will set the automated letters to print in Spanish.
 - 3.6 Migrant status.
 - 3.6.1 An infant who is a member of a household in which any member is a migrant farmworker.
 - 3.6.2 A migrant farmworker is an individual whose principal employment is in agriculture, on a seasonal basis, who has been employed within the last 24 months, and who establishes, for the purpose of such employment, a temporary home.
 - 3.7 Homelessness. An infant whose family lacks a fixed and regular nighttime residence; or whose primary nighttime residence is:
 - 3.7.1 A supervised publicly or privately operated shelter designed to provide temporary living quarters.

- 3.7.2 An institution that provides a temporary residence for persons intended to be institutionalized.
 - 3.7.3 A temporary accommodation at the home of another individual, such as a friend or relative. This temporary accommodation cannot exceed 365 days.
 - 3.7.4 A public or private place not designed for or ordinarily used as a regular sleeping accommodation for human beings.
 - 3.8 Foster Care status.
 - 3.8.1 An infant who has entered the foster care system during the previous six months or;
 - 3.8.2 An infant who has moved from one foster care home to another foster care home during the previous six months.
 - 3.9 Document any Special Needs for the family group, such as, needs afternoon appointments.
- 4.0 ASSESS IMMUNIZATION STATUS:
- 4.1 Review the current immunization record. If the current immunization record is not available, ask the applicant to bring it to the next WIC appointment.
 - 4.2 Screen the immunization status by using one of the following methods.
 - 4.2.1 Count the number of doses of DTaP (diphtheria and tetanus toxoids and acellular pertussis) vaccine recorded in relation to their age.
 - By 3 months of age the infant should have had 1 or more doses.
 - By 5 months of age the infant should have had 2 or more doses.
 - By 7 months of age the infant should have had 3 or more doses.
 - 4.2.2 **OR** Compare the complete immunization record with the current Advisory Committee on Immunization Practices (ACIP) Recommended Childhood Immunization Schedule.
 - 4.3 If the immunizations are not up-to-date.
 - 4.3.1 Provide information to caregiver on the recommended immunization schedule.
 - 4.3.2 Refer to the infant's medical home for completion.
 - 4.3.3 If the WIC clinic is located at the infant's medical home, it is strongly recommended that immunizations are provided by the appropriate staff while the infant is still in the clinic.
- 5.0 BASIC CONTACT:

- 5.1 The Rights and Responsibilities Statement must be read and signed by the applicant's legal guardian at the beginning of each certification period.
 - 5.2 Offer the applicant's caregiver the opportunity to register to vote.
 - 5.2.1 If the caregiver wants to register to vote - provide a Kansas Voter Registration Application.
 - 5.2.2 If the caregiver does not want to register to vote - provide a State of Kansas Agency Declination Form.
 - 5.3 The nondiscrimination poster, "And Justice for All" must be prominently displayed for all WIC clients and applicants to read.
- 6.0 ASSESS INCOME INFORMATION:
- 6.1 Other Assistance.
 - 6.1.1 Temporary Assistance for Families (TAF).
 - 6.1.2 Medicaid.
 - Client receiving.
 - A pregnant woman in household receiving.
 - Another infant in household receiving.
 - 6.1.3 Food Stamps.
 - 6.2 Household composition.
 - 6.2.1 A group of related or non-related individuals who are living together as one economic unit (residents of a homeless facility or an institution are not considered as members of a single family).
 - 6.2.2 If the household includes a pregnant woman, the household size shall include the number of unborn children unless the applicant has a religious or cultural objection that precludes counting unborn children.
 - 6.3 Assess household income.
 - 6.3.1 Gross earnings for each household member.
 - 6.3.2 Source of income.
 - 6.3.3 Document proof of income.
 - 6.4 Calculate income eligibility.
- 7.0 REVIEW:
- 7.1 Date of WIC certification.
 - 7.2 Physical presence of client, if client is not present, the reason for the exception must be documented on the notes tab.
 - 7.3 Document proof of residency.
 - 7.4 Document proof of identities.
 - 7.4.1 Infant.
 - 7.4.2 Caregiver.
- 8.0 ASSESS SOCIAL INFORMATION:
- 8.1 Assess use of medications and/or vitamin/mineral supplements, prescribed and/or over-the-counter.

- 8.1.1 Evaluate for Drug Nutrient Interactions. Use of prescription or over-the-counter medications that have been shown to interfere with nutrient intake or utilization.
- 8.1.2 Evaluate for Inappropriate Intake of Dietary Supplements. Routinely using inappropriate or excessive amounts of any dietary supplement with potentially harmful consequences.
- 8.2 Assess potential parenting skills of caregiver.
 - 8.2.1 Infant Born to a Woman who Abused Alcohol or Drugs during pregnancy.
 - 8.2.2 Infant Born to a Woman with Mental Retardation.
 - 8.2.3 Infant Born to a WIC Eligible Woman.
 - 8.2.4 * Educational status of the caregiver(s).
 - 8.2.5 * Emotional and psychological attitude of caregiver(s) toward parenting
 - 8.2.6 * Family's nutrition knowledge.
- 8.3 *Medical Provider.
- 9.0 ASSESS INFANT'S FEEDING HISTORY:
 - 9.1 Breastfed.
 - 9.1.1 Age formula supplementation started, if applicable.
 - 9.1.2 Age weaned from breastfeeding, if applicable.
 - 9.2 Age solids introduced.
 - 9.2.1 Early introduction of solids: addition of solid food(s) into the daily diet before 4 months of age.
 - 9.2.2 Failure to introduce solids by 7 months of age is considered an Inappropriate Infant Feeding Practice.
- 10.0 ASSESS:
 - 10.1 Birth sequence.
 - 10.1.1 If a singleton birth, enter a 1.
 - 10.1.2 If a multiple birth, enter the sequence birth sequence of this infant.
 - 10.2 Mother's total prenatal weight gain.
 - 10.3 Mother's WIC status during pregnancy - An infant born to a mother who was on WIC during pregnancy is considered an Infant Born to a WIC Eligible Woman.
 - 10.4 Usual Activity Level.
 - 10.5 Familial Growth Pattern - Document exceptions only, such as:
 - 10.5.1 Constitutional short stature.
 - 10.5.2 Obese biological parents.
 - 10.6 Assess if anyone in the household currently smokes inside the home.
- 11.0 ASSESS CAREGIVER CONCERNS:
 - 11.1 Colic.

- 11.2 Constipation. If constipation is a concern, see Constipation in Infants Nutrition Management Guidelines.
 - 11.3 Development.
 - 11.4 Diarrhea
 - 11.5 Allergies.
 - 11.6 Growth
 - 11.7 Infant Care.
 - 11.8 Spitting Up.
 - 11.9 Weaning.
 - 11.10 Other Health Concerns.
- 12.0 ANTHROPOMETRIC AND LABORATORY ASSESSMENT:
- 12.1 Determine anthropometric status using appropriate equipment and techniques. See the Anthropometric Assessment Training Module for a review of proper procedures for weighing and measuring.
 - 12.1.1 Length of gestation.
 - An Infant born at less than or equal to 37 weeks gestation is considered premature.
 - If infant is premature, calculate the infant's adjusted gestational age.
 - The adjusted gestational age is calculated by the KWIC system.
 - To calculate an adjusted gestational age:
 - Subtract the infant's actual gestational age in weeks from 40 weeks to determine the adjustment for prematurity in weeks.
 - Subtract the adjustment for prematurity in weeks from the infant's chronological postnatal age in weeks to determine the infant's adjusted gestational age.
 - 12.1.2 Obtain self-declared birth length and birth weight status.
 - An infant whose birth weight was > 3 pounds 5 ounces (1500 g) and ≤ 5 pounds 8 ounces (2500 g) is considered to have a Low Birth Weight.
 - An infant whose birth weight was ≤ 3 pounds 5 ounces (1500 g) is considered to have a Very Low Birth Weight.
 - * Assess size for gestational age by plotting birth weight for gestation age at birth on an intrauterine growth reference.
 - 12.1.3 Obtain current recumbent length measurement.
 - 12.1.4 Obtain current weight. The infant should be weighed either nude or in dry diaper.
 - 12.1.5 * Obtain current head circumference.
 - 12.2 Review measurements on the appropriate graph. Sequential measurements plotted over time are more important than a single

measurement, because they provide an indication of the growth rate. Most healthy infants will maintain a steady growth rate that runs parallel to one of the percentile lines. Infants whose percentiles change are more likely to have a problem.

12.2.1 Review Length/Age graph.

- Premature infants, who have reached the equivalent age of 40 weeks gestation, should be assessed using adjusted gestational age.
- The Length/Age graph will not be plotted and growth risk factors will not be assessed for infants who have not yet reached the equivalent age of 40 weeks gestation. For counseling purposes, the infant's growth may be assessed using a growth chart for low birth weight (LBW) or very low birth weight (VLBW) infants consistent with the protocols of your local medical community.
- Short Stature, recumbent length \leq 5% length/age (adjusted gestational age).
- At Risk of Short Stature, recumbent length, \geq 6% and \leq 10% length/age (adjusted gestational age).

12.2.2 Review Weight/Length graph.

- Underweight, weight/length \leq 5% weight/length.
- At Risk of Becoming Under, weight/length, \geq 6% and \leq 10%.
- If weight/height is \leq 10th percentile, see the Underweight in Children Nutrition Management Guideline.
- Overweight, weight/length - between 24 - 36 months of age and \geq 95% weight/length. If weight/length is $>$ the 95th percentile, see the Overweight (Obesity) in Children Nutrition Management Guideline.

12.2.3 * Review the Weight/Age (0-36 mos.) graph.

- Premature infants, who have reached the equivalent age of 40 weeks gestation, should be assessed using adjusted gestational age.
- KWIC will not plot the Weight/Age graph for infants who have not yet reached the equivalent age of 40 weeks gestation. For counseling purposes, the infant's growth may be assessed using a growth chart for low birth weight (LBW) or very low birth weight (VLBW) infants consistent with the protocols of your local medical community.

12.2.4 * Review the Head Circumference graph.

- Premature infants, who have reached the equivalent age of 40 weeks gestation, should be assessed using adjusted gestational age.
 - KWIC will not plot the Head Circumference/Age graph for infants who have not yet reached the equivalent age of 40 weeks gestation.
- 12.3 Assess hemoglobin / hematocrit, see the Biochemical Assessment Training Module for a review of proper procedures.
- 12.3.1 If the infant is < 6 months of age at the initial certification, a hemoglobin / hematocrit is not required until 9 - 12 months of age. Infants may be routinely screened at 12 months of age. LAs are encouraged to schedule this appointment prior to the infants first birthday.
- 12.3.2 If the infant is 6 months of age or older at the initial certification, determine hemoglobin/ hematocrit level according to standard laboratory procedures. Ideally this screen should occur between 9-12 months of age. Since this is a small pool of infants an exception is allowed to screen the hemoglobin / hematocrit in conjunction with the certification.
- Low Hemoglobin / Hematocrit.
 - Hemoglobin < 11.0 g/dl.
 - Hematocrit concentration < 33%.
 - *Assess factors that affect hemoglobin/hematocrit.
 - Altitude - Long term residency at altitudes above 3000 feet cause a generalized upward shift in hemoglobin / hematocrit.
 - 3,000 - 3,999 feet above sea level will increase hemoglobin by about 0.2 g/dl and hematocrit by approximately 0.5%.
 - Elevations above 4,000 feet are not relevant to Kansas.
- 12.4 Assess if the infant has ever had a blood lead test within the past 12 months.
- 12.4.1 If no, refer to the appropriate local resource. If the WIC clinic is located at the infant/child's medical home, it is strongly recommended that the appropriate staff complete the blood lead test while the infant/child is in the clinic.
- 12.4.2 If yes, assess level.
- An Elevated Blood Lead Level is greater than or equal to 10 µg/dl.

- If blood lead level is greater than or equal to 5 µg/dl see the Lead Poisoning Nutrition Management Guideline.

13.0 ASSESS FEEDING HISTORY:

- 13.1 Adequacy of cooking facilities/food resources - Limited or no access to a stove for sterilization or a refrigerator or freezer (i.e., if expressed breastmilk is to be stored for more than 1-2 days) for storage can contribute to Lack of Sanitation in Handling of Formula or Breastmilk.
- 13.2 Adequacy and safety of water supply - Limited or no access to a safe water supply (documented by appropriate officials) is Lack of Sanitation in Handling of Formula or Breastmilk.
- 13.3 * Household member responsible for purchase and preparation of food.
- 13.4 Cultural, regional, or religious factors affecting food choices.
- 13.5 Method currently used in feeding.

14.0 BREASTFEEDING ASSESSMENT

- 14.1 Suggestions for putting the infant to the breast.
- 14.1.1 Mother should be comfortable, sit up straight and not lean over.
- 14.1.2 Use pillows, rolled towels, blankets, etc., to support the mother's arms and the infant's body.
- 14.1.3 Place the infant in a position facing the breast. Chest to chest. Hips flexed in any breastfeeding position (side-sitting, cradle, football, lying down). Infant should not be on back as when bottle feeding.
- 14.1.4 Support the breast with a "C" hold (4 fingers on the bottom and the thumb on the top).
- 14.1.5 Lightly tickle the infant's lips with nipple to elicit wide opening of the mouth.
- 14.1.6 Wait for the infant's mouth to open wide and then quickly pull the infant onto the breast directing the nipple to the back of the infant's throat.
- 14.1.7 ½" or more of the areola (dark area of the breast) should be in the infant's mouth.
- 14.1.8 Four points of the infant should be touching the breast.
- Nose tip. Baby can breathe when nose tip is touching breast.
 - Upper lip. The upper lip is turned out (not rolled in over the gums).
 - Lower lip. The lower lip is turned out. The tongue should be under the nipple.
 - Chin.
- 14.1.9 Start over if the infant is latched on incorrectly or if the

- mother experiences discomfort.
- 14.1.10 See the Breastfeeding Management Self-Instructional Module for pictures of positions.
- 14.2 Remove the infant from the breast by inserting a finger between the jaws.
- 14.3 Frequency of feeding
- 14.3.1 The infant will nurse 8-12 times in 24 hours for the first few weeks of life. The focus is on helping the mother learn to recognize her infant's cues for hunger.
- 14.3.2 The baby may cluster feed. Cluster feeding is several feeds in a short time (20 to 60 minutes). At other times during the day feeds are farther apart (>60 minutes to 4 hours).
- 14.3.3 Infrequent Breastfeeding as Sole Source of Nutrients is defined as a fully breastfed infant (not taking any solid foods).
- Less than two months of age and routinely taking less than 8 feedings in 24 hours.
 - Two or more months of age and routinely taking less than 6 feedings in 24 hours.
- 14.3.4 The mother will need to nurse more frequently during growth spurts.
- Growth spurts occur at five to ten days, three weeks, six weeks, three months, and six months.
 - More frequent feedings will increase the breastmilk supply to keep up with the baby's bigger appetite.
- 14.3.5 Stress an increased frequency of feeds does not indicate inadequate milk supply.
- 14.4 Duration of feeding
- 14.4.1 The mother-baby interaction determines the length of time on each breast. The focus is on helping the mother learn to recognize her infant's cues for satiety.
- 14.4.2 The infant should nurse as long as desired on the first breast, be burped, roused and offered the second breast.
- 14.4.3 To make sure infant receives hindmilk, it is important not to limit feedings to less than 10 minutes on a breast.
- 14.5 Breastmilk appearance.
- 14.5.1 Colostrum - First milk within first few days after birth; small amount yellowish and creamy. Colostrum is an essential first food.
- 14.5.2 Mature milk - occurs after the first 2-3 days; thinner than colostrum; slightly blue in color.
- Foremilk is produced between feedings.
 - Hindmilk is produced during a feeding.
 - Contains more fat and calories than foremilk.
 - Essential for weight gain.

- 14.6 Discuss establishing and maintaining an adequate milk supply:
- 14.6.1 Stress the importance of avoiding formula or water bottles within the first 3-4 weeks to help establish and maintain an adequate milk supply.
 - 14.6.2 A baby's effective suckling is indicated by swallowing. Swallowing is noted by a soft sound "ah, ah" and also by a change from quick jaw movements and short stretches of the cheeks to slower jaw movements with longer stretches of the cheeks. These signs can be shown to the mother.
 - 14.6.3 In the first few days, the breasts will feel softer after feeding. However usually by day 7-10 postpartum the breasts are softer and smaller, and less noticeably full and empty related to the feedings - this normal physiologic adjustment to breastfeeding often causes women to think that they are drying up.
 - Anticipatory guidance may help avoid this worry.
 - If a woman expresses concern, offer to let her nurse the WIC clinic. The infant can be weighed both before and after feeding to assess actual intake.
 - 14.6.4 Discuss indicators of sufficient intake by day 4-5 of life.
 - Infant should have 6-8 wet diapers in 24 hours.
 - Infant should have 4 or more yellow nice sized stools/24 hours.
 - Infant will wake to feed 8-12 times in 24 hours.
 - Infant seems content after feedings.
- 14.7 Evaluate need for a Breast Pump. (See the Breastfeeding Woman Nutrition Management Guidelines).
- 14.8 If currently expressing breastmilk, evaluate handling and storage procedures. Failure to properly prepare, handle, and store bottles or storage containers of expressed breastmilk, including limited or no access to a refrigerator or freezer (i.e., if expressed breastmilk is to be stored for more than 1-2 days) for storage is Lack of Sanitation in Handling of Formula or Breastmilk.
- 14.8.1 Fresh breastmilk should refrigerated and used or frozen within 48 hours.
 - 14.8.2 Frozen breastmilk should be used within 3 months
 - 14.8.3 Previously frozen breastmilk should not be kept in the refrigerator for more than 24 hours after thawing.
 - 14.8.4 Do not add fresh breastmilk to already frozen breastmilk in a storage container.
- 14.9 Identify potential problems.
- 14.9.1 Lack of audible swallowing.
 - 14.9.2 Significant maternal nipple pain, not improving.
 - 14.9.3 Exaggerated weight loss > 10% of infant's birth weight.
 - 14.9.4 Inadequate weight gain < 25-30 g/d after day 4-6 of life.

- 14.9.5 Not back to birth weight by day 10.
- 14.9.6 Evaluate for Potential Breastfeeding Complications.
 - Jaundice.
 - Weak or ineffective suck.
 - Difficulty latching onto mother's breast.
 - Inadequate stooling (at least 4 to 5 stools a day by 4-5 days of life) and/or less than 6 wet diapers per day.
- 14.9.7 If any potential problems are identified, refer immediately for appropriate management. This includes referral when caregiver requests supplemental formula for a breastfed infant. See the Breastfeeding Management Self-Instructional Module for more information.

15.0 ASSESSMENT OF ARTIFICIAL BREASTMILK USE.

- 15.1 Amount and type of formula or other milk sources currently used.
 - 15.1.1 Feeding Cow's Milk During First 12 Months.
 - Cow's milk (fluid, evaporated, and dry) has insufficient nutrients and can cause occult blood loss, stress on the kidneys and allergic reactions.
 - Sweetened condensed milk has an abundance of sugar that displaces other nutrients or causes over consumption of calories.
 - 15.1.2 Goat's milk, sheep's milk, imitation milks and substitute milks do not contain nutrients in amounts appropriate for infants. Feeding these substances during the first year of life is an Inappropriate Infant Feeding Practice.
 - 15.1.3 The American Academy of Pediatrics sees no role for the use of low-iron formulas in infant feeding and recommends that all formulas fed to infants be fortified with iron (>6.7 mg/100 kcal; 10-12 mg/L). Pediatrics. 1989;84:1114-1115.
 - Using a Low Iron infant formula (less than 10 mg of iron per liter of formula prepared at standard dilution) during first 6 months of life and as primary fluid consumed during the second 6 months of life (includes infants prescribed low iron formula without iron supplementation) is an Inappropriate Infant Feeding Practice.
 - Using a Low Iron infant formula at 6 months of age or later is considered No Dependable Source of Iron for Infants over 6 Months.
- 15.2 Types of formulas tried and reasons for changing. See Formula Manufacturers & Products for a complete listing of products and suggested uses for each.
- 15.3 Formula preparation and handling, including dilution, sanitation, and storage practices.

- 15.3.1 Failure to follow manufacturer’s dilution instructions or specific instructions accompanying a prescription is Improper Dilution of Formula.
- Overdilution of formula can result in excessive water intake; inadequate nutrient intake; failure to thrive; poor growth.
 - Underdilution of formula increases calories, protein, and solutes and can result in obesity and dehydration.
- 15.3.2 Lack of Sanitation in Handling of Formula or Breastmilk includes.
- Limited knowledge on how to.
 - Prepare bottles, nipples, and/or formula.
 - Handle prepared formula.
 - Store prepared or opened formula.
 - Failure to properly prepare, handle, and store bottles or storage containers of formula.
 - Prepared formula should be kept in the refrigerator for no longer than 48 hours.
 - Prepared formula should not be held at room temperature longer than 2 hours or longer than recommended by the manufacturer.

16.0 ASSESS MEDICAL HISTORY / NUTRITIONAL RISK.

16.1 Medical conditions affecting nutritional status.

16.1.1 Cancer.

16.1.2 Celiac Disease.

16.1.3 Central Nervous System Disorders.

- If infant is diagnosed with Cerebral Palsy, see the Cerebral Palsy Nutrition Management Guideline.

16.1.4 Diabetes Mellitus.

16.1.5 Failure to Thrive.

16.1.6 Fetal Alcohol Syndrome.

16.1.7 Gastro-Intestinal Disorders.

16.1.8 Genetic and Congenital Disorders.

- If infant is diagnosed with Down Syndrome, see the Down Syndrome Nutrition Management Guideline.

16.1.9 Hypertension.

16.1.10 Inborn Errors of Metabolism.

16.1.11 Infectious Diseases.

16.1.12 Other Medical Conditions.

- Juvenile rheumatoid arthritis (JRA).
- Lupus erythematosus.
- Cardiorespiratory diseases.
- Heart disease.

- Cystic fibrosis. If infant is diagnosed with cystic fibrosis, see the Cystic Fibrosis Nutrition Management Guidelines.
- Persistent asthma (moderate or severe) requiring daily medication.

- 16.1.13 Pyloric Stenosis.
- 16.1.14 Recent Major Surgery, Trauma, Burns.
- 16.1.15 Renal Disease.
- 16.1.16 Thyroid Disorders.

17.0 ASSESS DIETARY / NON-MEDICAL RISK FACTORS.

- 17.1 Food allergies/intolerances.
- 17.2 Any reported diet restrictions or modifications.
- 17.3 Review for Inappropriate Infant Feeding Practices.
 - 17.3.1 Infant not fed breastmilk or iron-fortified formula as primary source of nutrients during first 6 months of life and as primary fluid consumed during the second 6 months of life (includes infants prescribed low iron formula without iron supplementation).
 - 17.3.2 Feeding goat's milk, sheep's milk, imitation milks, or substitute milks in place of breast milk or FDA-approved infant formula during the first year of life.
 - 17.3.3 Late introduction of solids: failure to introduce solids by 7 months of age.
 - 17.3.4 Not using a spoon to introduce and feed early solids.
 - 17.3.5 Infant not beginning to finger feed by 7-9 months.
 - 17.3.6 Feeding solids in a bottle (including enlarging the nipple to accommodate thickened liquid).
 - 17.3.7 Using a syringe-action nipple feeder.
 - 17.3.8 Feeding foods of inappropriate consistency, size, or shape that put the infant at risk of choking.
 - 17.3.9 Inappropriate, infrequent or highly restrictive feeding schedules or forcing an infant to eat a certain type and/or amount of food.
 - 17.3.10 Feeding any amount of honey to infant under 1 year of age (added to liquids or solid foods, used in cooking, as part of processed foods, on a pacifier, etc.).
- 17.4 No Dependable Source of Iron for Infants over 6 Months.
- 17.5 Improper Dilution of Formula.
- 17.6 Feeding Other Foods Low in Essential Nutrients.
- 17.7 Inappropriate Use of Bottles.
 - 17.7.1 Routine use of the bottle to feed liquids other than breast milk, formula, or water.
 - 17.7.2 Allowing the infant to fall asleep at naps or bedtime with the bottle.

- 17.7.3 Allowing the infant to use the bottle without restriction (e.g., walking around with a bottle) or as a pacifier.
 - 17.7.4 Propping the bottle.
 - 17.8 Dental Problems that impair the ability to ingest food in adequate quantity.
 - 17.9 Developmental, sensory or motor delays or other Disabilities Interfering with the Ability to Eat.
 - 17.10 Clinical manifestations of Nutrient Deficiency Diseases.
- 18.0 CALCULATE WIC NUTRITIONAL RISK ELIGIBILITY.
- 19.0 NUTRITION COUNSELING.
- 19.1 Anthropometric Counseling.
 - 19.1.1 Growth charts and percentiles.
 - 19.1.2 Normal growth pattern for infants.
 - 19.2 Solicit caregiver's questions or concerns regarding infant's diet. Review appropriate concepts or guidelines in response to questions, concerns and risks factors identified.
 - 19.3 In their policy statement, Breastfeeding and the Use of Human Milk (PEDIATRICS Vol. 115 No. 2, pp. 496-506), the American Academy of Pediatrics (AAP) Committee on Breastfeeding firmly adheres to the position that breastfeeding ensures the best possible health as well as the best developmental and psychosocial outcomes for the infant. Enthusiastic support and involvement of pediatricians in the promotion and practice of breastfeeding is essential to the achievement of optimal infant and child health, growth, and development.
 - 19.4 The policy statement stresses that exclusive breastfeeding is sufficient to support optimal growth and development for approximately the first 6 months of life and provides continuing protection against diarrhea and respiratory tract infection. Breastfeeding should be continued for at least the first year of life and beyond for as long as mutually desired by mother and child.
 - 19.4.1 Complementary foods rich in iron should be introduced gradually beginning around 6 months of age. Preterm and low birth weight infants and infants with hematologic disorders or infants who had inadequate iron stores at birth generally require iron supplementation before 6 months of age. Iron may be administered while continuing exclusive breastfeeding.
 - 19.4.2 Unique needs or feeding behaviors of individual infants may indicate a need for introduction of complementary foods as early as 4 months of age, whereas other infants may not be ready to accept other foods until approximately 8 months of age.

- 19.4.3 Introduction of complementary feedings before 6 months of age generally does not increase total caloric intake or rate of growth and only substitutes foods that lack the protective components of human milk.
- 19.4.4 During the first 6 months of age, even in hot climates, water and juice are unnecessary for breastfed infants and may introduce contaminants or allergens.
- 19.4.5 Increased duration of breastfeeding confers significant health and developmental benefits for the child and the mother, especially in delaying return of fertility (thereby promoting optimal intervals between births).
- 19.4.6 There is no upper limit to the duration of breastfeeding and no evidence of psychologic or developmental harm from breastfeeding into the third year of life or longer.
- 19.4.7 Infants weaned before 12 months of age should not receive cow's milk but should receive iron-fortified infant formula.
- 19.5 The AAP Committee on Nutrition has strongly advocated iron fortification of infant formulas since 1969 and states that there are no known medical contraindications to using iron-fortified formulas in formula-fed infants.
 - 19.5.1 In light of controlled studies, gastrointestinal symptoms are not an indication for switching to a low-iron formula.
 - 19.5.2 The condition of the rare infant with an iron overload syndrome can be carefully monitored. However, the dose of iron received from human milk or infant formula is minute in comparison with the total body iron load.
 - 19.5.3 PEDIATRICS Vol. 104 No. 1 July 1999, pp. 119-123
- 19.6 Cow's milk, goat's milk, and evaporated milk are not recommended for use during the first 12 months of life.
 - 19.6.1 Cow's milk has insufficient nutrients and can cause occult blood loss, stress on the kidneys and allergic reactions.
 - 19.6.2 Sweetened condensed milk has an abundance of sugar that displaces other nutrients or causes over consumption of calories.
 - 19.6.3 Canned evaporated milk, Goat's milk, sheep's milk, imitation milks and substitute milks do not contain nutrients in amounts appropriate for infants.
- 19.7 Review proper handling of breastmilk.
 - 19.7.1 Fresh breastmilk should be refrigerated and used or frozen within 48 hours.
 - 19.7.2 Frozen breast should be used within 3 months
 - 19.7.3 Previously frozen breastmilk should not be kept in the refrigerator for more than 24 hours after thawing.
 - 19.7.4 Do not add fresh breastmilk to already frozen breastmilk in a storage container.

- 19.8 Review proper handling of formula.
- 19.8.1 Mix formula per manufacturer directions unless directed otherwise by health care profession.
- Overdilution of formula can result in excessive water intake; inadequate nutrient intake; failure to thrive; poor growth.
 - Underdilution of formula increases calories, protein, and solutes and can result in obesity and dehydration.
- 19.8.2 Prepared formula should not be kept in the refrigerator for longer than 48 hours.
- 19.8.3 Prepared formula should not be held at room temperature longer than 2 hours or longer than recommended by the manufacturer.
- 19.9 Review the importance of proper use of bottle.
- 19.9.1 The bottle should only be used to feed breast milk, formula, or water.
- 19.9.2 The infant should be held during feedings and the bottle should not be propped.
- 19.9.3 An infant should not be allowed to fall asleep at naps or bedtime with the bottle or to use the bottle without restriction or as a pacifier.
- Improper use of the bottle may result in fermentation of carbohydrates on surface of the tooth producing organic acids that de-mineralize and destroy enamel, with subsequent tooth decay. Generally, many teeth are involved, decay develops rapidly, and occurs on surfaces normally thought to be at low risk for decay. Maxillary anterior teeth are affected first and most severely because of prolonged repeated exposure, frequently to the extent that extraction of these teeth is required in children as young as 17 months.
 - If inappropriate use of the bottle persists, infant is at risk of toothaches, costly dental treatment, loss of primary teeth, and developmental lags on eating and chewing. If this continues beyond the usual weaning period, there is a risk of decay to permanent teeth.
- 19.9.4 Infants should not be fed formula or breastmilk that remains in a bottle one hour after the start of feeding; and/or is left over from an earlier feeding.
- 19.9.5 Warming infant formula, breastmilk, or foods in the microwave may result in serious burns to the mouth, lips, and tongue, and the destruction of antibodies naturally found in breastmilk. "Hot spots" cannot necessarily be detected when testing temperature of foods.

- 19.9.6 Gradually increase cup use and decrease bottle use with goal of weaning from bottle at approximately 1 year of age.
- 19.10 Healthy infants usually require little or no supplemental water, except in hot weather, especially if solid foods are not started.
 - 19.10.1 A total of 4-8 ounces per day of plain water is appropriate for infants when solid foods are started or in hot weather for formula-fed or partially breastfed babies.
 - 19.10.2 Water intoxication can occur if infants are fed excessive amounts of water. Symptoms of the condition include respiratory failure, seizures, and convulsions.
- 19.11 Review hunger cues with caregiver.
 - 19.11.1 Rooting, mouth opening, lip licking.
 - 19.11.2 Placing hands to mouth resulting in mouth opening.
 - 19.11.3 Sucking/chewing on hands or fingers.
 - 19.11.4 Flexion of arms, clenching of fists
 - 19.11.5 Motor activity.
 - 19.11.6 Crying is a very late hunger cue.
- 19.12 Review signs of satiety with caregiver.
 - 19.12.1 Long pauses between burst of sucking.
 - 19.12.2 Less frequent swallowing.
 - 19.12.3 Increased non-nutritive sucking and rapid, quiver sucking.
 - 19.12.4 Relaxed mouth, drowsiness.
 - 19.12.5 Cessation of sucking.
 - 19.12.6 Spontaneous detachment (breast slips from relaxed mouth).
 - 19.12.7 No rooting or hand to mouth activity (mouth does not open if stimulated).
 - 19.12.8 Extension of arms, hands not clinched.
 - 19.12.9 Sleep or contented state.
- 19.13 Infants held to rigid feeding schedules are often underfed or overfed.
 - 19.13.1 Caregivers insensitive to signs of hunger and satiety, or who over manage feeding may inappropriately restrict or encourage excessive intake.
 - 19.13.2 Infrequent breastfeeding can result in lactation insufficiency and infant failure-to-thrive.
- 19.14 Review proper introduction of solid foods.
 - 19.14.1 The age of introduction of supplemental foods for infants cannot be set rigidly, rather, it depends on the rate of growth, stage of development, and level of activity of the infant, approximately 4 - 6 months.
 - 19.14.2 If solid foods are introduced before the infant is developmentally ready.

- Breastmilk or iron-fortified formula necessary for optimum growth is displaced.
 - Gastric secretions, digestive capacity, renal capacity and enzymatic secretions are low, which makes digestion of solids inefficient and potentially harmful. Furthermore, there is the potential for antigens to be developed against solid foods, due to the undigested proteins that may permeate the gut.
 - If solid foods are withheld until a later age, the infant will have considerably more difficulty in accepting them.
 - There is a critical or sensitive period of development in relation to eating, when a specific stimulus, solid food, must be introduced for the infant to learn the action of accepting and eating table food, which is more difficult to masticate.
 - The infant is developmentally ready for solid foods when.
 - The infant is better able to express certain feeding cues such as turning head to indicate satiation.
 - Oral and gross motor skills begin to develop that help the infant to take solid foods.
 - The extrusion reflex has disappeared.
 - The infant begins to sit upright and maintain balance.
- 19.14.3 Begin introducing solid foods with a spoon.
- Adding dilute cereal or other solid foods to bottles rather than spoon feeding deprives infants of the opportunity to learn to feed themselves.
 - Feeding solids in the bottle adds extra calories, which may contribute to excessive weight gain, and may pose a choking hazard.
- 19.14.4 A variety of pureed foods should be introduced.
- Start with the least allergenic food, rice cereal.
 - If there are no adverse reactions, add a new pureed food to the infant's diet each week.
 - Common signs of an allergic reaction are diarrhea, vomiting, rashes, and excessive irritability.
 - Avoid mixed cereals, fruits, vegetables, and dinners until the infant has tolerated all the foods in the mixed dish.
- 19.14.5 At approximately six months or older, offer juice in a cup. Four to six ounces per day is more than adequate.
- 19.14.6 An excessive amount of juice consumption increases the risk of loose stools and diarrhea and may replace other

nutrient dense foods. Juices, while providing vitamin C and carbohydrates should not replace infant formula or breast milk.

- 19.14.7 Start offering table foods when the infant can sit without assistance, at approximately nine months. Encourage mashed foods and finger foods as appropriate.
- 19.14.8 Foods to avoid in infancy.
- Foods of inappropriate consistency, size, or shape that put the infant at risk of choking. In particular, hard, round, smooth, slick, sticky pieces or pieces that do not break apart easily that can block breathing should be avoided (such as carrots, grapes, hot dogs, nuts, seeds, hard round candies, popcorn, raw vegetables, tough meat and others.).
 - Foods that may cause an allergic reaction (e.g., eggs whites, seafood, chocolate, citrus fruits, and tomatoes).
 - No honey until after first birthday. Honey has been implicated as the primary food source of *Clostridium botulinum* during infancy. These spores are extremely resistant to heat and are not destroyed by present methods of processing honey. *Botulism* in infancy is caused by ingestion of the spores, which germinate into the toxin in the lumen of the bowel.
 - Foods low in essential nutrients and high in calories.
 - Excessive intake of nutrient-poor and high-calorie foods and beverages can increase the risk of iron-deficiency anemia and poor growth by displacing nutrients from breastmilk or iron-fortified formula and other more appropriate foods in the infant's diet.
 - If infants increase their calorie consumption via high-calorie low-nutrient beverages and foods, the risk of obesity increases.
 - Caffeine-containing foods or beverages. Caffeine is a cerebral, respiratory, cardiac, and central nervous system stimulant. It also acts a diuretic, is a smooth muscle relaxant, and increases plasma glucose, free fatty acids and gastric secretions. Due to these effects on the body, caffeine is an inappropriate and potentially harmful substance to feed to infants.
- 19.14.9 Vitamin and mineral supplementation.
- Breastfeeding infants need 400 IU's of vitamin D daily if deeply pigmented or receive insufficient sunlight. Infant formulas have added Vitamin D, so additional supplementation is not necessary.

- After four to six months of age, the breastfed infant requires other sources of iron from food or drops.
 - Fluoride supplements are not generally recommended for normal breastfed or bottle fed infants residing in communities with fluoridated water supplies.
- 19.14.10 Advantages of making or buying baby foods.
- 19.15 Provide information on the potential dangers of caregiver substance abuse.
- 20.0 PROVIDE REFERRALS AS APPROPRIATE.
- 20.1 SRS Programs.
- 20.1.1 Medicaid / Health Wave.
 - 20.1.2 KAN-be Healthy.
 - 20.1.3 Temporary Assistance for Families (TAF).
 - 20.1.4 Child Support Enforcement.
 - 20.1.5 Food Stamps.
- 20.2 Immunizations.
- 20.3 Blood Lead Screening.
- 20.4 Health Care Provider.
- 20.5 Healthy Start.
- 20.6 Early Intervention Services for Infants and Toddlers.
- 20.7 Early Head Start.
- 20.8 A list of local breastfeeding resources including addresses and phone number, ie, La Leche League, WIC, Public Health Nursing, local hospital, lactation consultant, peer counselor and others.
- 21.0 SCHEDULE FOLLOW-UP NUTRITION EDUCATION.
- 21.1 Infants initially certified under 6 months of age.
- 21.1.1 A mid-certification visit should be scheduled between 5 ½ and 9 months of age.
 - 21.1.2 Low risk clients should be scheduled for two (2) secondary nutrition education contacts appropriate for risk factors identified.
 - The first opportunity should be between the first certification and the mid-certification visits.
 - The second opportunity should be between the mid-certification and the infant's first birthday.
 - 21.1.3 High-risk clients must be scheduled for two (2) individual high-risk contacts with the RD.
 - The first opportunity should be between the first certification and the mid-certification visits.
 - The second opportunity should be between the mid-certification and the infant's first birthday.
 - 21.1.4 At mid-certification the high or low risk status may change at the mid-certification appointment. Clients

should be scheduled for the appropriate type of contact based upon their current risk status.

- 21.2 Infants initially certified over 6 months of age.
 - 21.2.1 Low risk clients should be scheduled for a secondary nutrition education contacts appropriate for risk factors identified.
 - 21.2.2 High-risk clients must be scheduled for an individual high risk contacts with the RD.

- 22.0 ISSUE CHECKS.
 - 22.1 Assign appropriate food package, see the Food Package Tailoring Training Module for information on assigning food packages.
 - 22.2 Education on check usage.
 - 22.2.1 WIC Approved Food List.
 - 22.2.2 Approved WIC vendors.
 - 22.2.3 Shopping with WIC checks.

- 23.0 PROGRAM REGULATIONS AND GUIDELINES.

Give WIC applicants specific program information that is pertinent to their participation in the program.