

Arizona WIC Nutrition Care Guidelines: October 1, 2024



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Arizona WIC Nutrition Care Guidelines: **Introduction**

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Introduction to Nutrition Care Guidelines

The Arizona WIC Nutrition Care Guidelines serve as a compilation of nutrition assessment considerations and basic education prompts to support the delivery of quality nutrition care in WIC. The Nutrition Care Guidelines are not intended to standardize nutrition counseling for each participant, but to ensure that nutrition counseling in WIC is consistent with national guidelines. In alignment with participant-centered services (PCS), WIC is most effective when participants are recognized as the experts about their own circumstances, and that WIC is a resource to help participants apply the principles of nutrition in an effective way.

Nutrition care is provided in the context of participants' environmental and educational limitations, their interests, and their cultural preferences, with consideration for their progress through the stages of change. Stages of change are the cycles that people go through to decide whether they want to change and what the change will mean to them. Behavioral change doesn't occur in one step; it progresses through several steps or stages. The formal stages of change model identifies the following stages: precontemplation, contemplation, preparation, action, and maintenance. The Nutrition Care Guidelines act as a reference for WIC staff when offering nutrition education that may be of interest to WIC participants with relevance to the specific WIC category and risk.

The Nutrition Care Guidelines are not intended to replace or duplicate any of the content of new employee training or the in-depth training and resources that accompany the required week-long breastfeeding training for all Arizona WIC staff. Though the Nutrition Care Guidelines will provide a broad overview of breastfeeding guidelines in the sections about infants and breastfeeding women, the guidelines cross-reference the *Breastfeeding Answers Made Simple* textbook for detailed information.

The Nutrition Care Guidelines align with USDA guidelines, the American Academy of Pediatrics (AAP) guidelines, and the Academy of Nutrition and Dietetics (AND) Nutrition Care Process (NCP) practice guidelines within the Nutrition Care Manual (NCM). The NCP consists of four steps: assessment, diagnosis, intervention, and monitoring and evaluation.

Step 1: Nutrition Assessment.

The USDA WIC Nutrition Services Standards require that staff perform a comprehensive nutrition assessment using the Value Enhanced Nutrition Assessment (VENA) process to provide high-quality nutrition services in a participant-centered framework and to determine program eligibility. In addition, comprehensive nutrition assessments will be done at mid-certification assessments, when there is a change in the amount of infant formula being requested, or when a breast pump is being issued. The Academy of Nutrition and Dietetics defines nutrition assessment as a systematic method for obtaining, verifying, and interpreting data needed to identify nutrition-related problems, their causes, and their significance. Nutrition assessment is an ongoing process that involves both initial data collection and continued reassessment and analysis of participants' nutrition status. Arizona WIC utilizes the conversational approach to assessment and completes the nutrition assessment by using the ABCDE assessment guide, which coordinates with the WIC codes.

- A** - is gathering anthropometric information, or height and weight, from the participant and includes WIC codes in the 100s.
- B** - is gathering biochemical information—specifically, screening for risk of anemia and high blood lead concentrations—and includes WIC risk codes in the 200s.
- C** - is assessing for any clinical or medical conditions that may affect nutrition status, such as diabetes, and includes WIC codes in the 300s.
- D** - is the bulk of the assessment in WIC and includes exploring diet- and nutrition-related information with participants, such as eating patterns or vitamin use. This may include the use of projective tools (tools that help participants express their true feelings), if appropriate, to elicit deeper, more meaningful conversations. The D portion includes assessing for WIC codes in the 400s. For breastfeeding dyads, D also includes assessing for codes in the 600s. Lastly,
- E** - is assessing environmental and other factors that affect health and safety; it includes WIC risk codes in the 900s.

Step 2: Nutrition Diagnosis.

The AND describes the nutrition diagnosis as using data collected during the nutrition assessment to guide selection of the appropriate nutrition diagnosis. This is different from the traditional use of the word diagnosis and does not imply that nutrition professionals are deciding what health conditions are present; rather, it means they are simply naming the specific nutrition problem or risk based on their assessment. USDA Food and Nutrition Service has defined nutrition risk criteria that are used within WIC. In WIC, the diagnosis step of the nutrition care process entails the assignment of the WIC risk codes based on the information collected in the complete assessment.

Step 3: Nutrition Intervention.

The purpose of this step is to resolve or improve the identified nutrition problem by planning and implementing appropriate nutrition interventions that are tailored to the participant's needs and interests. Planning the nutrition intervention involves identifying the interests and motivations of the participant, prioritizing the risks, consulting evidence-based nutrition practice guidelines, determining participant-centered approaches and outcomes, determining time and frequency of care, and identifying needed resources and referrals. Implementation is the action phase and involves communicating the nutrition care plan and carrying out the plan. In WIC, this phase of the NCP is known as nutrition education. Nutrition education, counseling, coordination of care, and assignment of the tailored food package prescription in Arizona WIC are built around the participant-centered services framework known as the Together We Can model.

Step 4: Nutrition Monitoring and Evaluation.

This final step of the nutrition care process is used to determine whether participants have achieved or are making progress toward their individual goals. In the Arizona WIC setting, participants self-select their goals based on the assessment and education offered. It is important to listen for “change talk” from participants because this usually identifies their goals without the need for specific questions. It is also important to follow up with participants at each appointment regarding their progress and any changes that have occurred. This is called continuity of care, and it makes participants feel important, valued, and heard. Documentation is also a vital part of this phase of the NCP. Documentation assists in the continuity of care so that each staff person who sees a participant has an idea of the status and can check in with the participant to evaluate progress. In addition, documentation also protects staff if any significant issues arise which might result in a review of WIC records. In Arizona WIC, nutrition care is usually documented using a TGIF note.

T - Documents the Getting to the Heart of the Matter tool that was utilized during the discussion, as well as any concerns, challenges, or motivations identified by the participant or caregiver.

G - Documents the goals that have been identified by the participant.

I - Comprises the bulk of the documentation of the assessment and includes participants’ knowledge, feelings, and beliefs; relevant information that was learned during the assessment; what nutrition education was offered; any new WIC codes identified; and information specific to the tailoring of the food package prescription. Lastly,

F - Documents the follow-up needs that have been identified and require further attention at future visits to ensure continuity of care.

The Arizona WIC Nutrition Care Guidelines are divided into sections by participant category, with ABCDE assessment subsections under each category. The guidelines are based on the best information available at the time of this compilation.

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Arizona WIC Nutrition Care Guidelines: **Infants**

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Section Overview

Breastfeeding is recognized as the optimal nutrition for infants. Building a good feeding relationship with infants begins on day one. Arizona WIC follows the Baby Behavior approach to feeding newborns and young infants. The Baby Behavior framework is important in helping caregivers understand how to see, recognize, and respond to infant hunger and fullness cues. The understanding of hunger and fullness cues remains important for infants aged six months and older as they start solid foods. A foundation of healthy eating is best supported when caregivers understand how to follow their baby's lead.

Anthropometric Assessment



Anthropometry is the measurement of the size, weight, and proportions of the human body. The amount and rate of growth in infancy is an important part of gathering information in the ABCDE assessment process. The anthropometric assessment, or *A* section of the ABCDE assessment includes measuring and weighing infants, plotting their growth on growth charts, and tracking this information over time. The anthropometric assessment includes WIC codes in

the 100s.

Why Is This Important?

Infancy is a time of tremendous growth and development. Many changes occur in relatively short periods of time. There are a couple of important factors to keep in mind when assessing infant growth:

1. Infants *need* adequate nutrition to grow

Poor growth is an important indicator of nutrition challenges. Overall, healthy infants who are growing well have the energy to respond to and learn from their environment and can interact with their caregivers in a manner that encourages bonding and attachment.

2. To adequately measure growth, you must measure and collect a series of plots *over time*

Although one measurement plotted on a growth chart can be used to screen infants for nutritional risk, it does not provide adequate information to determine an infant's growth pattern and trends over time. When plotted correctly, a series of accurate measurements offers important information about an infant's growth pattern and trends. A series of measurements helps distinguish between growth delays versus genetic factors, such as the influence of parents' heights.

A - Infant Assessment Considerations

Newborn infant growth is broken down into different classifications that are determined by plotting weight on growth charts. These classifications include:

- Gestational age: The date the infant was born compared to the mother's due date.
- Birth weight: How much did the infant weigh at birth? This includes normal weight, low birth weight, very low birth weight, and extremely low birth weight.
- Weight for gestational age: Small for gestational age, appropriate for gestational age, or large for gestational age.

Normal Infant growth

- Growth rates of exclusively breastfed and formula-fed infants will differ
- The World Health Organization (WHO) growth standards reflect the **range** of optimal and normal infant growth

The United States Department of Agriculture (USDA), the American Academy of Pediatrics (AAP), and the Centers for Disease Control and Prevention (CDC) recommend use of the World Health Organization (WHO) growth standards for infants and children from zero to two years of age. This is because the WHO standards establish growth of the breastfed infant as the norm. The WHO growth standards for infants include measuring length-for-age, weight-for-age, and weight-for-length. Body mass index (BMI) is not calculated for infants and is not a recommended measurement before two years of age.

Growth Spurts

Typically occur:

- Days 8 to 12
- Weeks 3 to 4
- During the third month

Growth spurts for infants vary, but typically occur between days 8 and 12, between weeks 3 and 4, and in the third month. Healthy infants may lose approximately six to ten percent of their birth weight during the first few days of life, but should regain the weight within two weeks.

A - Infant Assessment and Working With Families

- Growth is a *sensitive and emotional* subject

Growth can be a sensitive subject for families. When an infant is not growing as expected, parents and caregivers may become scared or frustrated and feel they are doing something wrong.

- Be sensitive with your language, *avoid judgment words*

WIC staff can help put parents or caregivers at ease by avoiding language that places blame on them, while communicating that caregivers are an important part of the solution to improving their child's health. When talking about weight with parents, certain words used to describe body weight can be offensive (e.g., fat, obese, skinny, chunky, underweight, or overweight). Be mindful of language choices. Address the topic of weight with sensitivity, using terms such as "growth." Begin by asking the parents or caregivers for their permission to discuss their infant's growth.

- *Offer* to share the growth grid with parents
- If offer is accepted, describe the grid in a non-judgmental manner

Because growth is a sensitive subject, WIC staff must describe the grid without leading. Do this by describing how the grid is structured, but let the parent describe the growth. For example:

- "Babies typically fall anywhere between these two lines. Today he is plotting here/he has been plotting along these lines. How do you feel about his growth?"

Ask:

An important part of the assessment process includes asking probing questions. Asking open-ended questions, or questions that require more than a yes or no answer, gives a more complete picture for prioritizing knowledge, needs, and interests. This also allows WIC staff to coordinate an education message that is consistent with what caregivers may have already been told by their healthcare provider or to correct any misinformation they may have received at the end of the complete assessment when education is offered.

- "What has your doctor said about your infant's growth?"
- "How do you feel about your infant's growth?"

Assess:

Each point in the ABCDE assessment includes critical thinking to explore and evaluate the participant's situation. This involves pulling together all of the information available and evaluating what other factors need to be considered. Factors for the A infant assessment may include:

- Current infant growth
- Infant growth from birth weight
- Infant growth from last visit
- Birth weight and gestational age

Concern:**Weight-for-length less than or equal to second percentile (2nd %) (WIC Code 103.1)** 

This means that the infant is falling below the expected range of weight-for-length for most infants. This can lead to or be the result of poor nutrition, illness, or a more serious medical condition. Assess for growth patterns, food and fluid intake, any clinical conditions, healthcare provider instructions specific to growth, and caregiver's feelings about growth.

Weight-for-length above the second percentile (2nd %), but less than the fifth (5th %) (WIC Code 103.2)


This means that the infant may be at risk for falling below the expected range of weight-for-length for most infants. This can lead to or be the result of poor nutrition, illness, or a more serious medical condition. Assess for growth patterns, food and fluid intake, any clinical conditions, healthcare provider instructions specific to growth, and caregiver's feelings about growth.

Family history of BMI greater than or equal to 30 (WIC Code 114)

BMI is not calculated for infants. Family history of BMI is based on the BMI of the biological parents, if it is known. This code will be identified by HANDS (the Arizona WIC computer system) in most instances, and is based on the mother's BMI. Family history of a high BMI may indicate increased risk of a high BMI later in life for the infant. Assess for growth patterns, food and fluid intake, any clinical conditions, healthcare provider directions specific to growth, and caregiver's feelings about growth.

Weight for length greater than or equal to ninety-eighth percentile (98th%) (WIC Code 115) 

High weight-for-length in infants may indicate increased risk for future poor health outcomes and/or development of diseases. When identifying high weight-for-length and when discussing growth with caregivers, it is important to communicate in a way that is supportive and nonjudgmental. Choose your words carefully to convey an empathetic attitude and minimize embarrassment or harm to self-esteem while providing information on general ranges of growth. Assess for growth patterns, food and fluid intake, any clinical conditions, healthcare provider instructions specific to growth, and caregiver's feelings about growth.

Failure to thrive (WIC Code 134) 

This is a diagnosis given by a healthcare provider. Failure to thrive (FTT) in infancy is a complex and serious growth problem. FTT is diagnosed according to the following criteria:

- ← 2 yrs: Weight-for age, weight-for-length, or stature-for-age consistently falls below the 2.3rd percentile
- ← 2 yrs: Weight is less than 75% of median ("typical") weight-for-age

This indicates that an infant's nutrition is not supporting growth. Assess for growth patterns, food and fluid intake, any clinical conditions, healthcare provider directions specific to growth, and caregiver's feelings about growth.

Slowed/faltering growth pattern (WIC Code 135)

Growth faltering is defined as a growth rate below that which is appropriate for an infant's age and sex. Excessive weight loss in the first two weeks of life or any weight loss observed between two weeks to six months of age may indicate or lead to poor nutrition, illness, or a medical concern. Assess for growth patterns, food and fluid intake, any clinical conditions, healthcare provider instructions specific to growth, and the caregiver's feelings about growth.

Low birth weight (WIC Code 141)

This means the infant's birth weight is five and one-half pounds or less. Low birth weight is an important predictor of infant developmental delays, illness, and future growth. Infants with low birth weight need optimal nutrient intake for growth and development. Assess for growth patterns, food and fluid intake, any clinical conditions, healthcare provider instructions specific to growth, and caregiver's feelings about growth.

Prematurity (WIC Code 142.1)

This means the infant was born at or before 36 6/7 weeks of gestation. Premature infants may have physical problems that affect nutrition, including immature sucking, swallowing, digestion, and absorption of nutrients. Premature infants have increased nutrient and caloric needs for rapid growth. Healthcare providers may assess growth based on corrected age. Corrected age is the adjusted age of the infant/child based on his/her original due date. Assess for growth patterns, food and fluid intake, any clinical conditions, healthcare provider instructions specific to growth (including expectations for growth specific to corrected age), and caregiver's feelings about growth.

Early Term (WIC Code 142.2)

Early Term applies to an infant born from 37 0/7 to 38 6/7 weeks gestation. Between 37 and 39 weeks of gestation a fetus will experience a significant amount of development and growth of the lungs, brain and liver. The brain develops at its fastest rate at the end of the pregnancy, at a rate of up to one third between weeks 35 and 39. Additionally, layers of fat are added under the infant's skin during the last few weeks of pregnancy which helps them keep warm after birth. Early term delivery for infants will likely require a longer hospital stay and may have long term healthcare needs. Implications for WIC Nutrition Services WIC services can directly support preterm and early term infants and their caregivers, as these babies may have unique feeding difficulties.

Small for gestational age (WIC Code 151)

This is a diagnosis by a healthcare provider. It means that infant growth was affected during the mother's pregnancy, potentially resulting in slower growth, developmental delays, or increased risk of health problems. Assess for growth patterns, food and fluid intake, any clinical conditions, healthcare provider instructions specific to growth, and caregiver's feelings about growth.

Large for gestational age (WIC Code 153)

This means that the birth weight of the infant was nine pounds or more. Infants who are born large for gestational age may have increased risk of birth injuries and increased risk of childhood obesity, and may be the result of being born to a mother with diabetes (see pregnancy section). Assess for growth patterns, food and fluid intake, any clinical conditions, healthcare provider instructions specific to growth, and caregiver's feelings about growth.

A - Education Related to Infants' Growth

After a full assessment is completed (ABCDE), the counselor must review key points and concerns and identify nutrition education topics to offer the client. WIC nutrition education is defined as tips, information, suggestions, and ideas that reflect health and need. The priorities must also reflect the family's concerns, interest, and readiness for change.

Education for infants may emphasize:

- Baby behavior education (cues: look, recognize, respond)
- Age-appropriate foods
- Infant eating behaviors that can lead to growth below or above the expected rate
- Breastfeeding practices
- Bottle-feeding practices
- Cultural beliefs and food traditions
- Social and financial referrals

A - Education Messages Related to Growth

- "Every infant grows differently."
- "It's normal for some infants to lose weight after birth. Typically they are gaining weight again and are at least back to their birth weight by day 14. If not, they may not be eating enough."
- "Infants who are growing too slowly or too quickly may not be getting all of the important nutrition they need for healthy development."
- "An infant's hunger cues may include holding their hands near their mouth, making sucking noises, rooting or searching for the nipple, bending arms and legs, and puckering lips."
- "An infant's fullness cues may include relaxing hands or arms, slowing or stopping sucking, turning or pushing away from the nipple, or falling asleep."
- "Understanding and responding to your infant's cues can help his growth because he is more likely to be eating just the right amount."
- "Because young infants have such a small stomach, they grow best when feedings are small amounts and provided more frequently. This may include eight to ten feedings per day for infants under three months old."
- "Your baby is very smart! She knows exactly how much she can eat and how often she is hungry. Trust your baby to lead the way when it comes to eating."

Biochemical Assessment



In WIC, the biochemical assessment, or *B* section, of the ABCDE assessment includes gathering information related to specific blood tests. WIC screens for participants' risk of anemia by measuring hemoglobin. For infants, WIC does not routinely measure hemoglobin until 9 to 12 months of age. Currently, we measure the hemoglobin of infants by getting a small drop of blood from their heel to analyze. In WIC we also screen for high blood lead concentrations by asking participants if they have had their blood lead concentrations tested by their healthcare provider, and referring them back to their provider if they have not. Both anemia and lead exposure affect growth and development. The biochemical assessment includes WIC codes in the 200s.

Why Is This Important?

- Anemia impacts brain development

Iron deficiency is the most common cause of anemia. It may be caused by a diet low in iron, insufficient absorption of iron from the diet, which could be related to illness or a medical condition, or increased iron requirements due to growth. In infants, even mild anemia may delay development. This is because anemia can impair the way the body metabolizes energy, interfere with the way the body regulates temperature, and affect immune function or the way the body fights infection.

- Infants are at risk for lead poisoning

Early prevention is important to reduce future risks. Elevated blood lead levels also affect nutritional status, as well as growth and development. Lead poisoning is an entirely preventable public health problem in the United States. Infants and children are at greatest risk for lead poisoning because children absorb lead more readily than adults, and because children's developing nervous systems are particularly vulnerable to lead's effects. Lead screening and exposure and risk assessment are done by the healthcare provider.

B - Infant Assessment Considerations

- Infants six months and older are at risk for iron-deficiency anemia

During infancy, the body demands more iron. Iron deficiency is less common in healthy, full-term, normal-weight infants during the first six months of life. This is due to infants' body iron stores, which are sufficient to meet requirements. After six months, many infants use up their iron stores and require additional iron from their diets. For breastfed infants, this need can be met by adding high-iron, age-appropriate foods after six months of age. Formula-fed infants meet their iron requirements through iron-fortified infant formula. Premature and low birth weight infants are at greater risk for iron-deficiency anemia. Premature infants do not spend as much time in the uterus getting nutrients from the mother's diet; as a result, their iron stores are not as large.

- It is important to screen for lead-testing in infants

Infants' brains are still developing, so even a small amount of lead exposure can lead to future learning disabilities, behavioral problems, and anemia. Most commonly, infants and children get lead poisoning from lead-based paint. Infants considered at risk are those living in houses built before 1978 (the year when regulations began prohibiting the use of lead-containing paints in households) or those living in older homes (built before 1970) with lead-based pipes. Other infants and children who may be at high risk are those who immigrate to the United States from a country that does not regulate the use of lead, those who use imported bowls glazed with lead-based paint, or those using traditional folk remedies such as *greta* (powdered lead oxide) or *azarcon* (lead tetroxide).

B - Infant Assessment Concerns

Ask:

- "What has your doctor said about your baby's iron and lead levels?"
- "What have you heard about anemia and lead testing in infants?"

Assess:

If the hemoglobin value is low, continue the comprehensive ABCDE assessment with assessment of the following as it relates to low hemoglobin:

- Prematurity (A assessment)
- Clinical or other medical conditions (C assessment)
- Breastfeeding or use of iron fortified formula (D assessment)
- Environmental exposure to lead (paint, pipes, pottery, home remedies) (E assessment)

Concern:

Low hemoglobin/low hematocrit (WIC Code 201.1 and 201.2)

Hemoglobin (Hgb) and hematocrit (Hct) are the most commonly used tests to screen for iron-deficiency anemia. Measurements of hemoglobin and hematocrit reflect the amount of functional iron in the body. While these tests are not a direct measure of iron status and do not distinguish among different types of anemia, they are useful indicators of iron-deficiency anemia. A hemoglobin level of less than 11.0 g/deciliter (dL) or a hematocrit level of less than 33 percent is considered low for infants aged 6 to 12 months. Assess for anemia and iron supplements.

High blood lead levels (WIC Code 211)

Elevated lead levels are anything equal to or greater than 3.5 µg/dL within the past 12 months for children. For infants and adults elevated lead levels are anything equal to or greater than 5 µg/dL within the past 12 months. Blood lead screenings for infants may not be routine for their healthcare providers. Screenings may not begin until age one. Assess for lead poisoning diagnosis, environmental exposure, or recent move from another country.

***B* - Education Messages Related to Biochemical (Bloodwork)**

WIC nutrition education specific to concerns identified during the *B* assessment may include:

- “Hemoglobin is a tool used to screen for anemia, or low iron in the blood. Low hemoglobin isn’t a diagnosis of anemia, but it is a clue that your doctor may want to look into it a little more.”
- “The amount of iron you get from foods also affects your hemoglobin, or iron levels.”
- “Anemia can affect your infant’s development and lead to other infections.”
- “Any home built before 1978 may have lead-based paint. Other lead sources can be soil, toys (depending on where they were made), imported ceramics or old pottery, and imported herbal remedies.”

Clinical Assessment (Medical Conditions)



The clinical assessment, or *C* section, of the ABCDE assessment in the nutrition care process is the assessment of clinical or medical conditions that affect nutrition status. Caregivers may report a medical condition that has been diagnosed by a healthcare provider. Medical documentation from a healthcare provider is generally not needed to assign a WIC code. Dealing with medical conditions in infants can be stressful for caregivers and families. The impact on nutrition and growth from associated conditions can range from simple to complex.

In infants, these conditions may include anything from a genetic disorder to a recent surgery. The clinical assessment includes WIC codes in the 300s. The Arizona WIC Nutrition Care Guidelines provide only a general overview of *C* assessment guidelines and do not include comprehensive, detailed guidelines specific to each individual condition. For more detail about each condition, refer to the Nutrition Risk Manual.

Why Is This Important?

- Some medical conditions impact nutrition needs and diet

A basic understanding of medical conditions is important to be able to determine how they affect infants' nutrition status and feeding.

C - Infant Assessment Considerations

- The role of the WIC counselor is to assess for nutrition needs and/or referrals

Questions and conversations that may come up as a result of gathering *C* information in the assessment may be sensitive or challenging to navigate. This section can include a broad range of conditions that require healthcare and related services beyond basic, routine care. It is important to understand how the clinical or medical condition will affect nutritional needs and how to make appropriate referrals when necessary. The effects on nutritional needs may include altered growth, inadequate energy, inadequate nutrient intake to support growth and health, feeding problems related to oral-motor or behavioral difficulties, medication-nutrient interactions, need for enteral (tube) feedings, chronic constipation, or diarrhea. Clinical and medical codes designated as medium or high-risks require that a referral be offered for additional support by a state-approved Nutritionist or Dietitian (RD).

C - Infant Assessment Concerns

Ask:

- "What has your doctor said about your baby's health?"
- "What are your concerns about your baby's health?"
- "What has your doctor or dentist said about your baby's oral or dental health?"

Assess:

- The impact of the medical condition on the infant's health
- The impact of the medical condition on the infant's food and fluid intake
- The impact of the medical condition on the digestive/elimination system
- Any misunderstandings of how to manage and care for the infant's condition
- Family's coping strategies

Concern:

Nutrient deficiency or disease (WIC Code 341)

This is a diagnosis given by a healthcare provider. It includes nutritional deficiencies or diseases caused by insufficient dietary intake of a specific nutrient. Diseases include, but are not limited to, protein-energy malnutrition, scurvy, rickets, beriberi, hypocalcemia, osteomalacia, vitamin K deficiency, pellagra, cheilosis, Menkes disease, and xerophthalmia. Persistent deficiency may lead to growth problems or malnutrition. Assess for how the medical condition impacts the infant's nutritional status, overall health, and how the medical condition is being managed.

Gastrointestinal disorders (WIC Code 342)

This is a diagnosis given by a healthcare provider. It includes any gastrointestinal (GI) condition that interferes with the intake or absorption of nutrients. Disorders may include gastroesophageal reflux disease (GERD), stomach or intestinal ulcers, short bowel syndrome, inflammatory bowel disease (including colitis or Crohn's disease), pancreatitis, gallbladder disease, or malabsorption disorders. Assess for how the medical condition impacts the infant's nutritional status, overall health, and how the medical condition is being managed.

Diabetes mellitus (WIC Code 343)

This is a diagnosis given by a healthcare provider. It includes a group of metabolic diseases that cause hyperglycemia (elevated blood sugar) resulting from defects in insulin secretion, insulin action, or both. The two major classifications of diabetes are type 1 diabetes (insulin deficiency) and type 2 diabetes (insulin resistance). Diabetes is identified by fasting plasma glucose of 126 mg/dL or greater. Hyperglycemia is defined as equal to or greater than 200 mg/dL. Assess for how the medical condition impacts the infant's nutritional status, overall health, and how the medical condition is being managed.

Thyroid disorders (WIC Code 344)

This is a diagnosis given by a healthcare provider. It includes abnormal secretions of thyroid hormones due to disorders such as hyperthyroidism, hypothyroidism, congenital (present from birth) hyperthyroidism, and congenital hypothyroidism. Thyroid hormones influence all organ systems in the body and regulate how the body gets energy from food. Assess for how the medical condition impacts the infant's nutritional status, overall health, and how the medical condition is being managed.

Hypertension and prehypertension (WIC Code 345) ❤️

Commonly referred to as high blood pressure, this is a diagnosis given by a healthcare provider. It is age-specific when diagnosed in childhood, and is defined as blood pressure readings greater than the 95th percentile for age, gender, and height on at least three separate occasions. Assess for how the medical condition impacts the infant's nutritional status, overall health, and how the medical condition is being managed.

Renal disease (WIC Code 346) ❤️

Renal means "of or relating to the kidney." This is a diagnosis given by a healthcare provider. It may include pyelonephritis and persistent proteinuria, but excludes urinary tract infections (UTIs) involving the bladder. Renal disease can result in growth failure in infants and children. Assess for how the medical condition impacts the infant's nutritional status, overall health, and how the medical condition is being managed.

Cancer (WIC Code 347) ❤️

This is a diagnosis given by a healthcare provider and may include any type of cancer. Cancer is a disease caused by the uncontrolled division of abnormal cells in a part of the body. The type of cancer and stage of disease progression determines the type of medical treatment and, if indicated, nutrition management. Assess for how the medical condition impacts the infant's nutritional status, overall health, and how the medical condition is being managed.

Central nervous system disorders (WIC Code 348) ❤️

The central nervous system (CNS) is made up of the brain and spinal cord and is a network of nerve tissues that controls the activities of the body. CNS disorder is a diagnosis given by a healthcare provider. It may affect the amount of calories individuals need, their ability to feed, oral function, and growth. A common CNS disorder is seizures, or epilepsy. Assess for how the medical condition impacts the infant's nutritional status, overall health, and how the medical condition is being managed.

Genetic and congenital disorders (WIC Code 349) ❤️

This is a diagnosis given by a healthcare provider. It may include hereditary or congenital conditions that cause physical or metabolic abnormality, such as cleft lip or palate, Down syndrome, thalassemia major, sickle cell anemia (not sickle cell trait), and muscular dystrophy. Assess for how the medical condition impacts the infant's nutritional status, overall health, and how the medical condition is being managed.

Inborn errors of metabolism (IEM) (WIC Code 351) ❤️

This is a diagnosis given by a healthcare provider. It generally refers to gene mutations or gene deletions that change metabolism in the body. The inheritance of most metabolic disorders is rare. IEM disorders may happen at any stage of life, from infancy to adulthood. In most cases, when nutrition interventions are screened, identified, and started early in the newborn period and continued for a lifetime, the affected infant can continue to grow normally. The Arizona Newborn Screening Program through the Arizona Department of Health Services screens for 28 metabolic disorders in every infant born in Arizona. Several formulas specifically designed for treating the identified disorder can be made available through the participant's health insurance plan, through his or her AHCCCS plan, or by prescription through WIC. Assess for how the medical condition impacts the infant's nutritional status, overall health, and how the medical condition is being managed.

Infectious diseases - Acute (WIC Code 352.1)

This is a diagnosis given by a healthcare provider within the last six months. It includes diseases caused by growth of disease-causing microorganisms in the body that are severe enough to affect nutritional status. Acute infectious diseases such as hepatitis A, hepatitis E, pneumonia, RSV, and others typically increase the nutrient needs of the body. Assess for how the medical condition impacts the infant's nutritional status, overall health, and how the medical condition is being managed.

Infectious diseases - Chronic (WIC Code 352.2)

Chronic infectious diseases require long-term management and are likely to last a lifetime. Examples of chronic infectious diseases include HIV, AIDS, Hepatitis D, Hepatitis B, and Hepatitis C. Assess for how the medical condition impacts the infant's nutritional status, overall health, and how the medical condition is being managed.

Food allergies (WIC Code 353)

Food allergy reactions occur when the body's immune system responds to a harmless food as if it were a threat. The foods that most often cause allergic reactions are known as allergens. Common allergens include cow's milk (and foods made from cow's milk), eggs, peanuts, tree nuts (e.g., walnuts, almonds, cashews, hazelnuts, pecans, Brazil nuts), fish, shellfish (e.g., shrimp, crayfish, lobster, crab), wheat, and soy. Assess for how the medical condition impacts the infant's nutritional status, overall health, and how the medical condition is being managed.

Celiac disease (WIC Code 354)

Celiac disease (CD) is a diagnosis given by a healthcare provider. It is an autoimmune disease in which eating gluten (a protein in wheat, rye, and barley) results in damage to the small intestine and malabsorption of nutrients from food. Celiac disease can result in a wide range and severity of symptoms, which may include chronic diarrhea, vomiting, constipation, pale and foul-smelling fatty stools, and weight loss. Failure to thrive may occur in infants if CD is not well managed. The vitamin and mineral deficiencies that can occur from continued exposure to gluten may result in conditions such as anemia and osteoporosis and neurological disorders such as ataxia, seizures, and neuropathy. Treatment includes strictly following a gluten-free diet. Assess for how the medical condition impacts the infant's nutritional status, overall health, and how the medical condition is being managed.

Lactose intolerance (WIC Code 355)

Lactose is a sugar present in milk. Lactose intolerance is a syndrome in which eating foods that contain lactose results in diarrhea, abdominal pain, flatulence, or bloating. Assess for how the medical condition impacts the infant's nutritional status, overall health, and how the medical condition is being managed.

Hypoglycemia (WIC Code 356)

Hypoglycemia, as diagnosed by a healthcare provider, can occur as a complication of diabetes, as a condition in itself, in association with other disorders, or under certain conditions such as prolonged fasting. Assess for how the medical condition impacts the infant's nutritional status, overall health, and how the medical condition is being managed.

Recent surgery, trauma, burns (WIC Code 359)

This includes major surgery, trauma, or burns that are severe enough to compromise nutritional status that have occurred within the past two months, or similar injury more than two months ago that requires continued nutritional support. The body's response to recent major surgery, trauma, or burns may affect the nutrient requirements needed for recovery and lead to malnutrition. There is a catabolic response to surgery; severe trauma or burns cause a hypermetabolic state. Injury causes alterations in glucose, protein, and fat metabolism. Assess for how the medical condition impacts the infant's nutritional status, overall health, and how the medical condition is being managed.

Other medical conditions (WIC Code 360)

This includes diseases or conditions with nutritional implications that are not included in any of the other medical conditions. The current condition, or treatment for the condition, must be severe enough to affect nutritional status. This includes, but is not limited to:

- Juvenile Idiopathic Arthritis (JIA)
- Systemic Lupus Erythematosus (SLA)
- Polycystic Ovarian Syndrome (PCOS)
- Cardiovascular Diseases
- Asthma
- Cystic Fibrosis (CF)

Assess for how the medical condition impacts the infant's nutritional status, overall health, and how the medical condition is being managed.

Developmental, sensory, or motor delays interfering with the ability to eat (WIC Code 362)

A developmental disability is defined as a severe chronic disability that is the result of mental impairment, physical impairment, or a combination of both. This includes developmental, sensory, or motor disabilities that compromise or limit the ability to intake, chew, or swallow food or that require tube feeding to meet nutritional needs. Developmental disabilities affect individuals of all ages and are not a disease state. They are conditions caused by abnormalities, birth defects, and metabolic and chromosomal disorders. There is no single nutrition intervention that will work for all individuals. Many multidisciplinary teams use a range of treatments and nutrition interventions. Assess increased sensory sensitivity, how the medical condition impacts the infant's nutritional status, overall health, and how the medical condition is being managed.

Oral health conditions (WIC Code 381)

Early childhood caries (cavities) often result from inappropriate feeding practices. In infancy this may include baby bottle tooth decay and decay of the molars. Lack of early dental care may lead to tooth loss, damage to permanent teeth, reduced ability to chew, and speech problems.

Assess frequency of dental visits, age-appropriate cleaning of gums and teeth, bottle use (if bottle feeding), how the oral health condition impacts the infant's nutritional status, overall health, and how the oral health condition is being managed.

Fetal alcohol spectrum disorders (FASD) (WIC Code 382)

Fetal alcohol spectrum disorders (FASDs) are a group of conditions that can occur in a person whose mother consumed alcohol during pregnancy. FASDs is an overarching phrase that encompasses a range of possible diagnoses, including fetal alcohol syndrome (FAS), partial fetal alcohol syndrome (pFAS), alcohol-related birth defects (ARBD), alcohol-related neurodevelopmental disorder (ARND), and neurobehavioral disorder associated with prenatal alcohol exposure (ND-PAE) (2). Presence of condition diagnosed, documented, or reported by a physician or someone working under a physician's orders, or as self-reported by applicant/participant/caregiver.

Neonatal abstinence syndrome (NAS) (WIC Code 383)

Neonatal abstinence syndrome (NAS) is a drug withdrawal syndrome that occurs among drug-exposed (primarily opioid-exposed) infants as a result of the mother's use of drugs during pregnancy. NAS can last up to six months after birth. Assess infants with NAS for feeding concerns, provide breastfeeding support, offer frequent monitoring of weight gain and growth, and referrals for support services such as drug and alcohol counseling, parenting support, and medical evaluations.

C - Education Messages Related to Clinical (Medical Conditions)

Education specific to concerns identified during the *C* assessment may include:

- "How do you feel about talking to your doctor about your infant's condition?"
- "What referrals can WIC help you with to make sure you are getting all of the support you need to manage your infant's condition?"

Dietary Assessment



The dietary assessment, or *D* section, of the ABCDE assessment in the nutrition care process is the assessment of food- and nutrition-specific information. The dietary assessment includes WIC codes in the 400s as well as the breastfeeding-related codes in the 600s.

Why Is This Important?

- Diet and lifestyle are key in prevention
- WIC works and can help empower healthy choices

The WIC Program plays a key role in the prevention of nutrition-related health problems and promotion of lifelong healthy eating habits. This is achieved by providing high-quality nutrition education and supplemental foods rich in important nutrients. Studies have proven that WIC is one of the most successful and cost-effective nutrition intervention programs in the United States. Since its beginning in 1974, the WIC Program has earned a reputation as one of the most successful federally funded nutrition programs in the United States. Collective findings of studies, reviews, and reports demonstrate that because of the early intervention role WIC plays in promoting nutrition in pregnancy, through infancy, and into early childhood, the program improves birth outcomes of infants, early diet-related outcomes, infant feeding practices, and cognitive development.

Because of WIC's focus on nutrition, the dietary assessment is an important part of the comprehensive ABCDE assessment in gathering important information to support a healthy start for infants. The information gathered from the *D* assessment helps prioritize food- and behavior-based goals that are of greatest concern for caregivers to maximize nutrition-related health outcomes during the first year of life.

D - Infant Assessment Considerations

- The infant's relationship with their caregiver and the family's feeding approach impacts an infant's health
- Understanding and interpretation of infant behavior impacts a caregiver's feeding choices

Arizona WIC follows the Baby Behavior approach with infant feeding cues. Baby Behavior shows that when parents understand their infant's cues, they are able to meet the infant's needs more appropriately. This results in positive health outcomes, including increases in exclusive breastfeeding and decreases in overfeeding. Baby Behavior focuses on seeing, recognizing, and responding to infant hunger and fullness cues; understanding engagement and disengagement; and understanding crying and sleep patterns.

Infant engagement cues include:

- Reaching for caregiver
- Looking intently at caregiver's face
- Smiling
- Following caregiver's voice and face
- Raising head
- Relaxing face and body

Infant disengagement cues include:

- Looking away, turning away, or arching
- Yawning or falling asleep
- Frowning or glazed look
- Stiff hands, arms, and legs
- Crying
- Grimacing
- Choking or coughing
- Putting hands to ears

Infant hunger cues include:

- Putting hands near mouth
- Sucking noises
- Rooting or searching for nipple
- Bent arms or legs
- Puckering lips

Infant fullness cues include:

- Relaxing hands or arms
- Slowing or stopping sucking
- Turning or pushing away from nipple
- Falling asleep

In light or active sleep, infants are dreaming and may be easy to wake. Newborn and breastfed infants are more often in active sleep. Deep, or quiet, sleep includes regular and steady breathing and relaxed arms and legs. Newborn infants move to quiet sleep after 20 to 30 minutes of active sleep and may be harder to wake during deep sleep. Refer to the Baby Behavior training materials for detailed information.

Feeding Choices

Breastmilk is recognized as the ideal nutrition for infants. It is recommended that infants breastfeed until at least one year of age, and as long as mutually desired for both mother and baby. A mother's breastmilk has the perfect combination of nutrients needed for infant growth and development. When breastmilk is not available, iron-fortified infant formula is the appropriate alternative for the infant's first year of life. Regardless of whether infants are breastfed or formula fed, they should be held and cuddled during feedings.

Breastfeeding

Breastmilk has a unique nutrient composition and many protective factors to promote optimal infant health and development throughout the first year of life. Breastmilk is more easily digested than infant formula. The composition of breastmilk is constantly changing based on age, stage of lactation, beginning or ending of a feeding, time of day, and the mother's diet. During the first few days after the infant is born, the breastfed infant receives colostrum. Colostrum helps protect newborn infants from infections. Breastmilk continues to protect infants against other common illnesses of infancy, such as ear infections and respiratory infections. Breastmilk may offer protection against or delay the onset of food allergies. During the first few weeks, exclusively breastfed infants eat a total of 8 to 12 feedings within 24 hours. These young infants need to eat often throughout the day and night because their stomachs cannot hold a large quantity. From birth to six months of age, infants grow rapidly and will gradually increase the amounts they can consume at each feeding, the time between each feeding, and the total amount consumed in 24 hours. Encourage bottle-feeding parents or caregivers to prepare two ounces of breastmilk or infant formula every two to three hours at first. More should be prepared if the infant seems hungry, especially as the infant grows. Refer to *Breastfeeding Answers Made Simple* for a comprehensive breakdown of breastmilk composition.

Formula Feeding

Breastmilk is the optimal source of nutrition for infants. When breastmilk is not available, iron-fortified infant formula is the appropriate alternative. Infant formula types include cow's-milk-based, soy-based, hypoallergenic, lactose-reduced formulas, and specialty formulas for specific conditions. The AAP believes that there are only a few circumstances in which soy formula should be chosen instead of cow's-milk-based formula in healthy, full-term infants (infants who have no medical problems and were not born premature). These limited indications for use include infants with galactosemia (an inherited disorder that affects how the body processes a sugar called galactose) and hereditary lactase deficiency (an inherited disorder in which the amount of the digestive enzyme lactase is inadequate for the normal digestion of milk products), or in situations in which a vegan diet is preferred by the family. Some caregivers may be concerned about the safety of soy formula. Soy infant formula contains phytoestrogens, a substance found in certain plants that acts like the hormone estrogen. The safety and impact of phytoestrogens in infancy and early childhood remains under review.

Infant formula is available in three forms: powdered, concentrated liquid, and ready-to-feed (RTF). Powdered infant formula is prepared by mixing one unpacked level scoop of dry powdered formula using the measuring scoop that comes in the can of formula with two ounces of water. Concentrated infant formula is prepared by adding equal parts of water to concentrated liquid formula. The AAP recommends that caregivers use water from a safe source as identified by the local health department. Ready-to-feed infant formula is ready for the infant to consume and does not require additional water.

Caution

Although liquid infant formula is commercially sterile, powdered infant formula is not. Powdered infant formula contains low levels of *Cronobacter*, a gram-negative, non-spore-forming bacterium. *Cronobacter* has been associated with sepsis, meningitis, cerebritis, and necrotizing enterocolitis. Premature, low birth weight, or immunocompromised infants are at particular risk. Improper preparation and refrigeration of powdered infant formula can cause an increase in the level of contamination of *Cronobacter* in powdered formula. Arizona WIC issues liquid concentrate or ready-to-feed infant formula, which is commercially sterile, to premature, low birth weight, or immunocompromised infants for up to six months corrected age. Corrected age is the adjusted age of a premature baby based on the original due date.

Guidelines for Using a Bottle

To ensure that bottle feeding is safe and comfortable for infants and caregivers:

- Wash hands with soap and water before and after feedings.
- Hold infant in arms or lap in a semi-upright position during feedings to minimize the possibility of choking and allow physical eye contact with their caregiver.
- Hold the bottle at an angle so the end of the bottle near the nipple does not fill with air. Propping the bottle is never recommended.
- Burp infants at a natural break during the feeding.
- Do not give a bottle to an infant who is lying down or in a car seat because this can lead to dental problems.
- Never force infants to finish what is in the bottle.
- Remember that infants are the best judges of how much they need.
- Do not put cereal, juice, or other foods in the bottle.
- Bottles of water or tea are not recommended unless directed by physician

Introduction of Complementary Foods

Complementary foods are foods other than breastmilk or infant formula (liquids, semisolids, and solids) introduced to an infant to provide nutrients. Introducing complementary foods supports infants in learning how to eat a variety of foods and textures. This is a messy stage, but allowing infants to feed themselves is very important in their development of feeding skills. The introduction of complementary foods is exciting because the infant joins the caregiver at the table for family meals. Encourage caregivers to show a positive attitude when introducing complementary foods to their infant. Avoid force-feeding foods to an infant. If foods are rejected, it is important to offer rejected foods again in a week or two. Research has demonstrated that it takes as many as 10 to 15 exposures to a new food for an infant to readily accept the food. It may take time to adapt to the flavor and texture of new foods; familiarity plays a significant part in food acceptance.

When to Start

The World Health Organization (WHO) recommends that infants start receiving complementary foods in addition to breastmilk around six months of age. However, an infant's age alone does not always determine readiness. Signs of readiness for solids include:

- Sitting up with support
- Holding head steady
- Putting fingers or toys in mouth
- Showing desire for food by opening mouth
- Turning head away when finished eating
- Keeping food in mouth and swallowing (also known as loss of the early tongue thrust reflex)

All infants develop at their own rate. Infants with special medical conditions or developmental delays may not be ready for complementary foods at the same age as healthy full-term infants. Consider the infant's developmental stage and nutritional status; coexisting medical conditions; social factors; the family's cultural, ethnic, and religious food preferences; financial considerations; and other pertinent factors discovered through the nutrition assessment process. The jaw and muscle development that occurs when an infant eats complementary foods at the appropriate age contributes to later speech development. Infants who are not introduced to complementary foods when developmentally ready may reject foods when they are introduced at a later age or consume an inadequate variety and amount of food to meet their nutritional needs.

What to Feed and How Often

Research does not support introducing foods in a particular order; however, it is recommended to introduce one single-ingredient new food at a time. As an infant's oral skills develop, continue to provide a variety of textures of foods. Foods rich in iron and zinc are important at six months of age due to the depletion of the infant's body stores. Foods rich in iron and zinc can include well-cooked lean beef, chicken, turkey, egg yolk, or legumes.

Progression and Texture Transition

It is important to expose infants to a variety of food textures at the appropriate times. Encourage caregivers to transition infants through textures so they are eating a range of healthy family foods by 12 months. Infants who stay on pureed foods for prolonged periods, such as beyond eight to nine months of age or when developmentally ready, may have difficulties progressing through textures later, which may limit future food choice and, therefore, consumption of essential nutrients.

Watching for Food Reactions

When introducing complementary foods, do so gradually. Observe infants closely for adverse reactions such as rash, wheezing, vomiting, or diarrhea after eating a new food.

Safe Feeding

Gagging is common in infants as a result of the tongue-thrust reflex. It occurs frequently in infants being offered varying textures as they are learning how to hold the food in their mouths, chew, and swallow. It is not to be confused with choking. Choking is a dangerous situation. A choking infant will be unable to breathe and not be able to make noise. To reduce infants' risk of choking, caregivers can:

- Cook food until soft enough to easily pierce with a fork.
- Cut soft foods into small pieces (cubes of food not larger than a quarter inch) or thin slices that can easily be chewed.
- Cut soft round foods, such as well-cooked carrots, into short strips rather than round pieces.
- Substitute foods that may cause choking with a safe alternative, such as thinly sliced meat or hamburger instead of hot dogs.
- Remove all bones from poultry and meat, and especially from fish.
- Cut small round foods (e.g., grapes, cherry tomatoes, grape tomatoes) into quarters.
- Remove pits and seeds from very ripe fruit and cut the fruit into small pieces.

The Importance of Introducing Family Foods

Foods prepared for an infant at home can be as nutritious as and more economical than commercially prepared infant food. Caregivers who use home-prepared infant foods have more control over the variety and texture of food than those who use commercially prepared infant foods. Home-prepared foods should be prepared and stored safely, appropriate in texture, cooked using methods that preserve nutrients, and prepared without adding unnecessary ingredients such as sugar and salt.

Foods to Avoid in Infancy

- **Cow's milk** Cow's milk is not an appropriate substitute for breastmilk or infant formula for infants. Young infants cannot digest cow's milk as completely or easily as they digest formula. Also, cow's milk contains high concentrations of protein and minerals, which can stress an infant's immature kidneys and cause severe illness. In addition, cow's milk lacks the proper amounts of iron, vitamin C, and other nutrients that infants need.
- **Honey** Infants should not be given honey. Honey may be contaminated with bacteria that can cause infant botulism. This may cause muscle weakness and breathing problems.
- **Foods with added sugar** It is also recommended that infants not be given foods with added sugars, including sugar-sweetened beverages like juice, Kool-Aid, tea, and sports drinks. The AAP has concluded that fruit juice offers no nutritional benefit for infants younger than six months and has no advantage over whole fruits for infants older than six months; therefore, juice is not recommended in infancy and is not provided to infants through WIC.

D- Infant Assessment

Inappropriate infant feeding practices are included in the 411 WIC codes. Dietary Risk Associated with Complementary Feeding Practices includes the WIC Code 428. Education may be offered after completion of an ABCDE assessment.

Ask:

- “How do you feel about your baby’s eating?”
- “How do you feel breastfeeding is going?”
- “How does your baby let you know he/she is hungry or full?”

Assess:

- Breastfeeding status
- Feeding schedule and frequency
- Developmental milestones specific to eating
- Cultural traditions specific to eating
- Use of vitamins and/or supplements
- How foods are prepared and stored
- Physical activity

Concern:

Routinely using a substitute for breastmilk or FDA-approved iron-fortified formula as primary nutrient source during first year of life (WIC Code 411.1)

This may include the use of low-iron formula without iron supplementation; cow’s, goat’s, or sheep’s milk; canned evaporated or sweetened condensed milk; and imitation or substitute milks (such as rice- or soy-based beverages or nondairy creamer). During the first year of life, breastfeeding is the preferred method of infant feeding. Iron-fortified formula is generally the acceptable alternative for breastfeeding. Low-iron infant formula can compromise an infant’s iron stores and lead to iron-deficiency anemia. Cow’s milk has insufficient and inappropriate amounts of nutrients and can cause blood loss that can lead to iron deficiency, stress on the kidneys, and allergic reactions. Sweetened condensed milk contains a high amount of sugar that displaces other nutrients or causes overconsumption of calories. Homemade formulas prepared with canned evaporated milk do not contain optimal types and amounts of the nutrients infants need. Goat’s milk, sheep’s milk, and imitation milks do not contain nutrients in amounts appropriate for infants. Assess frequency and contents of substitute feeds and reasons for substitutions.

Routinely using nursing bottles or cups improperly (WIC Code 411.2)

Eating and feeding habits that affect tooth decay may be started during infancy and may continue into early childhood. Baby bottles may be a primary contributor to dental problems in infancy. Factors include using bottles with beverages containing sugars (e.g., fruit juice, soda, and other sweetened drinks) or pacifiers dipped in sweet products such as sugar, honey, or syrups. The AAP and the American Academy of Pediatric Dentistry recommend that juice should not be offered in a bottle and that infants should not be put to bed with bottles in their mouths. While sleeping with bottles in their mouths, infants' swallowing and salivary flow decrease, creating a pooling of liquid around the teeth. The practice of allowing infants to carry or drink from a bottle or training cup of juice for periods throughout the day leads to excessive exposure of teeth to carbohydrates, which promotes the development of dental problems. Adding solid food, such as infant cereal, to a nursing bottle results in force-feeding, inappropriately increases the calories and alters the nutrient composition of the formula, deprives the infant of experiences important to the development of feeding behavior, and could cause an infant to choke. Assess frequency and use of sugar-sweetened beverages in the bottle or cup, frequency of propping the bottle or cup, and frequency of falling asleep with the bottle or cup.

Routinely offering complementary foods or other substances that are inappropriate in type or timing (WIC Code 411.3)

This includes adding sweet agents such as sugar, honey, or syrups to any beverage (including water), prepared food, or pacifier and introducing any food other than breastmilk or iron-fortified infant formula before six months of age. Offering anything other than breastmilk or infant formula before the infant is developmentally ready may deprive the infant of other important calories or nutrients and lead to dental problems. Assess baby behavior and cues, developmental signs of readiness for complementary foods, reasons for offering solids, and cultural food patterns.

Routinely using feeding practices that disregard the development needs or stage of the infant (WIC Code 411.4)

Infants held to rigid feeding schedules are often underfed or overfed. Caregivers who may not be seeing, recognizing, or responding to baby behaviors, or those who overmanage feeding, may inappropriately restrict feeding or encourage overfeeding. These practices may promote negative or unpleasant associations with eating that may continue into later life, and may also contribute to obesity. Infrequent breastfeeding can result in lactation insufficiency and infant failure to thrive. Infants consuming solid foods require a texture appropriate to their developmental level. Assess the caregiver's knowledge of baby behavior, developmental milestones specific to eating, and cultural food patterns.

Feeding foods to an infant that could be contaminated with harmful microorganisms (WIC Code 411.5)

Raw, undercooked, and unpasteurized foods may contain pathogens such as *Escherichia coli* (*E. coli*), *Salmonella*, *Brucella*, *Listeria*, and *Cryptosporidium* organisms. These organisms can cause serious disease or foodborne illness (food poisoning). Honey has also been found to be the primary food source of *Clostridium botulinum* during infancy. These spores are extremely resistant to heat, including pasteurization, and are not destroyed by present methods of processing honey. Donor human milk acquired directly from individuals or the Internet also increases risk of harmful contamination. Assess solids offered to the infant, preparation and cooking methods, and cultural eating patterns.

Routinely feeding inappropriately diluted formula (WIC Code 411.6)

Overdilution of infant formula can cause water intoxication, resulting in hyponatremia (low sodium concentrations in the blood), irritability, coma, inadequate nutrient intake, failure to thrive, or poor growth. Underdilution of formula increases calories and protein and may cause kidney problems in infants. Powdered formulas vary in density, so manufacturers' scoops are formula-specific to ensure correct dilution. Assess formula preparation, daily amount of formula consumed, and reasons for improper dilution, if known.

Routinely limiting the frequency of nursing of the exclusively breastfed infant when breastmilk is the sole source of nutrients (WIC Code 411.7)

Exclusive breastfeeding provides ideal nutrition to an infant and is sufficient to support optimal growth and development. Frequent breastfeeding is critical to establishing and maintaining an adequate milk supply for the infant. Inadequate frequency of breastfeeding may lead to early weaning by the mother and to dehydration, poor weight gain, diarrhea, vomiting, illness, and malnourishment in the infant. Exclusive breastfeeding protects infants from early exposure to contaminated foods and liquids. In addition, infants who receive breastmilk rather than infant formulas have a lower risk of being overweight later in life. Assess potential reasons for limiting feedings, breastfeeding concerns, and cultural beliefs specific to food.

Routinely feeding a diet very low in calories and/or essential nutrients (WIC Code 411.8)

This may include following a strict vegan diet, macrobiotic diet, or other diet very low in calories or nutrients. Highly restrictive diets prevent adequate intake of nutrients and interfere with growth and development. Infants are particularly vulnerable during the weaning period; if they are being fed a macrobiotic diet, they may experience developmental delays. Strict vegan diets may be inadequate in calories, vitamin B12, vitamin D, calcium, iron, protein, and essential amino acids needed for growth and development. The more limited the diet, the greater the health risk. Assess reasons for following the restrictive diet, cultural or religious beliefs, client understanding of baby behavior and cues, and nutritional impact.

Routinely using inappropriate sanitation in preparation, handling, and storage of expressed breastmilk or formula (WIC Code 411.9)

Expressed breastmilk and prepared infant formula must be handled and stored properly in order to be safe for consumption. Avoid offering formula not prepared and/or stored per manufacturer or physician instructions. Avoid offering infants formula that has been at room temperature for longer than one hour. Concentrated or RTF formula can be held in the refrigerator up to 48 hours. Powdered formula can be prepared and refrigerated for up to 24 hours. Lack of sanitation may cause gastrointestinal infection. Most babies who are hospitalized for vomiting and diarrhea are bottle fed. This has often been attributed to the improper handling of formula rather than sensitivities to the formula.

The following breastmilk feeding, handling, and storage practices are considered inappropriate:

- Held in the freezer for more than six months
- Thawing frozen breastmilk in the microwave oven
- Refreezing breastmilk
- Adding freshly pumped chilled human milk to already-frozen human milk in a storage container
- Feeding thawed refrigerated human milk
- Saving breastmilk from a used bottle for another use at a subsequent feeding
- Using donor human milk acquired directly from individuals or the Internet

Assess water source, bottle preparation and storage, bottle cleaning, and hand washing.

Feeding dietary supplements with potentially harmful consequences (WIC Code 411.10)

An infant who consumes inappropriate or excessive amounts of single vitamins, multivitamins, or mineral or herbal remedies not prescribed by a physician is at risk for a variety of adverse effects, including harmful nutrient interactions and toxicity. While some herbal teas may be safe, some have undesirable effects, particularly on infants who are fed herbal teas or who receive breastmilk from mothers who have ingested herbal teas. Examples of teas with potentially harmful effects include licorice, comfrey leaves, sassafras, senna, buckhorn bark, cinnamon, wormwood, woodruff, valerian, foxglove, pokeroor or pokeweed, periwinkle, nutmeg, catnip, hydrangea, juniper, Mormon tea, thorn apple, yohimbe bark, lobelia, oleander, yerba mate, kola nut or gotu cola, and chamomile. Like drugs, herbal or botanical preparations have chemical and biological activity, may have side effects, and may interact with certain medications. These interactions can cause problems and can even be dangerous. Assess vitamin use (frequency, and amount), supplement use (frequency, and amount), use of herbs or teas (frequency and amount), and reasons for use.

Routinely not providing dietary supplements recognized as essential (WIC Code 411.11)

Depending on an infant's specific needs and environment, certain dietary supplements may be recommended by the healthcare provider. For example, fluoride supplements may be beneficial in reducing dental decay for children living in fluoride-deficient areas. Furthermore, to prevent rickets and vitamin D deficiency in healthy infants and children, the AAP recommends a vitamin D supplement of 400 IU per day for all breastfed and partially breastfed infants. Vitamin D can also be a concern for formula-fed infants. Assess dietary patterns, types and varieties of solids if older than six months, and vitamin and supplement use.

Dietary risk associated with complementary feeding practices (WIC Code 428)

The process of adding complementary foods should reflect the physical, intellectual, and behavioral stages of infants and children, as well as their nutrient needs. Lifelong eating habits are developed in the early years. Food exposure and accessibility, the modeling behavior of parents and siblings, and the level of parental control over food consumption influence a child's food preferences. Inappropriate feeding practices may result in under- or overfeeding and may promote negative associations with eating that continue later in life. Caregivers may not recognize signs of developmental readiness and, therefore, offer foods and beverages that may be inappropriate in type, amount, consistency, or texture. Zinc is critical for growth, immunity, and brain development and function. The concentration of zinc in breastmilk declines to a level considered inadequate to meet the needs of infants between 7 and 12 months of age.

Complementary food sources of zinc, such as meats or zinc-fortified infant cereals, should be introduced to exclusively breastfed infants by seven months. It is also recommended that breastfed infants be offered a supplemental iron food source beginning at six months, the point at which infants' bodily iron stores have been depleted. Assess for eating patterns, textures and types of solid foods offered to the infant, and cultural traditions specific to food and eating.

Breastfeeding complications or potential complications (Infants) (WIC Code 603)

Breastfeeding complications or potential complications can have both immediate and long-term consequences on infant health. Growth and development are more rapid during infancy than any other stage of life, with the highest nutrient needs compared to body size. Infants require more frequent feedings than older children and adults. The definition for Breastfeeding Complications or Potential Complications includes jaundice, weak or ineffective suck, difficulty latching onto the mother's breast, inadequate stooling and/or less than six wet diapers per day. Assess for ability to recognize and respond to infant hunger and fullness cues, frequency and duration of feedings, effective latch and breastfeeding support.

Infant up to 6 months old of WIC mother or of a woman who would have been eligible during pregnancy (WIC Code 701)

Infants under six months of age, whose mother was a WIC Program participant during pregnancy, benefit by continuing participation in the program. WIC participation during pregnancy improves pregnancy outcomes, resulting in healthier births with fewer complications. The health benefits maintained during gestation and early infancy may decline or be lost if program participation ceases. WIC participation in infancy is associated with lower infant mortality, decreased anemia for infants and improvements in growth. Infants on WIC are more likely to follow age-appropriate feeding recommendations and less likely to consume cow's milk before one year. Assess baby behaviors and cues, breastfeeding/formula feeding including frequency and duration/amount, as well as vitamin and supplement use.

Breastfeeding infant of a woman at nutritional risk (WIC Code 702)

A breastfed infant depends on mother's milk as the primary source of nutrition. Lactation significantly increases the mother's need for protein, calories, calcium and other vitamins and minerals. Inadequate maternal nutrition may result in decreased nutrient content of the milk. Assess for ability to recognize and respond to infant hunger and fullness cues, frequency and duration of feedings, effective latch and breastfeeding support.

Other Concerns in Infancy

Formula Intolerance

It is normal for almost all infants to be fussy at times, making it challenging to diagnose a true allergy or intolerance to infant formula. Only about 2 to 3 percent of infants have a true allergy to the milk protein in standard formulas. Caregivers concerned about possible formula intolerance should be referred to their healthcare provider and the WIC registered dietitian, who will coordinate care and approach with the doctor. Assess growth, type of formula, formula preparation, and symptoms.

Spitting Up and Vomiting

It is normal for young infants to spit up breastmilk or infant formula after feedings. A more severe form of spitting up is called gastroesophageal reflux disease (GERD). Reflux is defined as the spontaneous regurgitation of material from the stomach into the esophagus. Excessive spit-up can be reduced by burping the infant several times during a feeding to slow the feeding and lessen the amount of air swallowed, holding the infant in an upright position after a feeding for about 15 to 30 minutes, avoiding excessive movement or play right after eating, and avoiding forcing the infant to eat or drink when full and satisfied. Assess feeding status, method (propped, held), amount and frequency, amount and timing of spit-up, and bottle preparation (if bottle feeding).

Diarrhea

Typical dirty diapers look different for breastfed infants than for formula-fed infants. On average, stool from formula-fed infants is firmer than that from breastfed infants. Diarrhea is defined as the frequent passage of loose, watery stools. Diarrhea should not be confused with the normal stools of breastfed infants. Diarrhea in infants can be caused by a reaction to a food, excessive juice consumption, use of certain medications, medical conditions or infections, malabsorption of food, or consumption of contaminated food or water. Proper infant formula preparation and storage techniques are very important in ensuring that infant formula is not contaminated and a potential cause of diarrhea. Use of ordinary beverages to treat diarrhea may actually worsen the condition and lead to further dehydration. In most cases of acute diarrhea, and clearly when dehydration is not present, continued feeding of the infant's usual diet is the most appropriate treatment. This is true whether the infant's usual intake is breastmilk, milk-based infant formula, soy-based infant formula, or any of these milks, along with complementary foods. Assess feeding status, medical conditions, food and fluid intake, juice intake, and safe bottle handling, preparation, and storage.

Constipation

Constipation is generally defined as the condition when bowel movements are hard, dry, and difficult to pass. Although some believe that constipation is related to the frequency or the passage of stools, this may not be as important as the consistency of the stools. True constipation is not very common among breastfed infants who receive adequate amounts of breastmilk or among formula-fed infants who consume adequate diets. Some caregivers believe iron causes their infant to be constipated, but studies have demonstrated no relationship between iron-fortified infant formula and gastrointestinal distress, including constipation. Formula-fed infants tend to have firmer stools, but this does not indicate constipation. Assess whether symptoms are true constipation, feeding status, including number and length of feedings, formula intake and dilution, any recent changes in feeding, and blood in the stool.

Physical Activity in Infancy

Physical activity for infants focuses on the development of motor skills, or motions carried out when the brain, nervous system, and muscles work together. Gross motor skills involve the large muscle groups, such as those in the arms and legs, while fine motor skills involve smaller muscles like those in the hands and fingers. Caregivers can help infants develop the skills needed to be physically active and to reach developmental milestones like sitting up, rolling over, crawling, and walking. Stimulating environments that encourage infants to move and explore affect the rate of motor skill development. Similarly, the way infants are held, how much time they spend in infant equipment such as seats, swings, and walkers, the amount of time they spend on their stomachs during play, and the toys they play with can all affect motor skill development. Screen time, including the use of television, computers, and other electronic devices, also impacts infant health and development. It is recommended that children under the age of two not participate in screen time activities, but engage in activities with adults and family members that promote exploration and learning. Assess opportunities for infant movement, time and frequency of infant movement, and safety.

D- Education Related to Dietary (Nutrition)

Education specific to concerns identified during the *D* assessment may include:

D411.1 Education Messages for Substituting Breastfeeding or Iron-Fortified Formula:

- “Breastfeeding is the optimal source of nutrition for infants.”
- “Breastmilk or iron-fortified infant formula is all that infants need for the first six months.”
- “Babies this age who drink things other than breastmilk or formula tend not to grow and develop in the way that is expected because they are missing important nutrients that breastmilk and formula provide in just the right amounts.”

D411.2 Education Messages for Inappropriate Use of Bottles or Sippy Cups:

- “Babies who fall asleep with a bottle containing formula, milk, fruit juice, or any sweetened liquid or while breastfeeding tend to have more tooth decay because the sugar in the liquids (including breastmilk) pools around lower teeth while they sleep.”
- “Bottles are for breastmilk or formula only.”
- “Babies who drink juice or other sweetened liquids (such as juice, Kool-Aid, soda, Karo syrup) from a bottle often have more dental problems and get more calories than they need.”
- “Adding infant cereal to the bottle is not recommended because it may interfere with the proper dilution of infant formula and water. This also ignores infant cues and can lead to overfeeding.”

D411.3 Education Messages for Offering Inappropriate Complementary Foods:

- “Arizona WIC recommends waiting until infants are six months old before starting solid foods.”
- “Most healthy full-term infants are ready to start solid foods at six months when they can sit up with support, hold their head steady, put their fingers in their mouth, and keep food in their mouth and swallow it.”
- “Added sugars or sweeteners are not needed for infants.”

D411.4 Education Messages for Feeding Practices That Disregard Developmental Needs or Stage of Infant:

- “Arizona WIC recommends waiting until infants are six months old before starting solid foods.”
- “Most healthy full-term infants are ready to start solid foods at six months when they can sit up with support, hold their head steady, put their fingers in their mouth, and keep food in their mouth and swallow it.”
- “Infants move through the stages of textures as they get used to eating foods.”
- “Infants who are not introduced to solid foods when developmentally ready may reject foods when they are introduced at a later age.”

D411.5 Education Messages for Feeding Foods That Could Be Contaminated with Harmful Microorganisms:

- “Honey is a known source of the bacterial spores that cause botulism. For this reason, honey shouldn’t be given to babies under 12 months of age.”
- “Unpasteurized foods, such as unpasteurized milk, cheese, or juice, may result in illness in your baby as a result of the bacteria in the food.”

D411.6 Education Messages for Routinely Feeding Inappropriately Diluted Formula:

- “Powdered infant formula is prepared by using the measured scoop that comes in the can of formula to mix one unpacked level scoop of dry powder with two ounces of water.”
- “Concentrated infant formula is prepared by combining equal parts of water and concentrated liquid. That would be one ounce of formula for every one ounce of water.”
- “It is important to prepare the infant formula bottle according to the instructions to make sure your baby gets all of the calories and nutrients needed for healthy growth.”
- “WIC does not recommend increasing the water-to-formula amount because your baby will not get all of the calories she needs for growth.”
- “It is not recommended to decrease the amount of water to formula because this could lead to dehydration and result in kidney or digestion problems.”
- “Adding cereal to a bottle can interfere with the proper dilution of infant formula and water. This also ignores infant cues and can lead to overfeeding.”

D411.7 Education Messages for Limiting the Frequency of Nursing for an Exclusively Breastfed Infant:

- “Babies use their bodies and make noises to let you know when they need to eat and when they are done. These are called cues. It is recommended that you follow your baby’s cues when breastfeeding.”
- “Babies have to be fed often because their stomachs are very small.”
- “When your baby is hungry, he may keep his hands near his mouth, bend his arms and legs, make sucking noises, pucker his lips, and search for the nipple.”
- “You will know your baby is full when she begins to suck slower or stops sucking, relaxes her hands and arms, turns away from the nipple, pushes away, or falls asleep.”
- “Limiting breastfeeding may lead to poor weight gain and growth for your infant.”
- **(If less than two months old)** “On average, you can expect approximately eight or more feedings in 24 hours.”

D411.8 Education Messages for Routinely Feeding a Diet Very Low in Calories and/or Nutrients:

- “It is typically not recommended that infants follow a strict diet.”
- “Infants need breastmilk for optimal growth. If breastfeeding is not an option, infant formula is the acceptable alternative. Infants also benefit from the introduction of a variety of age-appropriate solid foods beginning at six months, in addition to breastmilk or formula.”

D411.9 Education Messages for Inappropriate Sanitation in Preparation, Handling, and Storage of Pumped Breastmilk or Formula:

- “Young infants may become ill from bottles that are not cleaned and prepared properly.”
- **(If feeding breastmilk)** “As a precaution, use refrigerated bottles of breastmilk within 24 hours to prevent the growth of harmful bacteria.”
- **(If formula-feeding)** “Prepare and/or store formula according to manufacturer or physician instructions.”
- “As a precaution, use refrigerated bottles of prepared formula within 24 hours to prevent the growth of harmful bacteria.”
- “As a reminder, wash your hands in warm soapy water after each diaper change and before feeding your baby to prevent illness.”
- “As a precaution, discard any unused breastmilk or formula left in the bottle after a feeding to prevent the growth of bacteria.”
- “Human milk obtained directly from individuals or through the Internet is potentially harmful due to the lack of adequate screening for infectious diseases and the risk of contamination.”

D411.10 Education Messages for Feeding Dietary Supplements with Potentially Harmful Consequences:

- “Herbs, teas, and other supplements may contain compounds that could be harmful to infants.”
- **(If providing a vitamin supplement by healthcare provider recommendation)** “Follow your doctor’s instructions for how often and how many vitamins to give your baby.”

D411.11 Education Message for Routinely Not Providing Dietary Supplements Recognized as Essential:

- “Vitamin D is recommended for all exclusively breastfed babies.”
- “Talk with your healthcare provider about providing a vitamin D supplement.”

D428 Education Messages for Dietary Risk Associated with Complementary Feeding Practices:

- “It is recommended that you wait until your baby is six months old to introduce solid foods.”
- “Introducing solid foods before an infant is ready may lead to illness.”
- “Foods rich in iron and zinc are important at six months of age due to the depletion of the infant’s body stores. Foods rich in iron and zinc include well-cooked lean beef, chicken, turkey, egg yolk, and legumes.”

Environmental Assessment (Including Other Social and Safety Factors)



The environmental assessment, or *E* section, of the ABCDE assessment includes assessing environmental, social, and safety factors that influence nutritional status. The common environmental factors assessed in WIC that affect infants include smoking, physical abuse, substance abuse, and foster care. The environmental assessment includes WIC codes in the 900s.

Why Is This Important?

- Environmental stressors may impact intake and growth

Environmental factors directly affect health and well-being. Referrals and follow-up are important opportunities to motivate caregivers and empower families with options to explore.

E - Infant Assessment Considerations

- Environmental risks are **sensitive and personal** subjects
- The role of the WIC counselor is to offer the client a chance to voice a need and make an appropriate referral

Information gathered from the *E* assessment can sometimes include sensitive topics that are challenging to address. Caregivers can be supported most effectively when they are made to feel safe to share without shame or blame. Based on the caregiver's motivation and interest, WIC may provide key connections to community resources and programs.

E - Infant Assessment

Ask:

- "What concerns do you have about the safety of your baby within your family relationships?"
- "How do you feel about smoking in your home and around your infant?"
- "What concerns do you have about alcohol or drug use in your home and around your infant?"

Assess:

- Safety concerns
- Alcohol and drug use
- Foster status
- Tobacco use in the home
- Access to community services

Concern:

Homelessness (WIC Code 801)

Homeless individuals comprise a very vulnerable population with many special needs. Today's homeless population contains a sizeable number of women and children. WIC defines homelessness as a predisposing nutrition risk condition. Homelessness includes situations in which a woman, infant or child lacks a fixed, regular nighttime residence. Examples include residence in public or private shelters, temporary residence in the home of another individual and in any public or private place not designed for regular sleeping accommodation for human beings. Assess the infant's access to community services. Assess for access to sanitary water and refrigeration to determine food package tailoring needs.

Migrancy (WIC Code 802)

Data indicates that infant mortality, malnutrition, and parasitic disease among children are higher for migrants than among the general U.S. population. Migrancy may lead to inadequate nutritional patterns or nutritionally related medical conditions. Assess the infant's access to community services. Assess for access to sanitary water and refrigeration to determine food package tailoring needs.

Recipient of abuse (WIC Code 901)

Recipient of abuse is defined as an individual who has experienced physical, sexual, emotional, economic, or psychological maltreatment that may frighten, intimidate, terrorize, manipulate, hurt, humiliate, blame, injure, and/or wound the individual.

Serious neglect and physical, emotional, or sexual abuse has short- and long-term physical, emotional, and functional consequences for children. Nutritional neglect is the most common cause of poor growth and may account for as much as half of all cases of failure to thrive in young children. Assess infant safety, access to community services, and if mandatory referral to child protective services is indicated.

WIC staff can provide the following nutrition services to participants who experience abuse:

- Provide a safe and supportive environment for participants who may be experiencing or have experienced abuse.
- Encourage pregnant women to attend all prenatal appointments with their health care provider and explain the importance of early and adequate prenatal care.
- Offer tailored breastfeeding support catered to the participant's specific needs and concerns.
- Encourage parents to attend local parenting classes or parent training programs (33).
- Refer the participant to their family case manager, if available, and/or to services and resources in their community that provide support to victims of abuse.
- Refer participants to national resources such as:
 - [National Domestic Violence Hotline](#): 1-800-799-SAFE (7233). This hotline is staffed with trained counselors 24 hours a day and provides callers with crisis counselors, safety planning and assistance in finding resources, such as shelter. A secure, confidential online chat option is also available.
 - [Directory of Crime Victim Services](#): This website provides a directory of programs and organizations that can help victims of crime.
 - [Rape, Abuse and Incest National Network \(RAINN\)](#): 1-800-656-HOPE (4673). This national hotline provides counseling and assistance to victims of sexual violence and their families and friends from trained counselors who are available 24 hours a day.
 - [National Clearinghouse for the Defense of Battered Women \(NCDBW\)](#): 1-800-903-0111 ext. 3. This national organization provides technical assistance to abused women facing charges related to their abuse.
 - [Childhelp National Child Abuse Hotline](#): 1-800-4-A-CHILD (1-800-422-4453). This hotline offers information to parents seeking help for child abuse, individuals who suspect child abuse is occurring and those needing prevention tips. Professional counselors are available to provide support and referrals to emergency and social services. Their website also lists Child Protective Services in each state.

Woman or infant/child of primary caregiver with limited ability (WIC Code 902)

Caregivers with limited ability to make feeding decisions may include individuals who are mothers aged 17 years or younger, mentally or intellectually disabled or delayed, diagnosed with a mental illness such as depression, physically disabled to a degree that restricts or limits food preparation abilities, or currently or historically abusing alcohol or other drugs. Assess support systems for the infant and access to community services.

Foster care (WIC Code 903)

Foster children have higher rates of chronic conditions such as asthma, diabetes, and seizure disorders than children who are not in foster care. They are also more likely than children in the general population to have birth defects, inadequate nutrition, and growth retardation, including short stature. These defects may be the result of abuse or neglect prior to entry into the foster care system or the history and frequency of moves between foster homes. For example, the foster caregiver accompanying a foster child to a WIC clinic for a first-time certification may have no knowledge of the child's eating patterns, special dietary needs, chronic illnesses, or other factors. Without any anthropometric history, failure to grow, often a problem for foster children, may not be diagnosed. The nutrition education, referrals, and service coordination provided by WIC can support foster parents in developing skills and knowledge to ensure that foster children receive appropriate nutrition and healthcare. Foster parents may have inadequate information about the health needs of new foster children; therefore, through the ABCDE assessment, WIC can alert foster parents to the nutritional risks that affect foster children and suggest ways to improve nutritional status. Code 903 will be automatically assigned by HANDS (the Arizona WIC computer system) based on the information provided on the certification screen. Assess most recent foster home move, instructions for special care of the infant, and linkages to community services.

Exposure to environmental tobacco smoke (WIC Code 904)

WIC defines exposure to environmental tobacco smoke (ETS) as exposure to smoke from tobacco products inside enclosed areas, like the home, place of child care, etc. ETS is also known as secondhand, passive, or involuntary smoke. The ETS definition also includes the exposure to the aerosol from electronic nicotine delivery systems (such as vapes, vaporizers, vape pens, hookah pens, electronic cigarettes and e-pipes).

Studies suggest that the health effects of ETS exposure at a young age could last into adulthood. This includes risk of cancer—specifically lung cancer—and cardiovascular diseases. There is strong evidence that ETS exposure to the fetus or infant results in permanent lung damage. Assess smoking inside the home and utilization of ASHLine cessation and referral services.

***E* - Education Related to Environmental**

Education specific to concerns identified during the *E* assessment may include:

- Provide local agency referral list.
- Encourage the caregiver to follow up on community support services.
- Refer to social and community services.

***E* - Referral Messages for Environmental Concerns**

- “May I give you this referral list of services available here in our community that may be able to help you?” (Provide local agency referral list.)
- “Arizona 211 is a community information and referral service. Let’s explore some options together, and I will also show you how to find this information from home.”

Infants—Take-Home Messages

The following is a summary of key nutrition education messages that may be shared with participants based on the concerns they share and the goals that they set for themselves.

- ❖ Breastfeeding provides optimal nutrition for infants.
- ❖ A good feeding relationship is established when parents understand how to look for, recognize, and respond to infant cues.
- ❖ Newborn infants typically feed 8 to 12 times per day or drink two to three ounces per feeding if bottle feeding.
- ❖ Appetite and growth spurts typically occur when an infant is 8 to 12 days old and at 6 weeks, 3 months, and 6 months. Infants may feed more frequently during these periods of increased need.
- ❖ Every infant grows differently.
- ❖ Infants will develop feeding skills at their own rate if given the opportunity.
- ❖ Complementary foods can be started when infants are developmentally ready, which is typically at six months of age for most healthy full-term infants.
- ❖ Introduce new foods gradually.
- ❖ Cow's milk should not replace breastmilk or infant formula.
- ❖ Physical activity is important for infant development.

References

1. Academy of Nutrition and Dietetics (AND). *Pediatric Nutrition Care Manual*. Updated May 19, 2014. <http://www.nutritioncaremanual.org/about-pncm>.
2. Academy of Nutrition and Dietetics (AND). *Public Health/Community Nutrition Care Process Toolkit*. 2012.
3. Academy of Nutrition and Dietetics (AND). *The Nutrition Care Process in Pediatric Practice*. 2014.
4. American Academy of Pediatrics (AAP). *Bright Futures: Nutrition*. 2011. http://brightfutures.aap.org/nutrition_3rd_Edition.html.
5. Arizona WIC Program. *Arizona WIC Program Nutrition Risk Criteria: Definitions, Justifications, and Clarifications*. <http://azdhs.gov/documents/prevention/azwic/manuals/nutrition-risk-manual.pdf>.
6. Mahan, L. Kathleen, Janice L. Raymond, and Sylvia Escott-Stump. *Krause's Food and the Nutrition Care Process*. 13th ed. 2012.
7. Mohrbacher, Nancy. *Breastfeeding Answers Made Simple: A Guide for Helping Mothers*. July 16, 2010.
8. National Association of Sport and Physical Education (NASPE) and American Alliance for Health Physical Education Recreation and Dance (AAHPERD). *Active Start: A Statement of Physical Activity Guidelines for Children from Birth to Age 5*. 2nd ed. 2009. <http://www.shapeamerica.org/standards/guidelines/activestart.cfm>.
9. United States Department of Agriculture (USDA). *Infant Nutrition and Feeding: A Guide for Use in WIC and CSF Programs*. Updated March 2009. <http://www.nal.usda.gov/wicworks/Topics/FG/CompleteFG.pdf>.
10. University of California Davis (UC Davis) Human Lactation Center. "Human Lactation Center Resources: Baby Behavior." 2014. <http://lactation.ucdavis.edu/#activities>.
11. World Health Organization (WHO). "Promoting Proper Feeding for Infants and Young Children: Infant and Young Child Feeding Fact Sheet." Updated February 2014. <http://www.who.int/nutrition/topics/infantfeeding/en>.

Arizona WIC Nutrition Care Guidelines: **Children**

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Section Overview

Childhood nutrition guidelines from the American Academy of Pediatrics (AAP) present food and eating as both healthy and pleasurable. The AAP guidelines align with USDA messages and promote positive attitudes toward food, emphasizing family meals that build on family strengths and promote unity, social bonds, and good communication.

Anthropometric Assessment



Anthropometry is the measurement of the size, weight, and proportions of the human body. The amount and rate of growth in early childhood is an important part of gathering information in the ABCDE assessment process. The anthropometric assessment, or *A* section of the ABCDE assessment includes measuring and weighing children, plotting their growth on growth charts, and tracking this information over time. The anthropometric assessment includes WIC codes in the 100s.

Why Is This Important?

- Children *need* adequate nutrition to grow

WIC uses growth measurements to determine whether children are healthy and growing properly. Poor growth is an important indicator of nutritional challenges.

- To adequately measure growth, you must measure and collect a series of plots **over time**

Although a single measurement plotted on a growth chart can be used to screen a child's nutritional risk, it does not provide adequate information to determine the child's growth pattern over time. When plotted correctly, a series of accurate measurements offers important information about a child's growth pattern. A series of growth measurements helps distinguish between normal or expected growth and actual growth delays. Growth trends also help to identify genetic factors that may affect growth, such as the height of the biological parents. The WIC Program can play an important role in helping caregivers reduce challenges related to poor growth during early childhood.

A - Child Assessment Considerations

- WHO growth charts are used for children from age one to two; length is measured recumbently

Children's heights and weights differ, depending on genetics, gender, sleep, health status, and nutrition. Between ages one and two, growth is measured using the World Health Organization (WHO) growth charts. We measure both weight-for-age and length-for-age to compare children to other children their same gender and age. We also use weight-for-length measurements to get an idea of the child's individual proportions. Length is used for these children, as they are measured recumbently (lying down).

- CDC growth charts are used for children age two and older; height is measured while standing

Children ages two and older are measured using the Centers for Disease Control and Prevention (CDC) growth charts. We generally measure height while standing for children two and older. We measure both weight-for-age and height-for-age to compare children to other children their same age and gender. To get an idea of their individual body proportions, we use BMI-for-age which is a measurement of body weight compared to height and also allows a comparison to other children by age and gender. BMI is used to screen for overweight, obesity, and underweight classification in children ages two and older. BMI is not used for one-year-old children due to the recumbent measuring of length. To date, there has been little research on the meaning of BMI calculated from recumbent length and the consequences of high or low BMI for infants and one-year-old children.

A - Child Assessment Concerns

- Growth is a *sensitive and emotional* subject

Sometimes children may not meet expected standards of growth. This may be the result of a condition from infancy, such as prematurity, small for gestational age, or low birth weight. Alternatively, this may be due to inadequate growth or failure to thrive. Growth can be a sensitive subject for families. When a child is not growing as expected, parents and caregivers may feel scared or frustrated, or they may worry that they are doing something wrong. You can help put caregivers at ease by avoiding language that places blame on parents while communicating to parents that they are an important part of the solution to improve their child's health. When talking about weight with parents, certain words that are used to describe body weight can be offensive (e.g., "fat," "obese," "skinny," "chunky," "underweight," or "overweight"). Be mindful of the language you use. Address the topic of weight sensitively by using terms such as "growth." Begin by asking the parents or caregivers for their permission to discuss their child's growth.

Ask:

An important part of the assessment process includes asking probing questions. Asking open-ended questions allows you to get a more complete picture by prioritizing knowledge, needs, and interest of caregivers. This also allows you to coordinate an educational message that is consistent with what the caregivers have already been told by their healthcare provider or correct any misinformation they may have received. This education is offered at the end of the complete assessment.


- "What has your doctor said about your child's growth?"
- "How do you feel about your child's growth?"

Assess:

Each point in the ABCDE assessment includes critical thinking to explore and evaluate the participant's situation. This involves combining all of the available information and evaluating what other factors need to be considered. Assessment factors to consider in the *A* child assessment may include the following:

- Current growth of the child
- Child's growth since infancy
- Child's growth since last visit

Concern:

Weight for length less than or equal to the 2nd percentile (2nd %) (C1) or BMI for age length less than or equal to 5th percentile (5th %) (C2, C3, C4) (WIC Code 103.1) 

This means that the child is falling below the expected range of weight for length or BMI. It can be the result of genetic traits, poor nutrition, illness, or a more serious medical condition. Being underweight can also **lead** to illness or a more serious medical condition. Assess for growth patterns, food and fluid intake, medical conditions, healthcare provider directions specific to growth, and caregivers' feelings about growth.

Weight for length above the 2nd percentile (2nd %) but less than or equal to the 5th percentile (5th %) (C1), or BMI for age above the 5th percentile (5th %) but less than or equal to the 10th percentile (10th %) (C2, C3, C4) (WIC Code 103.2)


This means that that the child is at risk of falling below the expected range of weight for length or BMI. It can be the result of poor nutrition, illness, genetic traits or a more serious medical condition. Assess for growth patterns, food and fluid intake, medical conditions, healthcare provider directions specific to growth, and caregivers' feelings about growth.

BMI for age greater than or equal to the 95th percentile (95th %) (C2, C3, C4) (WIC Code 113) 

BMI is a measure of body weight that is adjusted for height. Although not a direct measure of body fatness, BMI is a screening tool for assessing adiposity, or amount of body fat. Research on BMI and body fatness shows that children with BMI-for-age that is at or above the 95th percentile may have high adiposity. Although it is an imperfect screening tool, an elevated BMI may indicate increased risk of poor health outcomes and/or development of diseases. When identifying high BMI-for-age and discussing growth with caregivers, it is important to communicate in a supportive and nonjudgmental way. Choose your words carefully to convey an empathetic attitude, minimize embarrassment or harm to the child's self-esteem, and provide information regarding general ranges of growth. Do not use the term "obese." Use neutral terms, such as "weight disproportional to height," when discussing BMI with a parent or caregiver. Assess for growth patterns, food and fluid intake, medical conditions, healthcare provider directions specific to growth, and caregivers' feelings about growth.

BMI for age greater than or equal to 85th percentile (85th %) and less than 95th percentile (95th %); OR family history of BMI greater than or equal to 30 (C2, C3, C4); OR family history of BMI greater than or equal to 30 (C1) (WIC Code 114)

Family history of BMI is based on the BMIs of the biological parents, if they are known. In most instances, this code will be identified by HANDS (the Arizona WIC computer system) and is based on the mother’s BMI. Family history of a high BMI may indicate a child’s increased risk of a high BMI later in life. Assess for growth patterns, food and fluid intake, medical conditions, healthcare provider directions specific to growth, and caregivers’ feelings about growth.

Weight for length greater than or equal to the 98th percentile (98th %) (C1) (WIC Code 115) 


High weight-for-length for one-year-old children may indicate increased risk of poor health outcomes and/or development of diseases. When identifying high weight-for-length, it is important to communicate with parents/caregivers in a supportive and nonjudgmental way and with a careful choice of words that conveys an empathetic attitude and minimizes embarrassment or harm to a child’s self-esteem. Do not use the term “overweight.” Use neutral terms, such as “weight disproportional to length,” when discussing weight with a parent or caregiver. Assess for growth patterns, food and fluid intake, medical conditions, healthcare provider directions specific to growth, and caregivers’ feelings about growth.

Failure to thrive (WIC Code 134) 


Failure to thrive, a complex and serious growth problem, is a diagnosis given by a healthcare provider. Failure to thrive is diagnosed according to the following growth parameters:

- ← 2 yrs: Weight-for age, weight-for-length, or stature-for-age consistently falls below the 2.3rd percentile
- → 2 yrs: Weight-for age, BMI, or stature-for-age consistently falls below the 5th percentile
- ← 2 yrs: Weight is less than 75% of median (“typical”) weight-for-age
- → 2 yrs: Weight is less than 80% of median weight-for-stature

Assess for growth patterns, food and fluid intake, medical conditions, healthcare provider directions specific to growth, and caregivers’ feelings about growth.

Low birth weight (C1) (WIC Code 141) 

This term is used when the child’s birth weight was at or below five and one-half pounds. Low birth weight is an important predictor of future growth during early childhood (up to age two). Children born at low birth weights require optimal nutrient intake for complete growth and development. Assess for growth patterns, food and fluid intake, healthcare provider directions specific to growth, and caregivers’ feelings about growth.

Prematurity (C1) (WIC Code 142.1) 

This term indicates that the child was born at or less than 37 weeks of gestation. Premature infants may have physical problems that impact nutrition through early childhood (up to age two) and may require texture modifications, and increased nutrients and calories. Healthcare providers may assess growth based on corrected age, which is the adjusted age of the child based on his or her original due date. Assess for growth patterns, food and fluid intake, healthcare provider directions specific to growth, and caregivers’ feelings about growth.

Early Term (WIC Code 142.2)

Early Term applies to a child born from 37 0/7 to 38 6/7 weeks gestation. Between 37 and 39 weeks of gestation a fetus will experience a significant amount of development and growth of the lungs, brain and liver. The brain develops at its fastest rate at the end of the pregnancy, at a rate of up to one third between weeks 35 and 39. Additionally, layers of fat are added under the infant's skin during the last few weeks of pregnancy which helps them keep warm after birth. Early term delivery for children may increase the likelihood of delays in feeding and behavior, including the need to offer referrals for community providers.

Small for gestational age (WIC Code 151)

This diagnosis, given by a healthcare provider, indicates that the child's growth was affected during the mother's pregnancy. As a result, the child may have slower growth or developmental delays. Assess for growth patterns, healthcare provider directions specific to growth, and caregivers' feelings about growth.

Education for Children

Education may be offered after a complete ABCDE assessment. Education is based on the parent's or caregiver's identified concerns, interests, and motivation. Education for children may emphasize the following:

- The types of food and beverages consumed
- Division of Responsibility
- Cultural and/or religious eating practices
- Food access and availability
- Activity levels and total daily screen time

A - Avoiding Judgment

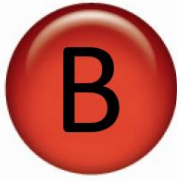
Discussing a child's size and growth is a sensitive topic for many caregivers. Before sharing messages related to growth we can affirm caregiver efforts and recognize signs of a child's progress. Ask permission to share education messages before moving forward.

A - Education Messages Related to Growth

Education specific to concerns identified during the *A* assessment may include:

- "Every child grows differently."
- "Genetics factor into your child's body shape and size."
- "Provide structure, safety, and opportunities for physical activity for your child."
- "Trust your children to do their part with eating, moving, and growing."
- "Healthy children will eat what they need to support the growth that is right for them."
- "Children who are low in weight for their age may benefit from added snacks and calories."
- "Nutritious high calorie foods that you may offer your child include peanut butter and cheese."
- "Provide choices for your child and set a good example."

Biochemical Assessment



In WIC, the biochemical, or *B* section, in the ABCDE assessment includes the assessment and gathering of information related to specific blood tests. WIC screens for risk of anemia by measuring hemoglobin. Hemoglobin screening for children first occurs between 9 and 12 months old, with follow-up tests every 6 months until age two (see Arizona WIC Laboratory Procedure Manual). For children under two years old, we get a small drop of blood from a finger to analyze. After age two, hemoglobin is measured yearly if the previous values were within normal limits. Once a child turns two years old, we can usually use a noninvasive (no finger stick needed) device to measure hemoglobin. WIC also screens for high blood lead concentrations by asking participants whether their children have had their blood lead concentrations tested by their healthcare provider, referring them back to their provider if they have not. Both anemia and lead exposure negatively affect growth and development. The biochemical assessment includes WIC codes in the 200s.

Why Is This Important?

- Anemia impacts growth and development

Iron deficiency is the most common cause of anemia. It may be caused by a diet low in iron, insufficient absorption of iron related to illness or a medical condition, or increased iron requirements due to growth. Even mild anemia may delay children's growth and development. Anemia can interfere with the way the body metabolizes energy, regulates temperature, and fights infection. Early prevention of anemia is important to reduce future health risks. Elevated blood iron levels adversely impact nutritional status, growth, and development.

- Children are at risk for lead poisoning

Lead poisoning is an entirely preventable public health problem in the United States. Infants and children are at greatest risk of lead poisoning because children absorb lead more readily than adults, and children's developing nervous systems are particularly vulnerable to lead's harmful effects. Lead screening and exposure and risk assessments are done by healthcare providers.

B- Child Assessment Considerations

- Children are at risk for iron-deficiency anemia, especially if they drink more than three glasses of milk per day

Iron-deficiency anemia is a condition that reduces the blood's ability to carry oxygen. Anemia can make children pale, irritable, and have low energy levels. Anemia is often seen in toddlers who drink more than three glasses of milk per day, which can make them less interested in iron-rich foods. There are two kinds of nutritional iron: heme and non-heme iron. Heme iron is found in animal products, especially red meat, and is easily absorbed by the body. Non-heme iron is much less easily absorbed and is found in plant foods such as dried beans and peas, fortified breads and cereals, dark green leafy vegetables, and tofu. Foods that have vitamin C, such as bell peppers, broccoli, spaghetti sauce, and citrus fruits and juices, help the body absorb iron and can be eaten with iron-rich foods to increase the amount of iron absorbed.

- It is important to screen for lead-testing in children

Children who are malnourished are more vulnerable to lead poisoning. Children absorb more lead if their stomachs are empty. Iron deficiency weakens the body's defense against lead absorption, and lead poisoning can cause iron deficiency. Both lead toxicity and iron deficiency affect children's behavior and brain development. Most commonly, children get lead poisoning from lead-based paint. Children who are considered at risk are those living in houses built before 1978 (the year that regulations began requiring that lead-containing paints could not be used in homes) or those living in older homes (built before 1970) with lead-based pipes. Other children who may be at high risk are those who immigrated to the United States from a country that does not regulate the use of lead, children using imported bowls glazed with lead-based paint, or those using traditional folk remedies such as *greta* (powdered lead oxide) or *azarcon* (lead tetroxide).

B- Child Assessment Concerns

Ask:

- "What has your doctor said about your child's iron and lead levels?"
- "What have you heard about iron and lead testing for children?"

Assess:

- Accuracy of hemoglobin value; repeat the test if needed
- Check for current use of a multivitamin or supplement containing iron
- Exposure to lead-based paint, pipes, pottery/bowls, or use of home remedies

Concern:**Low hemoglobin/low hematocrit** (WIC Code 201.1  and 201.2)

Hemoglobin (Hgb) and hematocrit (Hct) are the most commonly used tests to screen for iron deficiency anemia. Measurements of hemoglobin and hematocrit reflect the amount of functional iron in the body. Although neither test directly measures iron status nor distinguishes among different types of anemia, both tests are useful indicators of iron-deficiency anemia. Low hemoglobin or hematocrit in children, without adjusting for altitude, is a hemoglobin level of less than 11.1 g/deciliter (dL) or a hematocrit level of less than 33 percent. Assess for anemia and use of iron supplements.

High blood lead levels (WIC Code 211)

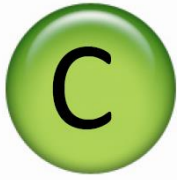
Elevated lead levels are anything equal to or greater than 3.5 µg/dL within the past 12 months for children. For infants and adults elevated lead levels are anything equal to or greater than 5 µg/dL within the past 12 months. Blood lead screenings for infants may not be routine for their healthcare providers. Screenings may not begin until age one. Assess for lead poisoning diagnosis, environmental exposure, or recent move from another country.

B- Education Messages Related to Biochemical (Bloodwork)

Education specific to concerns identified during the *B* assessment may include:

- “Hemoglobin measures the amount of iron in the body. The amount of iron your child gets from food affects his or her hemoglobin. Low iron can affect your child’s ability to learn and concentrate, and may result in infections.”
- “Not all children’s vitamins contain iron.”
- “Your children can increase the amount of iron in their diet by eating meat, fish, poultry, beans, and iron-fortified cereals provided through WIC.”
- “Adding foods rich in vitamin C to high-iron foods can help increase the absorption of iron.”
- “Homes built before 1978 may have lead-based paint. Other lead sources can be soil, toys, imported ceramics or old pottery, and imported herbal remedies.”

Clinical Assessment (Medical Conditions)



The clinical assessment, or *C* section, of the ABCDE assessment in the nutrition care process is the assessment of clinical or medical conditions that affect nutritional status. Caregivers may report a medical condition that has been diagnosed by a healthcare provider. Medical documentation from a healthcare provider is generally not needed to be able to assign a WIC code. Dealing with medical conditions in children can be stressful for caregivers and families. The impact of associated conditions on nutrition and growth can range from simple to complex. In children, associated conditions may include anything from a genetic disorder to a recent surgery. The clinical assessment includes WIC codes in the 300s. The Arizona WIC Nutrition Care Guidelines provide only a general overview of *C* assessment guidelines and do not include comprehensive nutrition care guidelines specific to each individual condition. For more details about each condition, refer to the Nutrition Risk Manual.

Why Is This Important?

- Some medical conditions impact nutrition needs and diet

A basic understanding of medical conditions is important to be able to determine how the medical condition affects the child's nutritional status and eating patterns.

C - Child Assessment Considerations

- The role of the WIC counselor is to assess for nutrition needs and/or referrals

Questions and conversations that may come up as a result of gathering the *C* information in the assessment may be sensitive or challenging to navigate. A broad range of conditions requiring routine and specialty healthcare may be discussed. It is important to understand how the clinical or medical condition may affect nutritional needs and how to make appropriate referrals when necessary. The effects on nutritional needs may include altered growth, inadequate energy and nutrient intake to support growth and health, feeding problems related to oral-motor and/or behavioral difficulties, medication-nutrient interactions, need for enteral (tube) feedings, chronic constipation or diarrhea, and use of alternative or complementary therapies or products. The identification of these clinical and medical codes through the WIC assessment process may require an evaluation by the WIC registered dietitian.

C - Child Assessment Concerns

Ask:

- “What has your doctor said about your child’s health?”
- “What are your concerns about your child’s health?”
- “What has your dentist said about your child’s oral/dental health?”

If a diagnosis is revealed, probing questions may be condensed to ask the following:

- “What has your doctor told you about your child’s condition?”

Assess:

- The impact of the medical condition on the child’s health
- The impact of the medical condition on the child’s food and fluid intake
- Any misunderstanding of how to manage and care for the child’s condition
- Family’s coping strategies

Concern:

Nutrient deficiency or disease (WIC Code 341)

This includes nutritional deficiencies or a disease caused by insufficient intake of a specific nutrient. Diseases include, but are not limited to, protein energy malnutrition, scurvy, rickets, beriberi, hypocalcemia, osteomalacia, vitamin K deficiency, pellagra, cheilosis, Menkes disease, and xerophthalmia. Persistent deficiency may lead to growth problems or malnutrition. Assess for how the medical condition affects the child’s overall health, food and fluid intake, and how the medical condition is being managed.

Gastrointestinal disorders (WIC Code 342)

This includes any gastrointestinal (GI) condition that interferes with the intake or absorption of nutrients. Disorders may include gastroesophageal reflux disease (GERD), stomach or intestinal ulcers, short bowel syndrome, inflammatory bowel disease (including colitis or Crohn’s disease), pancreatitis, gallbladder disease, or malabsorption disorders. Assess for how the medical condition affects the child’s overall health, impact on food and fluid intake, and how the medical condition is being managed.

Diabetes mellitus (WIC Code 343)

This includes a group of metabolic diseases that results in hyperglycemia (elevated blood sugar) resulting from defects in insulin secretion, insulin action, or both. The two major classifications of diabetes are type 1 diabetes (insulin deficiency) and type 2 diabetes (insulin resistance). Diabetes is identified by fasting plasma glucose of 126 mg/dL or greater. Hyperglycemia is defined as equal to or greater than 200 mg/dL. Assess for how the medical condition affects the child’s overall health, food and fluid intake, and how the medical condition is being managed.

Thyroid disorders (WIC Code 344)

This includes abnormal secretions of thyroid hormones. Types of disorders may include hyperthyroidism, hypothyroidism, congenital (present from birth) hyperthyroidism, and congenital hypothyroidism. Thyroid hormones influence all organ systems in the body and regulate how the body obtains energy from food. Assess for how the medical condition affects the child's overall health and how the medical condition is being managed.

Hypertension and prehypertension (WIC Code 345)

Hypertension is commonly referred to as high blood pressure. When diagnosed in childhood, it is age-specific and defined as blood pressure readings greater than the 95th percentile for age, gender, and height on at least three separate occasions. Blood pressure between the 90th and 95th percentile is considered prehypertension. Assess for how the medical condition affects the child's overall health, food and fluid intake, and how the medical condition is being managed.

Renal disease (WIC Code 346)

Renal means "of or relating to the kidney." This category may include pyelonephritis and persistent proteinuria, but excludes urinary tract infections involving the bladder. Renal diseases can result in growth failure in children. Assess for how the medical condition affects the child's overall health, food and fluid intake, and how the medical condition is being managed.

Cancer (WIC Code 347)

This may include any type of cancer, a disease caused by the uncontrolled division of abnormal cells in a part of the body. The type of cancer and stage of disease progression determines the type of medical treatment and, if indicated, nutrition management. Assess for how the medical condition affects the child's overall health, food and fluid intake, and how the medical condition is being managed.

Central nervous system disorders (WIC Code 348)

The central nervous system (CNS), which consists of the brain and spinal cord, is a network of nerve tissues that controls the body's activities. CNS disorders may affect a child's caloric requirements, ability to feed, oral dysfunction, and growth. A common CNS disorder is epilepsy, which is characterized by seizures. Assess for how the medical condition affects the child's overall health, food and fluid intake, and how the medical condition is being managed.

Genetic and congenital disorders (WIC Code 349)

This category may include hereditary or congenital conditions at birth that cause physical or metabolic abnormalities. It may include, but is not limited to, cleft lip or palate, Down syndrome, thalassemia major, sickle cell anemia (not sickle cell trait), and muscular dystrophy. Assess for how the medical condition affects the child's overall health, food and fluid intake, and how the medical condition is being managed.

Inborn errors of metabolism (IEM) (WIC Code 351) ❤️

This generally refers to gene mutations or gene deletions that change metabolism, such as phenylketonuria (PKU) and maple syrup urine disease (MSUD). IEM disorders may begin at any stage of life, beginning in infancy. In most cases, when disorders are identified and nutrition interventions begin early in the newborn period and continue for a lifetime, the affected infant can be cognitively and physically normal. Several medical foods or formulas designed for the specific treatment of the identified disorder can be made available through the participant's health insurance plan or AHCCCS plan, or by prescription through WIC. Assess for how the medical condition affects the child's overall health, food and fluid intake, and how the medical condition is being managed.

Infectious diseases - Acute (WIC Code 352.1) ❤️

This is a diagnosis given by a healthcare provider within the last six months. It includes diseases caused by growth of disease-causing microorganisms in the body that are severe enough to affect nutritional status. Acute infectious diseases such as hepatitis A, hepatitis E, pneumonia, RSV, and others typically increase the nutrient needs of the body. Assess for how the medical condition impacts the child's nutritional status, overall health, and how the medical condition is being managed.

Infectious diseases - Chronic (WIC Code 352.2) ❤️

Chronic infectious diseases require long-term management and are likely to last a lifetime. Examples of chronic infectious diseases include HIV, AIDS, hepatitis B, hepatitis C, and hepatitis D. Assess for how the medical condition impacts the child's nutritional status, overall health, and how the medical condition is being managed.

Food allergies (WIC Code 353) ❤️

Food allergy reactions occur when the body's immune system responds to a harmless food as if it were a threat. The foods that most often cause allergic reactions are called allergens and include cow's milk (and foods made from cow's milk), eggs, peanuts, tree nuts (e.g., walnuts, almonds, cashews, hazelnuts, pecans, and Brazil nuts), fish, shellfish (e.g., shrimp, crayfish, lobster, and crab), wheat, and soy. A food allergy is not to be confused with a food intolerance, which does not involve an immune response. Symptoms of a food intolerance may be less severe and happen more gradually than a diagnosed food allergy. Assess for specific food allergens, severity of reaction, and management of the allergy. Assess for how the medical condition affects the child's overall health, food and fluid intake, and how the medical condition is being managed.

Celiac disease (WIC Code 354) ❤️

Celiac disease is an autoimmune disease in which eating gluten (a protein in wheat, rye, and barley) results in damage to the small intestine and malabsorption of the nutrients from food. Celiac disease can result in a wide range and severity of symptoms, including chronic diarrhea, vomiting, constipation, pale and foul-smelling fatty stools, and weight loss. Failure to thrive may occur in children if the disease is not well managed. The vitamin and mineral deficiencies that can occur from continued exposure to gluten may result in anemia, osteoporosis, and neurological disorders such as ataxia, seizures, and neuropathy. Treatment includes strictly following a gluten-free diet. Assess for how the medical condition affects the child's overall health, food and fluid intake, and how the medical condition is being managed.

Lactose intolerance (WIC Code 355)

Lactose is a sugar present in milk. Lactose intolerance is characterized by experiencing one or more of the following symptoms after lactose ingestion: diarrhea, abdominal pain, flatulence, and/or bloating. Assess for how the medical condition affects the child's overall health, food and fluid intake, and how the medical condition is being managed.

Hypoglycemia (WIC Code 356)

Hypoglycemia can occur as a complication of diabetes, as a condition in itself, in association with other disorders, or under certain conditions such as prolonged fasting or long periods of strenuous exercise. Assess for how the medical condition affects the child's overall health, food and fluid intake, and how the medical condition is being managed.

Recent surgery, trauma, or burns (WIC Code 359)

This includes major surgery, trauma, or burns within the last two months (may self-report; must have physician's orders if longer than two months ago) that are severe enough to compromise nutritional status and require continued nutritional support. The body's response to recent major surgery, trauma, or burns may affect the nutrient requirements needed for recovery and lead to malnutrition. There is a catabolic response to surgery; severe trauma or burns cause a hypermetabolic state. Injury causes alterations in glucose, protein, and fat metabolism. Assess timing of recent surgery or trauma and post-surgery or discharge instructions, how the medical condition affects the child's nutritional status, overall health, food and fluid intake, and how the medical condition is being managed.

Other medical conditions (WIC Code 360)

This includes diseases or conditions with nutritional implications that are not included in any of the other medical conditions. The current condition, or treatment for the condition, must be severe enough to affect nutritional status. This includes, but is not limited to:

- Juvenile Idiopathic Arthritis (JIA)
- Systemic Lupus Erythematosus (SLA)
- Polycystic Ovarian Syndrome (PCOS)
- Cardiovascular Diseases
- Asthma
- Cystic Fibrosis (CF)

Assess for how the medical condition impacts the child's nutritional status, overall health, and how the medical condition is being managed.

Mental Illnesses (WIC Code 361)

Mental illnesses where the current condition, or treatment for the condition may affect nutrition status include, but are not limited to:

- Depression
- Anxiety Disorders
- Post-Traumatic Stress Disorder (PTSD)
- Obsessive-Compulsive Disorder (OCD)
- Personality Disorders
- Bipolar Disorders
- Schizophrenia
- Attention-Deficit/Hyperactivity Disorder (ADHD)

Depression

Depression has a variety of symptoms, the most common are feelings of sadness or a marked loss of interest in pleasure or activities. Other symptoms include appetite changes resulting in unintended weight loss or gain, insomnia or oversleeping, loss of energy or increased fatigue, restlessness or irritability, feelings of worthlessness or inappropriate guilt and difficulty thinking, concentrating, or making decisions.

Prenatal Depression

The most common symptoms of prenatal depression include feelings of sadness, anxiety, and fatigue. Women who experience depression during pregnancy are found to be at an increased risk of not following their prenatal medical plan, inadequate or excessive gestational weight gain, smoking, and substance use. Studies suggest that pregnant women with untreated symptoms of depression have increased rates of birth complications, preeclampsia, preterm delivery, low birth weight and impaired social, cognitive, and emotional development in the baby.

Depression in Pregnant Adolescents

Adolescent pregnancy is considered a significant risk for depression. Women who gave birth before their 20th birthday showed higher levels of depressive and anxiety symptoms. The symptoms of depression in adolescence are different than those presented in adulthood. While they share a depressed mood, adolescents more frequently show changes in appetite or weight and insomnia, rather than a loss of interests and poor concentration. Depression in adolescent pregnancy has a high frequency of suicidal attempts, reaching up to 20%. Teens who are female, have a family history of depression, a history of trauma, family conflict, a chronic medical disease, or who are LGBTQ are at greater risk for developing adolescent depression. Depression in adolescents can occur with other mental illnesses including anxiety.

Postpartum Depression

Postpartum depression (PPD) is a form of depression that occurs within 4 to 6 weeks after childbirth and is one of the most common complications that occurs after pregnancy. PPD is associated with many adverse outcomes for both mother and offspring including, maternal mortality and morbidity, increased risk for infanticide, poorer maternal-infant attachment, early discontinuation of breastfeeding, and impaired parenting behaviors. The risk factors associated with PPD include genetics, history of a mental illness and adverse life events including physical, psychological, or sexual abuse. Discrimination and immigration are often overlooked adverse life events associated with PPD.

PPD is different from the “baby blues” which is used to describe mild mood changes, feelings of worry, unhappiness, and exhaustion in the first 2 weeks after having a baby. The “baby blues” is a common reaction following delivery that affects 70-80% of new mothers. The “baby blues” typically peak four to five days after delivery and may last hours to days and usually resolve within 2 weeks.

Breastfeeding and Depression

Women with PPD are less likely to breastfeed, as PPD is considered a risk factor for breastfeeding self-efficacy. Women with low self-efficacy are 3 times more likely to stop breastfeeding early. Studies show the presence of depressive symptoms in the postpartum period decrease maternal confidence in breastfeeding and increase the risk of discontinuing exclusive breastfeeding. Women with PPD also have fewer positive interactions with their infants and a poorer perception regarding their baby's behavior. Additionally, PPD can negatively affect milk supply due to elevated levels of cortisol in the mother's system. Difficulties with breastfeeding can cause the mother to feel overwhelmed and increase the risk of depression. If a mother with early signs of PPD stops breastfeeding, depression can become more severe due to the abrupt drop in oxytocin levels. Successful breastfeeding may have a protective effect on maternal mental health because the breastfeeding relationship can decrease feelings of loneliness and emptiness that are common in PPD. Higher levels of oxytocin released during breastfeeding can cause the mother to feel calmer and more relaxed.

Anxiety Disorders

Anxiety disorders are the most common mental illness in adults in the U.S. They include the following types: generalized anxiety disorder, panic disorder, and various phobia-related disorders. In anxiety disorders, worry and fear interfere with daily life and are much more severe than occasional anxiety. All anxiety disorders share an increase in emotional, physical, and neurological symptoms precipitated by a specific situation or circumstance.

During pregnancy, anxiety may have adverse effects on both the mother and baby, including impaired fetal development, complications of labor, and altered mental development of the newborn. Therefore, it may be necessary to consider medication for anxiety that worsens during pregnancy. Anxiety disorders are usually treated with psychotherapy and medications.

Post-Traumatic Stress Disorder (PTSD)

PTSD is a psychiatric disorder that may occur in people who have experienced or witnessed a traumatic, shocking, scary, or dangerous event. People with PTSD have intense or disturbing thoughts and feelings related to their trauma that lasts after the traumatic event has ended. They may avoid situations or people that remind them of the event, and they may have strong negative reactions to something like a loud noise or an unexpected touch. Symptoms of PTSD usually begin within 3 months of the traumatic incident, but sometimes begin years after. To be considered PTSD, the symptoms must last more than a month and be severe enough to interfere with relationships or work.

Obsessive-Compulsive Disorder (OCD)

OCD is a chronic and long-lasting disorder in which a person has uncontrollable, reoccurring thoughts (obsessions) and/or behaviors (compulsions) that they feel the urge to repeat over and over. The compulsions, such as hand washing, checking on things or cleaning, can interfere with a person's daily life. People with OCD have difficulty stopping the obsessive thoughts or the compulsive actions even though they are very distressing and recognize their thoughts and behaviors are excessive.

Personality Disorders

Personality disorders, including obsessive-compulsive personality disorder (different from OCD), narcissistic personality disorder, antisocial personality disorder, and borderline personality disorder, are an “enduring pattern of inner experience and behavior that deviates markedly from the expectations of the individual’s culture”. Behaviors are pervasive and inflexible, often resulting in distress and impairment. The person’s way of thinking, feeling, and behaving is different from the expectations of society and causes problems functioning. Personality disorders are not usually diagnosed until a person is over the age of 18 because prior to that age a person’s personality is still developing.

Bipolar Disorders

Bipolar disorder (formerly known as manic depressive disorder or manic depression) is a mental illness that causes changes in a person’s mood that affects their daily life. These mood shifts are known as manic (elevated or agitated) or depressive (sad and hopeless). During depressive episodes, approximately 25-50% of those with bipolar disorder attempt suicide. Sometimes people may have a mixed episode, feeling both manic and depressive symptoms at the same time. The symptoms of a mood can last from days to weeks and vary in intensity. People with bipolar disorders are more likely to have other mental illnesses like anxiety, eating disorders, substance use issues or chronic medical conditions such as diabetes, obesity, or heart disease.

Schizophrenia

Schizophrenia is a serious mental illness that can be severely disabling if not treated. It is characterized by delusions, hallucinations, disorganized speech and behavior, and other symptoms that cause social or occupational dysfunction. For a diagnosis, symptoms must have been present for six months and have been active for at least one month. Symptoms appear in males in their late teens or early twenties and in females in their twenties or thirties.

People with schizophrenia also have higher mortality rates due to higher rates of heart disease, liver disease, and diabetes. These diseases appear to be more related to fat metabolism than dietary fat intake as schizophrenia appears to be associated with altered metabolism. Studies of patients with schizophrenia have shown them to have three times the amount of visceral fat when compared to those with equal total body fat. They also have reduced energy needs which may be related to antipsychotic medications frequently used in the treatment of schizophrenia. Antipsychotic medications are associated with increased appetite and weight, with some patients gaining as much as 25-60 pounds over the first few years after starting medication.

People with schizophrenia are at increased risk for substance use disorders. Their lifetime risk of having a serious drug or alcohol problem is 47% compared to 16% for the general population (46). High rates of substance use are associated with poor medical compliance, clinical decline, violence, and suicide. Some researchers think that the genetic risk for schizophrenia also increases the likelihood of substance use and an increased use of substances in adolescence may both increase the risk for developing a later substance use disorder and serve as an additional risk factor for the appearance of psychotic symptoms.

Women with schizophrenia are more likely to have increased rates of stillbirths and neonatal deaths. This may be due to the illness, other medical conditions, lifestyle factors, or social issues. Pregnant women with schizophrenia who take antipsychotics are more likely to be obese, smoke, use alcohol, drugs, other medications, and have pre-existing diabetes and hypertension. Antipsychotics may increase the risk of gestational diabetes mellitus (GDM), obesity, and gestational hypertension. These conditions can lead to adverse maternal and neonatal outcomes such as fetal growth abnormalities, preterm birth, and congenital malformations. Since most antipsychotics are sedating for adults, it is recommended that breastfed infants are monitored for sedation as some cases in infants have been reported.

Attention-Deficit/Hyperactivity Disorder (ADHD)

Attention-deficit/hyperactivity disorder (ADHD) is a persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development. Inattention includes behaviors such as wandering off task, difficulty keeping focus, and disorganization. Hyperactivity includes moving constantly, excessively fidgeting, tapping, or talking. Impulsivity includes hasty acts that occur without thought and may have a high potential for harm.

Many parents first observe excessive motor activity when the child is a toddler, but the symptoms are difficult to distinguish from highly variable normative behaviors before age four. ADHD is most often identified during elementary school years when the inattention becomes more prominent and impairing. In most individuals with ADHD, symptoms of motoric hyperactivity become less obvious in adolescence and adulthood, but difficulties with restlessness, inattention, poor planning, and impulsivity persist.

Developmental delays or sensory or motor delays interfering with the ability to eat (WIC Code 362)

A developmental disability is defined as a severe and chronic disability that is the result of a mental or physical impairment or a combination of mental and physical impairments. This includes developmental, sensory, or motor disabilities that restrict the ability to ingest, chew, or swallow food or that require tube feeding to meet nutritional needs. Developmental disabilities affect individuals of all ages and are not a disease state. They are conditions caused by abnormalities, birth defects, and metabolic and chromosomal disorders. No single nutritional intervention will work for all individuals. Many multidisciplinary teams use a range of treatments and nutritional interventions. Assess for increased sensory sensitivity, how the medical condition affects the child's overall health, food and fluid intake, and how the medical condition is being managed.

Oral health conditions (WIC Code 381)

Early childhood caries (cavities) often result from inappropriate feeding practices. This may include baby bottle tooth decay, associated with prolonged bottle use, and decay of the molars. Lack of early dental care may lead to tooth loss, damage to the permanent teeth, limited ability to chew, and potential speech problems. Assess dental visit frequency, age-appropriate teeth cleaning, bottle and pacifier use, ways the oral health condition affects the child's overall health, food and fluid intake, and how the oral health condition is being managed.

Fetal alcohol spectrum disorders (FASD) (WIC Code 382)

Fetal alcohol spectrum disorders (FASDs) are a group of conditions that can occur in a person whose mother consumed alcohol during pregnancy. FASDs is an overarching phrase that encompasses a range of possible diagnoses, including fetal alcohol syndrome (FAS), partial fetal alcohol syndrome (pFAS), alcohol-related birth defects (ARBD), alcohol-related neurodevelopmental disorder (ARND), and neurobehavioral disorder associated with prenatal alcohol exposure (ND-PAE) [2]. Presence of condition diagnosed, documented, or reported by a physician or someone working under a physician's orders, or as self-reported by applicant/participant/caregiver.

C - Education Messages Related to Clinical (Medical Conditions)

Education specific to concerns identified during the *C* assessment may include:

- "How do you feel about talking to your doctor about your child's condition?"
- "What referrals can WIC help you with to make sure you are getting all of the support you need to manage your child's health?"

Dietary Assessment



The dietary assessment, or *D* section of the ABCDE assessment in the nutrition care process, is the assessment of dietary or food-specific information. The dietary assessment includes WIC codes in the 400s.

Why is this important?

- Parents/caregivers and children each play an important role in the feeding relationship

Healthy eating habits in early childhood are best supported by following Ellyn Satter's Division of Responsibility approach and by having realistic eating expectations. The early influence of parents and caregivers is associated with the development of a child's relationship with food later in life. The Division of Responsibility in feeding is an approach to help children learn good eating habits and have a positive relationship with food as they grow. This approach has been supported by the American Academy of Pediatrics (AAP) and the United States Department of Agriculture (USDA). The Division of Responsibility guidelines recommend that, at every stage of feeding, parents or caregivers are responsible for what, when, and where food is offered. The children are responsible for deciding how much food they will eat and/or whether they will eat.

- Early feeding dynamics can set the stage for a child's relationship with food for a lifetime

Eating patterns and skills develop and change substantially during early childhood. It is not recommended that parents or caregivers use food as a reward or punishment. Doing so may result in the child forming negative associations with food. Eating behaviors in early childhood may include the tendency to selectively eat certain foods while refusing others. This may also include being reluctant or fearful to try new things. It is normal for a child's interest in eating to be unpredictable, and this may affect the amount that a child eats. Children may have a limited attention span or experience stages when they only want to eat certain types of foods. Young children's food selection may be highly influenced by environmental cues, including time of day, portion sizes served, pressure to eat, food restrictions, and the eating patterns and preferences of others who are important to them. It is important to assess the caregiver's approach to food refusal and mealtime behavior struggles with young children. You can help caregivers avoid the stress associated with eating with their young child by reminding them that this is all normal behavior during early childhood. The Division of Responsibility approach also encourages family meals in which children sit down and eat at the table with parents, caregivers, and family members. Children who have family meals tend to be healthy and happy children who learn to like a variety of foods, feel better about themselves, grow in the way that is best for them, and enjoy pleasant mealtime experiences. Eating habits and behaviors during early childhood are important for shaping future relationships with food.

D- Child Assessment Concerns

- Feeding relationships can be a sensitive and personal topic
- The role of the WIC counselor is to help the caregiver feel comfortable sharing

Children's relationships with food and how they eat may be influenced by many different adults, including parents, grandparents, and preschool teachers. These influences are important considerations in the dietary assessment. The dietary assessment is a great opportunity to engage children in the conversation by asking them questions about their eating experiences. Help caregivers feel comfortable sharing their thoughts, feelings, and experiences by avoiding conversations that associate blame with children's eating behaviors. The WIC Program plays a key role in the prevention of nutrition-related health problems and the promotion of lifelong healthy eating habits. Education specific to the needs and interests of the participant may be offered after the completion of the full ABCDE assessment.

Ask:

- "What is mealtime like for your family?"
- "How do you feel about your child's eating?"
- "How do you know when your child is hungry or full?"
- "Tell me about the portion sizes and the types of foods you offer your child."
- "What do you and your family like to do for physical activity?"

Assess:

- The types of food and beverages consumed at each meal and snack
- How food is prepared
- Food preferences
- Food allergies (see section C WIC Code 353)
- Food intolerances (see section C WIC Code 353)
- Frequency, timing, length, and location of feedings, meals, and snacks
- The child's independence in obtaining food
- The caregiver's beliefs regarding nutrition and eating as related to the child's health
- The caregiver's ability to recognize and honor hunger and fullness cues
- Use of nutrition supplements
- Cultural and/or religious eating practices
- Food access and availability
- Activity levels and total daily screen time

Concern:

Failure to meet dietary guidelines for Americans (WIC Code 401)

WIC applicants who meet the income, categorical, and residency eligibility requirements for WIC may be presumed to be at nutrition risk for *Failure to meet Dietary Guidelines for Americans*. This risk is assigned when no other risk is identified through the assessment. Explore any interests or concerns that the caregiver may have. Assess the need for anticipatory guidance to ensure the caregiver is prepared for normal changes related to developmental stages and needs.

Routinely feeding inappropriate beverages as the primary milk source (WIC Code 425.1)

This may include unfortified goat's milk, sheep's milk, and imitation and substitute milks, such as almond milk and coconut milk, that do not contain sufficient nutrients to be a primary milk source for children. Non-fat and reduced-fat milks are not recommended for children from one to two years of age; however, reduced-fat milk may be allowed for children from one to two years of age if there are weight concerns. These products have fewer calories than children may need and may cause children to grow at a slower rate and may negatively affect brain development. Assess milk type, reasons for use, and cultural or religious eating practices.

Routinely feeding a child any sugar-containing fluids (WIC Code 425.2)

Drinks with high quantities of sugar, such as juice, may result in dental problems during early childhood. Exposing teeth to sugar can result in tooth decay and cavities. Assess for types of drinks consumed, reasons for use, and access to water.

Routinely using nursing bottles, cups, or pacifiers improperly (WIC Code 425.3)

This includes children older than 14 months of age using bottles during the day or night and/or using pacifiers dipped in sugar, honey, or syrups. These practices can lead to dental problems, including cavities and other oral pain, which may contribute to feeding problems and poor growth. Assess frequency of bottle and pacifier use, types of beverages given in the bottle, types of sweeteners added to the pacifier, and access to water and milk.

Routinely using feeding practices that disregard the developmental needs or stages of the child (WIC Code 425.4)

Although some children may not physically be able to handle utensils or have good eye-hand coordination, independence and self-feeding are important. Self-feeding milestones include the following: by 15 months, children can manage a cup (although not without some spilling); by 16 to 17 months, food can be transferred from the bowl to the child's mouth with less spilling, the elbow can lift as the spoon is raised, and the wrist can flex as the spoon reaches the mouth; and by 18 to 24 months, children learn to tilt a cup with the fingers. Despite these new skills, two-year-old children often prefer using their fingers to using a spoon. Preschool-aged children learn to eat a wider variety of textures and kinds of food. Food may require softening and cutting into smaller pieces so that it may be chewed and swallowed without choking. Assess developmental abilities and concerns specific to eating, types and variety of food offered, food preparation methods, and division of responsibility in feeding and eating, including the child-caregiver eating relationship.

Feeding food to a child that could be contaminated with harmful microorganisms (WIC Code 425.5)

This includes raw and/or undercooked eggs or meats and unpasteurized juice and dairy that may contain pathogens, such as *Escherichia coli* (*E. coli*), *Salmonella*, *Brucella species*, *Listeria*, and *Cryptosporidium* organisms. These organisms can cause serious diseases or foodborne illnesses. Assess types and varieties of foods eaten, preparation and cooking methods, and cultural eating patterns.

Routinely feeding a diet very low in calories and/or essential nutrients (WIC Code 425.6)

Highly restrictive diets prevent adequate intake of nutrients and interfere with growth and development. Well-balanced vegetarian diets with dairy products and eggs are generally associated with good health. Strict vegan diets may be inadequate in calories, vitamin B12, vitamin D, calcium, iron, protein, and amino acids needed for growth and development. The more limited the diet, the greater the health risk. Assess reasons for following the restrictive diet, cultural eating patterns and/or religious beliefs related to food, and the child-caregiver feeding relationship.

Feeding dietary supplements with potentially harmful consequences (WIC Code 425.7)

A child consuming inappropriate or excessive amounts of a vitamin, mineral, or herbal remedy not prescribed by a physician may be at risk of adverse effects, including harmful nutrient interactions and toxicity. Similar to prescription medications, herbal or botanical preparations may have side effects. Depending on preparation and dose, herbal supplements may not be safe. Although some herbal teas may be safe, some may have harmful effects in young children. Examples of teas with potentially harmful effects in children include licorice, comfrey leaves, sassafras, senna, buckhorn bark, cinnamon, wormwood, woodruff, valerian, foxglove, pokeweed or pokeweed, periwinkle, nutmeg, catnip, hydrangea, juniper, Mormon tea, thorn apple, yohimbe bark, lobelia, oleander, Maté, kola nut or gotu cola, and chamomile. Like drugs, herbal or botanical preparations have chemical and biological activity, may have side effects, and may interact with certain medications. These interactions can cause problems and can even be dangerous. Assess use of vitamins, supplements, and herbs, reasons for supplement use, and cultural beliefs specific to supplements.

When a child's diet alone cannot meet nutrition requirements, routinely failing to provide dietary supplements that national public health policies recognize as essential (WIC Code 425.8)

Depending on a child's specific needs and environment, certain dietary supplements may be recommended by the child's healthcare provider. For example, fluoride supplements may be of benefit in reducing dental decay for children living in fluoride-deficient areas. In addition, the AAP recommends that children who are ingesting less than one liter (one quart) per day of vitamin D-fortified milk should receive a vitamin D supplement of 400 IU/day. Because one quart of milk is in excess of the recommended two cups of milk per day for preschool children, most children will require a vitamin D supplement. Assess use of vitamins and supplements and types of food consumed.

Routine ingestion of non-food items (pica) (WIC Code 425.9)

Pica, the recurrent eating of non-food substances, may seriously influence a child's health and growth. Complications of pica include iron-deficiency anemia, lead poisoning, intestinal obstruction, and toxicity. Assess types of non-food eaten, frequency of eating non-food items, attempts to address the concern, and the results of these attempts.

Dietary risk associated with complementary feeding practices (WIC Code 428) (C1)

This involves a child who has just recently begun to eat independently, was recently weaned from breastmilk or infant formula, or is transitioning from a diet based on infant/toddler foods to one based on the Dietary Guidelines for Americans. In addition, caregivers may not recognize signs of developmental readiness and, therefore, offer food and beverages that may be inappropriate in type, amount, consistency, or texture. Important nutrients for children ages 12 through 23 months are iron, vitamin E, fiber, and potassium. Nutrients that can be harmful if consumed in excess at these ages are zinc, vitamin A, and sodium. An excess of overall calories can also be harmful. Inappropriate feeding practices may result in under- or overfeeding and may promote negative associations with eating that continue later in life. Assess for eating patterns, food types and preparation, division of responsibility practices, and cultural food traditions.

Other Concerns for Children:

Diarrhea

Chronic nonspecific diarrhea, also known as toddler's diarrhea, may occur during the first three years. In many toddlers, the degree of diarrhea is aggravated by dietary factors such as excessive reduction in dietary fat or excessive intake of juice. The ingredient of concern in some juices is sorbitol, a sugar in non-citrus juices such as apple, pear, and prune juice. Diarrhea may be prevented or resolved by eating a variety of healthy foods from each food group, including fats, and limiting juice to no more than four ounces per day.

Food Allergies/Sensitivities

It can be worrisome and scary when children react to certain foods. Symptoms of food allergies may include difficulty breathing, skin rashes or irritations, vomiting, abdominal pain, and diarrhea. The most common foods that result in allergies in children are milk, eggs, peanuts, soy, wheat, tree nuts (such as walnuts and cashews), fish, and shellfish (such as shrimp). Healthcare providers may perform a test to help identify the specific source of the reaction. Some children may outgrow the food sensitivity. If a specific food is concerning, eliminate that food for a period of time. Caregivers may be able to try the food again in the future after talking with their healthcare provider.

Picky/Selective Eater or Poor Appetite

During early childhood, children may selectively eat certain foods while refusing others. This may also include being reluctant or fearful to try new things. It is normal for a child's interest in eating to be unpredictable, and this may influence the amount that a child eats. Children may have a limited attention span or experience stages when they want to eat only certain types of foods. Young children's food selection may be highly influenced by environmental cues, including time of day, portion sizes served, pressure to eat, food restrictions, and the eating patterns and preferences of others who are important to them. Children may have to be offered a food 10 to 15 times before they are willing to try it. Encourage parents and caregivers to maintain the division of responsibility approach. Signs that selective eating may have become a problem include sharp changes in growth and ongoing food-related struggles that result in family stress.

Physical Activity/Play in Childhood

Children are born with a love for movement and activity, and benefit from 60 minutes or more of physical activity each day. Physical activity for young children should be moderate and vigorous in intensity and include opportunities for both structured (or adult led) and unstructured (or free play) activities. This does not have to be done all at once and can be broken up throughout the day, such as in ten-minute increments. When children move and enjoy active play, they develop important skills and strengths that support healthy growth. Too much screen time, including use of television, video games, and computers, impacts a child's health and development. It is recommended that screen time and other sedentary, or non-moving, activities be limited by taking breaks and being physically active together as a family. Children under the age of two should not participate in screen time activities, and screen time use in older children should be limited to less than two hours per day. Assess opportunities for children's physical activity, time, type, and intensity of children's physical activity, screen time behaviors, and safety.

D- Education Related To Dietary (Nutrition)

Education specific to concerns identified during the *D* assessment may include:

D401 Failure to Meet Dietary Guidelines for Americans:

- Nutrition risk 401 is assigned when no other risk is identified through the assessment. Appropriate educational messages should be determined on a case by case basis.
- For example, appropriate education messages may focus on interests or concerns expressed by the caregiver.
- Educational messages that help the caregiver expect and prepare for normal changes related to developmental stages and needs are also appropriate.

D425.1 Education Messages for Routinely Feeding Inappropriate Beverages as the Primary Milk Source:

- "Children under the age of two need higher-fat milk to support healthy brain development. Non-fat and low-fat milks do not have enough fat."
- "Children ages two and older receive low-fat (1%) or fat-free milk from WIC. At this age, children are likely meeting their daily fat requirements through other food in the diet."
- "The calcium, vitamin A, and vitamin D found in the milk that WIC provides for your child build strong bones and promote healthy growth."
- "The alternative milk options that WIC provides include the appropriate amounts of vitamins and nutrients that your child needs to grow. Consider offering your child the WIC options (such as lactose-free milk, soy, or goat milk) instead of other sources that may not have those vitamins and nutrients."
- "Limit the use of sweetened milks and other beverages containing added sugars, such as juice, to promote healthy growth and prevent dental problems."

D425.2 Education Messages for Routinely Feeding Sugar-Containing Fluids/Beverages:

- “Beverages that are high in added sugars include sodas, fruit juices, sports drinks, Kool-Aid, and sweetened milks.”
- “The juice WIC provides for your child is 100% fruit juice without added sugars but should still be limited to no more than four ounces per day.”
- “Too many beverages and drinks with added sugars can lead to dental problems, poor nutrition, and poor growth.”
- “Young children need approximately 40 to 48 ounces of water per day. This equals five to six cups of water throughout the day. Offer water with snacks and between meals.”

D425.3 Education Messages for Routinely Using Bottles, Pacifiers, or Cups Improperly:

- “Baby bottle tooth decay can cause cavities and painful dental problems for young children. This can be prevented by weaning off the bottle and using a cup instead.”
- “It is recommended that children completely wean from the bottle by 14 months of age.”
- “The bedtime bottle can be the hardest. Some parents find it helpful to move down to a smaller bottle and then to only water in the bottle before completely weaning.”

D425.4 Education Messages for Routinely Using Feeding Practices That Disregard the Developmental Needs or Stages of the Child:

- “Mealtime is a time for children to learn and develop. Allowing them to feed themselves helps them gain motor skills to pick up food and learn when they are hungry or when they have had enough.”
- “Mealtime is family time. Parents are responsible for offering healthy meals. It is the child’s choice to decide how much to eat.”
- **(One to one-and-a-half-year-olds)** “At this age your child can grasp and release foods with fingers, is able to hold a spoon (but may not use it very well), can use a cup (but may have difficulty letting go of it), and will want food that others are eating.”
- **(One-and-a-half to two-year-olds)** “At this age your child may eat less than previously, like to eat with his/her hands, like trying foods of various textures, like routine, have favorite foods, and get distracted easily.”
- **(Two to three-year-olds)** “At this age your child is able to hold a glass and place a spoon straight into his/her mouth, may spill a lot, is able to chew more foods, may have definite likes and dislikes, may insist on doing things him/herself, likes routine, may dawdle during meals, may want to eat only certain foods, may demand foods in certain shapes or colors, and likes to help in the kitchen.”
- **(Three to four-year-olds)** “At this age your child is able to hold a cup by its handle, pour liquids from a small pitcher, use a fork, and chew most foods, and may have an increased appetite and interest in foods, request favorite foods, like foods in various shapes and colors, choose which foods to eat, be influenced by television, and like to imitate the cook.”

D425.5 Education Messages for Feeding Foods That Could Be Contaminated with Harmful Microorganisms:

- “Foods that may cause food poisoning include unpasteurized juices, unpasteurized dairy products, such as imported cheeses, raw or undercooked meat, fish, poultry, and eggs, and processed deli meats and hot dogs.”
- “To avoid illness, it is recommended that you heat hot dogs and deli or sandwich meats before offering them to your child.”
- “Read the labels on dairy products, such as cheeses, to make sure they include pasteurized products.”
- “Most cheeses made in the United States are pasteurized, but imported cheeses, such as those from Mexico, may not be pasteurized. It is important to read the food label and package first.”

D425.6 Education Messages for Routinely Feeding a Diet Very Low in Calories and/or Essential Nutrients:

- “It is typically not recommended that children follow a strict diet.”
- “For optimal growth, children need a variety of foods from all of the food groups.”
- “Restrictive diets may not support children’s hunger and fullness and may lead to an unhealthy relationship with food later in life.”

D425.7 Education Messages for Feeding Dietary Supplements with Potentially Harmful Consequences:

- “Herbs, teas, and other supplements may be harmful to children.”
- **(If providing a vitamin supplement by healthcare provider recommendation)** “Follow your doctor’s instructions for the frequency and amount of vitamins you give your child.”
- “Offer a variety of foods from each of the food groups to make sure your child gets all of the important vitamins and nutrients he/she needs for healthy growth.”

D425.8 Education Messages for Routinely Not Providing Dietary Supplements Recognized as Essential by National Public Health Policy When a Child’s Diet Alone Cannot Meet Nutrient Requirements:

- “400 IU of vitamin D is recommended for all children to support healthy bones and growth.”
- “Our bodies produce vitamin D through sun exposure. Although we get plenty of sun in Arizona, the recommended use of sunscreen may inhibit the amount of vitamin D our bodies produce. This is why obtaining vitamin D from foods, such as fortified milk, is important. Also, talk with your healthcare provider about a vitamin D supplement.”
- “If you have questions about the amount of fluoride available in the water you use at home, contact your local health department or water service provider.”
- “Talk to your dentist about the amount of fluoride that is right for your child.”

D425.9 Education Messages for Routine Ingestion of Non-Food Items:

- “When children eat non-food items, this is called pica. Common items that children may eat include carpet fiber, clay, foam, paint chips, and dirt. These can be toxic for a young child, may cause choking, and adversely affect healthy growth.”
- “Some children will stop eating non-food items if their attention is positively redirected to something else or a healthy snack and beverage are offered. In severe cases, we may have you meet with our registered dietitian or refer you to a behavioral feeding specialist.”

D428 Education Messages for Dietary Risk Associated with Complementary Feeding Practices:

- “Lifelong eating habits are developed in early childhood.”
- “You are responsible for what, when, and where to feed your child. Your child is responsible for how much and whether he or she eats the foods you offer.”
- “The eating patterns of young children can be inconsistent. It is normal for children to be picky at times, messy, or skeptical about new foods. You may avoid the stress or frustration that can be associated with this by recognizing that this is normal.”

Environmental Assessment (Including Other Social and Safety Factors)



The environmental assessment, or *E* section of the ABCDE assessment, includes assessing environmental, social, and safety factors that influence nutritional status.

The common environmental factors assessed in WIC that affect children include smoking, abuse, substance abuse, and foster care. This includes WIC codes in the 900s.

Why Is This Important?

- Environmental stressors may impact intake and growth

Environmental factors directly affect health and well-being. Referrals and follow-up conversations are important opportunities to motivate caregivers and empower families with options to explore.

E- Child Assessment Considerations

- Environmental risks are **sensitive and personal** subjects
- The role of the WIC counselor is to offer the client a chance to voice a need and make an appropriate referral

Information gathered from the *E* assessment can sometimes include topics that are sensitive and challenging to address. Caregivers can be best supported when they feel safe to share without being subject to shame or blame by others. Based on the caregiver's motivation and interest, WIC may provide connections to community resources and programs.

E- Child Assessment

Ask:

- "What concerns do you have about the safety of your child within your family relationships?"
- "How do you feel about smoking in your home and around your child?"
- "What concerns do you have about alcohol or drug use?"

Assess:

- Safety concerns
- Foster status
- Tobacco use in the home
- Alcohol and drug use/abuse

Concern:

Homelessness (WIC Code 801)

Homeless individuals comprise a very vulnerable population with many special needs. Today's homeless population contains a sizeable number of women and children. WIC defines homelessness as a predisposing nutrition risk condition. Homelessness includes situations in which a woman, infant or child lacks a fixed, regular nighttime residence. Examples include residence in public or private shelters, temporary residence in the home of another individual and in any public or private place not designed for regular sleeping accommodation for human beings. Assess the child's access to community services. Assess for access to sanitary water and refrigeration to determine food package tailoring needs.

Migrancy (WIC Code 802)

Data indicates that infant mortality, malnutrition, and parasitic disease among children are higher for migrants than among the general U.S. population. Migrancy may lead to inadequate nutritional patterns or nutritionally related medical conditions. Assess the child's access to community services. Assess for access to sanitary water and refrigeration to determine food package tailoring needs.

Recipient of abuse (WIC Code 901)

Recipient of abuse is defined as an individual who has experienced physical, sexual, emotional, economic, or psychological maltreatment that may frighten, intimidate, terrorize, manipulate, hurt, humiliate, blame, injure, and/or wound the individual.

Serious neglect and physical, emotional, or sexual abuse has short- and long-term physical, emotional, and functional consequences for children. Nutritional neglect is the most common cause of poor growth and may account for as much as half of all cases of failure to thrive in young children. Assess child safety and access to community services.

WIC staff can provide the following nutrition services to participants who experience abuse:

- Provide a safe and supportive environment for participants who may be experiencing or have experienced abuse.
- Encourage pregnant women to attend all prenatal appointments with their health care provider and explain the importance of early and adequate prenatal care.
- Offer tailored breastfeeding support catered to the participant's specific needs and concerns.
- Encourage parents to attend local parenting classes or parent training programs (33).
- Refer the participant to their family case manager, if available, and/or to services and resources in their community that provide support to victims of abuse.
- Refer participants to national resources such as:
 - [National Domestic Violence Hotline](#): 1-800-799-SAFE (7233). This hotline is staffed with trained counselors 24 hours a day and provides callers with crisis counselors, safety planning and assistance in finding resources, such as shelter. A secure, confidential online chat option is also available.
 - [Directory of Crime Victim Services](#): This website provides a directory of programs and organizations that can help victims of crime.
 - [Rape, Abuse and Incest National Network \(RAINN\)](#): 1-800-656-HOPE (4673). This national hotline provides counseling and assistance to victims of sexual violence and their families and friends from trained counselors who are available 24 hours a day.
 - [National Clearinghouse for the Defense of Battered Women \(NCDBW\)](#): 1-800-903-0111 ext. 3. This national organization provides technical assistance to abused women facing charges related to their abuse.
 - [Childhelp National Child Abuse Hotline](#): 1-800-4-A-CHILD (1-800-422-4453). This hotline offers information to parents seeking help for child abuse, individuals who suspect child abuse is occurring and those needing prevention tips. Professional counselors are available to provide support and referrals to emergency and social services. Their website also lists Child Protective Services in each state.

Primary caregiver with limited ability (WIC Code 902)

Caregivers with a limited ability to make feeding decisions may include individuals who are young moms (age 17 or younger); mentally or intellectually disabled/delayed and/or who have a mental illness such as diagnosed depression; physically disabled to a degree that restricts or limits food preparation abilities; or currently using or have a history of abusing alcohol or other drugs. Assess the child's support system and access to community services.

Foster care (WIC Code 903)

Foster children have higher rates of chronic conditions such as asthma, diabetes, and seizure disorders. They are also more likely than children in the general population to have birth defects, inadequate nutrition, and growth retardation, including short stature. This may be the result of abuse or neglect prior to entry into the foster care system and/or the history and frequency of moves from foster homes. For example, the foster caregiver accompanying a foster child to a WIC clinic for an initial certification may have no knowledge of the child's eating patterns, special dietary needs, chronic illnesses, or other factors. Without any anthropometric history, the common problem of failure to grow may not be diagnosed. The nutrition education, referrals, and service coordination provided by WIC can support the foster parent in developing skills and knowledge to ensure that the foster child receives appropriate nutrition and healthcare. Although a foster parent may have inadequate information about a new foster child's health needs, WIC's ABCDE assessment can alert the foster parent to the child's nutritional risks and suggest ways to improve the child's nutritional status. Code 903 will be automatically assigned by HANDS (the Arizona WIC computer system) based on the information provided on the certification screen. Assess most recent foster home move, instructions for special care of the child, and links to community services.

Exposure to environmental tobacco smoke (WIC Code 904)

WIC defines exposure to environmental tobacco smoke (ETS) as exposure to smoke from tobacco products inside enclosed areas, like the home, place of child care, etc. ETS is also known as secondhand, passive, or involuntary smoke. The ETS definition also includes the exposure to the aerosol from electronic nicotine delivery systems (such as vapes, vaporizers, vape pens, hookah pens, electronic cigarettes and e-pipes). Studies suggest that the health effects of ETS exposure at a young age could last into adulthood. This includes risk of cancer—specifically lung cancer—and cardiovascular diseases. There is strong evidence that ETS exposure to the fetus or infant results in permanent lung damage. Assess smoking inside the home and utilization of ASHLine cessation and referral services.

***E* - Education Related to Environmental**

Education specific to concerns identified during the *E* assessment may include:

- Provide local agency referral list
- Encourage the caregiver to follow up with community support services
- Refer to social and community services

***E* - Referral Messages for Environmental Concerns**

- “May I give you this referral list of services available here in our community that may be able to help you?” (Provide local agency referral list.)
- “Arizona 211 is a community information and referral service. Let’s explore some options together, and I will also show you how to find this information from home.”

Children—Take-Home Messages

The following is a summary of common core messages from USDA that may be shared with caregivers based on the concerns they may share and the goals that they set for themselves.

- ❖ Enjoy each other while enjoying family meals.
- ❖ Feed your child's independent spirit.
- ❖ Let go a little to gain a lot.
- ❖ Think beyond a single meal; think about what your child eats over time.
- ❖ Sometimes new foods take time.
- ❖ Patience works better than pressure.
- ❖ Let them learn by serving themselves.
- ❖ Children should be active every day.

References

12. Academy of Nutrition and Dietetics (AND). "Position of AND: Nutrition Guidance for Healthy Children Ages 2 to 11 Years." *Journal of the Academy of Nutrition and Dietetics* 114 (August 2014): 1257–1276.
13. Academy of Nutrition and Dietetics (AND). *Pediatric Nutrition Care Manual*. Updated May 19, 2014. <http://www.nutritioncaremanual.org/about-pncm>.
14. Academy of Nutrition and Dietetics (AND). *Public Health/Community Nutrition Care Process Toolkit*. 2012.
15. Academy of Nutrition and Dietetics (AND). *Guide to Pediatric Nutrition Assessment*, 2nd ed. 2013.
16. Academy of Nutrition and Dietetics (AND). *The Nutrition Care Process in Pediatric Practice*. 2014.
17. American Academy of Pediatrics (AAP). *Bright Futures: Nutrition*. 2011. http://brightfutures.aap.org/nutrition_3rd_Edition.html.
18. Arizona WIC Program. *Arizona WIC Program Nutrition Risk Criteria: Definitions, Justifications, and Clarifications*. <http://azdhs.gov/documents/prevention/azwic/manuals/nutrition-risk-manual.pdf>.
19. Mahan, L. Kathleen, Janice L. Raymond, and Sylvia Escott-Stump. *Krause's Food and the Nutrition Care Process*. 13th ed. 2012.
20. National Association of Sport and Physical Education (NASPE) and American Alliance for Health Physical Education Recreation and Dance (AAHPERD). *Active Start: A Statement of Physical Activity Guidelines for Children from Birth to Age 5*. 2nd ed. 2009. <http://www.shapeamerica.org/standards/guidelines/activestart.cfm>.
21. Satter, Ellyn. *Division of Responsibility in Feeding* 2014. <http://ellynsatterinstitute.org/dor/divisionofresponsibilityinfeeding.php>
22. USDA Choose MyPlate. *Health and Nutrition Information for Preschoolers*. <http://www.choosemyplate.gov/health-nutrition-information-preschoolers/daily-food-plan-preschoolers.html>
23. USDA and HHS. *Dietary Guidelines for Americans*. 2010. <http://www.health.gov/dietaryguidelines/>

Arizona WIC Nutrition Care Guidelines: **Pregnant Women**

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Section Overview

A pregnant woman's body provides the environment for the growth and development of her baby. Because such important growth occurs during pregnancy for both the pregnant woman and her baby, most women can enjoy a healthy pregnancy by eating nutritionally balanced meals before and during pregnancy, getting prenatal care, gaining a healthy amount of weight, remaining physically active, taking prenatal vitamins, getting plenty of rest, and avoiding cigarettes, alcohol, and drugs .

Anthropometric Assessment



Anthropometry is the measurement of the size, weight, and proportions of the human body. The amount and rate of weight gain in pregnancy is an important part of gathering information for pregnant women in the ABCDE assessment. In pregnancy, the *A* assessment includes measurement and tracking of prenatal weight gain based on a woman's prepregnancy body mass index (BMI). The anthropometric assessment covers WIC codes in the 100s.

Why Is This Important?

- Appropriate weight gain during pregnancy is important

In WIC, we conduct an assessment of prepregnancy height and weight for pregnant women in order to determine the prepregnancy BMI. It is the prepregnancy BMI that determines the appropriate total weight gain and recommended rate of weight gain for pregnant participants. WIC also assesses weight gain during pregnancy to ensure healthy pregnancy outcomes for both mothers and their babies.

A - Assessment Considerations in Pregnancy

- Weight is a **sensitive and personal** topic, especially during pregnancy

Weight can be a sensitive subject for many women, especially during pregnancy. Pregnancy can also be an emotional time; this is compounded by feelings of uncertainty regarding the woman's changing body. Be sensitive when addressing prepregnancy weight and pregnancy weight gain guidelines by allowing the participant to "lead the dance" in exploring feelings and beliefs regarding weight gain.

- There are ranges of recommended weight gain, depending on prepregnancy BMI
- Gaining above or below recommendations can cause problems

Weight gain guidelines during pregnancy are provided by the Institute of Medicine (IOM). In women with a prepregnancy BMI within the normal range, a weight gain of 25 to 35 pounds is associated with the best health outcomes for mom and baby. Weight gain for women with multiple-birth pregnancies, such as twins or triplets, is approximately 37 to 54 pounds for women with a prepregnancy BMI within the normal range. Weight loss during pregnancy is discouraged. Specific IOM recommendations for pregnancy weight gain based on prepregnancy BMI include the following:

Prepregnancy BMI	First trimester (pounds)	Second & third trimesters (pounds per week)	Pregnancy total (pounds)	Women pregnant with multiples (twins, triplets, etc.)
Less than 18.5	2.2-6.6	1-1.3	28-40	Talk with your healthcare provider
18.5-24.9	2.2-6.6	0.8-1.1	25-35	37-54
25.0-29.9	2.2-6.6	0.5-0.7	15-25	31-50
Greater than 30.0	0.5-4.4	0.4-0.6	11-20	25-42

Weight gain during pregnancy is plotted on a chart in relation to the expected delivery date. Gaining weight within the recommendations helps keep mom and baby healthy and comfortable. Gaining weight below the recommended range will make it hard for the baby to grow properly. Gaining weight above the recommended range may result in complications during delivery and health concerns for both mom and baby later in life.

A - Pregnancy Assessment Concerns

Ask:

- “How do you feel about your changing weight since you’ve been pregnant?”
- “How much weight do you want to gain with this pregnancy?”
- “What has your doctor discussed with you about weight gain in pregnancy?”

Assess:

- Accuracy of self-reported prepregnancy weight
- Total weight gain based on prepregnancy weight
- Weight gain since last visit
- Healthcare provider recommendations regarding pregnancy weight gain

Concern:

Prepregnancy BMI less than 18.5 (WIC Code 101)

Women with a prepregnancy BMI of less than 18.5 who become pregnant are at a higher risk for delivery of low birth weight (LBW) infants, delayed fetal growth, and complications during delivery. This is also associated with a higher incidence of various pregnancy complications, such as hemorrhaging, premature rupture of membranes, anemia, endometriosis, and cesarean delivery. The goal of the prenatal nutritional counseling provided by WIC is to achieve recommended weight gain (by emphasizing food choices of high nutritional quality, which may include encouraging increased consumption of some calorically-dense foods). Assess for pregnancy weight gain, healthcare provider directions specific to weight gain, food and fluid intake and feelings about pregnancy weight gain and body changes.

Prepregnancy BMI greater than or equal to 25 (WIC Code 111)

Women with a prepregnancy BMI of greater than or equal to 25 may be at risk for higher rates of cesarean delivery, gestational diabetes mellitus, preeclampsia and other pregnancy-induced hypertensive disorders, as well as postpartum anemia. A BMI greater than or equal to 25 may also increase risk of chronic disease, including hypertension, dyslipidemia, diabetes mellitus, cholelithiasis, coronary heart disease, osteoarthritis, sleep apnea, stroke, and certain cancers.. Assess for pregnancy weight gain, healthcare provider directions specific to weight gain, food and fluid intake and feelings about pregnancy weight gain and body changes.

Pregnancy weight gain below range (WIC Code 131)

Maternal weight gain during the second and third trimesters is an important determinant of fetal growth. Low maternal weight gain (and/or maternal weight loss), is associated with an increased risk of small for gestational age (SGA) infants. In addition, low maternal weight gain may be associated with failure to initiate breastfeeding and possibly preterm birth. Assess for pregnancy weight gain, food and fluid intake, healthcare provider directions specific to weight gain, and feelings about pregnancy weight gain and body changes.

Pregnancy weight gain above range (WIC Code 133)

This includes pregnancy weight gain above range at any point in pregnancy, based on the weight gain grid provided by the Institute of Medicine (IOM), where a pregnant woman's weight plots at any point above the top line of the appropriate weight gain range for her respective prepregnancy weight category. This may cause an increased risk for cesarean delivery and delivering large for gestational age infants, which may also lead to complications during labor and delivery. The evidence is inconclusive whether pregnancy weight gain above range may be associated with glucose abnormalities and gestational hypertension disorders. Assess for pregnancy weight gain, any healthcare provider directions specific to weight gain, food and fluid intake and feelings about pregnancy weight gain and body changes.

Education for Pregnant Women

Education may be offered after a complete ABCDE assessment and is based on a woman's identified concerns, interests, and motivation. Education for pregnant women may emphasize:

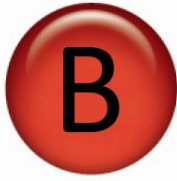
- MyPlate pregnancy guidelines
- Breastfeeding preparation anticipatory guidance
- Emphasize health and wellbeing rather than just a focus on weight and weight gain
- Physical activity recommendations (*See Dietary Concerns: Other Concerns For Pregnant Women*)

A - Education Messages Related to Anthropometry

Education specific to concerns identified during the A assessment may include:

- "Pregnancy is a time of important growth for both yourself and your baby. When you gain weight within the recommended range, that weight is distributed among the growing baby's needs, the uterus, placenta, blood and body fluids. When weight gain exceeds the recommended range, it can mean more of the weight is being stored on mom's body. That's why it is important to choose foods of high nutritional quality."
- "Sometimes it is challenging to meet weight gain recommendations during pregnancy due to things like appetite, nausea, or just being tired. Eating a healthy variety of foods during pregnancy can continue to support healthy growth for you and your baby until you are able to overcome some of these common concerns in pregnancy."

Biochemical Assessment



In WIC, the biochemical, or *B* in the ABCDE assessment, includes the assessment and gathering of information related to specific blood tests. WIC screens for whether participants are at risk of anemia by measuring hemoglobin blood levels. WIC also screens for high blood lead concentrations by asking women if they have had their blood lead concentrations tested by their healthcare provider—and referring them back to their provider if they have not. Both anemia and lead exposure may impact the health of pregnant women and their growing babies. The biochemical assessment covers WIC codes in the 200s.

Why Is This Important?

- Pregnant and postpartum women are at risk for iron-deficiency anemia

Iron deficiency is the most common cause of anemia. It may be caused by a diet low in iron, insufficient absorption of iron from a diet related to illness or a medical condition, or increased iron requirements due to pregnancy. The increase in maternal blood supply during pregnancy greatly increases the body's demand for iron as well as the likelihood that anemia will develop.

- WIC can make a difference when anemia is identified

WIC screens for anemia because the risks associated with anemia in pregnancy are severe, and include infant mortality, premature birth, and low birth weight. WIC's early identification of the risk of anemia in pregnancy is important, not only for providing referrals back to the woman's healthcare provider, but also for implementing early nutrition interventions to ensure a healthy pregnancy for both mom and baby. Discussing lead screening with pregnant women and referring them back to their healthcare providers for screening, exposure, and risk assessment is another valuable resource WIC provides.

B- Pregnancy Assessment Considerations

- It is important to screen for iron levels

Iron-deficiency anemia is a condition that reduces the blood's ability to carry oxygen. Pregnant women need more iron than non-pregnant women. It is recommended that pregnant women consume 27 mg of iron per day. There are two kinds of nutritional iron: heme iron is found in animal products, especially red meat, and is easily absorbed into the body. Non-heme iron is much less easily absorbed and is found in plant foods such as dried beans and peas; fortified breads and cereals; dark green leafy vegetables, and tofu. Foods that have vitamin C such as bell peppers, broccoli, spaghetti sauce, and citrus fruits and juices help the body absorb iron and can be eaten with iron-rich foods to increase the amount of iron that is absorbed.

- Women may be at risk for lead poisoning for several reasons

Iron deficiency weakens the body's defense against lead absorption, while lead poisoning can cause iron deficiency. Both lead toxicity and iron deficiency may impact both pregnant women and their growing babies. Women considered at risk are those living in houses built before 1978 (the year that regulations began requiring that lead-containing paints could not be used in households) or those living in older homes (built before 1970) with lead-based pipes. Other pregnant women that may be at high risk are those who immigrated to the United States from countries that do not regulate the use of lead, those using imported bowls glazed with lead-based paint, pregnant women with pica, or those using traditional folk remedies such as *greta* (powdered lead oxide) or *azarcon* (lead tetroxide).

B - Pregnancy assessment concerns

Ask:

- "What has your doctor said about your iron and lead levels?"
- "What concerns do you have about anemia or lead?"
- "What have you heard about iron and lead testing?"

Assess:

- Accuracy of value, and repeat the test if needed
- Current use of prenatal vitamins or supplements containing iron
- Exposure to lead-based paint, pipes, pottery/bowls, or home remedies

Concern:

Low hemoglobin/low hematocrit (WIC Code 201.1 and 201.2)

Hemoglobin (Hgb) and hematocrit (Hct) are the most commonly used tests to screen for iron-deficiency anemia. Measurements of hemoglobin and hematocrit reflect the amount of functional iron in the body. While neither test can directly measure iron status or distinguish between different types of anemia, these tests are useful indicators of iron-deficiency anemia. The indicator for low hemoglobin or hematocrit in pregnant women, without adjusting for altitude, is a hemoglobin level of less than 11.0 g/deciliter (dL) or a hematocrit level of less than 33 percent. Assess for anemia and iron supplements.

High blood lead levels (WIC Code 211)

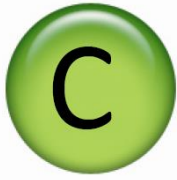
Elevated lead levels are anything equal to or greater than 3.5 µg/dL within the past 12 months for children. For infants and adults elevated lead levels are anything equal to or greater than 5 µg/dL within the past 12 months. Blood lead screenings for infants may not be routine for their healthcare providers. Screenings may not begin until age one. Assess for lead poisoning diagnosis, environmental exposure, or recent move from another country.

***B* - Education Messages Related to Biochemical (Bloodwork)**

Education specific to concerns identified during the *B* assessment may include:

- “Hemoglobin is related to the amount of iron in the body. The amount of iron you get from foods affects your hemoglobin levels. Low iron can cause you to feel tired and can affect your growing baby.”
- “Prenatal vitamins contain iron, but it is also important to get iron from foods.”
- “You can increase the amount of iron in your diet by eating meat, fish, poultry, beans, iron-fortified cereals and whole grains provided by WIC.”
- “Adding vitamin C-rich foods to high-iron foods can help increase the absorption of iron from foods.”
- “Homes built before 1978 may have lead-based paint. Other lead sources can be soil, toys (depending on where they were made), imported ceramics or old pottery, and imported herbal remedies.”

Clinical Assessment (Medical Conditions)



The clinical assessment, or *C* section of the ABCDE assessment in the nutrition care process, is the assessment of clinical or medical conditions that impact nutrition status. Pregnant women may report a diagnosed medical condition that was a concern pre-pregnancy, or a new concern that has arisen since becoming pregnant. Medical documentation from a healthcare provider is generally not needed to assign a WIC code. Understanding the impact of nutrition on a growing baby can be complicated. In pregnant women, the impacts may stem from conditions ranging from gestational diabetes to a genetic disease. The clinical assessment covers WIC codes in the 300s. The Arizona WIC Nutrition Care Guidelines serve only to provide a general overview of *C* assessment guidelines, and do not include comprehensive details of nutrition care guidelines specific to each individual condition. To find more details about each condition, refer to the Nutrition Risk Manual.

Why is this important?

- Some medical conditions impact nutrition needs and diet

A basic understanding of medical conditions is important to determine how a medical condition affects a pregnant woman's nutrition status and eating patterns.

C - Pregnancy assessment considerations

- The role of the WIC counselor is to assess for nutrition needs and/or referrals

Questions and conversations that may come up as a result of gathering the *C* information in the assessment may be sensitive or challenging to navigate. This can include a broad range of conditions requiring healthcare and related services beyond basic, routine care. It is important to understand how the clinical or medical condition will affect nutritional needs and how to make appropriate referrals when necessary. The effects on nutritional needs or intake may include inadequate energy and nutrient intake to support health, medication-nutrient interactions, need for enteral (tube) feedings, chronic constipation or diarrhea, and use of alternative or complementary therapies or products. The identification of these clinical and medical codes through the WIC assessment process may require an evaluation by the WIC registered dietitian (RD).

C - Pregnancy Assessment Concerns

Ask:

- "What has the doctor said about your health?"
- "What concerns do you have about your health in this pregnancy?"
- "What has your dentist said about your oral/dental health?"
- "Since you've become pregnant, have you been feeling more depressed, anxious, or overwhelmed than is normal for you?"
- "Would you like some information on mental health resources?"

- “How often do you have little interest or pleasure in doing things?”

If the client mentions a diagnosis, further probing questions include:

- “What has your doctor told you about how your condition may impact your pregnancy?”
- “How does this condition impact your nutrition or eating?”
- “What special instructions have you been given during pregnancy?”

Assess:

- The impact of the medical condition on pregnancy and the woman’s health
- The impact of the medical condition on the woman’s nutritional status or her food and fluid intake.
- Frequency of prenatal visits and care
- Coping strategies

Concern:

Hyperemesis gravidarum (WIC Code 301)

Hyperemesis gravidarum is defined as severe nausea and vomiting to the extent that the pregnant woman becomes dehydrated and shows an increase in blood acidity levels. Other symptoms may include weight loss in pregnancy. The cause is unknown. The most severe cases may require hospitalization with intravenous (IV) fluid and nutrition therapy. This may be distinguished from morning sickness in that vomiting is so severe that it does not allow the woman to keep anything in her stomach. Assess the degree of nausea and vomiting, recommendations/directions provided by the healthcare provider, and overall health. Presence of condition diagnosed, documented, or reported by a physician or someone working under a physician’s orders, or as self-reported by applicant/participant/caregiver.

Gestational diabetes (GDM) (WIC Code 302)

Gestational diabetes mellitus is defined as any degree of glucose or carbohydrate intolerance with the onset or first recognition during pregnancy. Pregnancy is an insulin-resistant state. Deterioration of glucose tolerance typically occurs during pregnancy, particularly in the third trimester. Untreated or poorly treated GDM results in a higher risk of morbidity and mortality for both the mother and the fetus. Established risk factors for GDM include advanced maternal age, obesity, and family history of diabetes. Assess recommendations/directions provided by the healthcare provider, history of GDM and DM, and overall health.

History of gestational diabetes (WIC Code 303)

Women who have had a pregnancy complicated by GDM are 40 to 60 percent more likely to develop diabetes within 15 to 20 years, usually type 2. This risk of subsequent (future) diabetes is greatest in women with GDM who are diagnosed early in the pregnancy, who exhibit the highest rates of hyperglycemia during the pregnancy, and who are obese. Approximately 30 to 50 percent of women with a history of GDM will develop GDM in a later pregnancy. Assess any recommendations or directions provided by the healthcare provider, history of GDM and DM, and overall health.

History of preeclampsia (WIC Code 304)

Preeclampsia is defined as pregnancy-induced hypertension (→140mm Hg systolic or 90mm Hg diastolic blood pressure) with proteinuria developing usually after the twentieth week of gestation. Symptoms of preeclampsia may include edema (swelling) and renal (kidney) failure. Assess any recommendations or directions provided by the healthcare provider, frequency of prenatal visits, and overall health.

311 Hx Preterm or Early Delivery (WIC Code 311)

History of preterm or early delivery is defined as the birth of an infant at < 39 weeks gestation. Preterm birth causes at least 75 percent of neonatal deaths not due to congenital malformations. In most cases of preterm labor, the cause is unknown. Early term infants will likely require a longer hospital stay and may have long-term healthcare needs, as a significant amount of development related to the lungs, brain, liver, and fat layers beneath the skin occur during the last few weeks of pregnancy. Factors that can increase the risk of a woman delivering an early term infant are the same as those for preterm birth. Assess any recommendations or directions provided by the healthcare provider, frequency of prenatal visits, and overall health.

History of low birth weight (WIC Code 312)

History of low birth weight is defined as the birth of an infant weighing < 5 lb. 8 oz. (< 2500 grams). A pregnant woman's weight gain is one of the most important associations with infant birth weight. Assess any recommendations or directions provided by the healthcare provider, food and fluid intake, frequency of prenatal visits, and overall health.

History of fetal or neonatal loss (WIC Code 321)

Adverse outcomes related to history of fetal or neonatal loss may include recurrent loss in future pregnancies, low birth weight (including preterm and small for gestational age infants), premature rupture of membranes, neural tube defects, and major congenital malformations. Important vitamins, minerals, and nutrients to support healthy outcomes in pregnancy include sufficient energy or calories, protein, folate, zinc, and vitamin A. Assess any recommendations or directions provided by the healthcare provider, frequency of prenatal visits, and overall health.

Pregnancy at a young age (WIC Code 331)

Pregnancy at a young age is defined as conception at equal to or less than 20 years of age. Pregnancy at a young age, before a woman's growth is complete, constitutes a nutritional risk because of the potential for competition for nutrients between the needs of the pregnancy and the woman's body. Assess any recommendations or directions provided by the healthcare provider, food and fluid intake, frequency of prenatal visits, and overall health.

Short interpregnancy interval (WIC Code 332)

A short interpregnancy interval is defined as conception before 16 months postpartum. Pregnancy requires an adjustment of the mother's body to a new state which results in rapid depletion of maternal stores of certain nutrients. Mothers with closely spaced pregnancies may not have sufficient time to restore the nutritional deprivations caused by the previous pregnancy. Assess any recommendations or directions provided by the healthcare provider, frequency of prenatal visits, food and fluid intake, vitamin supplementation and overall health.

Lack of or inadequate prenatal care (WIC Code 334)

This includes prenatal care beginning after the first trimester (or after the thirteenth week) of pregnancy or too few visits. Women who do not receive early and adequate prenatal care are more likely to deliver premature or low birth weight infants. Assess social support system, potential barriers preventing regular prenatal care, and overall health.

Multifetal gestation (WIC Code 335)

Multifetal gestation includes more than one fetus in a current pregnancy. Multifetal pregnancies may be associated with low birth weight, fetal growth restriction, placental and cord abnormalities, preeclampsia, anemia, shorter gestation, and an increased risk of infant mortality. The risk of pregnancy complications is greater in women carrying twins and increases as the number of fetuses increases. Women who are pregnant with twins have greater requirements for all nutrients than women carrying only one fetus. Assess any recommendations or directions provided by the healthcare provider, food and fluid intake, frequency of prenatal visits, and overall health.

Delayed uterine growth (WIC Code 336)

This includes a fetal weight lower than the tenth percentile for gestational age. Severely growth-restricted infants are at increased risk of fetal and neonatal death, hypoglycemia, polycythemia, cerebral palsy, anemia, bone disease, birth asphyxia, and long-term neurocognitive complications. Assess any recommendations or directions provided by the healthcare provider, frequency of prenatal visits, and overall health.

History of large for gestational age (LGA) (WIC Code 337)

This includes any history of giving birth to an infant weighing greater than or equal to 9 pounds (4000 grams); it is also known as macrosomia. Women with a history of LGA infants are at an increased risk of giving birth to an LGA infant in future pregnancies. Macrosomia may be an indicator of maternal diabetes (current or gestational) or a predictor of future diabetes. LGA infants may also be at risk for injury during birth. Assess any recommendations or directions provided by the healthcare provider, frequency of prenatal visits, and overall health.

Pregnant woman currently breastfeeding (WIC Code 338)

Breastfeeding during pregnancy can influence a woman's ability to meet the nutritional needs of both her growing fetus and her nursing baby. Pregnancy may also impact the volume and composition of a breastfeeding woman's milk supply. When women nurse through a pregnancy, it is possible for oxytocin released during breastfeeding to trigger uterine contractions resulting in premature labor. Assess lactation support, any recommendations or directions provided by the healthcare provider, frequency of prenatal visits, food and fluid intake and overall health.

History of birth with a congenital defect (WIC Code 339)

This includes a woman who has given birth to an infant who has a congenital or birth defect, like cleft lip or palate, that is linked to inadequate nutritional intake, including inadequate zinc, folic acid, or excess vitamin A. Assess any recommendations or directions provided by the healthcare provider, vitamin and mineral intake, frequency of prenatal visits, and overall health.

Nutrient deficiency or disease (WIC Code 341)

This is a diagnosis given by a healthcare provider that includes nutritional deficiencies or a disease caused by insufficient dietary intake of specific nutrients. Diseases include, but are not limited to, protein-energy malnutrition, scurvy, rickets, beriberi, hypocalcemia, osteomalacia, vitamin K deficiency, pellagra, cheilosis, Menkes disease, and xerophthalmia. Persistent deficiency may lead to growth problems or malnutrition. Assess any recommendations or directions provided by the healthcare provider, food and fluid intake, frequency of prenatal visits, and overall health.

Gastrointestinal disorders (WIC Code 342)

This is a diagnosis given by a healthcare provider that includes any gastrointestinal (GI) condition that interferes with the intake or absorption of nutrients. Disorders may include gastroesophageal reflux disease (GERD), stomach or intestinal ulcers, short bowel syndrome, inflammatory bowel disease (including colitis or Crohn's disease), pancreatitis, gallbladder disease, or malabsorption disorders. Assess any recommendations or directions provided by the healthcare provider, food and fluid intake, frequency of prenatal visits, and overall health.

Diabetes mellitus (WIC Code 343)

This is a diagnosis given by a healthcare provider that includes a group of metabolic diseases resulting in hyperglycemia (elevated blood sugar), which occurs due to defects in insulin secretion, insulin action, or both. The two major classifications of diabetes are type 1 diabetes (insulin deficiency) and type 2 diabetes (insulin resistance). Diabetes is identified by a fasting plasma glucose level of 126 mg/dL or greater. Hyperglycemia is defined as equal to or greater than 200 mg/dL. Assess any recommendations or directions provided by the healthcare provider, management of diabetes, frequency of prenatal visits, and overall health.

Thyroid disorders (WIC Code 344)

This is a diagnosis given by a healthcare provider that includes abnormal secretions of thyroid hormones. Types of disorders may include hyperthyroidism, hypothyroidism, congenital (present from birth) hyperthyroidism, and congenital hypothyroidism. Thyroid hormones influence all organ systems in the body and regulate how the body gets energy from food. Assess any recommendations or directions provided by the healthcare provider, frequency of prenatal visits, and overall health.

Hypertension and prehypertension (WIC Code 345)

Hypertension (commonly referred to as high blood pressure) is the most common medical complication of pregnancy. People with prehypertension are twice as likely to develop hypertension. Hypertension during pregnancy may lead to low birth weight, fetal growth restriction, and premature delivery. Hypertensive disorders of pregnancy are categorized as follows:

- **Chronic hypertension:** Hypertension that was present before pregnancy. Women with chronic hypertension are at risk for complications of pregnancy such as preeclampsia.
- **Preeclampsia:** A pregnancy-specific syndrome observed after the twentieth week of pregnancy, characterized by elevated blood pressure accompanied by significant proteinuria. See WIC Code 304.
- **Eclampsia:** The occurrence of seizures in a woman with preeclampsia that cannot be attributed to other causes.

- **Preeclampsia superimposed upon chronic hypertension:** Preeclampsia occurring in a woman with chronic hypertension.
- **Gestational hypertension:** Blood pressure elevation detected for the first time after mid-pregnancy without proteinuria. It presents minimal risks to mother and baby when it does not progress to preeclampsia.

Assess any recommendations or directions provided by the healthcare provider, food and fluid intake, frequency of prenatal visits, and overall health.

Renal disease (WIC Code 346)

Renal means “of or relating to the kidney.” This is a diagnosis given by a healthcare provider that may include pyelonephritis and persistent proteinuria, but excludes urinary tract infections (UTI) involving the bladder. Assess the recommendations or directions provided by the healthcare provider, food and fluid intake, frequency of prenatal visits, and overall health.

Cancer (WIC Code 347)

This is a diagnosis given by a healthcare provider that may include any type of cancer. Cancer is a disease caused by the uncontrolled division of abnormal cells in a part of the body. The type of cancer and stage of disease progression determines the type of medical treatment, and, if indicated, nutrition management. Assess any recommendations or directions provided by the healthcare provider, food and fluid intake, frequency of prenatal visits, and overall health.

Central nervous system disorders (WIC Code 348)

The central nervous system (CNS) comprises the brain and spinal cord and is a network of nerve tissues that control the activities of the body. CNS disorders are diagnoses given by a healthcare provider that may impact the amount of calories an individual needs, her ability to feed, oral dysfunction, and growth. A common CNS disorder is seizures, or epilepsy. Assess any recommendations or directions provided by the healthcare provider, food and fluid intake, frequency of prenatal visits, and overall health.

Genetic and congenital disorders (WIC Code 349)

This is a broad category covering many diagnoses given by a healthcare provider that may include hereditary or congenital conditions, present from birth, that cause physical or metabolic abnormalities. These may include, but are not limited to, cleft lip or palate, Down syndrome, thalassemia major, sickle cell anemia (not sickle cell trait), and muscular dystrophy. Assess any recommendations or directions provided by the healthcare provider, food and fluid intake, frequency of prenatal visits, and overall health.

Inborn errors of metabolism (WIC Code 351)

This is a diagnosis given by a healthcare provider that generally refers to gene mutations or gene deletions that alter the metabolism in the body. The inheritance of most metabolic disorders is rare. IEM disorders may manifest at any stage of life, from infancy to adulthood. In most cases, when nutritional interventions are screened, identified, and initiated early and continued for a lifetime, the person may have normal growth. Several medical foods designed for the specific treatment of the identified disorder can be made available through the participant’s health insurance plan, their AHCCCS plan, or by prescription through WIC. Assess any recommendations or directions provided by the healthcare provider, food and fluid intake, frequency of prenatal visits, and overall health.

Infectious diseases - Acute (WIC Code 352.1)

This is a diagnosis given by a healthcare provider within the last six months. It includes diseases caused by growth of disease-causing microorganisms in the body that are severe enough to affect nutritional status. Acute infectious diseases such as hepatitis A, hepatitis E, pneumonia, RSV and others typically increase the nutrient needs of the body. Assess any recommendations or directions provided by the healthcare provider, effect on food and fluid intake, frequency of prenatal visits, and overall health.

Infectious diseases - Chronic (WIC Code 352.2)

Chronic infectious diseases require long-term management and are likely to last a lifetime. Examples of chronic infectious diseases include HIV, AIDS, hepatitis B, hepatitis C, and hepatitis D. Assess any recommendations or directions provided by the healthcare provider, effect on food and fluid intake, frequency of prenatal visits, and overall health.

Food allergies (WIC Code 353)

Food allergy is a diagnosis given by a healthcare provider, and includes reactions when the body's immune system responds to a harmless food as if it were a threat. The foods that most often cause allergic reactions are called allergens and may include cow's milk (and foods made from cow's milk), eggs, peanuts, tree nuts (walnuts, almonds, cashews, hazelnuts, pecans, Brazil nuts), fish, shellfish (e.g., shrimp, crayfish, lobster, and crab), wheat, and soy. Assess for specific food allergens, severity of reaction, management of allergy, recommendations or directions provided by the healthcare provider, and overall health.

Celiac disease (WIC Code 354)

Celiac disease (CD) is a diagnosis given by a healthcare provider of an autoimmune disease in which eating gluten (a protein occurring in wheat, rye, and barley) results in damage to the small intestine and malabsorption of nutrients from food. Celiac disease can result in a wide range and severity of symptoms. Symptoms may include chronic diarrhea, vomiting, constipation, pale foul-smelling fatty stools, and weight loss. The vitamin and mineral deficiencies that can occur from continued exposure to gluten may result in conditions such as anemia, osteoporosis, and neurological disorders such as ataxia, seizures, and neuropathy. Treatment includes strict management in following a gluten-free diet. Assess any recommendations or directions provided by the healthcare provider, food and fluid intake, frequency of prenatal visits, and overall health.

Lactose intolerance (WIC Code 355)

Lactose is a sugar present in milk. Lactose intolerance is an inability to digest this sugar because the body does not produce sufficient amounts of the enzyme lactase. Symptoms include diarrhea, abdominal pain, flatulence, or bloating occurring after lactose ingestion. Assess any recommendations or directions provided by the healthcare provider, food and fluid intake, and overall health.

Hypoglycemia (WIC Code 356)

Hypoglycemia is blood glucose below 54 mg/dL. Hypoglycemia may result as a complication of diabetes, as a condition in itself, in association with other disorders, or under certain conditions such as prolonged fasting or long periods of strenuous exercise. Assess any recommendations or directions provided by the healthcare provider, food and fluid intake, frequency of prenatal visits, and overall health.

Eating disorders (WIC Code 358)

Eating disorders (such as anorexia nervosa and bulimia) may include a distorted sense of body image and morbid fear of becoming fat. Symptoms may include abnormal eating patterns including, but not limited to, self-induced vomiting, purging, and periods of starvation, use of drugs such as laxatives (in excess of normal use), appetite suppressants, thyroid preparations or diuretics, and self-induced marked weight loss. Anorexia nervosa and bulimia are serious eating disorders that affect women in their childbearing years. Unlike bulimia, binge-eating disorder is not associated with purging or excessive exercise. People with binge-eating disorder often are overweight or obese and at greater risk for miscarriage, cesarean delivery, gestational diabetes, gestational hypertension, heart attack, stroke and postpartum depression.

These disorders result in general malnutrition and may cause life-threatening fluid and electrolyte imbalances. Women with eating disorders may begin pregnancy in a poor nutritional state. They are at risk of developing chemical and nutritional imbalances, deficiencies, or weight gain abnormalities during pregnancy if disordered eating behaviors are not resolved. These eating disorders may complicate any pregnancy because the nutritional status of pregnant women is an important factor in perinatal outcomes. Assess feelings about changing body in pregnancy, overall mental and physical health, and support system. Be mindful of how any assessment questions relating to pregnancy weight gain may impact struggles in managing disordered eating.

For individuals affected by an eating disorder, staff can:

- If available, refer the participant to a health care provider (HCP) with expertise in eating disorders. The participant can work with the provider to create a plan for healthy eating and weight gain.
- Reinforce nutrition counseling/advice that is provided by the eating disorder treatment team/plan.
- Encourage the participant to be honest with their HCP and WIC staff regarding past or present struggles with an eating disorder or disordered eating.
- Encourage the participant to seek or refer the participant to individual counseling and/or support groups during and after pregnancy to help them cope with their concerns and fears regarding food, weight gain, body image, and the new role of parenting.
- Encourage the participant to attend other classes on pregnancy, childbirth, child development, and parenting skills.
- Educate participants that it is important for their prenatal HCP to weigh them as this information is essential to tracking the health of baby.
- When possible, the CPA should coordinate with the participant's HCP to obtain referral data such as height, weight gain, etc. Additionally, encourage the participant to discuss with their HCP about blind weighing (36). If necessary, they can ask their doctor about standing on the scale backwards and instruct them not to share the number with them.
- Encourage the participant to talk to their HCP before attending a prenatal exercise class to make sure it fits with their recovery plan.
- Modify conversation with the participant to avoid topics that are likely to provoke eating disordered behaviors (e.g., topics related to body weight, body shape, and calories).

Recent surgery, trauma, burns (WIC Code 359)

This includes major surgery (including C-sections), trauma, or burns severe enough to compromise nutritional status that have occurred within the past two months, or similar injury more than two months ago that requires continued nutritional support. The body's response to recent major surgery, trauma, or burns may affect the nutrient requirements needed for recovery and lead to malnutrition. There is a catabolic response to surgery; severe trauma or burns cause a hypermetabolic state. Injury causes alterations in glucose, protein, and fat metabolism. Assess any recommendations or directions provided by the healthcare provider, effect on food and fluid intake, frequency of prenatal visits, and overall health.

Other medical conditions (WIC Code 360)

This includes diseases or conditions with nutritional implications that are not included in any of the other medical conditions. The current condition, or treatment for the condition, must be severe enough to affect nutritional status. This includes, but is not limited to:

- Juvenile Idiopathic Arthritis (JIA)
- Systemic Lupus Erythematosus (SLA)
- Polycystic Ovarian Syndrome (PCOS)
- Cardiovascular Diseases
- Asthma
- Cystic Fibrosis (CF)

Assess for how the medical condition impacts the infant's nutritional status, overall health, and how the medical condition is being managed.

Mental Illnesses (WIC Code 361)

Mental illnesses where the current condition, or treatment for the condition may affect nutrition status include, but are not limited to:

- Depression
- Anxiety Disorders
- Post-Traumatic Stress Disorder (PTSD)
- Obsessive-Compulsive Disorder (OCD)
- Personality Disorders
- Bipolar Disorders
- Schizophrenia
- Attention-Deficit/Hyperactivity Disorder (ADHD)

Depression

Depression has a variety of symptoms, the most common are feelings of sadness or a marked loss of interest in pleasure or activities. Other symptoms include appetite changes resulting in unintended weight loss or gain, insomnia or oversleeping, loss of energy or increased fatigue, restlessness or irritability, feelings of worthlessness or inappropriate guilt and difficulty thinking, concentrating, or making decisions.

Prenatal Depression

The most common symptoms of prenatal depression include feelings of sadness, anxiety, and fatigue. Women who experience depression during pregnancy are found to be at an increased risk of not following their prenatal medical plan, inadequate or excessive gestational weight gain, smoking, and substance use. Studies suggest that pregnant women with untreated symptoms of depression have increased rates of birth complications, preeclampsia, preterm delivery, low birth weight and impaired social, cognitive, and emotional development in the baby.

Depression in Pregnant Adolescents

Adolescent pregnancy is considered a significant risk for depression. Women who gave birth before their 20th birthday showed higher levels of depressive and anxiety symptoms. The symptoms of depression in adolescence are different than those presented in adulthood. While they share a depressed mood, adolescents more frequently show changes in appetite or weight and insomnia, rather than a loss of interests and poor concentration. Depression in adolescent pregnancy has a high frequency of suicidal attempts, reaching up to 20%. Teens who are female, have a family history of depression, a history of trauma, family conflict, a chronic medical disease, or who are LGBTQ are at greater risk for developing adolescent depression. Depression in adolescents can occur with other mental illnesses including anxiety.

Postpartum Depression

Postpartum depression (PPD) is a form of depression that occurs within 4 to 6 weeks after childbirth and is one of the most common complications that occurs after pregnancy. PPD is associated with many adverse outcomes for both mother and offspring including, maternal mortality and morbidity, increased risk for infanticide, poorer maternal-infant attachment, early discontinuation of breastfeeding, and impaired parenting behaviors. The risk factors associated with PPD include genetics, history of a mental illness and adverse life events including physical, psychological, or sexual abuse. Discrimination and immigration are often overlooked adverse life events associated with PPD.

PPD is different from the “baby blues” which is used to describe mild mood changes, feelings of worry, unhappiness, and exhaustion in the first 2 weeks after having a baby. The “baby blues” is a common reaction following delivery that affects 70-80% of new mothers. The “baby blues” typically peak four to five days after delivery and may last hours to days and usually resolve within 2 weeks.

Breastfeeding and Depression

Women with PPD are less likely to breastfeed, as PPD is considered a risk factor for breastfeeding self-efficacy. Women with low self-efficacy are 3 times more likely to stop breastfeeding early. Studies show the presence of depressive symptoms in the postpartum period decrease maternal confidence in breastfeeding and increase the risk of discontinuing exclusive breastfeeding. Women with PPD also have fewer positive interactions with their infants and a poorer perception regarding their baby's behavior. Additionally, PPD can negatively affect milk supply due to elevated levels of cortisol in the mother's system. Difficulties with breastfeeding can cause the mother to feel overwhelmed and increase the risk of depression. If a mother with early signs of PPD stops breastfeeding, depression can become more severe due to the abrupt drop in oxytocin levels. Successful breastfeeding may have a protective effect on maternal mental health because the breastfeeding relationship can decrease feelings of loneliness and emptiness that are common in PPD. Higher levels of oxytocin released during breastfeeding can cause the mother to feel calmer and more relaxed.

Anxiety Disorders

Anxiety disorders are the most common mental illness in adults in the U.S.. They include the following types: generalized anxiety disorder, panic disorder, and various phobia-related disorders. In anxiety disorders, worry and fear interfere with daily life and are much more severe than occasional anxiety. All anxiety disorders share an increase in emotional, physical, and neurological symptoms precipitated by a specific situation or circumstance.

During pregnancy, anxiety may have adverse effects on both the mother and baby, including impaired fetal development, complications of labor, and altered mental development of the newborn. Therefore, it may be necessary to consider medication for anxiety that worsens during pregnancy. Anxiety disorders are usually treated with psychotherapy and medications.

Post-Traumatic Stress Disorder (PTSD)

PTSD is a psychiatric disorder that may occur in people who have experienced or witnessed a traumatic, shocking, scary, or dangerous event. People with PTSD have intense or disturbing thoughts and feelings related to their trauma that lasts after the traumatic event has ended. They may avoid situations or people that remind them of the event, and they may have strong negative reactions to something like a loud noise or an unexpected touch. Symptoms of PTSD usually begin within 3 months of the traumatic incident, but sometimes begin years after. To be considered PTSD, the symptoms must last more than a month and be severe enough to interfere with relationships or work.

Obsessive-Compulsive Disorder (OCD)

OCD is a chronic and long-lasting disorder in which a person has uncontrollable, reoccurring thoughts (obsessions) and/or behaviors (compulsions) that they feel the urge to repeat over and over. The compulsions, such as hand washing, checking on things or cleaning, can interfere with a person's daily life. People with OCD have difficulty stopping the obsessive thoughts or the compulsive actions even though they are very distressing and recognize their thoughts and behaviors are excessive.

Personality Disorders

Personality disorders, including obsessive-compulsive personality disorder (different from OCD), narcissistic personality disorder, antisocial personality disorder, and borderline personality disorder, are an “enduring pattern of inner experience and behavior that deviates markedly from the expectations of the individual’s culture”. Behaviors are pervasive and inflexible, often resulting in distress and impairment. The person’s way of thinking, feeling, and behaving is different from the expectations of society and causes problems functioning. Personality disorders are not usually diagnosed until a person is over the age of 18 because prior to that age a person’s personality is still developing.

Bipolar Disorders

Bipolar disorder (formerly known as manic depressive disorder or manic depression) is a mental illness that causes changes in a person’s mood that affects their daily life. These mood shifts are known as manic (elevated or agitated) or depressive (sad and hopeless). During depressive episodes, approximately 25-50% of those with bipolar disorder attempt suicide. Sometimes people may have a mixed episode, feeling both manic and depressive symptoms at the same time. The symptoms of a mood can last from days to weeks and vary in intensity. People with bipolar disorders are more likely to have other mental illnesses like anxiety, eating disorders, substance use issues or chronic medical conditions such as diabetes, obesity, or heart disease.

Schizophrenia

Schizophrenia is a serious mental illness that can be severely disabling if not treated. It is characterized by delusions, hallucinations, disorganized speech and behavior, and other symptoms that cause social or occupational dysfunction. For a diagnosis, symptoms must have been present for six months and have been active for at least one month. Symptoms appear in males in their late teens or early twenties and in females in their twenties or thirties.

People with schizophrenia also have higher mortality rates due to higher rates of heart disease, liver disease, and diabetes. These diseases appear to be more related to fat metabolism than dietary fat intake as schizophrenia appears to be associated with altered metabolism. Studies of patients with schizophrenia have shown them to have three times the amount of visceral fat when compared to those with equal total body fat. They also have reduced energy needs which may be related to antipsychotic medications frequently used in the treatment of schizophrenia. Antipsychotic medications are associated with increased appetite and weight, with some patients gaining as much as 25-60 pounds over the first few years after starting medication.

People with schizophrenia are at increased risk for substance use disorders. Their lifetime risk of having a serious drug or alcohol problem is 47% compared to 16% for the general population (46). High rates of substance use are associated with poor medical compliance, clinical decline, violence, and suicide. Some researchers think that the genetic risk for schizophrenia also increases the likelihood of substance use and an increased use of substances in adolescence may both increase the risk for developing a later substance use disorder and serve as an additional risk factor for the appearance of psychotic symptoms.

Women with schizophrenia are more likely to have increased rates of stillbirths and neonatal deaths. This may be due to the illness, other medical conditions, lifestyle factors, or social issues. Pregnant women with schizophrenia who take antipsychotics are more likely to be obese, smoke, use alcohol, drugs, other medications, and have pre-existing diabetes and hypertension. Antipsychotics may increase the risk of gestational diabetes mellitus (GDM), obesity, and gestational hypertension. These conditions can lead to adverse maternal and neonatal outcomes such as fetal growth abnormalities, preterm birth, and congenital malformations. Since most antipsychotics are sedating for adults, it is recommended that breastfed infants are monitored for sedation as some cases in infants have been reported.

Attention-Deficit/Hyperactivity Disorder (ADHD)

Attention-deficit/hyperactivity disorder (ADHD) is a persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development. Inattention includes behaviors such as wandering off task, difficulty keeping focus, and disorganization. Hyperactivity includes moving constantly, excessively fidgeting, tapping, or talking. Impulsivity includes hasty acts that occur without thought and may have a high potential for harm.

Many parents first observe excessive motor activity when the child is a toddler, but the symptoms are difficult to distinguish from highly variable normative behaviors before age four. ADHD is most often identified during elementary school years when the inattention becomes more prominent and impairing. In most individuals with ADHD, symptoms of motoric hyperactivity become less obvious in adolescence and adulthood, but difficulties with restlessness, inattention, poor planning, and impulsivity persist.

Developmental delays, sensory or motor delays interfering with the ability to eat (WIC Code 362)



A developmental disability is defined as a severe chronic disability that is the result of a mental or physical impairment or combination of mental and physical impairments. This includes developmental, sensory, or motor disabilities that restrict the ability to intake, chew, or swallow food or require tube feeding to meet nutritional needs. Developmental disabilities affect individuals of all ages and are not a disease state. They are conditions caused by abnormalities, birth defects, and metabolic and chromosomal disorders. There is not one single nutrition intervention that will work for all individuals. Many multidisciplinary teams use a range of treatments; nutrition interventions may not be a family's first priority in overall care, so it is important to appropriately recognize and respond to the family's cues. Assess increased sensory sensitivity, how the medical condition impacts the woman's health overall, effect on food and fluid intake, and how the medical condition is being managed.

Nicotine and Tobacco Use (WIC Code 371)

This includes any use of products that contain nicotine and/or tobacco to include but not limited to:

- Cigarettes, pipes, cigars, hookahs, and smokeless tobacco (e.g. chewing tobacco, snuff, dissolvables)
- Electronic nicotine delivery systems (e.g. e-cigarettes, vaping devices)
- Nicotine replacement therapies (e.g. gums, patches).

Smoking and exposure to nicotine products causes health problems and other adverse consequences for the mother and the newborn infant, such as infant death and risk for Sudden Infant Death Syndrome (SIDS). Women who smoke are at risk for chronic and degenerative diseases such as cancer, cardiovascular disease, and chronic obstructive pulmonary disease (COPD). They are also at risk for loss of bone density. In addition, maternal smoking exposes infants and children to environmental tobacco smoke. Because smoking increases oxidative stress and metabolic turnover of vitamin C, the requirement for this vitamin is higher for women who smoke. Nicotine can be found in breastmilk, therefore, the use of nicotine products may directly impact breastfed infants. Assess smoking cessation efforts, recommendations, and directions provided by the healthcare provider, and assess overall postpartum health.

Alcohol and substance use (WIC Code 372)

For pregnant women, this includes any alcohol use, any illegal substance use, marijuana use in any form and/or abuse of prescription medications. Drinking alcoholic beverages during pregnancy can harm the developing fetus. Alcohol has the potential to damage the fetus at every stage of the pregnancy. Fetal alcohol spectrum disorders (FASD) is a name given to a condition sometimes seen in children of mothers who drink heavily during pregnancy, and it is characterized by a specific pattern of physical, mental, and behavioral abnormalities.

There is no known safe amount of marijuana use during pregnancy. THC can pass from the mother to the unborn child through the placenta if marijuana is ingested or inhaled during pregnancy. Children who are exposed to THC prior to birth can experience decreased academic ability, cognitive function and ability to remain attentive.

Prescription drugs such as opiates and synthetic narcotics (e.g. oxycodone, Vicodin, Narco, Percocet, morphine, dilaudid) have serious health risks associated with their use including endocarditis; coma or sudden death from overdose. A mother's use of these substances during pregnancy can lead to neonatal abstinence syndrome (NAS), which is a series of withdrawal symptoms experienced by an infant after birth due to intrauterine exposure to substances. (see infant risk 383 - Neonatal Abstinence Syndrome for more information). Assess for access to and use of social support services, recommendations or directions provided by the healthcare provider, frequency of prenatal visits, and overall health.

Oral health conditions (WIC Code 381)

Maternal periodontal disease and dental caries may impact pregnancy outcomes, including increasing a woman's risk of atherosclerosis, rheumatoid arthritis, and diabetes. Women may experience dental problems for a variety of reasons, including lack of resources to pay for dental care, barriers to access dental care, and lack of understanding of the importance of oral health and effective self-care practices. Assess frequency of oral care at home, access to dental care services, food and fluid intake, and frequency of visits to the dentist, and overall health.

Fetal alcohol spectrum disorders (FASD) (WIC Code 382)

Fetal alcohol spectrum disorders (FASDs) are a group of conditions that can occur in a person whose mother consumed alcohol during pregnancy. FASDs is an overarching phrase that encompasses a range of possible diagnoses, including fetal alcohol syndrome (FAS), partial fetal alcohol syndrome (pFAS), alcohol-related birth defects (ARBD), alcohol-related neurodevelopmental disorder (ARND), and neurobehavioral disorder associated with prenatal alcohol exposure (ND-PAE) (2). Presence of condition diagnosed, documented, or reported by a physician or someone working under a physician's orders, or as self-reported by applicant/participant/caregiver.

C- Education Messages Related to Clinical (Medical Conditions)

Education specific to concerns identified during the *C* assessment may include:

- “How do you feel about talking to your doctor about your condition?”
- “What are your concerns about your nutrition that WIC can help you with?”
- “What referrals can WIC help you with to make sure you are getting all of the support you need for a healthy pregnancy?”

Dietary Assessment



The dietary assessment, or *D* section of the ABCDE assessment in the nutrition care process, is the assessment of dietary, or food-specific, information. The dietary assessment covers WIC codes in the 400s.

Why Is This Important?

- A pregnant woman's diet impacts her health as well as that of her unborn baby

A pregnant woman's food choices support her own health as well as her growing infant's development. Nutritional needs during pregnancy are higher than they were before she was pregnant. The growth of the baby demands additional nutrients, including additional energy or calories. The food choices a pregnant woman makes impact not only herself but also the health of her unborn baby. For this reason, it is recommended that pregnant women avoid certain foods that could be harmful, such as those that may be toxic or cause food poisoning, including certain raw foods or fish that are high in mercury. The supplemental foods provided through WIC can help support the additional needs to nourish both mothers and their babies.

D- Pregnancy Assessment Considerations

- WIC can help provide adequate nutrition during pregnancy

During pregnancy, WIC can optimize health outcomes by supporting a healthy environment for mothers and their babies through the proper balance of nutrients and avoidance of cigarettes, alcohol, and drugs that could negatively affect the development of the fetus. There are no additional caloric needs for pregnant women during the first trimester, but beginning in the second trimester, a pregnant woman generally needs an additional 340 calories per day, increasing to an additional 450 calories per day in the third trimester. It is recommended for most pregnant women to supplement a healthy diet with daily prenatal vitamin and mineral supplements.

Foods to Avoid or Limit During Pregnancy

Alcohol

Use of alcohol during pregnancy has been associated with increased rates of spontaneous abortion, placental abruption, low birth weight babies, mental abnormalities, and cognitive compromise. Alcohol is never recommended, even in small amounts, during pregnancy.

Unpasteurized soft cheeses

Soft cheeses made from unpasteurized milk, such as brie, feta, *queso blanco*, and *queso fresco* should be avoided, as they may contain E. coli or Listeria pathogens. Pregnant women are 20 times more likely to become infected with Listeria than other healthy adults. While Listeria infection in non-pregnant women may only cause abdominal discomfort, in pregnant women, the infection may cause harm to the fetus. When made from pasteurized milk, most soft cheeses are considered safe to eat during pregnancy. Many of the soft cheeses made in the United States are made from pasteurized milk, but pregnant women should be encouraged to check the label.

Raw or undercooked meat, poultry, eggs, and seafood

Raw or undercooked meat, poultry, eggs, and seafood may contain bacteria that may cause illness to pregnant women and harm the fetus and should be avoided during pregnancy.

Raw milk

Unpasteurized, or raw, milk may contain bacteria that can cause illness to pregnant women and harm the fetus and should be avoided during pregnancy.

Cold cuts

Cold cuts may also contain Listeria bacteria that cause illness to pregnant women and harm the fetus and should be avoided during pregnancy.

High mercury-containing seafood

Some seafood may contain unhealthy substances such as mercury. Mercury can harm the developing nervous system in an unborn child or young baby. Levels of mercury in seafood vary, but levels are highest in shark, mackerel, tilefish, tuna, and swordfish. It is important that pregnant women avoid high-mercury fish. However, low-mercury fish, including shrimp, crab, salmon, tilapia, trout, cod, canned light tuna and catfish, can be encouraged. Canned “white” tuna (albacore) is higher in mercury than the “light” variety, and should be limited to less than six ounces per week

Caffeine

The American Congress of Obstetricians and Gynecologists (ACOG) advises that pregnant women limit caffeine consumption to no more than 200 mg/day, the approximate amount in one 12-ounce cup of coffee, about three to four cups of black tea or iced tea, or approximately three to four 12-ounce cans of soda.

D- Pregnancy Assessment

The WIC Program plays a key role in the prevention of nutrition-related health problems and the promotion of lifelong healthy eating habits. Education specific to the needs and interests of the participant may be offered after the completion of the full ABCDE assessment.

Ask:

- “What has the doctor told you about the need for vitamins/supplements/herbs during pregnancy?”
- “What concerns do you have about nutrition during your pregnancy?”
- “Tell me about any cultural traditions or recommendations from friends and family you follow regarding your nutrition and care during pregnancy.”
- “What has your doctor told you about participating in physical activity during your pregnancy?”

Assess:

- Prenatal vitamin use
- Types of foods and beverages consumed
- How foods are being prepared
- Food preferences
- Food allergies (see C Section WIC Code 353)
- Food intolerances (see C Section WIC Code 353)
- Cultural and/or religious eating practices
- Food access and availability
- Activity levels

Concern:

Failure to meet dietary guidelines for Americans (WIC Code 401)

WIC applicants who meet the income, categorical, and residency eligibility requirements for WIC may be presumed to be at nutrition risk for *Failure to meet Dietary Guidelines for Americans*. This risk is assigned when no other risk is identified through the assessment. Explore any interests or concerns that the caregiver may have.

Consuming dietary supplements with potentially harmful consequences (WIC Code 427.1)

Women taking inappropriate or excessive amounts of dietary supplements, such as single vitamins or multivitamins or minerals, or botanical (including herbal) remedies or teas such as sage or mint, are at risk for adverse effects like harmful nutrient interactions. Most nutrient toxicities occur through excessive supplementation of particular nutrients, such as vitamins A, B6, niacin, iron, and selenium. Besides nutrient toxicities, nutrient–nutrient and drug–nutrient interactions may adversely affect health. Many herbal and botanical remedies have cultural significance related to beliefs about pregnancy and breastfeeding. Herbal supplements such as blue cohosh and pennyroyal stimulate uterine contractions, which may increase the risk of miscarriage or premature labor. Assess dietary intake and supplement use, type, and frequency.

Consuming a diet very low in calories and/or essential nutrients (WIC Code 427.2)

Women consuming highly restrictive diets are at risk for primary nutrient deficiencies, especially during critical developmental periods such as pregnancy. Pregnant women who restrict their diets may increase the risk of birth defects, suboptimal fetal development, and chronic health problems in their children. Low calorie intake during pregnancy may lead to inadequate prenatal weight gain, which is associated with infant intrauterine growth restriction (IUGR). Strict vegan diets may be highly restrictive and result in nutrient deficiencies. Nutrients of potential concern that may require supplementation are iron, riboflavin, zinc, vitamin B12, vitamin D, calcium, and selenium. Assess reasons for restrictive diet, excluded foods, and cultural or religious eating practices.

Compulsively ingesting non-food items (pica) (WIC Code 427.3)

Pica, or eating non-food items, may lead to lead poisoning and exposure to other toxins, anemia, displacement of nutrients, gastric and small bowel obstruction, or infection. It may also contribute to nutrient deficiencies, either by inhibiting absorption or by displacing nutrient-dense foods in the diet. Poor pregnancy outcomes associated with pica-induced lead poisoning include lower maternal hemoglobin level at delivery and a smaller head circumference in the infant. Assess types of non-food items eaten, frequency of eating non-food items, attempts to address the concern that have or have not worked, and recommendations or directions provided by the healthcare provider.

Inadequate vitamin/mineral supplementation recognized as essential by national public health policy (WIC Code 427.4)

The Recommended Dietary Allowance (RDA) for pregnant women is 27 mg of iron per day. Iron supplementation is recommended for all pregnant women to prevent iron deficiency. The RDA for iodine during pregnancy is 220 µg. Severe iodine deficiency during pregnancy may impact cognitive development in children. Pregnant women should take a prenatal vitamin that contains 150 µg of iodine. It is also recommended that all women of childbearing age consume 400 µg of folic acid per day (higher if there is a history of neural tube defect-affected pregnancy). Assess use of prenatal vitamins or other multivitamins and dietary patterns.

Pregnant women ingesting foods that could be contaminated with pathogenic microorganisms (WIC Code 427.5)

Pregnant women are at greater risk for foodborne illness than non-pregnant women. Pregnant women should follow recommended food safety practices for cleaning, preparing, and storing foods. Foodborne illness is caused by pathogenic microorganisms (bacteria, viruses, and parasites) and their toxins and chemical contamination. The symptoms are usually gastrointestinal in nature and may include vomiting, diarrhea, and abdominal pain. Foods that could be potentially contaminated include milk (*Campylobacter*), shellfish (Norwalk-type viruses), unpasteurized apple cider (*E. coli*), eggs (*Salmonella*), fish (ciguatera toxins), raspberries (*Cyclospora*), strawberries (Hepatitis A virus), and ready-to-eat meats (*Listeria monocytogenes*). *Listeria monocytogenes* can cause an illness called listeriosis. Listeriosis during pregnancy may result in premature delivery, miscarriage, fetal death, and severe illness or death of a newborn from the infection. Listeriosis may be transmitted to the fetus through the placenta even if the mother is not showing signs of illness. Assess dietary patterns, food preparation methods, and cultural eating patterns.

Other Concerns for Pregnant Women

Food Cravings and Aversions

Some reasons for food avoidance during pregnancy may include smell aversion caused by enhanced perception of aromas, a heightened gag response, getting ill while eating or smelling a particular food, or altered gastric comfort. Cravings and aversions are powerful urges toward or away from foods, including foods that would not normally elicit any unusual reaction when the woman is not pregnant. Some pregnant women find relief from nausea during pregnancy by temporarily avoiding certain foods that trigger a reaction.

Constipation and Hemorrhoids

Pregnant women can become constipated if they fail to drink adequate water and eat recommended amounts of fiber. Women who are treated with Ondansetron (Zofran) for nausea and vomiting may also experience severe constipation. Straining during stooling due to constipation increases the risk for hemorrhoids. Increased consumption of fluids and fiber-rich foods, including dried fruits and nuts, can usually control these concerns.

Heartburn

Gastric esophageal reflux is common during the second and third trimesters of pregnancy, and it often occurs at night. Relief may occur by suggesting that the pregnant woman eat small frequent meals and stay upright for at least three hours after a meal.

Nausea and Vomiting (“Morning Sickness”)

Nausea and vomiting in pregnancy, also known as morning sickness, affects 50 percent to 90 percent of all pregnant women during the first trimester and usually resolves at approximately 17 weeks gestation. Small, frequent snacks of carbohydrate foods may reduce nausea for some, whereas protein food sources may help others. Ginger may also reduce symptoms, and studies indicate that ginger is better at reducing symptoms of nausea and vomiting in pregnancy than vitamin B6. Nausea and vomiting in pregnancy should not be confused with the more severe hyperemesis gravidarum (see C Section WIC Code 301).

Physical Activity During Pregnancy

Physical activity is safe for generally healthy women during pregnancy. It increases cardiorespiratory fitness without increasing the risk of early pregnancy loss, preterm delivery, or low birth weight. It is recommended that healthy women try to get at least 150 minutes of physical activity a week during pregnancy and the postpartum period. This is equal to 30 minutes per day and may be broken up into smaller ten-minute periods of moderate physical activity, such as brisk walks. It is also recommended that pregnant women avoid doing activities that involve lying on their backs after the first trimester of pregnancy and avoid doing activities with high risk of falling or abdominal trauma, including contact or collision sports, such as horseback riding, soccer, basketball, and downhill skiing. Encourage pregnant women to talk to their healthcare providers about the amount and type of physical activity that is right for them.

D- Education Related to Dietary (Nutrition)

Education specific to concerns identified during the *D* assessment may include:

Education Preparing Pregnant Women for Breastfeeding (all pregnant women)

Studies show that education is the single most important indicator as to whether a woman will initiate breastfeeding and continue up to six months. Chapter 19 of the Arizona WIC Policy and Procedure Manual includes the following suggested topics to offer to pregnant women by trimester, following the *Together We Can* model:

- First trimester—Breastmilk is the ideal nutrition for infants; benefits of breastfeeding
- Second trimester—Anatomy and physiology; breastfeeding positioning and latch-on technique; and equipment (including clothing, pumps, and storage)
- Third trimester—Common fears, barriers, problems, and myths about breastfeeding; anticipatory guidance for maternity care practices

Refer to *Medications and Mothers' Milk* to identify the lactation risk category associated with any medications and/or drugs, and consult with an international board certified lactation consultant (IBCLC) for high-level contraindications regarding any medication questions a pregnant woman may have regarding upcoming breastfeeding.

D401 Failure to Meet Dietary Guidelines:

- Nutrition risk 401 is assigned when no other risk is identified through the assessment. Appropriate educational messages should be determined on a case by case basis.
- For example, appropriate education messages may focus on interests or concerns expressed by the client.
- Educational messages that help the client expect and prepare for normal changes related to pregnancy is appropriate.

D427.1 Education messages on consuming dietary supplements with potentially harmful consequences:

- “Herbs, teas, and other supplements may contain compounds that could be harmful to yourself and your growing baby.”
- “For any vitamin or supplement use during pregnancy, follow your doctor’s instructions on proper use.”
- “Eat a variety of foods from each of the food groups to meet your vitamin and nutrient requirements during pregnancy.”

D427.2 Education messages on consuming a diet very low in calories and/or essential nutrients:

- “It is typically not recommended that women follow a strict diet during pregnancy. During pregnancy you need a variety of foods from all of the food groups to support the healthy growth of your baby, as well as your own health.”

D427.3 Education messages on compulsively ingesting non-food items (pica):

- “Pica is a condition that involves the eating of non-food items, and it can be found more often in pregnant women. Common items that pregnant women may eat include carpet fiber, clay, foam, paint chips, or dirt. This can be highly toxic for both yourself and your baby.”
- “Follow up with your doctor if this concern seems like something you do not feel you will be able to overcome. Continue taking your prenatal vitamin and make sure you are also eating a variety of healthy foods.”

D427.4 Education messages on inadequate vitamin/mineral supplementation recognized as essential:

- “It is recommended that all women of childbearing age increase their intake of folic acid. Folic acid is found naturally in some foods, such as leafy vegetables, beans, and whole grains. Folic acid is also added to foods, such as certain breakfast cereals, breads, and pastas. It is hard to meet your folic acid requirements with food alone, so it is important to also make sure you continue to take your prenatal vitamin.”
- “You can increase the amount of iron in your diet by eating meat, fish, poultry, beans, and iron-fortified cereals provided through WIC.”
- “Adding vitamin C-rich foods to high-iron foods can help increase the absorption of iron from foods.”
- “Check the label of your prenatal vitamin to make sure it has at least 150 ug of iodine. Iodine needs can be met through iodized salt or a supplement. Talk to your doctor to determine your individual needs.”

D427.5 Education messages on ingesting foods that could be contaminated with pathogenic microorganisms:

- “During pregnancy, hormone changes lower women’s immune systems, so it’s harder to fight off infections. Pregnant women are especially at risk for food-borne illness.”
- “Foods of concern during pregnancy include unpasteurized juices, unpasteurized dairy products such as imported cheeses, raw or undercooked meat, fish, poultry, eggs, and processed deli meats and hot dogs.”
- “It is recommended that you heat hot dogs and deli or sandwich meats before eating them.”
- “Read the labels on dairy products, such as cheeses, to make sure they include only pasteurized products.”
- “Most cheeses made in the United States are pasteurized, but imported cheeses, such as those from Mexico, may not be pasteurized. It is important to read the food label and package first.”
- “See your doctor if you think you are experiencing foodborne illness. Symptoms may include diarrhea, nausea or vomiting, stomachache, headache, fever, and chills.”

Environmental Assessment (Including Other Social and Safety Factors)



The environmental assessment, or *E* section of the ABCDE assessment, includes assessing environmental, social, and safety factors that influence nutritional status. The common environmental factors assessed in WIC that impact women include smoking, abuse, and substance abuse. This covers WIC codes in the 900s.

Why Is This Important?

- Environmental stressors may impact a pregnant woman's condition

Environmental factors directly impact health and well-being. Referrals and follow ups are important opportunities to motivate and empower women with options to explore.

E- Pregnancy Assessment Considerations

- Environmental risks are **sensitive and personal** subjects
- The role of the WIC counselor is to offer the client a chance to voice a need and make an appropriate referral

Information gathered from the *E* assessment can sometimes include sensitive topics that are challenging to address. Women are best supported when WIC avoids associations with shame or blame, and makes women feel safe to share. Based on different women's motivations and interests, WIC may provide key connections to community resources and programs.

E- Pregnancy Assessment Concerns

Ask:

- "What concerns do you have about feeling safe in your relationship?"
- "What are your thoughts about smoking in your home?"
- "What concerns do you have about alcohol or drug use?"

Assess:

- Safety concerns
- Foster status
- Tobacco use in the home
- Alcohol and drug use
- Access to community services

Concern:

Homelessness (WIC Code 801)

Homeless individuals comprise a very vulnerable population with many special needs. Today's homeless population contains a sizeable number of women and children. WIC defines homelessness as a predisposing nutrition risk condition. Homelessness includes situations in which a woman, infant or child lacks a fixed, regular nighttime residence. Examples include residence in public or private shelters, temporary residence in the home of another individual and in any public or private place not designed for regular sleeping accommodation for human beings. Assess the woman's access to community services. Assess for access to sanitary water and refrigeration to determine food package tailoring needs.

Migrancy (WIC Code 802)

Data indicates that infant mortality, malnutrition, and parasitic disease among children are higher for migrants than among the general U.S. population. Migrancy may lead to inadequate nutritional patterns or nutritionally related medical conditions. Assess the woman's access to community services. Assess for access to sanitary water and refrigeration to determine food package tailoring needs.

Recipient of abuse (WIC Code 901)

Recipient of abuse is defined as an individual who has experienced physical, sexual, emotional, economic, or psychological maltreatment that may frighten, intimidate, terrorize, manipulate, hurt, humiliate, blame, injure, and/or wound the individual.

The CDC reports that intimate partner violence or abuse during pregnancy may be a more common problem than conditions for which pregnant women are routinely screened. Studies have shown associations between intimate partner violence and unintended pregnancy, delayed prenatal care, and behavioral risk factors such as smoking, alcohol, and drug abuse. Abuse during pregnancy is associated with poor nutrition and health behaviors as well as increased risks of low birth weight and preterm delivery. Abused women are more likely to experience low maternal weight gain and anemia, consume an unhealthy diet, and abuse drugs, alcohol, and cigarettes. Women may be reluctant to share this information; they would benefit from discretion in sharing community support and referral services. Assess the woman's safety and access to community services.

WIC staff can provide the following nutrition services to participants who experience abuse:

- Provide a safe and supportive environment for participants who may be experiencing or have experienced abuse.
- Encourage pregnant women to attend all prenatal appointments with their health care provider and explain the importance of early and adequate prenatal care.
- Offer tailored breastfeeding support catered to the participant's specific needs and concerns.
- Encourage parents to attend local parenting classes or parent training programs (33).
- Refer the participant to their family case manager, if available, and/or to services and resources in their community that provide support to victims of abuse.
- Refer participants to national resources such as:
 - [National Domestic Violence Hotline](#): 1-800-799-SAFE (7233). This hotline is staffed with trained counselors 24 hours a day and provides callers with crisis counselors, safety planning and assistance in finding resources, such as shelter. A secure, confidential online chat option is also available.
 - [Directory of Crime Victim Services](#): This website provides a directory of programs and organizations that can help victims of crime.
 - [Rape, Abuse and Incest National Network \(RAINN\)](#): 1-800-656-HOPE (4673). This national hotline provides counseling and assistance to victims of sexual violence and their families and friends from trained counselors who are available 24 hours a day.
 - [National Clearinghouse for the Defense of Battered Women \(NCDBW\)](#): 1-800-903-0111 ext. 3. This national organization provides technical assistance to abused women facing charges related to their abuse.
 - [Childhelp National Child Abuse Hotline](#): 1-800-4-A-CHILD (1-800-422-4453). This hotline offers information to parents seeking help for child abuse, individuals who suspect child abuse is occurring and those needing prevention tips. Professional counselors are available to provide support and referrals to emergency and social services. Their website also lists Child Protective Services in each state.

Woman or infant/child of primary caregiver with limited ability (WIC Code 902)

This may include women who are young moms (17 years of age or younger), women who are mentally or intellectually disabled or delayed and/or have a mental illness such as diagnosed depression, are physically disabled to a degree which restricts or limits food preparation abilities, or are currently using or have a history of abusing alcohol or other drugs. Assess support system for woman and access to community services.

Foster care (WIC Code 903)

Foster care teenagers have higher rates of chronic conditions such as asthma, diabetes, and seizure disorders. They are also more likely than teenagers in the general population to have birth defects, inadequate nutrition, and growth retardation, including short stature. This may be the result of abuse or neglect prior to entry into the foster care system and/or the history and frequency of moves between foster homes. For example, the foster caregiver accompanying a foster teen to a WIC clinic for a first-time pregnancy certification may have no knowledge of the teen's eating patterns, special dietary needs, chronic illnesses, or other factors. Without any anthropometric history, failure to grow—often a problem for foster teenagers—may not be diagnosed. The nutrition education, referrals, and service coordination provided by WIC can support the foster parent in developing the skills and knowledge to ensure that the foster teenager receives appropriate nutrition and healthcare for herself as well as for the pregnancy. A foster parent may have inadequate information about a new foster teen's health needs; therefore, through the ABCDE assessment, WIC can alert foster parents to the nutritional risks that many foster care teenagers have and suggest ways to improve the teen's nutritional status. Code 903 will be automatically assigned by HANDS (the Arizona WIC computer system) based on the information provided on the certification screen. Assess linkages to community services.

Exposure to environmental tobacco smoke (WIC Code 904)

WIC defines exposure to environmental tobacco smoke (ETS) as exposure to smoke from tobacco products inside enclosed areas, like the home, place of child care, etc. ETS is also known as secondhand, passive, or involuntary smoke. The ETS definition also includes the exposure to the aerosol from electronic nicotine delivery systems (such as vapes, vaporizers, vape pens, hookah pens, electronic cigarettes and e-pipes). Studies suggest that the health effects of ETS exposure at a young age could last into adulthood. This includes risk of cancer—specifically lung cancer—and cardiovascular diseases. There is strong evidence that ETS exposure to the fetus or infant results in permanent lung damage. Assess smoking inside the home and utilization of ASHLine cessation and referral services.

***E*- Education Related to Environmental**

Education specific to concerns identified during the *E*assessment may include:

- Provide local agency referral list
- Encouraging the caregiver to follow up on community support services
- Refer to social and community services

***E*- Referral Messages for Environmental Concerns**

- “May I give you this referral list of services available here in our community that may help you?” (Provide local agency referral list.)
- “Arizona 211 is a community information and referral service. Let’s explore some options together, and I will also show you how to find this information from home.”

Take-Home Messages for Pregnant Women

The following is a summary of key messages that may be shared with participants based upon the concerns they may share and the goals that they set for themselves.

- ❖ Make half your plate fruits and vegetables.
- ❖ Make at least half your grains whole.
- ❖ Drink skim or 1% milk.
- ❖ Vary your protein food choices.
- ❖ Use oils to replace solid fats where possible.
- ❖ Make choices that are low in empty calories. Empty calories are calories from added sugars and solid fats in foods. Some common foods with empty calories include soda and other sugar-sweetened beverages, candy, desserts, and fried foods.
- ❖ The total amount of weight gained during pregnancy depends on your weight when you become pregnant. If your weight was in the healthy range, you may gain between 25 and 35 pounds.
- ❖ Pregnant women should avoid cigarettes, alcohol, and drug use.
- ❖ Take a prenatal vitamin every day in addition to eating a healthy diet.
- ❖ Visit your doctor regularly.
- ❖ Healthy women should participate in regular physical activity as recommended by their healthcare providers.
- ❖ Feed your baby only breastmilk for the first six months.

References

1. Academy of Nutrition and Dietetics (AND) Nutrition Care Manual. <http://www.nutritioncaremanual.org/>
2. Academy of Nutrition and Dietetics (AND). Position of AND: Nutrition and Lifestyle for a Healthy Pregnancy. July 2014. *J Acad Nutr Diet*. 114: 1099–1103.
3. Academy of Nutrition and Dietetics (AND) Public Health/Community Nutrition. Nutrition Care Process Toolkit. 2012. www.eatright.org
4. American College of Obstetricians and Gynecologists (ACOG). 2013. Nutrition During Pregnancy. <http://www.acog.org/~media/For%20Patients/faq001.pdf?dmc=1&ts=20140806T2024500095>
5. Arizona WIC Program. *Arizona WIC Program Nutrition Risk Criteria: Definitions, Justifications, and Clarifications*. <https://azdhs.gov/documents/prevention/azwic/manuals/nutrition-risk-manual.pdf> .
6. Food and Drug Administration (FDA) and USDA Food Safety and Inspection Service (FSIS). Food Safety for Pregnant Women. 2011. <http://www.fda.gov/downloads/Food/FoodbornellnessContaminants/UCM312787.pdf>
7. Institute of Medicine (IOM). Weight Gain During Pregnancy Guidelines. 2009. <http://iom.edu/Reports/2009/Weight-Gain-During-Pregnancy-Reexamining-the-Guidelines.aspx>.
8. Mahan, L. Kathleen, Janice L. Raymond, and Sylvia Escott-Stump. *Krause's Food and the Nutrition Care Process*. 13th ed. 2012.
9. US Department of Health and Human Services. Physical Activity Guidelines for Americans. 2008. www.health.gov/paguidelines.
10. USDA Choose MyPlate. Health and Nutrition Information for Pregnant and Breastfeeding Women. <http://www.choosemyplate.gov/mypyramidmoms/>
11. USDA and HHS. Dietary Guidelines for Americans. 2010. <http://www.health.gov/dietaryguidelines/>

Arizona WIC Nutrition Care Guidelines: Breastfeeding and Postpartum Women

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Section Overview

The breastfeeding and postpartum period is a time of dramatic physical and emotional change for women, yet it is often an afterthought in nutrition and follow-up healthcare. Often, the time is focused on the new baby rather than on the mother's needs. Nutrition care for breastfeeding and postpartum women is optimized when centered on the woman's motivation and focused on small simple steps to maintain good health.

This section of the nutrition care guidelines is not intended to duplicate the in-depth training and resources that accompany the required week-long breastfeeding training for all Arizona WIC staff. Rather, it provides a broad overview of guidelines specific to nutrition care for the breastfeeding and postpartum woman. Refer to the *Breastfeeding Answers Made Simple* textbook for detailed information on breastfeeding concerns.

Anthropometric Assessment



Anthropometry is the measurement of the size, weight, and proportions of the human body. In the early postpartum period we also consider prepregnancy BMI and the amount of weight gained during pregnancy. After six months postpartum, we will consider current BMI rather than prepregnancy BMI in the *A* assessment. The anthropometric assessment covers WIC codes in the 100s.

Why Is This Important?

WIC can support breastfeeding and postpartum women in achieving their weight goals in a healthy way while also maintaining a realistic appreciation of differences in body size.

A - Assessment Considerations for Breastfeeding and Postpartum Women

- Postpartum women *may* retain some weight and fluids from pregnancy

During the first six months after delivery, a woman's current weight is not an accurate indicator of BMI. In WIC, we refer to the prepregnancy BMI as an indicator for WIC code assignment in the first six months after birth. Once a woman is more than six months postpartum, we use her current BMI as the basis for assigning WIC codes. This is because women will still be retaining extra body fluids produced during pregnancy, as well as extra fat during the first six months postpartum. If a woman gained an adequate amount of weight during pregnancy, her postpartum weight will likely be more than her prepregnancy weight. Studies indicate that the average postpartum weight retention (weight gained during pregnancy but not lost during the postpartum period) is approximately 2.2 pounds for each live birth.

- Breastfeeding *can* help women lose weight at a healthy rate

There are no current guidelines in place regarding the time frame in which a new mom is expected to return to her prepregnancy weight; however, in general, breastfeeding promotes an earlier return to prepregnancy weight. Healthy breastfeeding women can lose as much as one pound per week and still supply adequate milk to maintain their infant's growth. It takes nine months to put the weight on during pregnancy, so it may take that long to lose weight during the postpartum period. Healthy weight loss occurs at a rate of approximately one pound per week. It is recommended that women maintain physical activity and monitor food portions while avoiding extreme weight loss programs to promote healthy weight loss.

A - Breastfeeding and Postpartum Assessment Concerns

Ask:

- "At what weight do you feel best?"
- "How are you feeling about weight changes since your pregnancy ended?"

Assess:

- Accuracy of self-reported prepregnancy weight
- Postpartum weight compared to last visit
- Postpartum weight goals

Concern:

Prepregnancy BMI less than 18.5 if under six months postpartum, or current BMI less than 18.5 if six or more months postpartum (WIC Code 101)

A BMI of less than 18.5 for women may be influenced by genetics, illness, activity levels, postpartum depression, or poor nutrition. Prepregnancy weight, amount of weight gain during pregnancy, race, age, parity (number of pregnancies), and lactation all influence postpartum weight. By six months postpartum, body weight is more stable and may be close to the prepregnancy weight. Prepregnancy weight is a better indicator of weight status than postpartum weight in the first six months after delivery. Assess accuracy of prepregnancy BMI, the postpartum weight, and the woman's feelings about her postpartum body changes.

Prepregnancy BMI greater than or equal to 25 if under six months postpartum, or current BMI greater than or equal to 25 if six or more months postpartum (WIC Code 111)

Prepregnancy weight is a better indicator of weight status than postpartum weight in the first six months after delivery. By six months postpartum, body weight is more stable and may be close to the prepregnancy weight. Weight during the early postpartum period is very unstable. During the first four to six weeks, fluids shift and tissue changes cause fluctuations in weight. After six weeks, weight loss varies among women. Prepregnancy weight, amount of weight gain during pregnancy, race, age, parity (number of pregnancies), and lactation all influence postpartum weight. Assess the postpartum weight and the woman's feelings about her postpartum body changes.

Pregnancy weight gain above recommended range (WIC Code 133)

The amount of weight gained during pregnancy may affect postpartum weight. Pregnancy weight gain above the recommended range may increase the risk of future chronic disease. Assess the postpartum weight and the woman's feelings about her postpartum body changes.

Education for Breastfeeding and Postpartum Women

After a full assessment is completed (ABCDE), the counselor must review key points and concerns and identify WIC nutrition education topics to offer the client. WIC nutrition education is defined as tips, information, suggestions, and ideas that reflect health and need. The priorities must also reflect the woman's concerns, interest, and readiness for change.

Education for breastfeeding and postpartum women may emphasize the following:

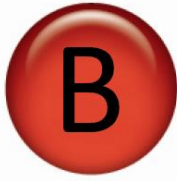
- MyPlate guidelines
- Breastfeeding support and guidance
- Health and well-being rather than just a focus on weight and weight loss/gain
- Physical activity recommendations (See Physical Activity for Breastfeeding and Postpartum Women)

A - Education Messages Related to Anthropometry

Education specific to concerns identified during the *A* assessment may include:

- "The postpartum period is a time of recovery."
- **(If weight is a concern):** "Becoming a new mom can be overwhelming. Take time to rest, and ensure you are getting enough to eat. WIC can help you set realistic goals for yourself so that you reach a weight that is right for you."

Biochemical Assessment



In WIC, the biochemical, or *B* in the ABCDE assessment, includes the assessment and gathering of information related to specific blood tests. WIC screens for whether participants are at risk of anemia by measuring hemoglobin blood levels. WIC also screens for high blood lead concentrations by asking women if they have had their blood lead concentrations tested by their healthcare provider, referring them back to their provider if they have not. The biochemical assessment includes WIC codes in the 200s.

Why Is This Important?

- Pregnant and postpartum women are at risk for iron-deficiency anemia

Iron deficiency is the most common cause of anemia. It may be caused by a diet low in iron, insufficient absorption of iron from the diet related to illness or a medical condition, or increased iron requirements due to postpartum recovery. The increase in maternal blood supply during pregnancy greatly increases the demand for iron as well as the likelihood of anemia beyond pregnancy into the postpartum period.

- WIC can make a difference when anemia is identified

The identification of anemia during the postpartum period by WIC is important in providing referrals to the woman's healthcare provider and also in providing early nutrition interventions. Discussing lead screening with women and referring them back to their healthcare providers for screening, as well as exposure and risk assessment, is another valuable resource that WIC provides.

***B* - Breastfeeding and Postpartum Assessment Considerations**

- It is important to screen for iron levels

Iron-deficiency anemia is a condition that reduces the blood's ability to carry oxygen. There are two kinds of nutritional iron. Heme iron is found in animal products (especially red meat) and is easily absorbed into the body. Non-heme iron is much less easily absorbed and is found in plant foods such as dried beans and peas, fortified breads and cereals, dark green leafy vegetables, and tofu. Foods with vitamin C, such as bell peppers, broccoli, spaghetti sauce, and citrus fruits and juices, help the body absorb iron and can be eaten with iron-rich foods to increase the amount of iron that is absorbed.

- Women may be at risk for lead poisoning for several reasons

Iron deficiency weakens the body's defense against lead absorption, while lead poisoning can cause iron deficiency. Women considered at risk for lead poisoning are those living in houses built before 1978 (the year that regulations began requiring that lead-containing paints could not be used in households) or in older homes (built before 1970) with lead-based pipes. Other women who may be at high risk are those who immigrate to the United States from a country that does not regulate the use of lead, those using imported bowls glazed with lead-based paint, or those using traditional folk remedies such as *greta* (powdered lead oxide) or *azarcon* (lead tetroxide).

B - Breastfeeding and Postpartum Assessment Concerns

Ask:

- "What has your doctor said about your iron and lead levels since your pregnancy ended?"
- "What have you heard about iron and lead testing?"

Assess:

- Accuracy of value, and repeat the test if needed
- Current use of prenatal vitamins or supplements containing iron
- Exposure to lead-based paint, pipes, pottery/bowls, or home remedies

Concern:

Low hemoglobin/low hematocrit (WIC Code 201.1  and 201.2)

Hemoglobin (Hgb) and hematocrit (Hct) are the most commonly used tests to screen for iron-deficiency anemia. Measurements of hemoglobin and hematocrit reflect the amount of functional iron in the body. While neither test is a direct measure of iron status and does not distinguish among different types of anemia, these tests are useful indicators of iron-deficiency anemia. Low hemoglobin or hematocrit in women, without adjusting for altitude, is a hemoglobin level of less than 11.0 g/deciliter (dL) or a hematocrit level of less than 33 percent. Assess for anemia and iron supplements.

High blood lead levels (WIC Code 211)

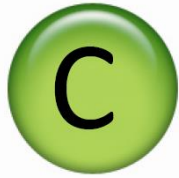
Elevated lead levels are anything equal to or greater than 3.5 µg/dL within the past 12 months for children. For infants and adults elevated lead levels are anything equal to or greater than 5 µg/dL within the past 12 months. Blood lead screenings for infants may not be routine for their healthcare providers. Screenings may not begin until age one. Assess for lead poisoning diagnosis, environmental exposure, or recent move from another country.

***B* - Education Messages Related to Biochemical (Bloodwork)**

Education specific to concerns identified during the *B* assessment may include:

- “Hemoglobin is related to the amount of iron in the body. The amount of iron you get from food affects your hemoglobin. Low iron can cause you to feel tired and affect your ability to care of your baby.”
- “It is helpful to continue to take your prenatal vitamins during the postpartum period. They contain iron and other important vitamins to help replenish body stores that you may have lost during pregnancy.”
- “It is important to meet your vitamin and mineral needs from foods, not just vitamins or supplements. You can get more iron in your diet by eating meat, fish, poultry, beans, and iron-fortified cereals and whole grains provided by WIC.”
- “Adding vitamin C-rich foods to high-iron foods can help increase the absorption of iron from foods.”
- “Homes built before 1978 may have lead-based paint. Other lead sources can be soil, toys (depending on where they were made), imported ceramics or old pottery, and imported herbal remedies.”

Clinical Assessment (Medical Conditions)



The clinical assessment, or *C* section of the ABCDE assessment in the nutrition care process, is the assessment of clinical or medical conditions that impact nutrition status. Women may report a medical condition that was a concern during pregnancy but was resolved after they had the baby. Medical documentation from a healthcare provider is generally not needed to be able to assign a WIC code. Understanding the impact on nutrition can be complicated.

The clinical assessment includes WIC codes in the 300s. The Arizona WIC Nutrition Care Guidelines provide only a general overview of *C* assessment guidelines and do not include comprehensive details of nutrition care guidelines specific to each individual condition. To find more detail about each condition, refer to the Nutrition Risk Manual.

Why Is This Important?

- Some medical conditions impact nutrition needs and diet

A basic understanding of medical conditions is important to be able to determine how the medical condition influences the woman's nutrition status and eating patterns.

C - Breastfeeding and Postpartum Assessment Considerations

- The role of the WIC counselor is to assess for nutrition needs and/or referrals

Questions and conversations that may come up as a result of gathering the *C* information in the assessment may be sensitive or challenging to navigate. This can include a broad range of conditions requiring healthcare and related services beyond basic, routine care. It is important to understand how the clinical or medical condition will affect nutritional needs and how to make appropriate referrals when necessary. The effects on nutritional needs or intake may include inadequate energy and nutrient intake to support health, medication-nutrient interactions, need for enteral (tube) feedings, chronic constipation or diarrhea, and use of alternative or complementary therapies or products. Clinical and medical codes designated as medium or high-risks require that a referral be offered for additional support by a state-approved Nutritionist or Dietitian (RD)..

C - Breastfeeding and Postpartum Assessment Concerns

Ask:

- “What has the doctor said about your health?”
- “What concerns do you have about your health?”
- “What has your dentist said about your oral/dental health?”

If a diagnosis is mentioned, further probing questions include the following:

- “What has your doctor told you about how your condition may affect you during the postpartum period?”
- “How does this condition affect the way you eat?”
- “What special instructions have you been given?”

Assess:

- The impact of the medical condition on the woman’s health
- Frequency of maternal care visits
- Coping strategies

Concern:

History of gestational diabetes (GDM) (WIC Code 303)

Women who have had a pregnancy complicated by GDM are 40 to 60 percent more likely to develop diabetes, usually type 2, within 15 to 20 years. This risk of subsequent diabetes is greatest in women with GDM who are diagnosed early in the pregnancy, exhibit the highest rates of hyperglycemia during the pregnancy, and are obese. Approximately 30 to 50 percent of the women with a history of GDM will develop GDM in a subsequent pregnancy. Assess the recommendations and directions provided by the healthcare provider, history of GDM and DM, and overall health.

History of preeclampsia (WIC Code 304)

Preeclampsia is defined as pregnancy-induced hypertension (less than 140mm Hg systolic or 90mm Hg diastolic blood pressure) with proteinuria developing usually after the twentieth week of gestation. Symptoms of preeclampsia may include edema (swelling) and renal (kidney) failure. Assess the recommendations and directions provided by the healthcare provider, frequency of postpartum visits, and overall health.

311 Hx Preterm or early Delivery (WIC Code 311)

History of preterm or early delivery is defined as the birth of an infant at \leq 39 weeks gestation. Preterm birth causes at least 75 percent of neonatal deaths not due to congenital malformations. In most cases of preterm labor, the cause is unknown. Early term infants will likely require a longer hospital stay and may have long-term healthcare needs, as a significant amount of development related to the lungs, brain, liver, and fat layers beneath the skin occur during the last few weeks of pregnancy. Factors that can increase the risk of a woman delivering an early term infant are the same as those for preterm birth. Assess any recommendations or directions provided by the healthcare provider, frequency of prenatal visits, and overall health.

History of low birth weight (WIC Code 312)

History of low birth weight is defined as the birth of an infant weighing \leq 5 lb. 8 oz. (\leq 2500 grams). The pregnant woman's weight gain is one of the most important associations with infant birth weight. Assess any recommendations or directions provided by the healthcare provider, social support system, and overall health.

History of fetal or neonatal loss (WIC Code 321)

Adverse outcomes related to history of fetal or neonatal loss (if it occurred in the most recent pregnancy, then risk is assigned) may include recurrent loss in future pregnancies, low birth weight (including preterm and small-for-gestational-age infants), premature rupture of membranes, neural tube defects, and major congenital malformations. Important vitamins, minerals, and nutrients to support healthy outcomes in pregnancy include energy or calories, protein, folate, zinc, and vitamin A. Assess the recommendations and directions provided by the healthcare provider, social support system, and overall health.

Pregnancy at a young age (WIC Code 331)

Pregnancy at a young age is defined as conception at equal to or less than 20 years of age. Pregnancy at a young age, before a woman's growth is complete, constitutes a nutritional risk because of the potential for competition for nutrients between the needs of the pregnancy and the woman's body. Assess any recommendations or directions provided by the healthcare provider, food and fluid intake, frequency of prenatal visits, and overall health.

Short interpregnancy interval (WIC Code 332)

A short interpregnancy interval is defined as conception before 16 months postpartum. Pregnancy requires an adjustment of the mother's body to a new state, which results in rapid depletion of maternal stores of certain nutrients. Mothers with closely spaced pregnancies may not have sufficient time to restore the nutritional deprivations of the previous pregnancy. Assess the recommendations and directions provided by the healthcare provider, social support system, and overall health.

Multifetal gestation (WIC Code 335)

Multifetal gestation includes more than one fetus in a recent pregnancy. Multifetal pregnancies may be associated with low birth weight, fetal growth restriction, placental and cord abnormalities, preeclampsia, anemia, short gestation period, and an increased risk of infant mortality. The risk of pregnancy complications is greater in women carrying twins and increases as the number of fetuses increases. Women with twins have greater requirements for all nutrients than women with only one infant. Assess the recommendations and directions provided by the healthcare provider, food and fluid intake (if breastfeeding), social support system, and overall health.

History of large for gestational age (LGA) (WIC Code 337)

This includes any history of giving birth to an infant weighing greater than or equal to nine pounds (4,000 grams), also known as macrosomia. Women with a history of LGA infants are at an increased risk of giving birth to a large-for-gestational-age infant in future pregnancies. Macrosomia may be an indicator of maternal diabetes (current or gestational) or a predictor of future diabetes. LGA infants may also be at risk for injury during birth. Assess the recommendations and directions provided by the healthcare provider, and assess overall postpartum health.

History of birth with a congenital defect (WIC Code 339)

This includes women who have given birth to an infant who has a congenital or birth defect, like cleft lip or palate, that is linked to inappropriate nutritional intake, including inadequate zinc, folic acid, or excess vitamin A. Assess the recommendations and directions provided by the healthcare provider, and assess overall postpartum health.

Nutrient deficiency or disease (WIC Code 341)

This is a diagnosis given by a healthcare provider that includes nutritional deficiencies or a disease caused by insufficient dietary intake of a specific nutrient. Diseases include, but are not limited to, protein-energy malnutrition, scurvy, rickets, beriberi, hypocalcemia, osteomalacia, vitamin K deficiency, pellagra, cheilosis, Menkes disease, and xerophthalmia. Persistent deficiency may lead to growth problems or malnutrition. Assess the recommendations and directions provided by the healthcare provider, food and fluid intake, and assess overall postpartum health.

Gastrointestinal disorders (WIC Code 342)

This is a diagnosis given by a healthcare provider that includes any gastrointestinal (GI) condition that interferes with the intake or absorption of nutrients. Disorders may include gastroesophageal reflux disease (GERD), stomach or intestinal ulcers, short bowel syndrome, inflammatory bowel disease (including colitis or Crohn's disease), pancreatitis, gall bladder disease, or malabsorption disorders. Assess the recommendations and directions provided by the healthcare provider, food and fluid intake, and assess overall postpartum health.

Diabetes mellitus (WIC Code 343)

This is a diagnosis given by a healthcare provider that includes a group of metabolic diseases resulting in hyperglycemia (elevated blood sugar), which occurs due to defects in insulin secretion, insulin action, or both. The two major classifications of diabetes are type 1 diabetes (insulin deficiency) and type 2 diabetes (insulin resistance). Diabetes is identified when a patient has a fasting plasma glucose of 126 mg/dL or greater. Hyperglycemia is defined as equal to or greater than 200 mg/dL. Assess the recommendations and directions provided by the healthcare provider, management of diabetes, and assess overall postpartum health.

Thyroid disorders (WIC Code 344)

This diagnosis given by a healthcare provider relates to abnormal secretions of thyroid hormones. Types of disorders may include hyperthyroidism, hypothyroidism, congenital (present from birth) hyperthyroidism, and congenital hypothyroidism. Thyroid hormones influence all organ systems in the body and regulate how the body gets energy from food. Assess the recommendations and directions provided by the healthcare provider, and assess overall postpartum health.

Hypertension and prehypertension (WIC Code 345)

Hypertension (commonly referred to as high blood pressure) is the most common medical complication of pregnancy and can continue beyond the end of the pregnancy. People with prehypertension are twice as likely to develop hypertension. Hypertension during pregnancy may lead to low birth weight, fetal growth restriction, and premature delivery. Hypertensive disorders are categorized as follows:

- **Chronic hypertension:** Hypertension that was present before pregnancy. Women with chronic hypertension are at risk for complications of pregnancy such as preeclampsia.
- **Preeclampsia:** A pregnancy-specific syndrome observed after the twentieth week of pregnancy with elevated blood pressure accompanied by significant proteinuria. See WIC Code 304.
- **Eclampsia:** The occurrence of seizures in a woman with preeclampsia that cannot be attributed to other causes.
- **Preeclampsia superimposed upon chronic hypertension:** Preeclampsia occurring in a woman with chronic hypertension.
- **Gestational hypertension:** Blood pressure elevation detected for the first time after mid-pregnancy without proteinuria.

Assess the recommendations and directions provided by the healthcare provider, food and fluid intake, impact of the condition during the postpartum period, and overall postpartum health.

Renal disease (WIC Code 346)

Renal means, “of or relating to the kidney.” This is a diagnosis given by a healthcare provider that may include pyelonephritis and persistent proteinuria, but excludes urinary tract infections (UTI) involving the bladder. Assess the recommendations and directions provided by the healthcare provider, food and fluid intake, and assess overall postpartum health.

Cancer (WIC Code 347)

This is a diagnosis given by a healthcare provider that may include any type of cancer. Cancer is a disease caused by the uncontrolled division of abnormal cells in a part of the body. The type of cancer and stage of disease progression determines the type of medical treatment and, if indicated, nutrition management. Assess the recommendations and directions provided by the healthcare provider, effect on food and fluid intake, frequency of healthcare visits, and overall postpartum health.

Central nervous system disorders (WIC Code 348)

The central nervous system (CNS) comprises the brain and spinal cord and is a network of nerve tissues that controls the activities of the body. CNS disorders are diagnoses given by a healthcare provider that may affect the number of calories an individual needs, her ability to feed, oral dysfunction, and growth. A common CNS disorder is having seizures, or epilepsy. Assess the recommendations and directions provided by the healthcare provider, effect on food and fluid intake, and assess overall postpartum health.

Genetic and congenital disorders (WIC Code 349)

This diagnosis, given by a healthcare provider, may include hereditary or congenital conditions at birth that cause physical or metabolic abnormalities. These conditions may include, but are not limited to, cleft lip or palate, Down syndrome, thalassemia major, sickle cell anemia (not sickle cell trait), and muscular dystrophy. Assess the recommendations and directions provided by the healthcare provider, and assess overall postpartum health.

Inborn errors of metabolism (IEM) (WIC Code 351)

This is a diagnosis given by a healthcare provider that generally refers to gene mutations or gene deletions that alter metabolism in the body. The inheritance of most metabolic disorders is rare. IEM disorders may manifest at any stage of life, from infancy to adulthood. In most cases, when nutritional interventions are screened, identified, and initiated early and continued for a lifetime, the person may have normal growth. Several medical foods or formulas designed for the specific treatment of the identified disorder can be made available through the participant's health insurance plan, through the AHCCCS plan, or by prescription through WIC. Assess the recommendations and directions provided by the healthcare provider, food and fluid intake, and assess overall postpartum health.

Infectious diseases - Acute (WIC Code 352.1)

This is a diagnosis given by a healthcare provider within the last six months. It includes diseases caused by growth of disease-causing microorganisms in the body that are severe enough to affect nutritional status. Acute infectious diseases such as hepatitis A, hepatitis E, pneumonia, RSV and others typically increase the nutrient needs of the body. Assess the recommendations and directions provided by the healthcare provider, food and fluid intake, and assess overall postpartum health.

Infectious diseases - Chronic (WIC Code 352.2)

Chronic infectious diseases require long-term management and are likely to last a lifetime. Examples of chronic infectious diseases include HIV, AIDS, hepatitis B, hepatitis C, and hepatitis D. Assess the recommendations and directions provided by the healthcare provider, food and fluid intake, and assess overall postpartum health.

Food allergies (WIC Code 353)

Food allergy reactions occur when the body's immune system responds to a harmless food as if it were a threat. The foods that most often cause allergic reactions are called allergens and include cow's milk (and foods made from cow's milk), eggs, peanuts, tree nuts (walnuts, almonds, cashews, hazelnuts, pecans, Brazil nuts), fish, shellfish (e.g., shrimp, crayfish, lobster, and crab), wheat, and soy. Assess for specific food allergens, severity of reaction, management of allergy, recommendations and directions provided by the healthcare provider, and overall postpartum health.

Celiac disease (WIC Code 354)

Celiac disease (CD) is a diagnosis given by a healthcare provider that refers to an autoimmune disease in which eating gluten (a protein in wheat, rye, and barley) results in damage to the small intestine and malabsorption of the nutrients from food. Celiac disease can result in a wide range and severity of symptoms. Symptoms may include chronic diarrhea, vomiting, constipation, pale foul-smelling fatty stools, and weight loss. The vitamin and mineral deficiencies that can occur from continued exposure to gluten may result in conditions such as anemia, osteoporosis, and neurological disorders such as ataxia, seizures, and neuropathy. Treatment includes strict management in following a gluten-free diet. Assess the recommendations and directions provided by the healthcare provider, food and fluid intake, and assess overall postpartum health.

Lactose intolerance (WIC Code 355)

Lactose is a sugar present in milk. Lactose intolerance is the inability to digest this sugar because the body does not produce sufficient amounts of the enzyme lactase. Symptoms include diarrhea, abdominal pain, flatulence, and/or bloating after lactose ingestion. Assess the recommendations and directions provided by the healthcare provider, food and fluid intake, and assess overall postpartum health.

Hypoglycemia (WIC Code 356)

Hypoglycemia is blood glucose below 54 mg/dL. It can occur as a complication of diabetes, as a condition in itself, in association with other disorders, or under certain conditions such as prolonged fasting or long periods of strenuous exercise. Assess the recommendations and directions provided by the healthcare provider, food and fluid intake, and assess overall postpartum health.

Eating disorders (WIC Code 358)

Eating disorders (such as anorexia nervosa and bulimia) may include a distorted sense of body image and morbid fear of becoming fat. Symptoms may include abnormal eating patterns including, but not limited to, self-induced vomiting, purging, and periods of starvation, use of drugs such as laxatives (in excess of normal use), appetite suppressants, thyroid preparations or diuretics, and self-induced marked weight loss. Anorexia nervosa and bulimia are serious eating disorders that affect women in their childbearing years. Unlike bulimia, binge-eating disorder is not associated with purging or excessive exercise. People with binge-eating disorder often are overweight or obese and at greater risk for miscarriage, cesarean delivery, gestational diabetes, gestational hypertension, heart attack, stroke and postpartum depression.

These disorders result in general malnutrition and may cause life-threatening fluid and electrolyte imbalances. Women with eating disorders may begin pregnancy in a poor nutritional state. They are at risk of developing chemical and nutritional imbalances, deficiencies, or weight gain abnormalities during pregnancy if disordered eating behaviors are not resolved. These eating disorders may complicate any pregnancy because the nutritional status of pregnant women is an important factor in perinatal outcomes. Assess feelings about changing body in pregnancy, overall mental and physical health, and support system. Be mindful of how any assessment questions relating to pregnancy weight gain may impact struggles in managing disordered eating.

For individuals affected by an eating disorder, staff can:

- If available, refer the participant to a health care provider (HCP) with expertise in eating disorders. The participant can work with the provider to create a plan for healthy eating and weight gain.
- Reinforce nutrition counseling/advice that is provided by the eating disorder treatment team/plan.
- Encourage the participant to be honest with their HCP and WIC staff regarding past or present struggles with an eating disorder or disordered eating.
- Encourage the participant to seek or refer the participant to individual counseling and/or support groups during and after pregnancy to help them cope with their concerns and fears regarding food, weight gain, body image, and the new role of parenting.
- Encourage the participant to attend other classes on pregnancy, childbirth, child development, and parenting skills.
- Educate participants that it is important for their prenatal HCP to weigh them as this information is essential to tracking the health of baby.
- When possible, the CPA should coordinate with the participant's HCP to obtain referral data such as height, weight gain, etc. Additionally, encourage the participant to discuss with their HCP about blind weighing (36). If necessary, they can ask their doctor about standing on the scale backwards and instruct them not to share the number with them.
- Encourage the participant to talk to their HCP before attending a prenatal exercise class to make sure it fits with their recovery plan.
- Modify conversation with the participant to avoid topics that are likely to provoke eating disordered behaviors (e.g., topics related to body weight, body shape, and calories).

Recent surgery, trauma, burns (WIC Code 359)

These include major surgeries (including C-sections), trauma, or burns severe enough to compromise nutritional status that have occurred within the past two months or more than two months ago that require continued need for nutritional support. The body's response to recent major surgery, trauma, or burns may affect the nutrient requirements needed for recovery and lead to malnutrition. There is a catabolic response to surgery; severe trauma or burns cause a hypermetabolic state. Injury causes alterations in glucose, protein, and fat metabolism. Assess the recommendations and directions provided by the healthcare provider, effect on food and fluid intake, and assess overall postpartum health.

Other medical conditions (WIC Code 360)

This includes diseases or conditions with nutritional implications that are not included in any of the other medical conditions. The current condition, or treatment for the condition, must be severe enough to affect nutritional status. This includes, but is not limited to:

- Juvenile Idiopathic Arthritis (JIA)
- Systemic Lupus Erythematosus (SLA)
- Polycystic Ovarian Syndrome (PCOS)
- Cardiovascular Diseases
- Asthma
- Cystic Fibrosis (CF)

Assess for how the medical condition impacts the infant's nutritional status, overall health, and how the medical condition is being managed.

Mental Illnesses (WIC Code 361)

Mental illnesses where the current condition, or treatment for the condition may affect nutrition status include, but are not limited to:

- Depression
- Anxiety Disorders
- Post-Traumatic Stress Disorder (PTSD)
- Obsessive-Compulsive Disorder (OCD)
- Personality Disorders
- Bipolar Disorders
- Schizophrenia
- Attention-Deficit/Hyperactivity Disorder (ADHD)

Depression

Depression has a variety of symptoms, the most common are feelings of sadness or a marked loss of interest in pleasure or activities. Other symptoms include appetite changes resulting in unintended weight loss or gain, insomnia or oversleeping, loss of energy or increased fatigue, restlessness or irritability, feelings of worthlessness or inappropriate guilt and difficulty thinking, concentrating, or making decisions.

Prenatal Depression

The most common symptoms of prenatal depression include feelings of sadness, anxiety, and fatigue. Women who experience depression during pregnancy are found to be at an increased risk of not following their prenatal medical plan, inadequate or excessive gestational weight gain, smoking, and substance use. Studies suggest that pregnant women with untreated symptoms of depression have increased rates of birth complications, preeclampsia, preterm delivery, low birth weight and impaired social, cognitive, and emotional development in the baby.

Depression in Pregnant Adolescents

Adolescent pregnancy is considered a significant risk for depression. Women who gave birth before their 20th birthday showed higher levels of depressive and anxiety symptoms. The symptoms of depression in adolescence are different than those presented in adulthood. While they share a depressed mood, adolescents more frequently show changes in appetite or weight and insomnia, rather than a loss of interests and poor concentration. Depression in adolescent pregnancy has a high frequency of suicidal attempts, reaching up to 20%. Teens who are female, have a family history of depression, a history of trauma, family conflict, a chronic medical disease, or who are LGBTQ are at greater risk for developing adolescent depression. Depression in adolescents can occur with other mental illnesses including anxiety.

Postpartum Depression

Postpartum depression (PPD) is a form of depression that occurs within 4 to 6 weeks after childbirth and is one of the most common complications that occurs after pregnancy. PPD is associated with many adverse outcomes for both mother and offspring including, maternal mortality and morbidity, increased risk for infanticide, poorer maternal-infant attachment, early discontinuation of breastfeeding, and impaired parenting behaviors. The risk factors associated with PPD include genetics, history of a mental illness and adverse life events including physical, psychological, or sexual abuse. Discrimination and immigration are often overlooked adverse life events associated with PPD.

PPD is different from the “baby blues” which is used to describe mild mood changes, feelings of worry, unhappiness, and exhaustion in the first 2 weeks after having a baby. The “baby blues” is a common reaction following delivery that affects 70-80% of new mothers. The “baby blues” typically peak four to five days after delivery and may last hours to days and usually resolve within 2 weeks.

Breastfeeding and Depression

Women with PPD are less likely to breastfeed, as PPD is considered a risk factor for breastfeeding self-efficacy. Women with low self-efficacy are 3 times more likely to stop breastfeeding early. Studies show the presence of depressive symptoms in the postpartum period decrease maternal confidence in breastfeeding and increase the risk of discontinuing exclusive breastfeeding. Women with PPD also have fewer positive interactions with their infants and a poorer perception regarding their baby's behavior. Additionally, PPD can negatively affect milk supply due to elevated levels of cortisol in the mother's system. Difficulties with breastfeeding can cause the mother to feel overwhelmed and increase the risk of depression. If a mother with early signs of PPD stops breastfeeding, depression can become more severe due to the abrupt drop in oxytocin levels. Successful breastfeeding may have a protective effect on maternal mental health because the breastfeeding relationship can decrease feelings of loneliness and emptiness that are common in PPD. Higher levels of oxytocin released during breastfeeding can cause the mother to feel calmer and more relaxed.

Anxiety Disorders

Anxiety disorders are the most common mental illness in adults in the U.S.. They include the following types: generalized anxiety disorder, panic disorder, and various phobia-related disorders. In anxiety disorders, worry and fear interfere with daily life and are much more severe than occasional anxiety. All anxiety disorders share an increase in emotional, physical, and neurological symptoms precipitated by a specific situation or circumstance.

During pregnancy, anxiety may have adverse effects on both the mother and baby, including impaired fetal development, complications of labor, and altered mental development of the newborn. Therefore, it may be necessary to consider medication for anxiety that worsens during pregnancy. Anxiety disorders are usually treated with psychotherapy and medications.

Post-Traumatic Stress Disorder (PTSD)

PTSD is a psychiatric disorder that may occur in people who have experienced or witnessed a traumatic, shocking, scary, or dangerous event. People with PTSD have intense or disturbing thoughts and feelings related to their trauma that lasts after the traumatic event has ended. They may avoid situations or people that remind them of the event, and they may have strong negative reactions to something like a loud noise or an unexpected touch. Symptoms of PTSD usually begin within 3 months of the traumatic incident, but sometimes begin years after. To be considered PTSD, the symptoms must last more than a month and be severe enough to interfere with relationships or work.

Obsessive-Compulsive Disorder (OCD)

OCD is a chronic and long-lasting disorder in which a person has uncontrollable, reoccurring thoughts (obsessions) and/or behaviors (compulsions) that they feel the urge to repeat over and over. The compulsions, such as hand washing, checking on things or cleaning, can interfere with a person's daily life. People with OCD have difficulty stopping the obsessive thoughts or the compulsive actions even though they are very distressing and recognize their thoughts and behaviors are excessive.

Personality Disorders

Personality disorders, including obsessive-compulsive personality disorder (different from OCD), narcissistic personality disorder, antisocial personality disorder, and borderline personality disorder, are an “enduring pattern of inner experience and behavior that deviates markedly from the expectations of the individual’s culture”. Behaviors are pervasive and inflexible, often resulting in distress and impairment. The person’s way of thinking, feeling, and behaving is different from the expectations of society and causes problems functioning. Personality disorders are not usually diagnosed until a person is over the age of 18 because prior to that age a person’s personality is still developing.

Bipolar Disorders

Bipolar disorder (formerly known as manic depressive disorder or manic depression) is a mental illness that causes changes in a person’s mood that affects their daily life. These mood shifts are known as manic (elevated or agitated) or depressive (sad and hopeless). During depressive episodes, approximately 25-50% of those with bipolar disorder attempt suicide. Sometimes people may have a mixed episode, feeling both manic and depressive symptoms at the same time. The symptoms of a mood can last from days to weeks and vary in intensity. People with bipolar disorders are more likely to have other mental illnesses like anxiety, eating disorders, substance use issues or chronic medical conditions such as diabetes, obesity, or heart disease.

Schizophrenia

Schizophrenia is a serious mental illness that can be severely disabling if not treated. It is characterized by delusions, hallucinations, disorganized speech and behavior, and other symptoms that cause social or occupational dysfunction. For a diagnosis, symptoms must have been present for six months and have been active for at least one month. Symptoms appear in males in their late teens or early twenties and in females in their twenties or thirties.

People with schizophrenia also have higher mortality rates due to higher rates of heart disease, liver disease, and diabetes. These diseases appear to be more related to fat metabolism than dietary fat intake as schizophrenia appears to be associated with altered metabolism. Studies of patients with schizophrenia have shown them to have three times the amount of visceral fat when compared to those with equal total body fat. They also have reduced energy needs which may be related to antipsychotic medications frequently used in the treatment of schizophrenia. Antipsychotic medications are associated with increased appetite and weight, with some patients gaining as much as 25-60 pounds over the first few years after starting medication.

People with schizophrenia are at increased risk for substance use disorders. Their lifetime risk of having a serious drug or alcohol problem is 47% compared to 16% for the general population (46). High rates of substance use are associated with poor medical compliance, clinical decline, violence, and suicide. Some researchers think that the genetic risk for schizophrenia also increases the likelihood of substance use and an increased use of substances in adolescence may both increase the risk for developing a later substance use disorder and serve as an additional risk factor for the appearance of psychotic symptoms.

Women with schizophrenia are more likely to have increased rates of stillbirths and neonatal deaths. This may be due to the illness, other medical conditions, lifestyle factors, or social issues. Pregnant women with schizophrenia who take antipsychotics are more likely to be obese, smoke, use alcohol, drugs, other medications, and have pre-existing diabetes and hypertension. Antipsychotics may increase the risk of gestational diabetes mellitus (GDM), obesity, and gestational hypertension. These conditions can lead to adverse maternal and neonatal outcomes such as fetal growth abnormalities, preterm birth, and congenital malformations. Since most antipsychotics are sedating for adults, it is recommended that breastfed infants are monitored for sedation as some cases in infants have been reported.

Attention-Deficit/Hyperactivity Disorder (ADHD)

Attention-deficit/hyperactivity disorder (ADHD) is a persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development. Inattention includes behaviors such as wandering off task, difficulty keeping focus, and disorganization. Hyperactivity includes moving constantly, excessively fidgeting, tapping, or talking. Impulsivity includes hasty acts that occur without thought and may have a high potential for harm.

Many parents first observe excessive motor activity when the child is a toddler, but the symptoms are difficult to distinguish from highly variable normative behaviors before age four. ADHD is most often identified during elementary school years when the inattention becomes more prominent and impairing. In most individuals with ADHD, symptoms of motoric hyperactivity become less obvious in adolescence and adulthood, but difficulties with restlessness, inattention, poor planning, and impulsivity persist.

Developmental delays, or sensory or motor delays interfering with the ability to eat (WIC Code 362)

A developmental disability is defined as a severe chronic disability that is attributable to a mental or physical impairment or combination of mental and physical impairments. This includes developmental, sensory, or motor disabilities that restrict the ability to intake, chew, or swallow food or that require tube feeding to meet nutritional needs. Developmental disabilities affect individuals of all ages and are not a disease state. They are conditions caused by abnormalities, birth defects, and metabolic and chromosomal disorders. No single nutrition intervention therapy will work for all individuals. Many multidisciplinary teams use a range of treatments; nutrition interventions may not be a family's first priority in overall care, so it is important to appropriately recognize and respond to the family's cues. Assess the recommendations and directions provided by the healthcare provider, effect on food and fluid intake, and assess overall postpartum health.

Prediabetes (WIC Code 363)

This is a diagnosis given by a healthcare provider. Impaired fasting glucose (IFG) and/or impaired glucose tolerance (IGT) are referred to as prediabetes. These conditions are characterized by hyperglycemia that does not meet the definition for diabetes mellitus. Someone that has prediabetes is at high risk for developing type 2 diabetes and cardiovascular disease. A fasting plasma glucose greater than 100-125 mg/dL is referred to as IFG and 140-199 mg/dL is IGT. Assess the recommendations and directions provided by the healthcare provider, management of prediabetes, and assess overall postpartum health.

Nicotine and Tobacco Use (WIC Code 371)

This includes any use of products that contain nicotine and/or tobacco to include but not limited to:

- Cigarettes, pipes, cigars, hookahs, and smokeless tobacco (e.g. chewing tobacco, snuff, dissolvables)
- Electronic nicotine delivery systems (e.g. e-cigarettes, vaping devices)
- Nicotine replacement therapies (e.g. gums, patches).

Smoking and exposure to nicotine products causes health problems and other adverse consequences for the mother and the newborn infant, such as infant death and risk for Sudden Infant Death Syndrome (SIDS). Women who smoke are at risk for chronic and degenerative diseases such as cancer, cardiovascular disease, and chronic obstructive pulmonary disease (COPD). They are also at risk for loss of bone density. In addition, maternal smoking exposes infants and children to environmental tobacco smoke. Because smoking increases oxidative stress and metabolic turnover of vitamin C, the requirement for this vitamin is higher for women who smoke. Nicotine can be found in breastmilk, therefore, the use of nicotine products may directly impact breastfed infants. Assess smoking cessation efforts, recommendations, and directions provided by the healthcare provider, and assess overall postpartum health.

Alcohol and substance use (WIC Code 372)

For breastfeeding and postpartum women, this includes routine current alcohol use of eight or more drinks per week or four or more drinks per day, binge drinking (four or more drinks within two hours), any marijuana use in any form, abuse of prescription medications, and/or any illegal drug use. Drinking alcoholic beverages during breastfeeding can affect the baby, and the extent relates to the amount the mother ingests. It also affects decision-making capabilities for the care of the infant, putting the infant's health and safety at risk. Assess for frequency of alcohol consumption and/or illegal drug use, access to and use of social support services, the recommendations and directions provided by the healthcare provider, food and fluid intake, and overall postpartum health.

Oral health conditions (WIC Code 381)

Periodontal disease may increase the woman's risk of atherosclerosis, rheumatoid arthritis, and diabetes. These oral health problems are highly prevalent in women of childbearing age, particularly among low-income women and members of racial and ethnic minority groups. Socioeconomic factors, lack of resources to pay for care, barriers to accessing care, lack of public understanding of the importance of oral health, and lack of effective self-care practices all represent reasons that women may experience dental problems. Assess the frequency of oral care at home, access to dental care, effect on food and fluid intake, and overall health.

Fetal alcohol spectrum disorders (FASD) (WIC Code 382)

Fetal alcohol spectrum disorders (FASDs) are a group of conditions that can occur in a person whose mother consumed alcohol during pregnancy. FASDs is an overarching phrase that encompasses a range of possible diagnoses, including fetal alcohol syndrome (FAS), partial fetal alcohol syndrome (pFAS), alcohol-related birth defects (ARBD), alcohol-related neurodevelopmental disorder (ARND), and neurobehavioral disorder associated with prenatal alcohol exposure (ND-PAE) (2). Presence of condition diagnosed, documented, or reported by a physician or someone working under a physician's orders, or as self-reported by applicant/participant/caregiver.

C - Education Messages Related to Clinical (Medical Conditions)

Education specific to concerns identified during the *C* assessment may include:

- "How do you feel about talking to your doctor about your condition?"
- "What are your concerns about your nutrition that WIC can help you with?"
- "What referrals can WIC help you with to make sure you are getting all of the support you need?"

Dietary Assessment



The dietary assessment, or *D* section of the ABCDE assessment in the nutrition care process, is the assessment of dietary, or food-specific, information. The dietary assessment includes WIC codes in the 400s as well as the breastfeeding-related codes in the 600s.

Why Is This Important?

- Diet plays an important role in postpartum recovery and healthy future pregnancies

A healthy diet is important during the postpartum period to replenish the nutrient stores depleted during pregnancy. A mother's nutritional status after pregnancy can also influence the outcome of future pregnancies. The supplemental foods provided through WIC can help support a healthy postpartum recovery.

D- Breastfeeding and Postpartum Assessment Considerations

- A healthy, varied diet will support breastfeeding and postpartum women's needs
- Postpartum women don't need to add extra calories to support breastfeeding if they are trying to lose weight

Many of the same nutrition factors from pregnancy will apply to the breastfeeding and postpartum woman. The same basic nutrition guidelines apply to breastfeeding mothers as apply to non-breastfeeding women and the rest of the family. "Diet rules" have been cited as a barrier to breastfeeding, as women may see diet rules as being too hard to follow or too restrictive. However, breastfeeding women do not need to follow a perfect diet to provide good-quality milk for their babies. Energy needs during lactation are slightly higher than for the postpartum woman who is not breastfeeding. On average, women burn 300-500 calories per day due to breastfeeding. Women who are trying to lose weight in the postpartum period don't need to consume extra calories just because they are breastfeeding. There is no need for an average-weight breastfeeding woman to keep track of calories. Breastfeeding and postpartum women may be encouraged to eat to hunger and use their appetite as their guides, choosing foods from all food groups according to My Plate guidelines. New moms often tend to focus on the care and nourishment of their newborn, putting their own eating habits second to that of the infant. As the woman selects nutrition goals that are right for her, offer simple and easy recommendations to support her in reaching her goal. It is also helpful to identify sources of support in the family unit that may assist in the preparation of meals.

Foods to Eat or Avoid

In general, there are no specific foods that breastfeeding and postpartum women should eat or avoid. A breastfeeding woman can eat any nutritious foods she chooses. If she suspects that a particular food is causing her infant discomfort, she can work with a registered dietitian (RD) and her healthcare provider to explore options for dietary changes. During the first year, only 5 percent of breastfed babies react to a food their mothers consume. Cow's milk is the food babies most commonly react to.

Caffeine

As with pregnancy, caffeine consumption for breastfeeding and postpartum women should be moderate. This would be the equivalent of one to two cups of coffee per day.

Alcohol

While alcohol consumption is discouraged for all postpartum women, specific recommendations on alcohol and breastfeeding vary. In general, an occasional alcoholic drink around celebratory occasions or gatherings is considered compatible with breastfeeding. *Medications and Mother's Milk* states that "significant amounts of alcohol are secreted into breast milk, although it is not considered harmful to the infant if the amount and duration are limited." Alcohol clears a mother's bloodstream quickly, so she can usually minimize her baby's exposure by drinking right after breastfeeding. A postpartum woman with a drinking problem is unlikely to volunteer this information. If alcohol abuse is suspected, contact her healthcare provider and refer her to a substance abuse counselor.

Vegetarian and Vegan Diets

Vegetarian diets may vary widely, but vegetarian-style eating patterns have been associated with improved health outcomes and are recognized as a healthy dietary choice. Vegans do not consume any animal products, while lacto-ovo vegetarians consume milk and eggs. Some individuals eat diets that are primarily vegetarian but may include small amounts of meat, poultry, or seafood. It is important to ask a vegetarian mother what specific foods she avoids. Mothers following vegan diets need vitamin B12 and iron supplements to prevent deficiency because the primary source of vitamin B12 is animal protein, and iron is not as readily absorbed from plant-based sources as from animal sources.

D - Breastfeeding and Postpartum Assessment

The WIC Program plays a key role in the prevention of nutrition-related health problems and the promotion of lifelong healthy eating habits. Education specific to the needs and interests of the participant may be offered after the completion of the full ABCDE assessment.

Ask:

- “What has the doctor told you about the need for vitamins or supplements after pregnancy?”
- **(If breastfeeding):** “How do you feel breastfeeding is going?”
- “What concerns do you have about your diet or nutrition now that the baby has been born?”
- “What has your doctor told you about resuming regular physical activity or exercise?”

Assess:

- Continued prenatal vitamin or multivitamin use
- The types of foods and beverages consumed
- How foods are being prepared
- Food preferences
- Food allergies (See C Section WIC Code 353)
- Food intolerances (See C Section WIC Code 353)
- Cultural and/or religious eating practices
- Food access and availability
- Activity levels

Concern:

Failure to Meet Dietary Guidelines for Americans (WIC Code 401)

WIC applicants who meet the income, categorical, and residency eligibility requirements for WIC may be presumed to be at nutrition risk for *Failure to meet Dietary Guidelines for Americans*. This risk is assigned when no other risk is identified through the assessment. Explore any interests or concerns that the caregiver may have.

Consuming dietary supplements with potentially harmful consequences (WIC Code 427.1)

Women taking inappropriate or excessive amounts of dietary supplements, such as single or multivitamins or minerals, or botanical (including herbal) remedies or teas such as sage or mint, are at risk for adverse effects like harmful nutrient interactions. Most nutrient toxicities occur through excessive supplementation of particular nutrients, such as vitamins A, B6, niacin, iron, and selenium. Besides nutrient toxicities, nutrient-nutrient and drug-nutrient interactions may adversely affect health. Many herbal and botanical remedies have cultural implications and are related to beliefs about postpartum health and/or breastfeeding. Assess supplement use, type, and frequency as well as dietary intake.

Consuming a diet very low in calories and/or essential nutrients (WIC Code 427.2)

Women consuming highly restrictive diets are at risk for primary nutrient deficiencies, especially during critical recovery periods, such as in postpartum recovery. Strict vegan diets may be highly restrictive and result in nutrient deficiencies. Nutrients of potential concern that may require supplementation are iron, riboflavin, zinc, vitamin B12, vitamin D, calcium, and selenium. Assess reasons for restrictive diet, excluded foods, and cultural or religious eating practices.

Compulsively ingesting non-food items (pica) (WIC Code 427.3)

Pica, or eating non-food items, may lead to lead poisoning and exposure to other toxins, anemia, displacement of nutrients, gastric and small bowel obstruction, and infection. It may also contribute to nutrient deficiencies by either inhibiting absorption or displacing nutrient-dense foods in the diet. Assess types of non-food eaten, frequency of eating non-food items, and attempts to address the concern that have or have not worked.

Inadequate vitamin/mineral supplementation recognized as essential by national public health policy (WIC Code 427.4)

The Recommended Dietary Allowance (RDA) of iron for postpartum women is 15 to 18 mg per day, depending on age, and 9 to 10 mg per day for lactating women, depending on age. Iron supplementation may be recommended by the woman's healthcare provider during the postpartum period to replenish iron stores lost during pregnancy. It is also recommended that all women of childbearing age consume 400 µg of folic acid per day. Assess use of prenatal or multivitamin and dietary patterns.

Other Concerns for Breastfeeding and Postpartum Women

Breastfeeding Complications (WIC Code 602)

This includes the following breastfeeding complications: engorgement, plugged ducts, mastitis, and flat or inverted nipples. Severe breast engorgement may be caused by infrequent nursing and/or ineffective removal of milk. This severe breast congestion causes the nipple-areola area to become flattened and tense, making it difficult for the baby to latch on correctly. This can cause sore, damaged nipples and poor milk transfer during feeding attempts. This may also affect milk supply. When the infant is unable to latch on or nurse effectively, alternative methods of milk expression are necessary. A clogged duct is a temporary backup of milk that occurs when one or more of the lobes of the breast do not drain well. This may result from incomplete emptying of milk. Mastitis is a breast infection that causes a flu-like illness accompanied by an inflamed, painful area of the breast—putting both the health of the mother and successful breastfeeding at risk. Infants may have difficulty latching on correctly to nurse when nipples are flat or inverted. Severe nipple pain, discomfort lasting throughout feedings, or pain persisting beyond one week postpartum is atypical and suggests the baby is not positioned correctly at the breast. There are several other causes of severe or persistent nipple pain, including Candida, or staph infection. Referrals for lactation counseling and/or examination by the woman's healthcare provider are indicated. Refer to *Breastfeeding Answers Made Simple* for detailed care and education. Assess breastfeeding status, concerns, frequency, and support systems.

Physical Activity for Breastfeeding and Postpartum Women

Encourage breastfeeding and postpartum women to resume exercise a few weeks after delivery when lactation is well established and with healthcare provider approval. The same basic physical activity recommendations apply for breastfeeding and postpartum women as they would for all other healthy adult females. Most importantly, exercise has emotional benefits that are valuable for all women in the postpartum period, breastfeeding or otherwise, with many new mothers reporting exercise to be a great stress reliever. Lack of time can make it difficult to fit physical activity into daily routines. Encourage a new mom to find opportunities to exercise with her baby, such as taking the baby out for a walk. Exercise during the postpartum period may start gradually, working up to 30 minutes per day. This may be broken up into shorter periods, such as three ten-minute exercise breaks.

D- Education Related to Dietary (Nutrition)

Education specific to concerns identified during the *D* assessment may include:

D401 Failure to meet dietary guidelines:

- Nutrition risk 401 is assigned when no other risk is identified through the assessment. Appropriate educational messages should be determined on a case by case basis.
- For example, appropriate education messages may focus on interests or concerns expressed by the client.
- Educational messages that help the client with recovery and healing after pregnancy and support for breastfeeding clients is appropriate.

D427.1 Education messages on consuming dietary supplements with potentially harmful consequences:

- “Herbs, teas, and other supplements may contain compounds that could be harmful to you and make you ill.”
- “For any vitamin or supplement, follow your doctor’s instructions on proper use.”
- “Eat a variety of foods from each of the food groups to meet your vitamin and nutrient requirements for a healthy postpartum recovery.”

D427.2 Education messages on consuming a diet very low in calories and/or essential nutrients:

- “It is not typically recommended that women follow a strict diet after pregnancy. Your body is trying to recover and replenish your nutrient stores, and this may be hard to do with such a highly restrictive diet.”

D427.3 Education messages on compulsively ingesting non-food items (pica):

- “When women eat non-food items, it is called pica. Common items that postpartum/breastfeeding women may eat include carpet fiber, clay, foam, paint chips, or dirt. This can be highly toxic for you.”
- “Follow up with your doctor if this concern seems to be something you do not feel you will be able to overcome. Continue taking your prenatal vitamins, and make sure you are also eating a variety of healthy foods.”

D427.4 Education messages on inadequate vitamin/mineral supplementation recognized as essential:

- “It is recommended that all women of childbearing age increase their intake of folic acid. Folic acid is found naturally in some foods, such as leafy vegetables, beans, and whole grains. Folic acid is also added to foods, such as certain breakfast cereals, breads, and pastas. It is hard to meet your folic acid requirements with food alone, so it is important to make sure you also continue to take your prenatal vitamin.”
- “Hemoglobin measures the amount of iron in the body. The amount of iron you get from foods affects your hemoglobin. Low iron can cause you to feel tired and can affect your ability to care for your baby.”
- “You can increase the amount of iron in your diet by eating meat, fish, poultry, beans, and iron-fortified cereals provided through WIC.”
- “Adding vitamin C-rich foods to high-iron foods can help increase the absorption of iron from foods.”

Breastfeeding complications (WIC Code 602)

- Refer to *Breastfeeding Answers Made Simple* book.

Environmental Assessment (Including Other Social and Safety Factors)



The environmental assessment, or *E* section of the ABCDE assessment, includes assessing environmental, social, and safety factors that influence nutritional status. The common environmental factors assessed in WIC that affect women include smoking, abuse, and substance abuse. This includes WIC codes in the 900s.

Why Is This Important?

- Environmental stressors may impact postpartum recovery

Environmental factors directly affect health and well-being. Referrals and follow up are important opportunities to motivate and empower women with options to explore.

E- Breastfeeding and Postpartum Assessment Considerations

- Environmental risks are **sensitive and personal** subjects
- The role of the WIC counselor is to offer the client a chance to voice a need and make an appropriate referral

Information gathered from the *E* assessment can sometimes include sensitive topics that are challenging to address. Women are best supported when WIC avoids associations with shame or blame, and makes women feel safe to share. Based on different women's motivations and interests, WIC may provide key connections to community resources and programs.

E - Breastfeeding and Postpartum Assessment

Ask:

- "What concerns do you have about feeling safe in your relationship?"
- "What are your thoughts about smoking in your home?"
- "What concerns do you have about alcohol or drug use?"

Assess:

- Safety concerns
- Foster status
- Tobacco use in the home
- Alcohol and drug use
- Access to community services

Concern:

Homelessness (WIC Code 801)

Homeless individuals comprise a very vulnerable population with many special needs. Today's homeless population contains a sizeable number of women and children. WIC defines homelessness as a predisposing nutrition risk condition. Homelessness includes situations in which a woman, infant or child lacks a fixed, regular nighttime residence. Examples include residence in public or private shelters, temporary residence in the home of another individual and in any public or private place not designed for regular sleeping accommodation for human beings. Assess the woman's access to community services. Assess for access to sanitary water and refrigeration to determine food package tailoring needs.

Migrancy (WIC Code 802)

Data indicates that infant mortality, malnutrition, and parasitic disease among children are higher for migrants than among the general U.S. population. Migrancy may lead to inadequate nutritional patterns or nutritionally related medical conditions. Assess the woman's access to community services. Assess for access to sanitary water and refrigeration to determine food package tailoring needs.

Recipient of abuse (WIC Code 901)

Recipient of abuse is defined as an individual who has experienced physical, sexual, emotional, economic, or psychological maltreatment that may frighten, intimidate, terrorize, manipulate, hurt, humiliate, blame, injure, and/or wound the individual.

The CDC reports that intimate partner violence or abuse during pregnancy may be a more common problem than conditions for which pregnant women are routinely screened. Studies have shown associations between intimate partner violence and unintended pregnancy, delayed prenatal care, and behavioral risk factors such as smoking, alcohol, and drug abuse. Abuse during pregnancy is associated with poor nutrition and health behaviors as well as increased risks of low birth weight and preterm delivery. Abused women are more likely to experience low maternal weight gain and anemia, consume an unhealthy diet, and abuse drugs, alcohol, and cigarettes. Women may be reluctant to share this information; they would benefit from discretion in sharing community support and referral services. Assess the woman's safety and access to community services.

WIC staff can provide the following nutrition services to participants who experience abuse:

- Provide a safe and supportive environment for participants who may be experiencing or have experienced abuse.
- Encourage pregnant women to attend all prenatal appointments with their health care provider and explain the importance of early and adequate prenatal care.
- Offer tailored breastfeeding support catered to the participant's specific needs and concerns.
- Encourage parents to attend local parenting classes or parent training programs (33).
- Refer the participant to their family case manager, if available, and/or to services and resources in their community that provide support to victims of abuse.
- Refer participants to national resources such as:
 - [National Domestic Violence Hotline](#): 1-800-799-SAFE (7233). This hotline is staffed with trained counselors 24 hours a day and provides callers with crisis counselors, safety planning and assistance in finding resources, such as shelter. A secure, confidential online chat option is also available.
 - [Directory of Crime Victim Services](#): This website provides a directory of programs and organizations that can help victims of crime.
 - [Rape, Abuse and Incest National Network \(RAINN\)](#): 1-800-656-HOPE (4673). This national hotline provides counseling and assistance to victims of sexual violence and their families and friends from trained counselors who are available 24 hours a day.
 - [National Clearinghouse for the Defense of Battered Women \(NCDBW\)](#): 1-800-903-0111 ext. 3. This national organization provides technical assistance to abused women facing charges related to their abuse.
 - [Childhelp National Child Abuse Hotline](#): 1-800-4-A-CHILD (1-800-422-4453). This hotline offers information to parents seeking help for child abuse, individuals who suspect child abuse is occurring and those needing prevention tips. Professional counselors are available to provide support and referrals to emergency and social services. Their website also lists Child Protective Services in each state.

Woman or infant/child of primary caregiver with limited ability (WIC Code 902)

This may include women who are young moms (17 years of age or younger), are mentally or intellectually disabled/delayed and/or have a mental illness such as diagnosed depression, are physically disabled to a degree which restricts or limits food preparation abilities, or are currently using or have a history of abusing alcohol or other drugs. Assess the support system for the woman and access to community services.

Foster care (WIC Code 903)

Foster care teenagers have higher rates of chronic conditions such as asthma, diabetes, and seizure disorders. They are also more likely than teenagers in the general population to have birth defects, inadequate nutrition, and growth retardation, including short stature. This may be the result of abuse or neglect prior to entry into the foster care system and/or the history and frequency of moves from foster homes. For example, the foster caregiver accompanying a foster teen to a WIC clinic for a first-time pregnancy certification may have no knowledge of the teen's eating patterns, special dietary needs, chronic illnesses, or other factors. Without any anthropometric history, failure to grow—often a problem for foster teenagers—may not be diagnosed. The nutrition education, referrals, and service coordination provided by WIC can support the foster parent in developing the skills and knowledge to ensure that the foster teen receives appropriate nutrition and healthcare. A foster parent may have inadequate information about a new foster teen's health needs; therefore, through the ABCDE assessment, WIC can alert foster parents to the nutritional risks that many foster care teenagers have and suggest ways to improve the teen's nutritional status. Code 903 will be automatically assigned by HANDS (the Arizona WIC computer system) based on the information provided on the certification screen. Assess linkages to community services.

Exposure to environmental tobacco smoke (WIC Code 904)

WIC defines exposure to environmental tobacco smoke (ETS) as exposure to smoke from tobacco products inside enclosed areas, like the home, place of child care, etc. ETS is also known as secondhand, passive, or involuntary smoke. The ETS definition also includes the exposure to the aerosol from electronic nicotine delivery systems (such as vapes, vaporizers, vape pens, hookah pens, electronic cigarettes and e-pipes). Studies suggest that the health effects of ETS exposure at a young age could last into adulthood. This includes risk of cancer—specifically lung cancer—and cardiovascular diseases. There is strong evidence that ETS exposure to the fetus or infant results in permanent lung damage. Assess smoking inside the home and utilization of ASHLine cessation and referral services.

***E*- Education Related to Environmental**

Education specific to concerns identified during the *E*assessment may include:

- Provide local agency referral list
- Encourage the caregiver to follow up on community support services
- Refer to social and community services

***E*- Referral Messages for Environmental Concerns**

- “May I give you this referral list of services available here in our community that may help you?” (Provide local agency referral list.)
- “Arizona 211 is a community information and referral service. Let’s explore some options together, and I will also show you how to find this information from home.”

Take-Home Messages for Breastfeeding and Postpartum Women

The following is a summary of key messages that may be shared with participants based on the concerns they may share and the goals that they set for themselves.

- ❖ Encourage appreciation of differences in body size, emphasizing health over weight.
- ❖ Doctors recommend feeding only breastmilk for the first six months. Continue breastfeeding in addition to feeding solid foods until your baby is at least one year old.
- ❖ Make half your plate fruits and vegetables.
- ❖ Make at least half your grains whole.
- ❖ Use skim or 1% milk.
- ❖ Vary your protein choices.
- ❖ Use oils to replace solid fats when possible.
- ❖ Avoid calories from added sugars and solid fats.
- ❖ Be cautious when drinking alcohol. (Educators: See *Breastfeeding Answers Made Simple* for specific messaging for breastfeeding women).
- ❖ Aim for 2½ hours per week of physical activity.
- ❖ Drink to thirst, mostly water.

References

12. Academy of Nutrition and Dietetics (AND) Nutrition Care Manual.
<http://www.nutritioncaremanual.org/>
13. Academy of Nutrition and Dietetics (AND) Public Health/Community Nutrition. Nutrition Care Process Toolkit. 2012. www.eatright.org
14. Arizona WIC Program. *Arizona WIC Program Nutrition Risk Criteria: Definitions, Justifications, and Clarifications*.
<http://azdhs.gov/documents/prevention/azwic/manuals/nutrition-risk-manual.pdf> .
15. Food and Drug Administration (FDA) and USDA Food Safety and Inspection Service (FSIS). Food Safety for Pregnant Women. 2011.
<http://www.fda.gov/downloads/Food/FoodbornellnessContaminants/UCM312787.pdf>
16. Institute of Medicine (IOM). Weight Gain During Pregnancy Guidelines.
<http://www.acog.org/Resources-And-Publications/Committee-Opinions/Committee-on-Obstetric-Practice/Weight-Gain-During-Pregnancy> .
17. Mahan, L. Kathleen, Janice L. Raymond, and Sylvia Escott-Stump. *Krause's Food and the Nutrition Care Process*. 13th ed. 2012.
18. Mohrbacher, Nancy. *Breastfeeding Answers Made Simple: A Guide for Helping Mothers*. July 16, 2010.
19. US Department of Health and Human Services. Physical Activity Guidelines for Americans. 2008. www.health.gov/paguidelines.
20. USDA Choose MyPlate. Health and Nutrition Information for Pregnant and Breastfeeding Women. <https://www.choosemyplate.gov/moms-pregnancy-breastfeeding>
21. USDA and HHS. Dietary Guidelines for Americans. 2010.
<http://www.health.gov/dietaryguidelines/>