

## 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?

WIC uses growth measurements to determine whether children are healthy and growing properly. Poor growth is an important indicator of nutritional challenges. 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 is in a position to play an important role in helping caregivers reduce challenges related to poor growth during early childhood.

### A Child Assessment Considerations

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). Children age 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 age 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**

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** (WIC Code 103.1)

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

- **Weight for length above the 2nd percentile but less than or equal to the 5th percentile (C1), and BMI for age above the 5th percentile but less than or equal to the 10th percentile (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 growth. It can be the result of poor nutrition, illness, or a more serious medical condition. Assess for growth patterns, healthcare provider directions specific to growth, and caregivers feelings about growth.

- **BMI for age greater than or equal to the 95th percentile (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. Use a careful choice of words that conveys an empathetic attitude, minimizes embarrassment or harm to the child's self-esteem, and provides 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, healthcare provider directions specific to growth, and caregivers feelings about growth.

- **Family history of BMI greater than 30** (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, healthcare provider directions specific to growth, and caregivers feelings about growth.

- **Weight for length greater than or equal to the 98th percentile (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, 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 when a child's weight consistently falls below the 3rd percentile for his or her age, indicating that the child's nutrition is not supporting his or her growth. Assess for growth patterns, healthcare provider directions specific to growth, and caregivers feelings about growth.

- **Inadequate growth** (WIC Code 135)

A low rate of weight gain indicates that weight is not at the expected rate for the child's age. This low rate of weight gain may indicate poor nutrition, illness, or a medical concern. Assess for growth patterns, healthcare provider directions specific to growth, and caregivers feelings about growth. Assess for growth patterns, healthcare provider directions specific to growth, and caregivers feelings about growth.

- **Low birth weight** (WIC Code 141)

This term is used when the child's birth weight was at or below 5½ 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, healthcare provider directions specific to growth, and caregivers feelings about growth.

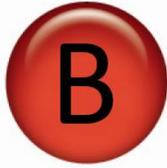
- **Prematurity** (WIC Code 142)

This term indicates that the child was born at less than thirty-seven weeks of gestation. Premature infants may have physical problems that impact nutrition through early childhood (up to age two) and may require 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, healthcare provider directions specific to growth, and caregivers feelings about growth.

- **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.

## 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 risk of anemia by measuring hemoglobin. For children, we generally measure hemoglobin at twelve and eighteen months old, and then yearly if the previous values were within normal limits. For children twelve to eighteen months old, we do a finger poke to gather a small drop of blood to analyze. Once a child turns two years old, we can usually use a noninvasive 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?

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.

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 completed through healthcare providers.

### **B** Child Assessment Considerations

Iron deficiency anemia is a condition that reduces the blood's ability to carry oxygen. Anemia can make children pale, irritable, and lacking in energy. 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 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 absorbed.

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 foreign 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)

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 or 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 or a hematocrit level of less than 33.0. 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 10 µg/deciliter within the past twelve months. Blood lead screenings may not be routine by all healthcare providers. Assess for lead poisoning diagnosis, environmental exposure, or recent move from another country.

## 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 provides only a general overview of C assessment guidelines and does 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?

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

Questions and conversations that may surface 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
- Any misunderstanding of how to manage and care for the child’s condition
- Family’s coping strategies

### **Concern:**

- **Nutrient deficiency diseases** (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, beri, 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 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 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 greater than 126 mg/dL. Hyperglycemia is defined as equal to or greater than 200 mg/dL. Assess for how the medical condition affects the child’s overall health 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 pre-hypertension** (WIC Code 345)

This 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. Assess for how the medical condition affects the child's overall health 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 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 determine the type of medical treatment and, if indicated, nutrition management. Assess for how the medical condition affects the child's overall health 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 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 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. 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 and how the medical condition is being managed.

- **Infectious diseases** (WIC Code 352)

This includes diseases caused by growth of pathogenic microorganisms in the body that are severe enough to affect nutritional status. Infectious diseases typically increase the body's nutrient needs. Assess for how the medical condition affects the child's 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 allergy. Assess for how the medical condition affects the child's overall health 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 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 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 and how the medical condition is being managed.

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

This includes major surgery, trauma, or burns that are severe enough to compromise nutritional status. Assess timing of recent surgery or trauma and post-surgery or discharge instructions.

- **Other medical conditions** (WIC Code 360)

This includes diseases or conditions with nutritional implications that are not included in any of the other medical condition categories. The current condition or treatment for the condition must be severe enough to affect nutritional status. This includes but is not limited to arthritis, lupus, heart disease, cystic fibrosis, and asthma. Assess for how the medical condition

affects the child's overall health and how the medical condition is being managed.

- **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 increased sensory sensitivity, how the medical condition affects the child's 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. 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 visits, age-appropriate teeth cleaning, bottle and pacifier use, ways the oral health condition affects the child's overall health, and how the oral health condition is being managed.

- **Fetal alcohol syndrome (FAS)** (WIC Code 382)

This includes a combination of permanent and irreversible birth defects solely attributable to the mother's alcohol consumption during pregnancy. There is no known cure or treatment for FAS; it can only be prevented. Symptoms of FAS may include failure to thrive. Assess for how the medical condition affects the child's overall health and how the medical condition is being managed.



## 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?

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 AAP and 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.

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

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."

### **Assess:**

- The types of food and beverages consumed at each meal and snack
- How food is prepared
- Food preferences
- Food allergies (see C section WIC Code 353)
- Food intolerances (see C section 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:**

- **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 that do not contain sufficient nutrients to be a primary milk source for children. Nonfat and reduced-fat milks are not recommended for children from one to two years of age. The lower calories in these products 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 fourteen 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 fifteen months, children can manage a cup (although not without some spilling); by sixteen to seventeen 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 eighteen to twenty-four 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 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 food-borne 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 on young children. Examples of teas with potentially harmful effects on children 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, Maté, kola nut or gotu cola, and chamomile. 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)

This involves a child who has just recently begun to eat independently, was recently weaned from breast milk 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 twelve through twenty-three 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 over-feeding 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 ten to fifteen 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. It is recommended that screen time, including use of television, video games, and computers, be limited by taking breaks and being physically active together as a family. Children benefit from sixty minutes per day of physical activity. This does not have to be done all at once and can be broken up throughout the day, such as in ten- to fifteen-minute increments. When children move and enjoy active play, they develop important skills and strengths that support healthy growth.

## 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 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

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:

- **Recipient of abuse** (WIC Code 901)

Serious neglect and physical, emotional, or sexual abuse have 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.

- **Primary caregiver with limited ability** (WIC Code 902)

Caregivers with a limited ability to make feeding decisions may include individuals who are young moms (seventeen years old or younger); mentally 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 nutritional 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 the environmental tobacco smoke (ETS) code as exposure to smoke from tobacco products inside the home. Studies suggest that the harmful health effects of ETS exposure at a young age could last into adulthood. This includes risk of cancer, specifically lung cancer, and cardiovascular diseases. Assess smoking inside the home and utilization of ASHLine cessation and referral services.

## Education for Children

Education may be offered after the completion of 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 Anthropometric WIC Code Education:**

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

#### **A Education Messages Related to Growth:**

- "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."
- "Foods that you may offer your child that are higher in calories include peanut butter and cheese."
- "Provide choices for your child, and set a good example."

### **B Biochemical (Bloodwork) WIC Code Education:**

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

#### **B Education Messages Related to Bloodwork:**

- "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.”

### **C Clinical (Medical Conditions) WIC Code Education:**

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

#### **C Referral Messages for Medical Conditions:**

- “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?”

### **D Dietary (Nutrition) WIC Code Education:**

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

#### **D 425.1 Education Messages for Routinely Feeding Inappropriate Beverages as the Primary Milk Source:**

- “Children under the age of two need whole milk to support healthy brain development.”
- “Children age two and older receive 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 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.”

#### **D 425.2 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 forty to forty-eight ounces of water per day. This equals five to six cups of water throughout the day. Offer water with snacks and between meals.”

**D 425.3 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 fourteen 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.”

**D 425.4 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.”

**D 425.5 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.”

**D 425.6 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.”

**D 425.7 Education Messages for Feeding Dietary Supplements with Potentially Harmful Consequences:**

- “Herbs, teas, and other supplements may contain compounds that could be harmful to children.”
- (If providing a vitamin supplement by healthcare 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.”

**D 425.8 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. This can be met through fortified milk provided through WIC.”
- “Our bodies can also 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 is also important.”
- “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.”

**D 425.9 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 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.”

### **D 428 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.”

### **E Environmental WIC Code Education:**

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 your 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.

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