Illinois WIC Program Nutrition Practice Standards (NPS)
Growth of Infants and Children
August 2022

Nutrition Practice Standards are provided to assist staff in translating policy into practice. This guidance is intended to be used in conjunction with resources listed at the end of this document.

Healthy Weight
Maintaining a healthy weight is important for the overall health and well-being of children. Children's weight status encompasses many factors including growth pattern, familial obesity, medical risks, and nutrition and physical activity habits. Two of the most important determinants of healthy weight are nutrition and physical activity. A balanced, nutritious, diet along with regular activity is key to the prevention of overweight and obesity and one reason the nutrition education offered by WIC is so important.

Body Mass Index
Body mass index (BMI) is a measure used to determine childhood overweight and obesity. For children, BMI is age- and sex-specific and is often referred to as BMI-for-age. A child's weight status is determined using an age- and sex-specific percentile for BMI rather than the BMI categories used for adults. This is because children's body composition varies between sexes and as they age. Therefore, BMI levels among children need to be expressed relative to other children of the same age and sex.

In children a high amount of body fat can lead to weight-related diseases and other health issues. Similarly, being underweight can put one at risk of negative health outcomes. Although BMI does not directly measure body fat, it is a useful screening tool because it correlates with both body fat and health risks. Children with BMIs between the 85th and 94th percentiles are defined as *overweight* and often have excess body fat and health risks associated with excess weight for height. For some, however, this BMI category reflects high lean body mass rather than legitimately high levels of body fat. The professional judgement of a CPA is imperative when making referrals. Children with BMI's at or above the 95th percentile is categorized as obese; for the majority, this correlates with the presence of excess body fat and its associated health risks.

Body Mass Index Percentile Categories for Children	
Body Mass Index Percentile	Definition
<5th%	Underweight
≥5th-84th %	Healthy weight
≥85th-94th %	Overweight
≥95th %	Obese

Growth Charts
Growth charts are meant to be used as a screening tool and they comprise only one aspect of overall growth. Centers for Disease Control and Prevention (CDC) recommends use of the World Health Organization (WHO) growth charts to monitor growth for all children from birth up to 2 years of age and use of the CDC growth charts for children age 2 years and older.

WHO and CDC growth charts are similar in that both describe weight-for-age, length (or stature)-for-age, weight-for-length (or stature) and body mass index (BMI) for age. They differ in the approach taken to create the growth charts.

- WHO growth charts are international standards that show how healthy children should grow. The standards describe growth of children living in six countries (including the U.S.) in environments believed to support optimal growth. One of several criteria defined for optimal growth is breastfeeding. WHO growth charts use the growth of breastfed infants as the norm for growth. WHO growth charts should be used with all children from birth up to 2 years of age, regardless of type of feeding.
- CDC growth charts are a growth reference, not a standard, which represents how U.S. children and teens grew primarily during the 1970s, 1980s, and 1990s. CDC recommends using these references from ages 2 through 19 to track weight, stature, and body mass index from childhood through the age of 19 years.

Growth Pattern

Physical growth in infants and children is an important indicator of health and wellness. Changes in growth can indicate inappropriate feeding dynamics or concerns of medical, nutritional, or emotional origin. Consistent growth patterns typically indicate healthy growth. A single plot on a growth chart does not show a true reflection of a child's growth. Normal growth is usually identified by a series of measurements indicating consistent growth, regardless of the percentile followed. The curved lines on the growth chart show selected percentiles that indicate the rank of the child's measurements. For example, when the dot is plotted on the 95th percentile line on the CDC BMI-for-age growth chart, it means that 5 of 100 children (5%) of the same age and sex in the reference population have a higher BMI-for-age.

The WHO growth standard charts use the 2nd and the 98th percentiles as the outer most percentile cutoff values indicating abnormal growth. The CDC growth reference charts use the 5th and the 95th percentiles as the outermost percentile cutoff values indicating abnormal growth. Values that plot outside those established parameters suggest the need to recheck measurements. It is important to know that some children will consistently plot at established cutoff percentiles. Generally, a growth pattern following a particular percentile curve is considered normal, even if it is at the extremes of the reference growth curves. A child consistently growing above the 95th percentile or below the 5th percentile on any chart is probably growing normally. Children whose growth parameters are at the extremes of the growth curve, but whose growth rates are normal are likely to be healthy. Accelerated or slowed growth rates, however, are rarely normal and warrant further evaluation.

Explaining Growth Charts

Allow parent/caregiver to view the growth chart. Explain that consistent growth along the same growth curve is more important than the percentile itself. An example phrase might include: "Your child has always grown along the 25th percentile for (Ex: ht, wt, BMI) which means if we lined 100 little girls/boys up, your child would be the 25th child for (ex: height) meaning there are 75 children that are taller and 24 children that are shorter than your child. He/she is growing consistently for his/her needs."
Ask: "Now that we've looked at your child's growth chart, tell me how you're feeling about your child's growth"; "What has your doctor shared or told you about your child's growth?"
Make note of parent's/caregiver's response as part of your assessment and summarize after the assessment process is complete.

Risk Factors
The following are growth related risk factors that make a child eligible for WIC. Risk factors indicate that the potential for improving health or nutritional status exists. Although we know it may be normal for a child to plot consistently below the 5th or above the 95th percentile, the risk factor would still be assigned because it is less common and could indicate a need for nutritional intervention or evaluation.

Refer to the following sections of the RFJM for in-depth guidance on infant / child growth:

- 103 Underweight or at risk of underweight
- 113 Obese
- 114 Overweight or at risk of overweight
- 115 High weight-for-length
- 121 Short stature or at risk of short stature
- 134 Failure to thrive
- 135 Slowed / faltering growth pattern

Infants
Growth in infants should be steady and predictable. It is a reflection of health and nutritional status. Parents and providers will notice periods of rapid growth (growth spurts), followed by periods of slower or no measurable growth. Growth can also be seasonal, with increases often noted during the spring and summer months and stagnant other months.

Infant weight loss in the early postpartum period is normal. A weight loss of 5-7% of birth weight is not considered unusual for formula-fed or breastfed infants (refer to *Addendum 1 – Quick Reference Baby Weight Loss Percentage Table*). Healthy infants are expected to regain their birth weight within 8-10 days after birth. Compared to formula-fed infants, breastfed infants gain weight rapidly in the first 3-4 months of life and relatively slowly thereafter. The typical pattern of slowed weight gain after 3-4 months among breastfed infants may lead to unnecessary early introduction of solid foods or cessation of breastfeeding if the slowed weight gain is perceived as insufficient milk supply.

Growth may be accelerated or slowed by a variety of conditions, with changes in growth as the first sign of a pathological condition such as undernutrition, hypothyroidism, iron deficiency, inborn errors of metabolism, lead toxicity, etc. Infants that do not follow a steady predictable pattern, such as those with short stature or decreased growth, should monitored.

<u>Parameters for Weight concerns in infants</u>

- If a breastfed infant loses 7% of birth weight in the first 72 hours after birth, an evaluation of the mother-infant dyad is needed.
- An infant with a weight loss of greater than or equal to 7% needs careful evaluation and intervention.
- A weight loss of up to 10% of birth weight is the maximum acceptable weight loss for newborn infants; any additional loss is an emergency.
- Weight loss is not expected after the first 2 weeks of life and requires follow-up.

Summarizing Assessment / Offering Education

Nutrition education related to growth related risk factors must be offered whenever indicated. It is important to communicate with parents/caregivers in a way that is supportive and nonjudgmental, and with a careful choice of words that convey an empathetic attitude and minimize embarrassment or harm to a child's self-esteem. Use of the terms *overweight* and *obese* should only be used for documentation and the use of more neutral terms (high weight for height, excess weight, BMI) when discussing a child's weight.

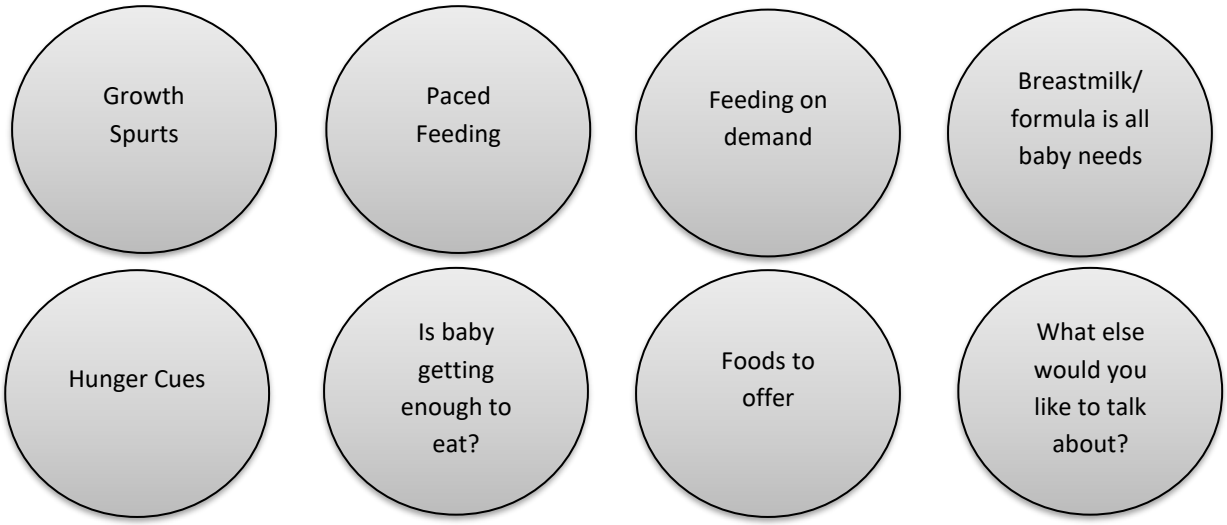
When parents hear their children are underweight or too thin, they naturally want to feed their child more. Likewise, when parents hear their children are overweight or obese, they may be inclined to restrict how much the child eats. Infants know how much they need to eat – they naturally know when they are hungry and when they are full. It is important for parents to allow infants to follow their own feeding pattern versus scheduled feedings. Parents may need education on recognition of satiety cues and other physiological needs that lead to crying in addition to ways of comforting an infant (holding, reading, rocking) other than feeding. Children also know how much to eat, but can lose that capability if there is too much interference or too little support. Using concepts of Ellyn Satter's *Division of Responsibility*[1] found in the DHS handout, **Feeding Children the Right Message,** can help parents set the stage for healthy eating relationships.

Summarize your assessment by offering parents a menu of choices for counseling and education. Staff might choose either blank circle charts or pre-filled DHS circle charts. Circle charts will open the conversation and allow for participant centered nutrition education.

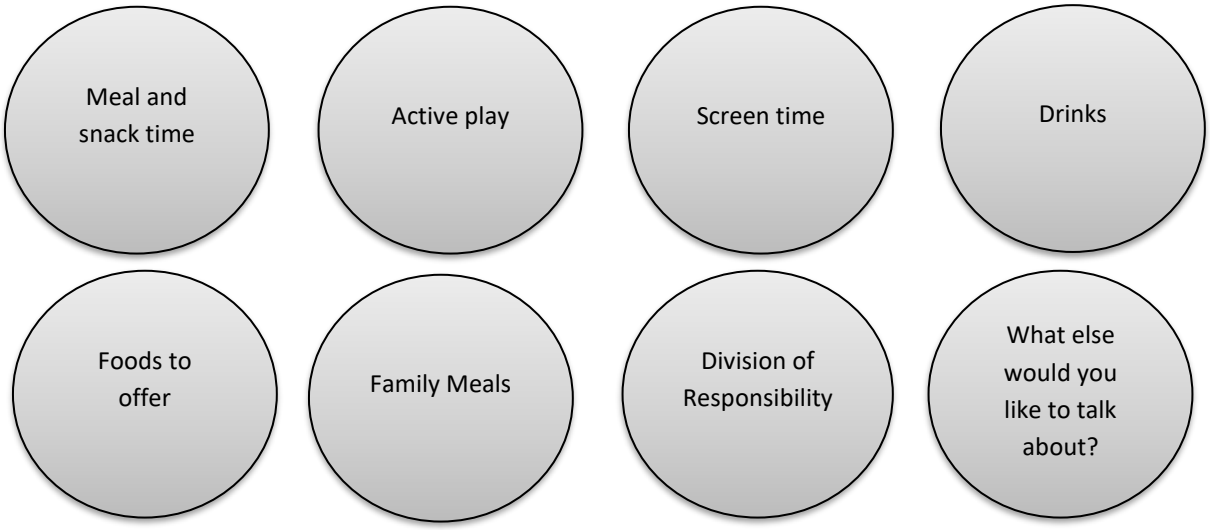
1) Satter, E (2000). *Child of mine: Feeding with love and good sense.*

Sample Blank Circle Chart topic ideas (growth related risk factors):

Infants



Children



When assisting parents with setting goals, CPAs should offer simple "how-to" ideas to help families be successful. In addition to discussing "how-to" ideas, a CPA may share key messages with parent/caregiver regarding healthy habits for healthy growth.

Key Messages:

- Encourage healthy eating habits through use of the WIC foods. Remind parent/caregivers that low-fat milk/yogurt, whole grains, lean protein sources, and fruits and vegetables are all steps in building healthy eating habits.
- Encourage parents to offer a variety of healthy foods throughout the day, given in 3 small meals and 2-3 snacks.
- Stay active and limit screen time; encourage parents/caregivers to make time for active play with their children and limit screen time to less than 2 hours a day.
- Limit sugary drinks and encourage plain tap water between meals and snacks.
- Continue to participate in WIC. Families benefit from the services WIC provides, such as monitoring a child's growth, offering healthy foods, and ideas of how to make healthy choices for the whole family.

Remember, the goal for children who are overweight is to reduce the rate of weight gain while allowing normal growth and development. Children should NOT be placed on weight reduction diets without the consultation of their primary care provider.

Making Referrals

It is important that CPAs explain that WIC will continue to monitor their children's growth and if at any time the growth appears abnormal or if the parent has concerns, WIC will refer the parent to their primary care provider and other services in their community. These referrals may provide additional medical assessments and offer treatment, when necessary, in cases where growth improvement is slow to respond to dietary intervention.

Any weight loss in children should be monitored. Again, accelerated or slowed growth rates are rarely normal and warrant further evaluation. CPAs should use clinical judgement when referring, considering the child's growth pattern, familial obesity, medical risks, nutrition, and physical activity habits. Refer to your Local Agency procedure on *communicating abnormal values to healthcare providers* for agency specific guidance.

Additional Resources:

I. Illinois WIC resources https://www.springfieldul.org/chtc/resources
II. WIC Infant Nutrition and Feeding Guide https://wicworks.fns.usda.gov/resources/infant-nutrition-and-feeding-guide
III. Centers for Disease Control and Prevention:
   - Growth Charts https://www.cdc.gov/growthcharts/
   - Growth Chart Training https://www.cdc.gov/nccdphp/dnpao/growthcharts/training/bmiage/page9_1.html
   - Tips for Parents https://www.cdc.gov/healthyweight/children/index.html

Satter, E. (2000). Child of mine: Feeding with love and good sense. Boulder, CO: Bull Publishing Company.