### **Background**

The <u>Center for Disease Control and Prevention</u> recommends that clinicians in the United States use the 2006 WHO international growth charts to assess infant and child growth and development for children ages <24 months. WIC adopted this recommendation and uses the Center for Disease Control and Prevention's adapted WHO growth charts (available at <a href="https://www.cdc.gov/growthcharts">https://www.cdc.gov/growthcharts</a>). The CDC growth charts should continue to be used for the assessment of growth in persons aged 2-19 years.

CDC recommends use of the 2006 WHO international growth charts for children aged <24 months for several reasons:

- Breastfeeding is the standard for infant feeding;
- In the WHO charts, the healthy breastfed infant is intended to be the standard against which all other infants are compared;
- All of the reference population of infants were breastfed for 12 months and were predominantly breastfed for at least 4 months.

#### **Growth Reference vs. Growth Standard**

The CDC and WHO growth charts differ in their overall conceptual approach to describing growth.

Growth Reference	Growth Standard
The 2000 CDC growth charts are a growth reference, not a standard, and describe how certain children grew in a particular place and time. The CDC charts describe the growth of children in the United States during a span of approximately 30 years (19631994). A growth reference does not account for the adequacy of the feeding or environment of the reference population.	The WHO charts* are growth standards that describe how healthy children should grow under optimal environmental and health conditions.  The curves were created based on data from selected communities worldwide, which were chosen according to specific inclusion and exclusion criteria. Deviation from the WHO growth standard should prompt clinicians to determine whether suboptimal feeding environment conditions exist, and if so, whether they can be corrected.

<sup>\*</sup>When using the WHO growth charts to screen for possible abnormal or unhealthy growth, use of the 2.3rd and 97.7th percentiles (or ±2 standard deviations) are recommended, rather than the 5th and 95th percentiles, as is common on the CDC charts.

### Why it is Important

Providing consistent messages at critical times in a breastfed infant's growth and development are essential to protect breastfeeding duration and a mother's milk supply. The routine use of the WHO growth curves by WIC and health care provider can help support consistent messaging regarding adequate growth.

Local agencies should be aware which growth charts are being used by their local providers to facilitate consistent messages around growth and development. When WIC and health care providers are on the same page, this may

reduce unnecessary and possibly harmful formula supplementation that could impact a breastfeeding mother's milk supply, her voiced breastfeeding goals or breastfed infant's nutrition. Using the same growth charts could also help WIC staff and health care providers with the early identification of feeding practices that place an infant at risk of overweight and obesity. For example, it is expected that fewer U.S. children will be identified as <u>underweight</u> using the WHO charts. Slower growth among breastfed infants during ages 3-18 months is normal, and gaining weight more rapidly than is indicated on the WHO charts might signal early signs of overweight.

If local agencies find that health care providers in their areas have different growth assessment tools, this should be discussed with the specific practices to ensure that during a WIC nutrition assessment, conflicts in messages around growth are minimized or addressed before they become an issue. Growth curves are one piece of a complete assessment and having an honest conversation with health care providers about what their assessment of breastfed and formula fed infants consists of is a key strategy to build rapport, trust and confidence between WIC and the health care provider, in addition to WIC, the health care provider and the participant.

It is important that WIC staff feel comfortable in addressing the discrepancies between the two growth charts (WHO and CDC). If questions or concerns about an infant's growth assessment or recommendations for supplementation arise, the WIC nutritionist should contact the health care provider to discuss in more detail to clarify any HCP recommendations.

#### WIC's Goal:

Support breastfeeding mothers in meeting their goals at critical times of their infant's growth and development. Empower moms to gain confidence to discuss with their health care provider their breastfeeding goals and baby's growth. Support all mothers in discussing growth and feeding patterns with WIC and health care provider during the first 24 months. Early weight loss or slow gain in breastfed or formula fed infants should be assessed and referred to health care providers immediately for evaluation. As described above, slower growth among breastfed infants during ages 3-18 months is normal based on growth standards and clear communication between WIC and health care providers about normal growth is essential to improve breastfeeding duration.

**Learning Objectives:** After participating in an individual counseling or group education session, participants will be able to:

- 1. List benefits to using the CDC growth charts based on the 2006 WHO growth standards to assess infant growth.
- 2. Ask the infant's health care provider which growth chart is used to measure her baby's growth 0-24 months.
- 3. Verbalize differences between breastfed infants expected growth to family members, especially if formula supplementation is being recommended.
- 4. If supplementation is necessary based on assessment using the WHO growth standards and/or health care provider recommendation, verbalize health care provider orders or ask health care provider to specify:
  - Type of supplement (expressed breastmilk or formula);
  - Amount or volume of supplementation (e.g. total of 4 ounces per day);
  - When it should be offered (after every feeding or all in one feeding);
  - When it will be no longer needed (plan for return to fully breastfeeding).

### Affirmations:

- That's awesome that you are interested in your baby's growth and development. It is great that you want to know more about how your breastmilk is helping your baby grow well.
- I'm glad you are open to working with us on your baby/child's growth.
- A lot of moms are surprised to learn that supplementation doesn't mean you have to stop breastfeeding.
- Lots of moms ask me if their baby is growing normally, or if this plot means it is too high.
- That's great you are asking or curious about your baby's growth. The truth is, the earlier we know if growth may become an issue down the road the better. Let's agree to continue to watch this together.
- A lot of moms find talking about growth charts can be really confusing. There are many ways to look at growth charts. So let's take it slow and break it down so you are comfortable with this information.

### **Key Educational Messages:**

- Based on government and scientific recommendations, WIC uses a chart (CDC adapted 2006 WHO growth standards) that compares your baby/child's growth to a growth standard. The standard describes how healthy infants/children grow under the best environmental (where they live and play) and health (feeding) conditions.
- The chart we use at WIC is a growth standard. It is recommended because it **uses ALL breastfed babies** to make up the growth curve. Comparing a breastfed baby to other breastfed babies may reduce the need for formula supplementation at times in the first year when breastfed babies normally have slower (and HEALTHIER) growth.
- The growth standard also is good for babies that get formula. If a formula fed baby gains weight quickly on this curve, it may be an early sign of overweight.
- WIC and your health care provider may be using different growth charts to assess growth. Find out what your health care provider uses.
- If you doctor recommends supplementation, make sure you ask these questions in order to continue to meet your breastfeeding goals.
  - Type of supplement (expressed breastmilk or formula);
  - Amount or volume of supplementation (e.g. total of 4 ounces per day);
  - When it should be offered (after every feeding or all in one feeding);
  - When it will be no longer needed (plan for return to fully breastfeeding).

#### **Activities:**

- Discuss these concepts at prenatally at an Infant Growth and Development group (3<sup>rd</sup> trimester or see below as part of 3-4 mo anticipatory guidance). This may tie in with Secrets of Baby Behavior principles.
- Case study to talk about growth with HCP for participant.
- For formula fed infants with high gain, review or demonstrate, paced bottle feeding.
- For breastfed infants being fed by bottle, review or demonstrate, paced bottle-feeding. http://kellymom.com/bf/pumpingmoms/feeding-tools/bottle-feeding/

#### **References:**

Massachusetts WIC Program, Special Projects Grant, Weigh of Life. Coordinate care around obesity and overweight with health care providers. <a href="https://wicworks.fns.usda.gov/wicworks//Sharing\_Center/gallery/weighoflife.htm#Toolkit">https://wicworks.fns.usda.gov/wicworks//Sharing\_Center/gallery/weighoflife.htm#Toolkit</a>

WIC Works: This link is also from the project and provides some concrete info for WIC nutrition staff re: approaching and discussing weight with parents. We are also considering using these materials in our orientation/competencies.

https://wicworks.fns.usda.gov/wicworks/Sharing Center/MA/Manual/Discussing Weight.pdf

Center for Disease Control (CDC):

<u>Use of World Health Organization and CDC Growth Charts for Children Aged 0--59 Months in the United States</u>

Please note: **An erratum has been published for this article. To view the erratum, please click <u>here.</u> Recommendations and Reports September 10, 2010 / 59(rr09); 1-15 <a href="http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5909a1.htm">http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5909a1.htm</a>** 

CDC WHO Growth Charts http://www.cdc.gov/growthcharts/who charts.htm

## **Training:**

WHO Growth Chart Training:

http://www.cdc.gov/nccdphp/dnpao/growthcharts/who/index.htm

#### **Handouts:**

Kelly Mom. *How to bottle feed the breastfed baby: Kelly Mom*. <a href="http://kellymom.com/bf/pumpingmoms/feeding-tools/bottle-feeding/">http://kellymom.com/bf/pumpingmoms/feeding-tools/bottle-feeding/</a>