



Washington State WIC
Nutrition Program

CDC-WHO Growth Charts



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Washington State Department of Health
WIC Nutrition Program

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After the Client Services
demonstration

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Welcome to the CDC-WHO Growth Chart Training!

In 2006 the World Health Organization (WHO) published new growth standards. The Center for Disease Control (CDC) released growth charts based on the WHO growth standards. These are the new charts we will be using in the Washington WIC Nutrition Program. This training will share information about the new charts and how we'll implement them.

During this training we'll use these terms when we talk about the charts:

- CDC charts = the current charts we use in WIC
- WHO charts = the new CDC-WHO charts we will be using soon

We are happy to share the new growth charts with you!

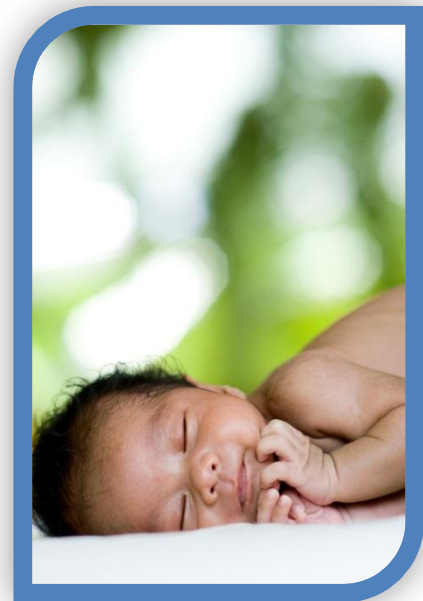
Agenda

Part 1: By the end of this section you will have:

- Learned about the new charts and how they were created
- Discovered the differences between the charts and identified trends in growth assessment with the new WHO growth charts
- Seen the new WHO charts
- Reviewed the new growth-related risks

Part 2: By the end of this section you will have:

- Viewed the graphs in Client Services
- Reviewed changes to policy and procedure for measuring young children
- Explored how WIC Connects skills can help the growth chart conversation
- Identified additional resources



Growth Charts are a Key Tool

WIC uses growth charts to:

- Assess growth
- Identify potential nutrition or health concerns
- Share information with caregivers
- Have open conversations about growth, nutrition and healthy habits.

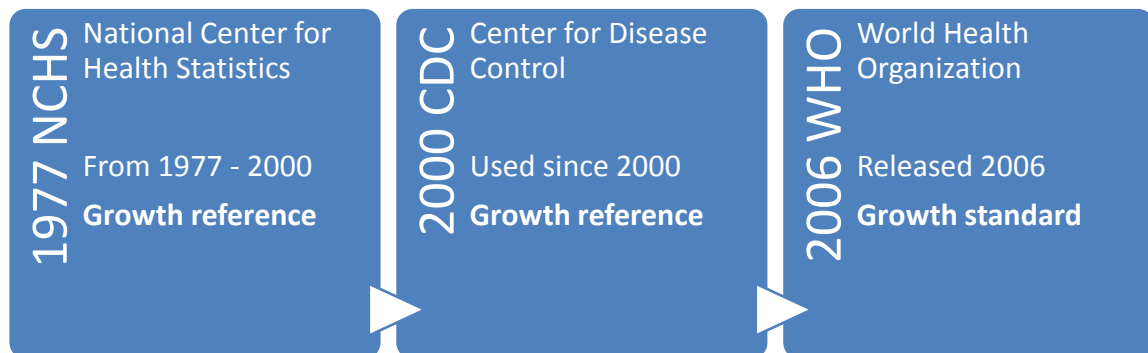


Physical growth is a way to assess the health and wellness of infants and children.

Keep these things in mind through-out this training and think about how they might be affected by the new growth charts.

History of the Growth Charts

Growth charts have been around for at least a century! Here's a brief review of the recent history of the charts used in WIC.



A Growth Reference or a Growth Standard?

Growth Reference – Describes how certain children grew in a particular place and time. It gives a point of comparison.

Growth Standard – Describes how healthy children should grow in a healthy environment regardless of time, place or ethnicity. It defines what is normal or optimal.

Comparing the two Growth Charts

This table shows the differences between the 2000 CDC and 2006 WHO growth charts.

Characteristic	2000 CDC Charts	2006 WHO Charts
Reference or Standard	Reference: <ul style="list-style-type: none"> Describes growth of children in the U.S. during the 1970's and 1980's. 	Standard: <ul style="list-style-type: none"> Describes how children should grow under optimal conditions regardless of time, place, or ethnicity.
Data	Limited number of measurements taken less often. Based on data from national health surveys and birth certificates in the U.S.	Large number of measurements taken frequently from birth to 24 months. Based on data taken in six world locations: <ul style="list-style-type: none"> Pelotas, Brazil Accra, Ghana Delhi, India Oslo, Norway Muscat, Oman Davis, California – U.S.
Requirements	No special requirements to be included in the data.	Had to meet these requirements to be included in the data: <ul style="list-style-type: none"> Adequate socioeconomic status to support growth Access to health care and breastfeeding support Full term birth No smoking during pregnancy or breastfeeding Exclusive or primarily breastfeeding ≥ 4 months Began feeding solids by 6 months Continued breastfeeding ≥ 12 months

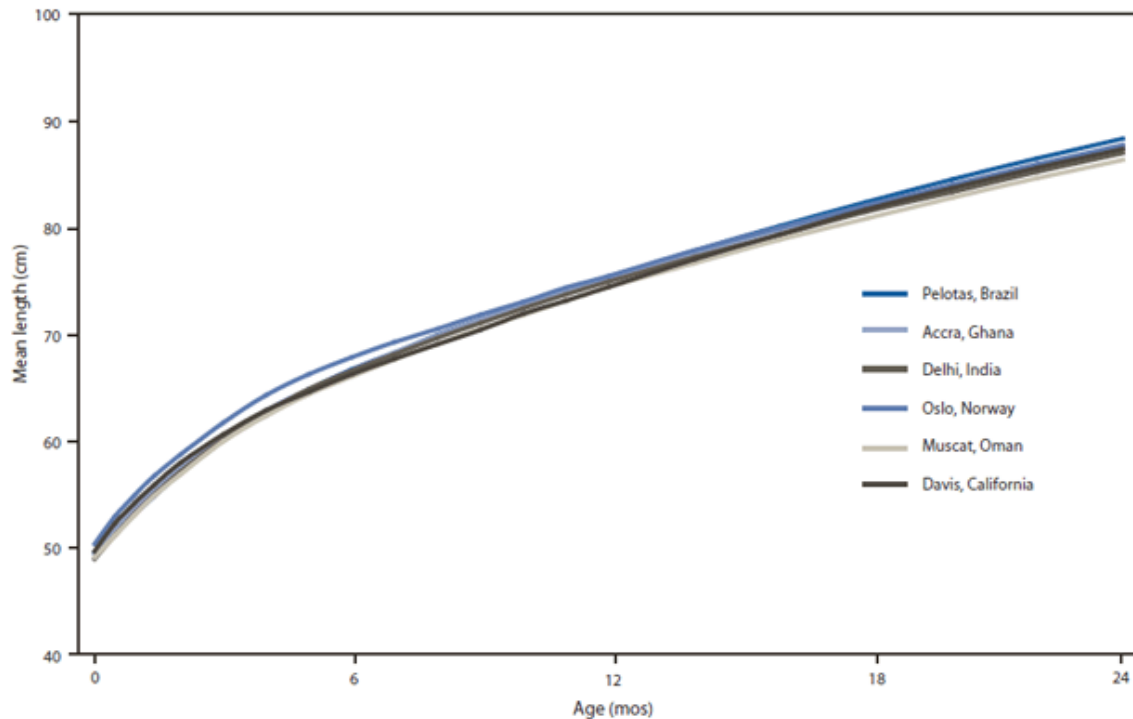
Additional factors:

- ✓ The American Academy of Pediatrics states that the healthy **breastfed infant is the standard** against which all other infants should be compared. The WHO charts are based on this premise.
- ✓ The WHO charts were created with **high quality data**.
- ✓ The WHO charts support the theory that **optimal nutrition + optimal environment + optimal care = optimal growth** regardless of time, place or ethnicity.

The WHO Hypothesis

Children throughout the world will grow similarly if exposed to optimal circumstances.

This chart shows the birth to 24 months growth data from the 6 WHO countries.



“For the first time, we now have a technically robust tool to measure, monitor and evaluate the growth of all children worldwide, regardless of ethnicity, socioeconomic status or type of feeding.”

WHO Committee Member

Recommendation to Use the WHO Growth Charts

The Center for Disease Control (CDC), the National Institutes of Health (NIH), and the American Academy of Pediatrics (AAP) recommend using the **WHO growth charts for children birth to 24 months** in the United States.

USDA accepts the recommendation for WIC.

Washington WIC will use these growth charts:

- ✓ **WHO growth charts** for children **0 – 24 months of age**
 - Length/Age & Weight/Age, Weight/Length & Head Circumference/Age
- ✓ **CDC growth charts** for children **2 – 5 years old**
 - Height/Age & Weight/Age and BMI/Age
- ✓ CDC weight/length and length/age charts for children 24 - 36 months who can't be measured standing up. These charts are for education only.

Differences between the Charts

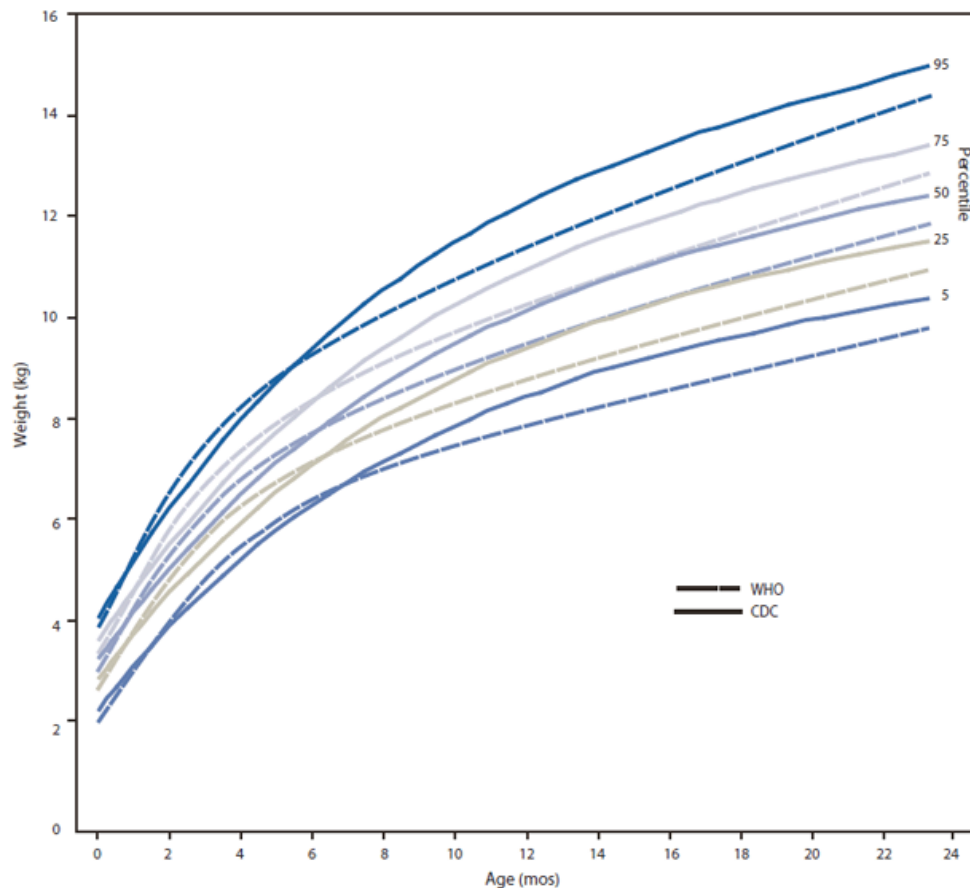


- The WHO charts show a different pattern of growth than the CDC charts.
- WHO measured healthy children under ideal conditions.
- Breastfed infants and children were the standard.

“The healthy breastfed infant is the standard against which all other infants should be compared.”

American Academy of Pediatrics

In general the WHO charts show a higher rate of weight gain in the first months of life, then the rate of weight gain tapers off from 6 to 23 months compared to the CDC growth charts. The chart below shows this comparison.



Differences between the Charts

Here are some of the differences you may notice with the **WHO growth charts**:

Length-for-age:

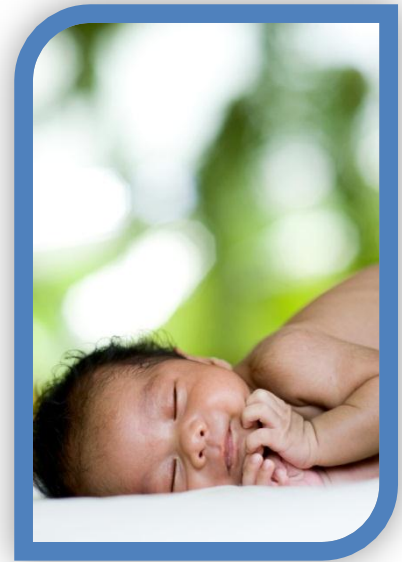
- **Slightly more** infants and children will plot in the **lower length-for-age** percentiles.

Weight-for-age:

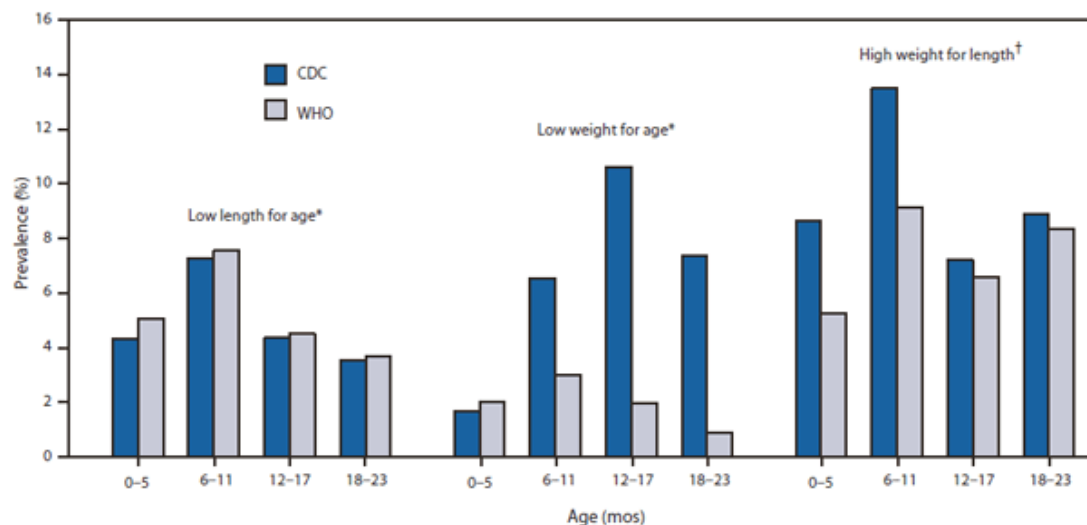
- **Fewer** infants and children will be identified with **low weight-for-age**, especially between 6 and 23 months of age.

Weight-for-length:

- **Slightly lower** number of infants and children with **low weight-for-length**.
- **Fewer** infants and children with **high weight-for-length**.



This bar graph compares the growth patterns between the CDC and WHO growth charts.



The **WHO charts use different percentiles to identify nutrition risks**.

- WHO growth standards are based on healthy children living in optimal conditions so **more extreme cutoffs are used to identify nutrition risk**.
- Use new cutoffs at the **2nd and 98th percentiles** on the WHO charts.

We'll continue to use the **5th and 95th percentiles on the CDC growth charts** for older children.

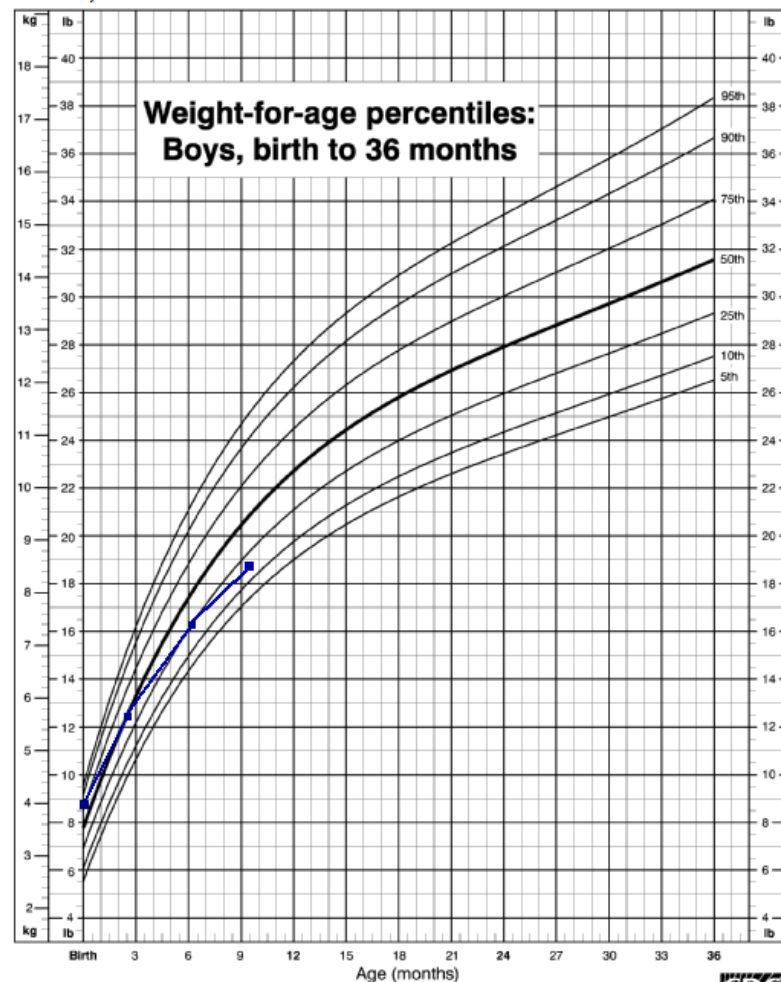
Comparison of Weight-for-age



Site: Emerald Clinic

CDC, Edwin T

DOB: 09/22/11



Published May 30, 2000.

SOURCE: Developed by the National Center for Health Statistics in collaboration with the National Center for Chronic Disease Prevention and Health Promotion (2000).

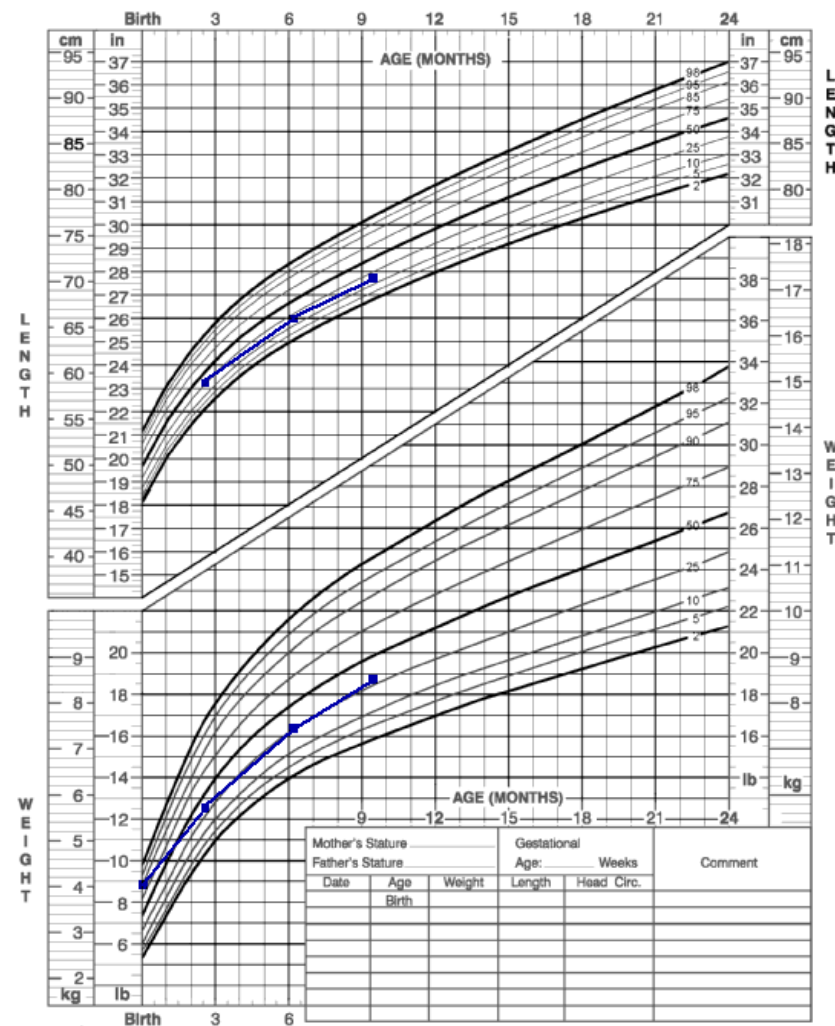


SAFER • HEALTHIER • PEOPLE™

Printed: 08/07/12

WHO, Edwin T
DOB: 09/22/11

Birth to 24 months: Boys Length-for-age and Weight-for-age percentiles



Site: Emerald Clinic

Published by the Centers for Disease Control and Prevention, November 1, 2009
SOURCE: WHO Child Growth Standards (<http://www.who.int/childgrowth/en>)



Printed: 08/07/12

Identifying risks

This table lists all the risk changes related to the new WHO growth charts.

Bolded risks indicate high risk

Category	Current Risks	New Risks
Infant	Weight/Length $\leq 5^{\text{th}}$	Weight/Length $\leq 2^{\text{nd}}$
Infant	Weight/Length $\leq 10^{\text{th}}$	Weight/Length $> 2^{\text{nd}}$ and $\leq 5^{\text{th}}$
Infant	No overweight risk for infants	Weight/Length $\geq 98^{\text{th}}$
Infant	Length/Age $\leq 5^{\text{th}}$	Length/Age $\leq 2^{\text{nd}}$
Infant	Length/Adjusted Age $\leq 5^{\text{th}}$	Length/Adjusted Age $\leq 2^{\text{nd}}$
Infant	Length/Age $\leq 10^{\text{th}}$	Length/Age $> 2^{\text{nd}}$ and $\leq 5^{\text{th}}$
Infant	Length/Adjusted Age $\leq 10^{\text{th}}$	Length/Adjusted Age $> 2^{\text{nd}}$ and $\leq 5^{\text{th}}$
Infant	Head Circumference/Age $\leq 5^{\text{th}}$	Head Circumference/Age $\leq 2^{\text{nd}}$
Infant	Head Circumference/Adjusted Age $\leq 5^{\text{th}}$	Head Circumference/Adjusted Age $\leq 2^{\text{nd}}$
Child	Weight/Length $\leq 5^{\text{th}}$	Weight/Length $\leq 2^{\text{nd}}$ (< 24 months)
Child	Weight/Length $\leq 10^{\text{th}}$	Weight/Length $> 2^{\text{nd}}$ and $\leq 5^{\text{th}}$ (< 24 months)
Child	No overweight risk for children 12–24 months	Weight/Length $\geq 98^{\text{th}}$ (< 24 months)
Child	Weight/Length $\geq 95^{\text{th}}$ (24 – 36 months)	No risk for CDC WHO growth charts for length between 24 and 36 months; use BMI risks when height is taken
Child	Length/Age $\leq 5^{\text{th}}$	Length/Age $\leq 2^{\text{nd}}$ (< 24 months)
Child	Length/Adjusted Age $\leq 5^{\text{th}}$	Length/Adjusted Age $\leq 2^{\text{nd}}$ (< 24 months)
Child	Length/Age $\leq 10^{\text{th}}$	Length/Age $> 2^{\text{nd}}$ and $\leq 5^{\text{th}}$ (< 24 months)
Child	Length/Adjusted Age $\leq 10^{\text{th}}$	Length/Adjusted Age $> 2^{\text{nd}}$ and $\leq 5^{\text{th}}$ (< 24 months)
Child	No head circumference risk for children	Head Circumference/Age $\leq 2^{\text{nd}}$ (< 24 months)
Child	No head circumference risk for children	Head Circumference/Adjusted Age $\leq 2^{\text{nd}}$ (< 24 months)
Child	Premature ≤ 37 Weeks Gestation (< 2 yrs)	Premature ≤ 37 Weeks Gestation (< 24 months)
Child	Low Birth Weight < 5 lbs 8 oz (< 2 yrs)	Low Birth Weight < 5 lbs 8 oz (< 24 months)
Child	Small for Gestational Age (< 2 yrs)	Small for Gestational Age (< 24 months)

Client Services will continue to auto assign growth risks!

This completes Part 1 of the training. Begin Part 2 when you are ready.

Part 2 begins here after the Client Services demonstration.

Client Services

Graphs appear in the drop-down list based on age and type of measurements taken.

Height/Age & Weight/Age (together on 1 page)

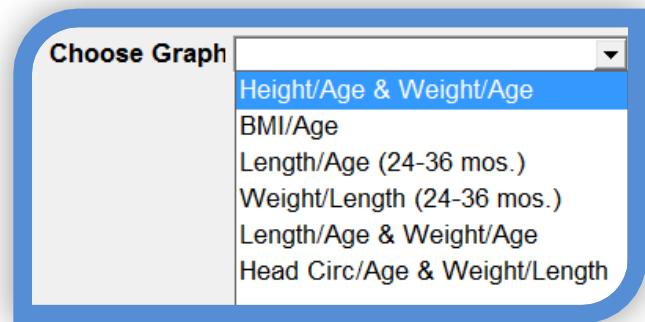
BMI/Age

- Appear in the list after age 2 when height or weight is entered

Length/Age (24-36 mos.)

Weight/Length (24-36 mos.)

- Appear only between 24 and 36 months when length is entered
- Use for education only



As a child gets older,
the graph selection list is longer.

Select any previous graph to view.

Length/Age & Weight/Age (together on 1 page)

Head Circ/Age & Weight/Length (together on 1 page)

- Appear from birth to 24 months
- Head circumference is still optional

Weighing and Measuring

Here is a summary of WIC's policy for weighing and measuring infants and children:

Category and Age	Measurement	Clothing
Infants: Birth to 12 months	Length – recumbent board Weight – infant scale	Dry diaper or light clothing - onesie
Children: 12 – 24 months	Length – recumbent board Weight – infant scale	Dry diaper or light clothing - onesie
2 – 5 years	Height – stadiometer Weight – adult scale	Light clothing

The **standard is to take a standing height measurement for children between 24 and 36 months** of age. If you can't get a height at this age:

- Document the length in Client Services.
- Client Services will plot length measurements on the 24 – 36 month growth charts.
- Client Services won't identify risks based on length measurements taken between 24 and 36 months.
- Length/Age (24-36 mos.) and Weight/Length (24-36 mos.) charts are for education only.

Accurate measurements are important! Review the online **Anthropometric module** at:
<http://dohmedia.doh.wa.gov/wictraining/anthropometrics/index.html>

The Growth Chart Conversation

Listen to a personal experience about a doctor sharing growth information.

Hear how **WIC Connects skills** could have made the conversation easier and more meaningful.

See the “Tips for Talking with Caregivers about Growth Charts” in the Appendix.

Answer the following questions and share with a partner:

1. How do WIC Connects skills make the growth chart conversation easier for you and more meaningful for caregivers?
2. What words or phrases could you use for each of the WIC Connects skills listed below during the growth chart conversation?
 - Open-ended questions:
 - Affirmations:
 - Reflections:
 - Summaries:

“I would have felt heard and valued as a parent. My doctor would have come along side me to have a conversation about my daughter’s health and growth.”

See these tools in the Appendix:

- ❖ Tips for Talking with Caregivers about Growth Charts
- ❖ Steps for the Growth Chart Conversation

Transitioning to the new charts

Here are some things to consider as we transition to the new charts:

The infant or child **may not look different** to you or the caregiver, **but** he or she **plots at a different percentile on the WHO growth chart.**

- Try framing the new charts with the caregiver.
- See the “Tips for Talking with Caregivers about Growth Charts” in the Appendix.



The child has a **new risk**

- Be sure to press the “Identify New Risks” button on the Measures Tab to assign growth-related risks during the eligibility period.
- You can add new risks at any time.
- See “Assess Nutrition Risk” in Volume 1, Chapter 14 – Nutrition Risk Criteria

The child **becomes high risk** during the certification

- Be sure to press the “Identify New Risks” button on the Measures Tab to assign growth-related risks during the eligibility period.
- Refer to the nutritionist for a high risk care plan when there are more than 60 days (2 months) left in the eligibility period.
- If there aren’t 60 days left in the eligibility period, you don’t have to refer to the nutritionist (but it’s best practice).
- See “Determine High Risk Status” in Volume 1, Chapter 14 – Nutrition Risk Criteria.

The child was high risk and is **no longer high risk**

- Make sure no other high risk factors apply.
- Write a note in the client’s file about the change from high risk status.
- The risk can’t be removed.
- The client isn’t required to see the nutritionist for a high risk care plan.
- See “Determine High Risk Status” in Volume 1, Chapter 14 – Nutrition Risk Criteria.

Implementation

The WHO charts will be in Client Services Version 7.2 on **Wednesday, September 26, 2012**.

Where to get Help

1. Call CIMS Support for Client Services questions: 1-800-841-1410, press 7.
2. State WIC Manual: Volume 1, Chapter 9 – Anthropometrics and Chapter 14 – Nutrition Risk Criteria. We will post these two chapters on the website by September 26th.
<http://www.doh.wa.gov/PublicHealthandHealthcareProviders/PublicHealthSystemResourcesandServices/LocalHealthResourcesandTools/WIC/PolicyProcedures.aspx>
3. Call Local Agency Technical Assistance (LATA) for policy or risk questions: 1-800-841-1410, press 0 and ask for LATA.

Resources

See the list of references located in the Appendix.

Practice Ideas

We know it may take time to feel comfortable using these new tools; whether it's a new growth chart or new participant-centered growth chart conversations.

Here are some ideas to practice using WIC Connect skills when sharing growth information.

- Think about a growth chart conversation that went well. What do you think made the conversation go well? Share your thoughts with a partner.
- Think about a challenging growth chart conversation you may have had in the past. Work with a partner to practice using some of the WIC Connect skills you think might make the conversation go better.
- Identify a growth chart conversation with a caregiver between now and your next staff meeting that goes well and share with your co-workers the words that feel comfortable and connect with you and the caregiver.



Appendix

CDC-WHO Growth Charts

Resources

Resource	Where to Find
WIC Manual Volume 1, Chapter 9 – Anthropometrics	http://www.doh.wa.gov/portals/1/Documents/Pubs/960-105-Volume1Chapter9.pdf
WIC Manual Volume 1, Chapter 14 – Nutrition Risk	http://www.doh.wa.gov/portals/1/Documents/Pubs/960-105-Volume1Chapter14.pdf
WIC Online Course - Anthropometrics	http://dohmedia.doh.wa.gov/wictraining/anthropometrics/index.html
WHO Growth Chart Training (CDC)	http://www.cdc.gov/nccdphp/dnpao/growthcharts/who/index.htm A helpful training with lots of background about why the new WHO charts are an improvement.
Center for Disease Control and Prevention (CDC) website	http://www.cdc.gov/growthcharts/who_charts.htm “WHO Growth Standards Are Recommended for Use in the U.S. for Infants and Children 1 to 2 Years of Age”
Morbidity and Mortality Weekly Report (MMWR)	http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5909a1.htm?s_cid=rr5909a1_w “Use of WHO and CDC growth charts for children aged 0-59 months”
WA WIC Table of Risk Changes	WIC CDC-WHO Training materials, page 12.
American Association of Pediatrics journal article	http://pediatrics.aappublications.org/content/128/4/e786 “Parental Perceptions of Weight Terminology That Providers Use With Youth”
Wall Street Journal – Health Journal article	http://online.wsj.com/article/SB10000872396390443437504577544861908329668.html?mod=WSJ_article_comments#articleTabs%3Darticle “Is Baby Too Small? Charts Make it Hard to Tell”



We know parents enjoy talking about their kids. The conversation about growth is a great opportunity to connect with parents, show them how their child is growing and hear their thoughts and feelings about their child's growth.

Here are some tips to help you talk with caregivers about the new growth charts and have a meaningful conversation about growth.

Talking about the new growth charts:

If you would like to let caregivers know WIC is using new growth charts, here are some things you might say:

- Would you like to see how your child is growing? WIC is using new and improved growth charts.

If the caregiver is interested in more details:

- On the new growth charts, your child's growth may plot a little differently than before. These charts:
 - Use measurements from babies and children that were breastfed. Breastfeeding is the standard for infant feeding. (The past charts used mostly formula fed babies and children). **OR**
 - Include children from many different countries and ethnic backgrounds. **OR**
 - Had specific rules for which children were included; for example babies were full term, breastfed for one year and their moms didn't smoke during pregnancy. **OR**
 - Are used by doctors and other health programs.

Talking about growth:

Using WIC Connects skills can help with the growth chart conversation, especially if the topic is sensitive. Here are some examples of how to use WIC Connects skills when talking about growth.

Open-ended questions - Ask a question that leaves room for the caregiver to respond with his or her thoughts, feelings or ideas.

- What are your thoughts about Johnny's growth?
- What questions or concerns do you have?
- What has your doctor said about Lily's growth?

Affirmations – Share a genuine, supportive statement about the caregiver or child to open the conversation.

- Your child is growing great.
- You work hard to make sure Sally gets the foods she needs to grow well.
- You are interested in how your child is growing.

Reflections – Repeat or paraphrase what the caregiver says to show you are listening. Check your understanding of what she said or is feeling.

- Your doctor is concerned about Kayla's growth but she looks great to you.
- You're working hard to feed her well, but she just isn't gaining weight.
- People keep saying your child is too big, and you're tired of hearing that.

Summaries – Reinforce what the caregiver is saying and show you have heard her thoughts

- Let me see if I understand, your doctor is not concerned about Jake's growth, but you're not sure. You are concerned that he is too heavy. Did I get that right?
- So in your view Ryan is eating well and growing, as he should be. You and your husband are both small, so it fits that he is small too. You are satisfied with his growth. Did I get it all?



Steps for the WIC Conversation about a Child's Growth

WIC shares growth information with caregivers so they can see how their infant/child is growing. We also want to hear if the caregiver has any questions or concerns about growth so we can help them identify their own solutions and goals.

	<i>Steps</i>	<i>Examples</i>
1.	Develop a relationship with the caregiver. <ul style="list-style-type: none"> Start with something positive and specific. Give sincere and genuine affirmations. 	You do a great job caring for your child. Janie is so smart. Look at how she looks at you. She sure loves her mom!
2.	Ask if the caregiver has any concerns with her child's growth. Use reflective listening to show you have heard what the caregiver is saying or feeling about her child's growth.	What questions or concerns do you have about your child's growth? What do you think has contributed to it? (baby was sick, etc.) What does your doctor say about his growth? You feel Janie is growing perfectly.
3.	Ask for permission to share the growth charts with the caregiver.	Would you like to see how your child is doing on the growth charts?
4.	Briefly describe how the child is growing on each growth chart.	Growth charts show how kids grow compared to other kids the same age. When we compare Janie's growth to other kids the same age, her length for her age is at the 5 th percentile and her weight for age is at the 5 th percentile. When we compare her weight to other kids her length, she is between the 25 th and 50 th percentile.
5.	After sharing information about the growth charts ask if the caregiver has questions.	What are your thoughts about Janie's growth? Is this what you expected to see?
6.	Use the information gathered to determine where to take the conversation next.	