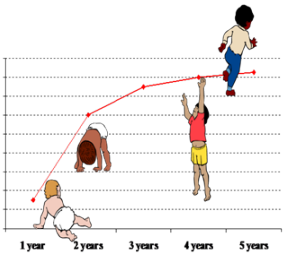
Implementation of the New WHO Charts in TWIST: Questions about Conversion



New growth charts from the World Health Organization (WHO) are available in TWIST for children from birth through 23 months of age. Here are some clarifications regarding the implementation of these new tools for monitoring children's growth:

Accessing WHO Charts:

- **How do I access the new WHO charts in TWIST?**
  Select the "View Graph" button on the medical data screen just as you currently do.

- **What options will display on the dropdowns when I go to "View Graphs" in TWIST?**

Participant Age	Charts
Birth through 23 months	Head Circumference (0-36 months) WHO Length for age (0-23 months) WHO Weight for age (0-23 months) WHO Weight for length (0-23 months)
24 to 36 months	BMI for age (2-6 years) Head circumference (0-36 months) Height for Age (2-6 years) Length for Age (0-36 months) Weight for Age (0-36 months) Weight for Age (2-6 years) Weight for Length (0-36 months) WHO Weight for Age (0-23 months) WHO Length for Age (0-23 months) WHO Weight for Length (0-23 months)
36 to 60 months	BMI for age (2-6 years) Height for Age (2-6 years) Weight for Age (2-6 years) Weight for Height (2-6 years) WHO Length for age (0-23 months) WHO Weight for age (0-23 months) WHO Weight for length (0-23 months)

- **How can I tell the difference between the WHO and the Center for Disease Control (CDC) charts in the dropdown list?**
  WHO charts will have "WHO" before their name. CDC charts will be listed as they are currently.

- **Why are the WHO charts the only charts available for children from birth through 23 months?**
  WHO charts replace all CDC growth charts that we used to view for this age group.

- **Why are the WHO charts listed on the dropdown for older children?**
  This allows historical data to be referenced as needed for the older child.

- **Will adjusted age graphs be available for preterm infants?**
  Yes, they will now be plotted on the WHO charts from birth through 23 months.

- **Can I print WHO charts from TWIST?**
  Yes, there is no change in the printing process for growth charts.

Characteristics of WHO Charts:

- **What will the WHO graphs look like?**
  They look very similar to the current CDC charts except that there are two additional lines for the 2^{nd} and 98^{th} percentiles.

- **How will the height and weight measurements from before the addition of WHO charts look on the medical data screen in TWIST?**
  Measurements and percentiles from past visits will continue to display based on the data entered and calculations that were done at the past appointment.

- **Will these past measurements show on the WHO chart?**
  Yes, the past measurements will plot on the WHO charts along with the current measurements. The percentiles plotted on the WHO chart may vary slightly from the percentiles that are displayed on the medical data screen since those calculations were based on CDC data.

- **How is age calculated for graphing on the WHO charts?**
  Age will continue to be rounded up or down to the nearest month as it is currently.

- **How will TWIST handle the transition from WHO to BMI charts at 24 months?**
  TWIST will plot WHO charts through the 23rd month. TWIST will begin plotting BMI for age when TWIST determines that the child's age is 24 months and the child's height measurement is standing. Some rounding of the age calculation occurs so occasionally this shift happens a little before the actual birthday. When a recumbent length is taken between the ages of 24 and 36 months, the CDC weight for length charts would be used instead of BMI for age.

- **Why does the standing height also show up on the length for age chart for children from 24 to 36 months old?**
  This is a known issue and will be corrected in the future. At this time, focus on the height for age and BMI for age when assessing graphs for children with standing heights.

- **The length for age plot point for the one month old infant looks a little off …what's up with that?**
  Good catch! This is the one graph line that appears slightly lower than expected following conversion. However, the percentile calculation and display on the medical data screen as well as the risk assignment are correct.

Risk Assignment related to WHO Charts:

- **How does TWIST assign growth related risks? Are they based on the new WHO charts?**
  Risk assignment and graphing are two different processes. TWIST uses the measurements entered on the medical data screen to complete calculations that assign risks and to create growth charts. Although the same measurements are used, the processes are separate from one another.

- **Will I need to manually delete growth related risks?**
  If measurements are entered incorrectly on the medical data screen, risks will be assigned based on that data. When the data is corrected, any risks generated by the original entry will need to be manually deleted as TWIST will not remove any risk once it is assigned. It is a good idea to double check risk assignment to confirm that it is accurate.

- **Will I need to manually add growth related risks?**
  TWIST has been programmed to assign these risks so manual assignment is not necessary.

- **Why do I sometimes see a percentile on the medical data screen that looks like it should qualify for a risk but TWIST has not assigned one?**
  The calculations that occur behind the scenes for risk assignment are more accurate than the percentile number displayed on the medical data tab. For example, the calculation might result in an exact percentile of 94.8% which would not assign a risk where the cutoff is 95% but the display would round up to show 95%. The risk is assigned from the calculation so it is correct.

- **When should I measure a child standing up or lying down to get the correct risk assignment?**
  Since WHO charts are based on recumbent measurements, continue to measure all infants and children from birth through 23 months lying down. The TWIST default changes from recumbent to standing on the child's second birthday.

  Continue to measure children age 24 months and older standing up and assess their growth on the BMI chart or CDC height for age chart. For children over 24 months of age, TWIST will only assign weight related risks when standing heights are present.

  Children who are unable to stand between 24 to 36 months of age can be measured lying down and have their growth assessed on the CDC length for age chart. For children over 36 months old who need to be measured recumbently, length will be graphed on the CDC height for age chart. There is no recumbent length chart in TWIST for this age group.

  See the following table for a summary of charts available for growth assessment when using recumbent vs. standing measurements:

Participant Age	Measurement Technique	Available Charts
Birth through 23 months	Recumbent	WHO Length for Age (0-23 months) WHO Weight for Length (0-23 months)
24-36 months	Standing	Height for Age (2-6 years) BMI for Age (2-6 years)
24-36 months	Recumbent (special circumstances only)	Length for Age (0-36 months) Weight for Length (0-36 months)
36-60 months	Standing	Height for Age (2-6 years) BMI for Age (2-6 years)
36-60 months	Recumbent (special circumstances only)	Height for Age (2-6 years) ** Weight for Height (2-6 years) **

  ** There is no recumbent length chart in TWIST for this age group so length is plotted on the height for age chart. When assessing growth in this situation, note that recumbent measurements tend to be longer than standing measurements.

- **Who should I call if I have more questions about risks or growth charts?**
  Contact Vernita Reyna or your nutrition consultant if you have additional questions.