

# WHO Set 2 Growth Charts for Connect Care

## Frequently Asked Questions:

### World Health Organization (WHO) Growth Charts for Canada Set 2 (WHO Set 2) for Growth Monitoring in Connect Care

#### What are the WHO Set 2 growth charts?

The WHO Set 2 growth charts were released by the Canadian Collaborative Group (comprised of Dietitians of Canada, the Canadian Pediatric Society, the College of Family Physicians of Canada, Community Health Nurses of Canada, and the Canadian Pediatric Endocrine Group) in 2014. Both the Canadian Pediatric Endocrine Group (CPEG) and WHO Set 2 growth charts are adapted from the same WHO data.

#### Why is Alberta Health Services transitioning to WHO Set 2 growth charts?

The change from CPEG growth charts to WHO Set 2 growth charts was initiated in 2013 when the Canadian Pediatric Endocrine Group (CPEG) began recommending the use of WHO Set 2 growth charts. Meditech users will be the last in AHS to transition from CPEG (growth charts in Meditech which were unable to be updated) to WHO Set 2 growth charts and this change will coincide with launch 8 of Connect Care in May 2024.

#### How are the WHO Set 2 growth charts different from the CPEG growth charts?

The WHO Set 2 growth charts are similar to CPEG growth charts with the following minor differences in percentiles.

- **Chart: Birth–24 Months Weight-for-length**
  - The 85<sup>th</sup> percentile line is displayed on the WHO Set 2 growth chart, whereas the 90<sup>th</sup> percentile is displayed on the CPEG growth charts.
  - The 99.9<sup>th</sup> percentile line is displayed on this WHO Set 2 growth chart but not on the CPEG growth charts. The 99.9<sup>th</sup> percentile may be a useful marker in some clinical situations.
- **Chart: 2–19 years BMI-for-age**
  - The 99.9<sup>th</sup> percentile line is displayed on this WHO Set 2 growth chart but not on the CPEG growth charts. The 99.9<sup>th</sup> percentile may be a useful marker in some clinical situations.

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- **Chart: 2-19 years: Weight-for-age**
  - The CPEG chart uses a solid percentile line after age 10, while the WHO Set 2 chart uses a dotted line after age 10. The dotted line intends to emphasize that monitoring weight for age alone is not recommended.

### I see percentiles and z-scores in Connect Care. What should I use?

Z-scores are used in acute care settings for pediatric malnutrition screening. **Z-scores do not need to be used in public health settings** as any measurement < 3<sup>rd</sup> or > 97<sup>th</sup> percentile would flag further assessment and/or referral.

A z-score is a statistical measure (i.e., the number of standard deviations) that identifies how a child plots amongst other children of the same age and sex, whether it be above or below the median value. Z-score values of -2, 0, and +2 correspond to the 3<sup>rd</sup>, 50<sup>th</sup>, and 97<sup>th</sup> percentiles, respectively.

### Will Connect Care populate historical growth data points from Meditech?

No, historical growth points are not universally available in Connect Care. Some zones have entered historical data from Meditech. If the growth data from Meditech has not been entered into Connect Care manually prior to a child's appointment, the healthcare provider can open Meditech (as read-only access until February 2026) to view the previous CPEG growth chart and data points. They can then compare the two growth charts to determine if the new data points fit within the growth trajectory or not. Where relevant, the healthcare provider may choose to enter historical data points into Connect Care. See the Connect Care Knowledge Library on Insite and search Growth Chart Quick Start Guide.

### Why do I see a variety of different growth chart options in Connect Care?

While you will see a variety of different growth chart options in Connect Care, the recommended growth chart is the WHO Set 2.

Condition-specific growth charts (e.g., Down's syndrome) are available in Connect Care and may be used by healthcare providers in specialty clinics in conjunction with the standard WHO Set 2 growth chart to provide further information on the overall growth assessment, as condition-specific growth charts while carefully produced, may not reflect optimal growth.

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### In Connect Care, why do the growth measurements automatically plot on a Fenton preterm growth chart for some *term* infants?

Connect Care currently defaults to the Fenton preterm growth chart for both term and preterm infants until 50 weeks postmenstrual age (gestational age + postnatal age). This is due to a configuration limitation where the Growth Chart Activity cannot default to a growth chart based on a patient's gestational age. An upgrade is scheduled for 2025 that will allow the Fenton chart to be the default for preterm infants, and WHO Set 2 for term infants.

At this time, healthcare providers can manually toggle to the WHO Set 2 growth chart in the Growth Chart activity by selecting it from the Reference Data Set drop down list. Unfortunately, this will not adjust the After Visit Summary (AVS) or other tools that use the default growth chart settings. Refer to the Growth Chart Quick Start Guide found on Insite in the Connect Care Knowledge Library.

### Why do I only see chronological age growth plots for the preterm infant I am seeing?

Connect Care will calculate chronological age automatically. If the infant was born premature, on the right-hand side of the growth chart screen, click on the box “Show gestation-adjusted age.” This will allow you to see both the chronological and corrected growth measurement plots. Refer to the Connect Care Knowledge Library on Insite and search Growth Chart Quick Start Guide.

### Why does the After Visit Summary (AVS) always display the Fenton growth chart for term and preterm infants under 50 weeks postmenstrual age?

The current configuration settings in Connect Care default to the Fenton growth chart for all infants until 50 weeks postmenstrual age. This applies to the AVS and other tools and is not changed when you select an alternative growth chart from the Reference Data Set in the Growth Chart activity.

As noted above, this is scheduled to be updated in 2025. In the meantime, providers can:

- Communicate to families that while the Fenton chart is designed for preterm infants, the growth data for children less than 50 weeks postmenstrual age is similar between preterm and post-term growth references. (Fenton et al., 2013) For most infants, the differences seen when plotting on the Fenton growth chart compared to the WHO Set 2 growth chart under 50 weeks postmenstrual age will be minimal.

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- Encourage families to focus on the child's growth pattern rather than one growth measurement.
- Copy (i.e., using a snipping tool) and paste the desired growth chart (e.g. WHO Set 2) into the Patient Instructions section of the AVS or print the WHO Set 2 growth chart separately.

### How can healthcare providers reassure parents of transitioning to WHO Set 2 growth charts?

With launch 8 of Connect Care, WHO Set 2 growth charts will be used across **all** settings in Alberta which will provide better continuity of care as healthcare providers will be able to share data points and view the child's overall growth. CPEG growth charts in Meditech and WHO Set 2 growth charts in Connect Care use the same WHO data, so minor differences will be seen between the two. Healthcare providers can reassure parents that their child's growth will still be accurately assessed.

#### Examples of explanation to parents

"Both the WHO Set 2 and CPEG growth charts use the same data and the differences between them are minor. With the WHO Set 2 growth charts now available, CPEG growth charts are no longer being used. As a parent, rest assured that healthcare providers can confirm a healthy growth pattern or identify possible growth concerns using either of these charts."

**or**

"The WHO Set 2 growth charts are now being used across all Alberta Health Services settings. As healthcare providers, we are still able to see your child's previous growth and will be able to confirm a healthy growth pattern or identify possible growth concerns."

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### Is there a way to notify their primary care provider of the growth measurements?

Yes. Embedded into Connect Care is the Growth Assessment Letter template (AHS AMB PPH Growth Assessment).

### Additional resources related to growth monitoring

- [Childhood Growth Monitoring](#)
- [Growth Charts – Infants, Children, & Youth](#)

### Reference

Fenton TR, Nasser R, Eliasziw M, Kim JH, Bilan D, Sauve R. Validating the weight gain of preterm infants between the reference growth curve of the fetus and the term infant. BMC Pediatr. 2013;13(1):92.

