6.1.3 Growth Monitoring

6.1.3.1 Conducting weight assessment in infants and children 0-2 years

Aim
To correctly measure, interpret and monitor the weight of infants and children up to 2 years of age.

Background
Monitoring of growth is an important means to identify whether a child is growing and developing normally or deviating from normal parameters. Growth monitoring is especially important during infancy to detect and monitor slow or excessive growth, check the impact of illness and treatment, and to identify or monitor those at higher risk.¹

For growth monitoring to be meaningful, serial measurements should be taken and plotted onto a growth chart over a period of time.² Along with growth measurement, the child should always be assessed according to their overall health, wellbeing, and developmental progress. Consideration of the combined factors of overall rate of growth, or growth trajectory, the actual position on the growth chart, and clinical judgement, including a knowledge of the child’s history, are required to determine whether further investigation is required.³

Additional monitoring should be conducted and referral should be considered when the direction of growth falls downwards or tracks upwards within or across a percentile, or if weight plateaus.⁴, ⁵

Nutrition and health status affect weight and overall growth and development. The normal growth velocity pattern in infants includes a rapid increase in growth within the first 4 – 6 months of life, when an infant generally doubles their birth weight. By 12 months of age, an infant’s weight has generally tripled from birth, and naturally tapers off from the initial rapid increase.⁶

The measurement of weight provides an overall measure of body size but does not distinguish between fat, muscle and fluid composition.

For further information on growth issues Community health professionals (CHPs) should refer to the Community health policy, procedure and guidelines manual:

- 3.4.1 Growth in childhood
- 3.4.2 Growth faltering
- 3.4.3 Overweight and obesity
Policy
Assessment of weight is offered and conducted with parent/carer consent at all Universal child health scheduled contacts.

Targeted weight assessment will be conducted at any contact where there is parent/carer and/or professional concern regarding growth, or an identified risk.

For children participating in the Enhanced Aboriginal Child Health Schedule, weight assessment is offered and conducted with parent/carer consent at each scheduled contact before 5 years of age.

Key points
- To be performed by staff with appropriate training and assessment skills.
- Weight status in infants and children must be assessed using age and sex specific reference values.
- Nutrition and health status affect weight and overall growth and development.
- To ensure weight measurement accuracy, reliable and sensitive equipment must be used along with good technique. Small errors during the measuring, recording or plotting can have a large impact on the infant and or child’s growth assessment.
- Weight is most accurately measured without clothing for this age group.
- Scales must be cleaned after use for each child, according to manufacturer’s recommendations and organisational policy guidelines.
- Community health staff must follow the organisation’s overarching infection prevention and management policies and perform hand hygiene in accordance with WA Health guidelines at all appropriate stages of the procedure.

Equipment
- Calibrated digital scales with a motion detector and stabiliser.
- Scales must be checked at least annually, using the process outlined in Appendix 1. Manufacturer’s guidelines must be followed with regard to calibration, servicing and transportation of scales.
- The scales must weigh up to 20 kg and be large enough to support a 2 year old child. The scales must be capable of measuring 5 gram increments.
- Other devices, such as for stature/length measurement, must not be attached to the scales.

Procedure

<table>
<thead>
<tr>
<th>Steps</th>
<th>Additional Information</th>
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<tbody>
<tr>
<td>1. Explain the procedure to the parent/carer, and the child where relevant. Allow sufficient time for</td>
<td>Encourage parent/carer support and involvement with the procedure where</td>
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NSQHS Standards: 1.7, 1.8
discussion of parent concerns. Obtain verbal consent to proceed.

2. Preparation:
   - Place a sheet/paper towel on the scale.
   - Child will be undressed and nappy removed.

3. Measuring:
   - Turn scale on and ‘tare’ to zero.
   - Ask the parent to place the child on the scales centrally so that weight is evenly distributed.
   - A child under 2 years who can stand independently may be weighed using either infant or platform scale (refer to procedure 6.1.5.2 for further information on platform scales)

4. Recording:
   - Follow the manufacturer’s guide to read the weight recording (some scales may take time to give a stable reading).
   - Plot results on the appropriate weight for age and gender growth chart.
   - Record weight to the nearest 10 grams (0.01 kg).
   - Plot exact age, to the nearest week.
   - Use dots to plot but do not join the dots with a line.
   - Document if the child is in plaster, a harness, or any other item unable to be removed, which may impact on results.
   - For premature children born before 37 weeks gestation, corrected age should be used on standard growth charts until 2 years of age (or until the child ‘catches’ up, whichever is sooner).
   - For very premature infants, growth should be plotted on prematurity charts until the infant reaches their expected due date.
   - There will be a staggered uptake of WHO growth charts over the course of 5 years.
   - Newborns from 2014 will be plotted onto the WHO charts located within the PHR and the Child health record.
   - Children new to the service in 2014, where a new Child health record is established, should be plotted onto the WHO growth charts within that record.
   - Infant’s growth will only be plotted onto ONE type of growth chart.

   *If they begin on CDC they stay on CDC.*
   *If they begin on WHO they stay on WHO.*
5. Explain growth plotting to parents/carer.
   - Interpret the growth chart with regards to the pattern of growth trajectory.
   - Identify tracking changes within or across percentiles.

Staff should refer to 3.4.1 Growth in childhood located within the Community health policy, procedures and guidelines manual and the Using WHO growth charts quiz for guiding information on interpretation of growth charts.

**Outcome**

Measuring and recording weight onto growth charts helps to confirm the impact of positive parenting practices.

It also assists in identification of deviations from the norm such as growth faltering or excessive weight gain.

Where a deviation is identified, staff should undertake review of the child’s feeding pattern or food intake.

Close monitoring should be in place for children where weight/length is less than 3rd centile or greater than 97th centile, although they do not necessarily indicate a problem.

The use of clinical pathways allows a comprehensive and evidence-based guidance for practitioners to help identify, manage and refer appropriately. For weight faltering or rapid weight gain staff should refer to the clinical pathway for further assessment and treatment: [Universal Child Health Services: Weight and Growth Referral and Follow Up](#).

**Referral pathway**

Discuss any abnormal findings with the parent / carer and seek verbal consent for referral to a medical practitioner using the CHS 663- Referral from Community Health form.

Further monitoring and referral should occur where there is:

- unexplained weight loss or weight not regained following illness
- weight or height plateau
- weight for age/ length for age where trajectory tracks downwards or tracks upwards within or across a percentile on growth charts.

Additional referral to a dietitian or lactation consultant may be considered, dependant on individual requirements and local area availability.
6.1.3 Growth monitoring

Useful resources

- Using WHO growth charts quiz
- Royal Children’s Hospital Melbourne Child Growth learning resource

Policy Owner | Portfolio
---|---
Director - Statewide Policy Unit. | Birth to School Entry

References


Appendix 1.

Routine checking of baby scales

Key points

- Routine checking of scales must be conducted at least annually.
- Scales which are moved regularly do not require additional checking if transported with due care.
- Scales must also be checked each time the battery is replaced, and wherever there is professional concern.
- Staff must comply with Area Health Service OSH guidelines for all manual handling aspects of the scales checking process and adhere to manutention principles to minimise risk of injury.

Note: Manufacturer’s recommendations must be followed with regard to transportation, servicing and calibration of scales.

Equipment

Set of standard weights: 100 grams, 1000 grams and 5000 grams.

Procedure

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<tr>
<td>1. Test the zero set.</td>
<td>This should be read zero +/- 1 unit. If the scales lowest measure is to 0.1 of a gram, the zero set should be 0.0 +/- 0.1 gram.</td>
</tr>
<tr>
<td>2. Check the accuracy of the 100 gram weight:</td>
<td>This should read: 100.0 grams +/- 0.5 grams.</td>
</tr>
<tr>
<td>- Place the 100 gram weight on the scales.</td>
<td></td>
</tr>
<tr>
<td>3. Check tare function:</td>
<td>This should now read: 0.0 grams +/- 0.1 grams.</td>
</tr>
<tr>
<td>- With the 100 gram weight still on the scales, press &quot;tare&quot; operation.</td>
<td></td>
</tr>
<tr>
<td>4. Check accuracy of 1000 grams:</td>
<td>This should read: 1000 grams +/- 5 grams.</td>
</tr>
<tr>
<td>- Place the 1000 gram weight on the scales.</td>
<td></td>
</tr>
<tr>
<td>5. Check accuracy of 5000 grams:</td>
<td>This should now read: 0.0 grams +/- 0.1 grams.</td>
</tr>
<tr>
<td>- Remove 1000 gram weight and press ‘tare’ to reset.</td>
<td></td>
</tr>
<tr>
<td>- Place the 5000 gram weight on the scales.</td>
<td>This should now read: 5000 +/- 25 grams.</td>
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6. Where there is any discrepancy in readings, repeat the test.  
   - If discrepancy persists on retest, forward the equipment for repair.  

| Equipment requiring repair may be forwarded to Biomedical Engineering department, or to the manufacturer. |

7. Record date of check and attach to back of scales.  
8. Record date of battery change.