**PROCEDURE**

<table>
<thead>
<tr>
<th>Height assessment 2 - 5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scope (Staff):</strong> Community health staff</td>
</tr>
<tr>
<td><strong>Scope (Area):</strong> CACH, WACHS</td>
</tr>
</tbody>
</table>

This document should be read in conjunction with this [DISCLAIMER](#).

**Aim**

To correctly measure and interpret the standing height of children two to five years of age.

**Risk**

The accurate measuring of height is an integral part of growth assessment. Failure to undertake height assessments or obtaining inaccurate height measurements may delay the identification of significant growth deviations for a child.

**Background**

Assessment of growth identifies whether a child has age appropriate growth or is deviating from normal parameters. For assessment of growth to be meaningful, serial measurements should be taken and plotted onto a growth chart over a period of time.\(^1\) Growth assessment is especially important during early childhood to detect and monitor slow or excessive growth, check the impact of illness and treatment, and to identify or monitor those at higher risk.\(^2\)

**Key Points**

- To be performed by community health staff with appropriate training and assessment skills.
- Height assessment is routinely offered as a component of the universal contact 2 years.
- For children receiving the Enhanced Aboriginal Child Health Schedule, height assessment is offered and conducted at each scheduled contact from 2.5 years until 5 years of age.
- Height assessment should also be offered and conducted at any Universal plus contact or drop in session over two years of age, where there is parent and/or professional concern regarding growth, or any other identified risk.
- Height status in children over the age of two years should be assessed using age and sex specific reference values.\(^3\)
- Standing height measurement is recommended for children over the age of two years.
• For children close to two years of age, standing height may be measured rather than recumbent length, if appropriate for the individual. Note: if BMI is to be calculated, children must be two years of age or older.

• It is important to record whether length or height stature has been measured when documenting findings. Recumbent length is approximately 1 – 2 centimetres (cm) greater than standing height.

• To ensure height measurement accuracy, reliable and sensitive equipment should be used along with good technique. Small errors during the measuring, recording or plotting can have a significant impact on the child’s growth assessment.

• Community health staff are to follow policy and procedures relating to infection control and perform hand hygiene in accordance with Western Australian Health guidelines at all appropriate stages of the procedure.

**Equipment**

• Height measurer consisting of a vertical metric rule or a correctly installed stadiometer ('pull down' measure) designed for the intended purpose.
  
  • A height measurer consists of a vertical board with an attached metric ruler and a moveable horizontal headboard.
  
  • Where ever possible, use a pull down headboard that is spring loaded to apply sufficient pressure to compress hair.
  
  • There should be a non-compressible flat even floor base on which the child stands.
  
  • The graduations on the height measurer should be at 0.1 cm intervals and the metric rule should be at least 220 cm.

**Procedure**

<table>
<thead>
<tr>
<th>Steps</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation</strong>&lt;br&gt;Explain the procedure to the parent and child. Allow sufficient time for discussion of concerns.</td>
<td>Encourage parent support and involvement with the procedure where possible.</td>
</tr>
<tr>
<td><strong>Preparation</strong>&lt;br&gt;• Explain the stadiometer/height measurer to the child and how you are going to use it to see how tall they are.&lt;br&gt;• Assist the child in removing their hat, shoes, socks, hair/head accessories.&lt;br&gt;• Position the child under the stadiometer facing away from the equipment or wall.</td>
<td>If the child is hesitant, measure the parent first where possible.</td>
</tr>
<tr>
<td>Steps</td>
<td>Additional Information</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Measuring</strong></td>
<td>Foot markers are useful to assist in correct placement of the child’s feet.</td>
</tr>
<tr>
<td>• Ask or assist the child to stand; with bare feet close together, legs straight, arms at sides, eyes straight ahead and shoulders relaxed.</td>
<td>The child’s head must be positioned in the Frankfort plane. The Frankfort plane is achieved when the lower edge of the eye socket ( Orbitale) is in the same horizontal plane as the notch above the flap of the ear ( Tragion).</td>
</tr>
<tr>
<td>• Ask the child to take a big breath in and out to relax.</td>
<td>(Reproduced with permission from Marfell-Jones et al., 2006).</td>
</tr>
<tr>
<td>• Check that their arms are still by their sides, knees straight, heels on the floor and shoulders relaxed.</td>
<td>If the two measurements disagree by 0.5 cm or more, take a third measurement and calculate an average from the two closest measurements.</td>
</tr>
<tr>
<td>• Check there are three contact points between the body and the stadiometer; shoulder blades, bottom and heels.</td>
<td></td>
</tr>
<tr>
<td>• Bring the measuring device down to rest on the child’s head to obtain height measurement.</td>
<td></td>
</tr>
<tr>
<td>• Ask the child to step off and step back onto the stadiometer and record a second measurement. Take an average of these two measurements.</td>
<td></td>
</tr>
<tr>
<td><strong>Recording</strong></td>
<td></td>
</tr>
<tr>
<td>• Record the height to the nearest 0.1 cm.</td>
<td></td>
</tr>
<tr>
<td>• Plot the height on the appropriate height for age and gender chart.</td>
<td></td>
</tr>
<tr>
<td>• Record that standing height/stature has been measured.</td>
<td></td>
</tr>
<tr>
<td>• Ensure documentation of any factors which may have interfered with accuracy in measurement.</td>
<td></td>
</tr>
</tbody>
</table>
Interpretation

- Interpret the growth chart with regard to the pattern of growth trajectory.
- Discuss findings with parents and expected growth patterns.

Interpretations of measurements are to be done in conjunction with a holistic assessment.

Serial measurements showing changes in the growth trajectories or unexpected movement on the curves, requires additional curves, requires additional assessment and/or referral.

For more information refer to the *Growth birth – 18 years, Growth faltering, Overweight and obesity, Body Mass Index assessment – child health* and *Body Mass Index assessment – primary school* guidelines.

Referral pathway

If required, refer to a medical practitioner.

Documentation

Community health staff will document relevant findings according to local processes.

References


Related internal policies, procedures and guidelines

The following policy documents can be accessed in the Community Health Manual via the HealthPoint link and Internet link

- Body Mass Index assessment – child health
- Body Mass Index assessment – primary school
- Growth birth – 18 years
- Growth faltering
- Overweight and obesity
Height assessment 2 - 5 years

Physical assessment 0 – 4 years
Universal contact guidelines
Weight assessment 0 – 2 years

Related internal resources and forms

The following resources and forms can be accessed from the HealthPoint CACH Intranet link

Body Mass Index Boys (CHS430B)
Body Mass Index Girls (CHS430A)
How children develop
Practice Guide for Community Health Nurses
World Health Organization Charts (CHS800A series)

Useful resources

Royal Children's Hospital Melbourne Child Growth learning resource

This document can be made available in alternative formats on request for a person with a disability.

Document Owner: Director Clinical Services Community Health
Reviewer / Team: Clinical Nursing Policy Team
Date First Issued: Jan 2014
Scheduled Review Date: July 2020
Last Reviewed: July 2017 (minor amendment/s: May 2017; 18.10.2018)
Approved by: CACH/WACHS Community Health Clinical Nursing Policy Governance Group
Endorsed by: Executive Director CACH
Date: 31.07.17
Standards Applicable: NSQHS Standards: 1.7, 1.8

Printed or personally saved electronic copies of this document are considered uncontrolled