



6.1 Physical assessment

6.1.3 Growth assessments

6.1.3.6 Healthy growth assessment for primary school aged children

Table of contents	Page
Aim	2
Background	2
Key points	3
Equipment	4
Procedure	5
1. Identify need for growth assessment	5
2. Parent/carer consent and engagement	5
3. Conduct height, weight, BMI assessment	7
4. Calculate BMI, percentile and weight category	8
5. Documentation	8
Considerations when interpreting BMI-for-age weight status results	9
Outcome	9
Referral pathway	11
Related policy, procedures and guidelines	12
Useful resources	12
References	14
Appendices	
Appendix A: Equipment	16
Appendix B: Talking with parents about children's weight	18
Appendix C: Health messages for parents	19
Appendix D: Risk and protective factors for the development of childhood obesity	21
Appendix E: Flow chart SEHA weight assessment process	22
Appendix F: Flow chart Targeted weight assessment process	25



Aim

To identify children as early as possible who are overweight or obese and appropriately refer or support children and their families to make positive lifestyle changes.

It is noted that unless advised by a paediatric specialist, weight loss is not recommended for overweight children. The emphasis is on weight maintenance over time to improve weight in relation to height and age.

Background

The early identification of overweight and obesity in childhood can improve long-term physical and psychosocial health outcomes.¹ Prevention and treatment interventions are most likely to be successful when implemented pre-puberty.³ Additionally, the earlier overweight is detected in young children, the easier it is to address and correct. Intensive and longer duration programs are usually required for families where a child's weight has reached the obese range.^{2, 3}

The likelihood of overweight and obesity persisting from childhood into adulthood increases with the degree of adiposity ('fatness'), age of the child and parental obesity. A systematic review of several studies tracking childhood overweight into adulthood reported⁴:

- 85% of overweight children aged 2 - 5 years became obese adults
- Between 76% and 78% overweight children aged 9 - 11 years became obese adults
- Between 86% or 90% overweight children aged 15 -17 years became obese adults.

Research indicates that parents are poorly skilled at identifying weight concerns in their own children. Results from parent perception surveys highlight significant misalignment between parental perceptions of children's weight status and clinically robust population surveys.^{2, 5}

Weight is often viewed as a sensitive topic for parents and their children. Many parents do not perceive that their child has a weight problem, and many others are not willing to acknowledge or address weight issues.⁶ Parent involvement, however, is critical to the success of any child's weight management intervention.⁹

The way a health professional approaches the issue of childhood overweight and obesity significantly influences parents' willingness to seek help and take action. In order to engage well with parents, health professionals require a good understanding of parental views and circumstances, and a sensitive approach when broaching the issue.

The National Health and Medical Research Council (NHMRC) recommends the use of BMI scores plotted on the BMI-for-Age Percentile charts (for boys or girls) as an initial (first level) assessment to identify children who may be overweight or obese.

There are a number of considerations to be taken into account when interpreting the BMI-for-age percentiles, including; height, early or late onset of puberty, unusual body fat distribution, highly developed muscles, and ethnicity.⁷ For more information



please refer to page 9 '*Considerations when interpreting BMI-For-Age weight status results*'.

The BMI is not a diagnostic tool. It is to be used in conjunction with information about family lifestyle and health history.

BMI is a score calculated as the ratio of an individual's weight in kilograms to height in metres squared (kg/m^2). In adults, BMI measures excess body weight for height. In children, the BMI score is adjusted for age and gender (on BMI-for-Age and gender percentile growth charts), in order to account for growth and body fat changes that occur as part of normal development. The BMI percentile indicates the relative position of the child in relation to others at the same age.

Infants and young children have a relatively higher proportion of fat as a normal component of growth. During middle childhood BMI falls as children become relatively leaner, and then increases as puberty approaches and body composition approaches that of adulthood. When measuring BMI in children BMI-for-age charts must be used to interpret the measurement.⁷

Both the US Centre for Disease Control and Prevention (CDC) and the World Health Organisation (WHO) have developed BMI-for-age and gender percentile growth charts. In 2014 Western Australia introduced the WHO height and weight growth charts for the 0 to 5 years cohort. A staged introduction of these charts over a five year period commenced with babies born from January 2015 and will include the use of WHO BMI charts from 2 to 5 years when required. School aged children over 5 years of age will continue to be plotted on CDC BMI charts. It is important that children and adolescents are consistently monitored against the appropriate chart, and not across different charts.

Key points

- Staff are to be familiar with the Early Detection Guidelines *4.4.5 Overweight and obesity in primary school aged children* prior to undertaking growth assessments.
- Community health professionals working in schools are to advocate for effective health policy on physical activity and healthy eating within the school environment, based on the Health Promoting Schools Framework. This will support parents and the school community to make positive behaviour change.
- Use of newsletter items will promote healthy messages related to healthy eating and physical activity. The 'Role of the Community Health Nurse in schools' resource package (in the *Resources* section of the intranet), provides many newsletter items.
- For growth assessments conducted as part of the School Entry Health Assessment program (SEHA), consent is provided when the parents ticks 'yes' to the weight assessment on the CHS409.
- It is recommended that Community Health Nurses take steps to inform the school community of the nature and scope of the School Entry Health Assessment including the measurement of height, weight and BMI.



- For targeted growth assessments (not part of the SEHA), parental consent and engagement must be sought and recorded on the CHS142, Referral to Community Health form, prior to conducting a BMI assessment.
- When talking to parents about their child's weight, parental engagement is critical. If the parent/carer does not acknowledge a weight concern in their child, or is not ready to make changes to family behaviour or lifestyle, then staff should not pursue the conversation and/or assessment. Staff should consider providing contact details or organising a follow-up appointment instead.
- Where there are concerns that a child is obese and there is lack of parent engagement, discuss with the school principal and Health line manager. The information sheet developed by the Statewide Protection of Children Coordination Unit (SPOCC) may be useful in these circumstances. See- Department of Health WA [Information sheet 8 Child obesity and child protection](#).
- For concerns about a child over seven years of age who is potentially underweight do not conduct a growth assessment. Refer to [4.5.3.4 Early identification and management of eating disorders](#).
- Training on BMI assessment, chart plotting, sensitive communication with parents and lifestyle counselling is essential. Refer to the online training package *Talking with parents about children's weight* (see appendix B). **Staff is strongly encouraged to complete this training prior to undertaking growth assessments.**
- Targeted weight assessments for older children are to be conducted in a manner that maintains privacy and confidentiality. Parents should be invited to attend a *targeted* assessment.
- The results of the height and weight assessment must be kept confidential. No comments on height/weight should be offered during the measurement process. If the student requests results, height/weight scores can be shared but language that labels should not be used, such as too short, too tall, underweight or overweight.
- Community health professionals should practice infection prevention and management. Hand hygiene is to be performed at all appropriate stages of the procedure.

Equipment

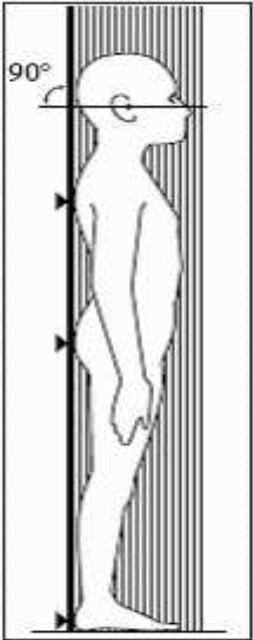
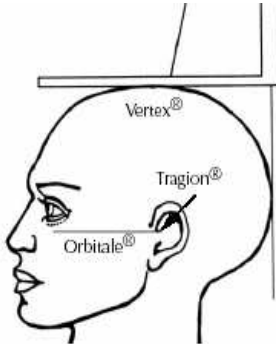
- Stadiometer or height rule
- Digital weight scale
- Calculator (may include calculator on mobile phone)

See Appendix A for further information on equipment specifications.



Procedure

Steps	Additional Information
<p>1. Identify the need for a growth assessment from either of the following pathways:</p> <ul style="list-style-type: none"> • The parent/carer accepts an offer of a weight assessment within the School Entry Health Assessment Form CHS 409. • A concern is raised by the parent/carer, teacher, student or community health professional at any other time (<i>targeted</i> assessment). 	<p>E.g. visible discrepancy in body size for age and height.</p>
<p>2. Parent/carer consent and engagement.</p> <p><u>CHS 409 Assessment</u></p> <ul style="list-style-type: none"> • Consent is provided if the parent ticks 'yes' to a growth assessment in the CHS 409. <p><u>Targeted growth assessment</u></p> <ul style="list-style-type: none"> • If a growth concern is identified by a teacher or school health staff and not ticked on the CHS 409 or it is an older child, it is essential that the parent/carer be contacted before an assessment is conducted. In this case, consent can be obtained on the CHS 142: Referral to Community Health Nurse form (which also makes provision for verbal consent). • On contacting the parent/carer, determine the following: <ul style="list-style-type: none"> ○ An acknowledgement that a possible weight issue may be present; ○ The beliefs and views on the weight issue, and concerns about the weight status of the child; and, ○ Parent/carer 'readiness' for behavioural change. 	<p>Note: Consent for health assessment is only valid within the same school year.</p> <p>If parent engagement cannot be achieved for targeted weight assessment, offer follow-up in 12 months.</p> <p>The 'Talking with parents about children's weight' on-line training package provides staff with good techniques to use when approaching parents or carers to discuss weight concerns. See Appendix B.</p>
<p>3. Conduct a BMI assessment.</p> <p><u>Setting up:</u></p> <ul style="list-style-type: none"> • Ensure that the stadiometer is correctly assembled according to manufacturer's instructions. • Ensure that the weighing scales are placed on a firm level surface with the indicator/switch on 'weight'. Follow manufacturer's guidelines if using 	<p>When conducting growth assessments as part of SEHA, a private room may not be available. However staff should consider ways of maintaining privacy and confidentiality.</p>

Steps	Additional Information
<p>the scales on carpet.</p> <ul style="list-style-type: none"> Use of a laminated template showing an outline of two feet may help orient the child to where to stand for the weight and height. Targeted growth assessments must be done in an area which ensures privacy. 	<p>Take care when disassembling the stadiometer as it may cause strain on the wrists.</p>
<p><u>Measure height:</u></p> <ul style="list-style-type: none"> Hair/head accessories may need to be removed so that positioning of the body can be seen on the stadiometer. The child must stand with weight distributed evenly on both feet, heels together, arms hanging freely by the sides and the head positioned so that the line of vision is at right angles to the body. There are usually three contact points between the body and the scale: upper back, buttocks and heels. Note: in a few individuals only two points of contact may occur (buttocks and heels). The head must be positioned in the Frankfort horizontal plane (refer to Figure 1). 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®). This technique obtains the maximum distance from the base of the stadiometer to the skull (Vertex®). This is best aligned by viewing the child from the side. To obtain consistent measure, the child is asked to inhale deeply and stretch to their fullest height while the moveable head piece is brought onto the top of the head with sufficient pressure to compress the hair. Ask the child to step away from the stadiometer and then stand back against it and take a second measurement. If the two measurements differ by more than 0.5cm then take a third measurement. Height is the average of the two closest measurements. Record the measurement in metres to the nearest 0.1 cm. For example, 108.3 cm is equal to 1.083 m. 	<p>Figure 1: The three contact points between the body and the stadiometer.⁸</p>  <p>Figure 2: The head in the Frankfort plane.</p>  <p>Source: Reproduced from Marfell-Jones et al., 2006.⁸</p> <p>Round the measurement to the nearest 0.1cm.</p>



Steps	Additional Information																
<p>Measure weight:</p> <ul style="list-style-type: none"> Request the child to remove his/her jumper, jacket, coat, shoes and empty pockets. Adjustments for clothing should only be included in calculation if adequate layers of clothing cannot be removed. Check the scale is reading zero. The student stands over the centre of the platform, with the body weight evenly distributed between both feet. Request the child to look straight ahead. Document unusual features, i.e. amputation, artificial limb. Record the measurement to the nearest 0.1 kg. For example, 18.3 kg. 	<p>Approximate weight of kindergarten/pre-primary clothing. To be used as a guide only, if required.</p> <table border="1" data-bbox="1059 472 1401 994"> <tr> <td>Zip-up jumper</td> <td>270g</td> </tr> <tr> <td>Pullover jumper</td> <td>230g</td> </tr> <tr> <td>Long sleeve cotton top</td> <td>120g</td> </tr> <tr> <td>Long sleeve top (heavier weight)</td> <td>150g</td> </tr> <tr> <td>Track pants</td> <td>230g</td> </tr> <tr> <td>Shorts (drill cotton)</td> <td>170g</td> </tr> <tr> <td>Polo t'shirt</td> <td>150g</td> </tr> <tr> <td>Socks</td> <td>30g</td> </tr> </table>	Zip-up jumper	270g	Pullover jumper	230g	Long sleeve cotton top	120g	Long sleeve top (heavier weight)	150g	Track pants	230g	Shorts (drill cotton)	170g	Polo t'shirt	150g	Socks	30g
Zip-up jumper	270g																
Pullover jumper	230g																
Long sleeve cotton top	120g																
Long sleeve top (heavier weight)	150g																
Track pants	230g																
Shorts (drill cotton)	170g																
Polo t'shirt	150g																
Socks	30g																
<p>4. Calculate BMI.</p> <p>To calculate the BMI number, weight is measured in kilograms and height is measured in metres. Enter the weight and height measurements into the formula given below and calculate the BMI.</p> <p>Formula: $BMI = \frac{\text{Weight (kg)}}{[\text{Height (m)}]^2}$</p> <p>Example: Weight: 18.2 kg Height: 1.083 m</p> $BMI = \frac{18.2}{1.083^2}$ $BMI = \frac{18.2}{(1.083 \times 1.083)}$ $BMI = \frac{18.2}{1.172}$ $BMI = 15.52$ <p>Determine the BMI-for-Age Percentile and Weight Status Category</p> <ul style="list-style-type: none"> Use 'BMI-for-Age Percentile Chart' to plot BMI number according to the gender and age, and obtain BMI-for-Age percentile. Use 'Weight Assessment Form for Girls/Boys: CHS 430A/B' to plot BMI-for-Age percentile. 	<p>For more information on BMI and Percentile charts refer to 'Associated Tools and Resources' section.</p> <p>The CDC BMI and percentile calculator for children and adolescents is a very useful tool.</p> <p>NB: Select metric version</p> <p>Remember that BMI percentiles are a guide only and are not diagnostic of weight status categories but contribute to an overall clinical impression.</p> <p>Example: A 7 year old boy with a BMI of 20 indicates the obese category (95th)</p>																



Steps		Additional Information
Weight status category*	Percentile range⁷	percentile or greater), however if he maintains his weight and a BMI of 20 at 12 years, he will be within a healthy weight range (less than the 85 th percentile).
Underweight	Less than 5 th percentile	
Healthy weight	5 th percentile to less than the 85 th percentile	
Overweight	85 th to less than 95 th percentile	
Obese	Equal to or greater than the 95 th percentile	
<p>5. Documentation.</p> <p><u>SEHA weight assessment</u></p> <p>Underweight range</p> <ul style="list-style-type: none"> • <u>CHS 409-2 Health Assessment Results</u>- include height, weight, BMI score and percentile only. • <u>CHS 430A/B</u> triplicate (x 1- Health service, x 1- parent copy, x 1- referral). <p>Healthy weight range:</p> <ul style="list-style-type: none"> • <u>CHS 409-2 Health Assessment Results</u>- include height, weight, BMI score, percentile and 'healthy weight'. <p>Overweight range:</p> <ul style="list-style-type: none"> • <u>CHS 409-2 Health Assessment Results</u>- include height, weight, BMI score and percentile only. • <u>CHS 430A/B</u> triplicate (x 1- Health service, x 1- parent copy, x 1- referral). Provide parent with CHS 430A/B only after making contact with the parent. <p>Obese range:</p> <ul style="list-style-type: none"> • <u>CHS 409-2 Health Assessment Results</u>- include height, weight, BMI score and percentile only. • <u>CHS 430A/B</u> triplicate (x 1- Health service, x 1- parent copy, x 1- referral). <p><u>Documentation of Targeted weight assessment (regardless of outcome)</u></p> <ul style="list-style-type: none"> • <u>CHS 412 Progress Notes and/or CHS 142 Referral to Community Health Nurse &</u> • <u>CHS 430A/B</u> triplicate (x 1- Health service, x 1- parent copy, x 1- referral). 		<p>Document physical problems or heavy clothing that may interfere with the accuracy of the measurement.</p> <p>HCARE: Primary issue- 0618; Secondary issue- 0306; Service provided- 01/02 etc.</p> <p>CDIS: Record all growth data in CDIS regardless of the result.</p> <p>Acceptance of BMI results by the parent may be enhanced by sending the CHS 430 BMI form to the parent after the initial contact has been made when the child is in the 'overweight' range.</p>



Considerations when interpreting BMI-For-Age weight status results

While the cut-off points for weight categories on the BMI percentile charts are clearly defined, their application should be used with professional judgment and consideration of several factors when assessing individuals:

- **Early or late onset of puberty:** Weight and height increases are most significant during puberty. This growth period is generally early during puberty in females due to peri-menarchal weight gain, and towards late puberty in males due to increase in lean body tissue.
- **Unusual body-fat distribution:** E.g. central/visceral obesity carries an increased risk of poor health outcomes.
- **Highly developed muscles:** Some children may be more athletic than others and have a higher than average muscle mass which can lead to a higher than normal BMI result; and
- **Ethnicity:** Racial differences can affect the true proportion of body fat and BMI, and therefore appropriate cut-off points. A BMI reference chart relevant to the ethno-cultural mix of the current Australian demographic has not yet been developed.

In any of the above instances, it is recommended that a clinical decision should be made as to whether or not to refer the child for a more comprehensive assessment. For more information on factors that contribute to BMI results see [4.4.5 Overweight and obesity in primary school aged children](#).

Outcome

School health service staff may offer healthy lifestyle brief intervention counselling to families to facilitate change. Appendix C outlines key targets for eating, physical activity and other behaviour goals which assist in conversations with families.

BMI suggests Underweight: Less than 5th percentile

- Refer the child to appropriate health care professionals for further assessment and/or intervention if concerned or if parent requests.
- Provide additional information if required. See Appendix C.
- For information on Eating Disorders in Children refer to 'Related policies, procedures and guidelines' and 'Useful resources' below.

BMI suggests Healthy Weight: 5th percentile to less than the 85th percentile

- No action required

BMI suggests Overweight: 85th to less than 95th percentile

- Make contact with the parent by phone or letter and inform them of the weight results prior to sending home the CHS 430 BMI form.
- When discussing results with the parent:-



- Inform the parent that the BMI is not diagnostic but that based on their child's results, they are in the overweight range. This feedback should be given with sensitivity; it may be the first time that a potential concern has been raised.
- Explore what weight range they consider their child to be.
- Explore factors that may contribute to a higher than expected BMI. Refer to 'Considerations when interpreting the BMI' on page 9.
- Explore parent concerns, lifestyle factors and other factors that may contribute (e.g. ethnicity). Use CHS 426 Lifestyle counselling guide.
- Identify small achievable goals or lifestyle changes that can be made within the family environment to help make positive changes to their child's future health and wellbeing. Reinforce that the aim is for the child to grow into their weight and not for weight loss.
- Reinforce positive nutrition, physical activity and screen time practices with verbal and written information, including CAH 0899 'Tips for keeping children healthy' handout. Also see Appendix C.
- Using clinical judgement, combined with BMI result and lifestyle assessment, decide if referral to GP is indicated and/or other referral options listed below.
- Provide additional support as required.
- Depending on referral outcomes and/or strategies agreed by parent, seek permission to re-contact and agree a timeframe with the parent. Follow up is recommended within 12 months.

BMI suggests Obese: Equal to or greater than the 95th percentile

- It is recommended that the parent/carer is contacted in person informing them that their child's results were found to be in the obese range, prior to providing a copy of the CHS 430 BMI results. A standard letter inviting the parent to make contact is available if this is not possible. This feedback should be given with sensitivity; it may be the first time that a potential concern has been raised.
- Where possible, arrange a face-to-face meeting to explain assessment results; explore eating and activity behaviours; discuss causes and consequences of overweight; and decide on interventions. This feedback should be given with sensitivity; it may be the first time that a potential concern has been raised. Use CHS 426 Lifestyle counselling guide.
- Consider above factors for 'overweight' when talking with parent.
- Refer to Medical Practitioner and/or dietitian for further assessment and treatment as a priority. Consider other suitable referral options (see below).
- If overweight is severe, consider referral to the PMH CLASP program via medical practitioner (see 'Referral pathway' and Useful resources section' below)



- Reinforce positive nutrition, physical activity and screen time practices with verbal and written information including CAH 0899 'Tips for keeping children healthy' handout. Also see Appendix C.
- Provide additional support and information as required.
- The NHMRC suggests that regular (3 monthly) BMI plotting on a percentile chart is the recommended process to track weight management progress for children. Ideally, this should be done under medical care.
- If the child is not under medical care, follow-up is recommended between 3 and 12 months (depending severity, referral outcomes and/or level of engagement and strategies agreed by parent). Document clearly when follow-up is planned to occur, including consent for follow-up BMI.
- For concerns regarding family engagement or neglect, consider making a report to Department for Child Protection and Family Support. Refer to Department of Health WA - [Information sheet 8 Child obesity and child protection for guidance](#).

Referral pathway

Referral decisions will depend on the growth status of the child and the capacity and preferences of the family. Referral will also depend on availability of local services which are varied across the state.

The following are some suggested referral points:

- Medical practitioner.
- Dietitian - some local health services (hospitals or community health centres) have dietetic services available for children. The Dietitian Association of Australia website can help to locate private dietetic services.
- Allied health professionals including; physiotherapist, occupational therapist, clinical psychologist or paediatrician.
- CLASP (Changes in Lifestyle Are Successful in Partnership) - PMH. For children and adolescents with complicated and/or significant obesity and their families (Medical practitioner referral to CLASP is required. Consider mentioning CLASP on CHS663 when referring a child to a medical practitioner)
- Better Health Program 7-13 years - a multi-component healthy lifestyle program for overweight and obese children aged 7-13 years and their families, available in WA (starting in Perth only) after July 2014. It will be based in communities and free of charge for families. Phone 1300 822 953 or email info@betterhealthcompany.org
- [Healthy Families for Healthy Futures](#) (Perth). A healthy lifestyle program run by Perth North Metro Medicare Local for families with children aged 6-12years.
- Quality parenting programs E.g. Triple P (Statewide) [Positive parenting programs](#). Note: Lifestyle Triple P is available in some areas.



- Healthy lifestyle programs or activities. E.g. [Ngala- Eat Play Thrive](#)
- Community leisure and recreation services.
- Adult weight management programs (helpful if the parent is concerned about their own weight), e.g. [Living well for life](#)- South coastal Medicare locals or [Change for life](#)- Perth central and East metro Medicare locals and other appropriate commercial programs.

Related policies, procedures and guidelines

3.4.1 Growth in childhood
3.4.2 Growth faltering
3.4.3 Overweight and Obesity
4.2.2 School Health Services in Western Australia
4.3 Health Promotion in Schools
4.4.2 School entry health assessment guidelines
4.4.2.2.3 Overweight and obesity in primary school aged children
4.5.3.4 Early identification and management of eating disorders
4.5.4.1 Brief intervention for adolescent overweight and obesity
Child and Antenatal Nutrition Manual
Department of Health WA Information sheet 8 Child obesity and child protection Guidelines for protecting children 2009 (under review)

Useful resources

CACH intranet resources
CHS430A/B BMI Percentile charts for Girls/Boys- Triplicate (x 1- Health service, x 1- parent copy, x 1- referral)
CHS 425 Parent follow-up letter . For use when unable to contact parent
CHS 426 Lifestyle counselling guide . Health record
CAH 0899 Tips for keeping children healthy . Parent handout
CAH 0898 BMI assessments and percentile charts for school aged children Information sheet- staff use only
CAH 0901 Promoting school health assessments . Poster
Newsletter items .
Feet diagram . To assist orientating children onto scales- laminate



BMI resources
CDC BMI and Percentile calculator for Children and Adolescents
Centers for Disease Control and Prevention . About BMI for Children and Teens
Parenting
Triple P- Positive parenting programs (Statewide) May include Lifestyle Triple P in some areas
Raising Children Network
Parenting WA Information on parenting services and events in WA
Food and nutrition
Ngala- Eat Play Thrive Workshops aimed at empowering families to lead healthier lifestyles.
Better Health Program 7-13 years Targeted multi-component healthy lifestyle program for overweight and obese children aged 7-13 years and their families.
Food for Kids - pamphlet. Go to www.dohquickmail.com.au/ to order
Eat for Health Australian Dietary Guidelines
National Health and Medical Research Council Obesity guidelines
CAHS Nutrition and Dietetics - Healthy children are our future
The Royal Children's Hospital Melbourne- Centre for Community Child Health. Nutrition in Childhood
Department of Education. Healthy food and drink
Refresh.ED Food & Nutrition Teaching Resources
WA School Canteen Association Healthy lunch box ideas
Go for 2&5 Fruit and veg recipes
Meerilinga Lunch box ideas and nutrition fact sheets
Fresh for kids Healthy lunch box ideas
CSIRO Wellbeing Plan for Kids
Food cents Food literacy and education program
Liveliighter Tools, tips, resources and recipes to help lead healthier lifestyles
Good Food for New Arrivals provides resources for both service providers and families to improve nutrition knowledge and access to healthy foods for newly arrived humanitarian and refugee families.
State Government of Victoria- Better Health Channel Healthy living/Conditions and



treatments (eating disorders)
Government of South Australia - Health topics/Healthy mind (eating disorders)
Physical activity
Department of Health- Nutrition and Physical Activity and Sedentary Behaviour Guidelines . Pamphlets available- 0-5years; 5-12 years; and Families. To order phone 1800 020 103
Heart Foundation 100 ways to Unplug and Play
Nature Play WA Resources for parents and families to encourage kids to get active outdoors.
Westmead children's Hospital- Fact sheets . Obesity/Physical activity/Food
Staff development
Talking with parents about children's weight . On-line professional development resource. Better Health Company
Family Partnership Training

Policy Owner	Portfolio
Director Statewide Policy Unit.	School aged children

References

1. Procter KL. The aetiology of childhood obesity: a review. *Nutrition Research Reviews* 2007; 20:29-45.
2. Safron, M., Cislak, A., Gaspar, T., Luszczynska, A. Effects of School based Interventions Targeting obesity related behaviours and body weight change: A systematic umbrella review. *Behavioural Medicine*. 2011. 47: 15-25.
3. Whitlock E.P, O'Connor E.A, Williams S.B, Beil T.L and Lutz K.W. Effectiveness of Weight Management Interventions in Children: A Targeted Systematic Review for the USPSTF. *Pediatrics* 2010;125:e396; originally published online January 18, 2010
4. Singh AS, Mulder C, Twisk JWR, van Mechelen W, Chinapaw MJM. Tracking of childhood overweight into adulthood: a systematic review of the literature. *Obesity reviews*. 2008; 9(5):474-88.
5. Australian Bureau of Statistics (2013). Australian Health Survey 2011-2013. 4364.0.55.003 - Australian Health Survey: Updated Results, 2011-2012. Australian Bureau of Statistics
6. Shay LE. Childhood Overweight: Early detection of risk factors. *The Journal for Nurse Practitioners* 2007; September: 549-554.
7. National Health and Medical Research Council (2013) Clinical practice guidelines for the management of overweight and obesity in adults,



adolescents and children in Australia. Melbourne: National Health and Medical Research Council.

8. Marfell-Jones, M.J., Olds, T., Stewart, A.D. Carter, L. International Standards for Anthropometric Assessment. International Society for the Advancement of Kinanthropometry (ISAK), Potchefstroom, South Africa. 2006
9. Oude Luttikhuis H, Baur, L. & Jansen, H. Interventions for treating obesity in children. Cochrane Database Sytematic Review. 2009(1)CD001872



Appendix A

Equipment

Stadiometer or height rule

The measurement of height requires a stadiometer or height rule which is a vertical metric rule, a horizontal head piece and a non-compressible flat even surface on which the child stands. The graduations on the stadiometer or height rule should be at 1 mm intervals. The stadiometer should be checked prior to each measurement session to ensure that both the headboard and floor are at 90 degrees.

There are a number of stadiometer or height rule models available on the market within varying price ranges. Using the guidelines above, local areas should purchase the model/s that best suit their requirements.

Ensuring the accuracy of stadiometer or height rule.

If local service areas select permanent wall mount height rules, then care needs to be taken to ensure they are mounted accurately and calibrated carefully.

Weight scales

Digital weighing scales should have a resolution of at least 0.1kg. The weighing scale must be placed on solid level ground such as concrete or wooden floor. Scales should be zero-balanced before each individual is measured. Measurement interval and labels should be clearly readable under all conditions of use. Accuracy of scales should be checked annually, see below.

Routine checking of stand-on scales

Key points

- Routine checking of scales must be conducted at least annually.
- Scales which are moved regularly do not require additional checking if handled with due care.
- Scales must 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 should be followed with regard to transportation, servicing and calibration of scales.

Equipment

Standard weights: 2 x 10 Kg weights. Additional 10 Kg weights as required.



Procedure

Steps	Additional information
1. Test the zero set according to manufacturer's instructions.	This should read zero +/- 1 unit If the scales lowest measure is to 0.01 of a kilogram (10 grams), the zero set should be 0.0 +/- 10 grams
2. Check the accuracy of the 10 Kg weight: <ul style="list-style-type: none"> Place one 10 Kg weight on the scales. 	This should read 10.00 Kgs +/- 50 grams.
3. Check tare function: <ul style="list-style-type: none"> With the 10 Kg weight still on the scales, press 'tare' operation or 'on/off' button to zero the scales. 	This should now read 00.00 Kgs +/- 10 grams.
4. Check accuracy of 20 Kg: <ul style="list-style-type: none"> Remove the 10 Kg weight and press 'tare' or 'on/off' to reset. Place two 10 Kg weights on the scales. 	This should now read 00.00 Kgs +/- 10 grams. This should now read 20 Kgs +/- 100 grams.
5. Check accuracy of 30 Kg: <ul style="list-style-type: none"> With the two 10 Kg weights still on the scales, place a third 10 Kg weight on the scales. 	This should read 30 Kgs +/- 150 grams.
6. Check accuracy of 40 Kg: <ul style="list-style-type: none"> With the three 10 Kg weights still on the scales, place a fourth 10 Kg weight on the scales. 	This should read 40 Kgs +/- 200 grams.
Note: Accuracy should be checked to the upper limit of weight range for clients regularly measured.	
7. Where there is any discrepancy in readings, repeat the test. <ul style="list-style-type: none"> If discrepancy persists on retest, forward the equipment to the manufacturer for calibration or repair. 	Record date of check and attach to back of scales. Record date of battery change and attach to back of scales.



Appendix B

Talking with parents about children's weight.

The online professional resource: [Talking with parents about children's weight](#), which is also accessed at (<http://www.talkingaboutweight.org/>) produced by the Better Health Company, comprises of 10 modules and is available free of charge for health staff across Western Australia.

The training aims to provide information on the following;

- prevalence, causes and consequences of overweight and obesity in childhood
- how to define and measure overweight and obesity in childhood
- the rationale for raising the issue of weight with parents
- how to plot BMI's on the growth charts
- helpful and unhelpful ways of talking about weight
- when and how the issue of weight may be raised with parents
- the characteristics of a helpful conversation with parents.

The resource also includes downloadable summary sheets, assessment tools, information sheets and referral options.



Appendix C

Key health messages for parents

Family change

- Make whole-of-family lifestyle changes
- Be a healthy role model for your children
- Adapt recommendations to your cultural and family values and beliefs
- Do not put children on a diet, or describe health behaviour changes as a diet, or focus on weight when promoting health behaviour changes.

Psychosocial wellbeing

- Model acceptance of all body sizes and shapes.
- Avoid negative comments about your own or others' bodies.
- Emphasise health, fitness and enjoyment, rather than weight loss, as reasons for health behaviours.
- Emphasise your child's achievement, talents and skills.
- Help your child develop social skills and coping strategies.

Food choices

- Provide a wide selection and the recommended quantities of foods consistent with *the Australian guide to healthy eating*.
- Provide a variety of vegetables every day
- Encourage consumption of at least five serves of vegetables each day.
- Provide a variety of fruit each week.
- Encourage consumption of at least two serves of fruit per day.
- Provide multigrain breads and cereals.
- Provide low-fat dairy products.
- Provide lean meats and fish.
- Use low-fat cooking techniques.
- Minimise availability and consumption of energy-dense foods.
- Minimise availability and consumption of sugar-sweetened beverages (for example, juice, soft drink, cordial).
- Provide water as your family's main drink.

Eating habits

- Provide portion sizes consistent with *The Australian guide to healthy eating*.
- Minimise eating out and take-away foods.
- Provide breakfast and encourage daily consumption.
- Provide a healthy school lunch.
- Eat three meals and healthy snacks each day.
- Eat meals together at the table as a family as often as possible.
- Eat meals and snacks without distraction.
- Minimise non-hungry eating.



- Provide healthy food choices at appropriate meal and snack times, and allow the child to decide what and how much they will eat from what is provided.

Sedentary time

- Limit television and other screen time to less than two hours per day.
- Do not have televisions and other screen activities in children's bedrooms.

Physical activity

- Provide opportunities for children to accumulate at least one hour (and up to several hours) of moderate to vigorous physical activity per day.
- Encourage a range of fun and interesting activities, including organised sports and activities, informal activities and active play.
- Encourage walking, riding and scooting as active transport options.
- Be active together as a family as often as possible.

Sleep

- Adequate quality sleep is linked to lower rates of overweight among children.
- Primary school aged children should aim to get 10 or more hours sleep per night.

Adapted from: *Clinical practice guidelines for child weight management in community health services. Children aged 5-12 years.* Primary Health Branch, Victorian Government Department of Human Services. Melbourne, Victoria. 2009



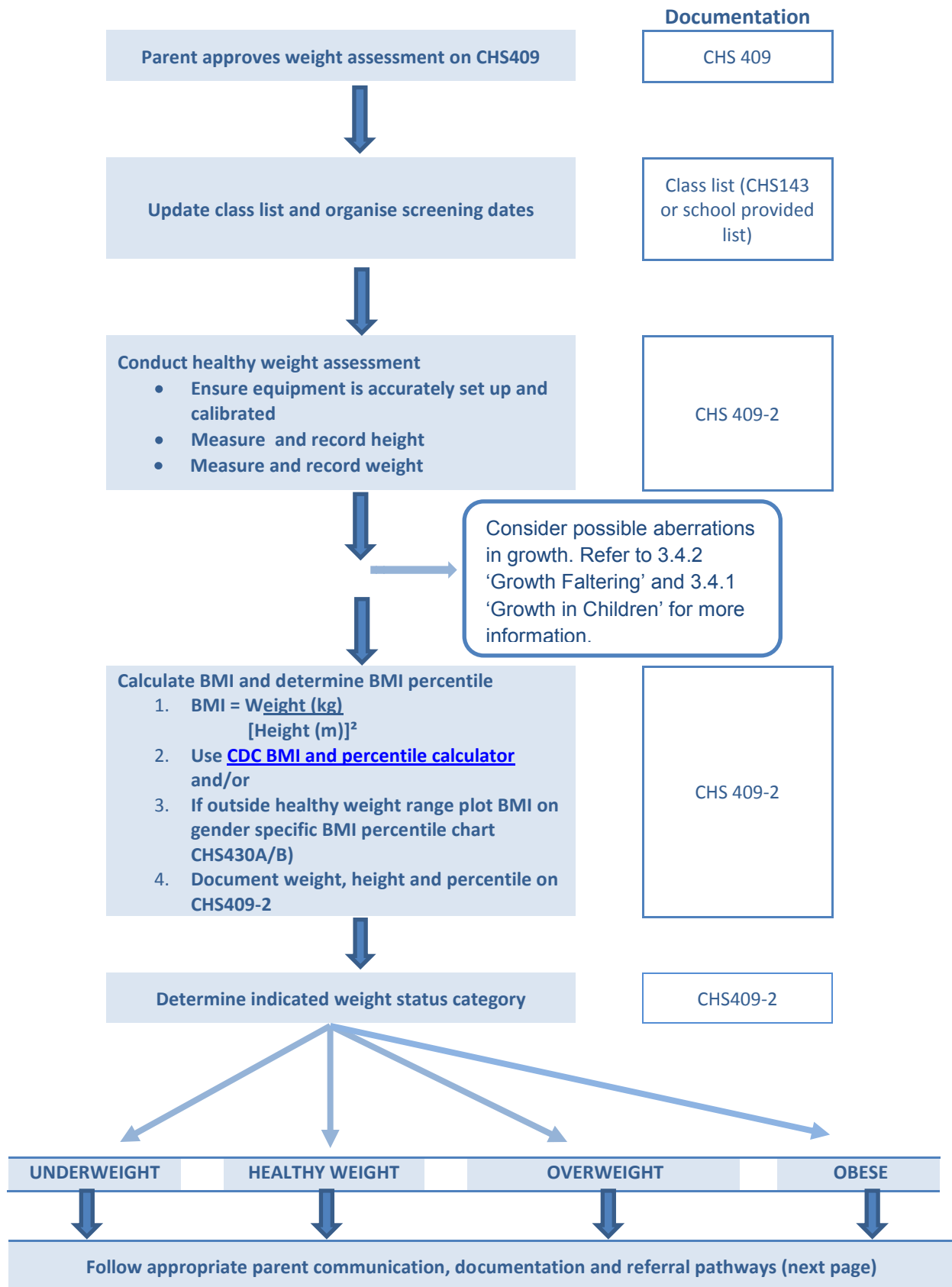
Appendix D
Risk and Protective Factors for the Development and Maintenance of Childhood Obesity

GENETIC MAKEUP	CHILD DIETARY INTAKE	FAMILY ENVIRONMENT	PARENTING
<p><i>Risk Factors</i></p> <ul style="list-style-type: none"> • Parental Obesity • Ethnicity • Conservative metabolism (tendency to store energy) • Certain rare endocrine disorders (eg. Prader-Willi Syndrome). <p><i>Protective Factors</i></p> <ul style="list-style-type: none"> • 'Active' metabolism (tendency to expend energy) 	<p><i>Risk Factors</i></p> <ul style="list-style-type: none"> • High intake of energy dense, nutrient poor foods (e.g. fast foods, soft drinks) <p><i>Protective Factors</i></p> <ul style="list-style-type: none"> • High intake of low GI foods (e.g. whole grains, legumes) • High intake of dairy foods (e.g. low fat milk, yoghurt) • Eating a healthy breakfast 	<p><i>Risk Factors</i></p> <ul style="list-style-type: none"> • Family has few economic resources • Parent lacks nutritional knowledge • Parent does not recognise childhood obesity or is not concerned about it • Parent has unhealthy eating habits (e.g. regular dieting) • Parent has a sedentary lifestyle (e.g. relies on TV for recreation) • Parent works long hours • Energy dense foods are available and easily accessible in the home. <p><i>Protective Factors</i></p> <ul style="list-style-type: none"> • Parent has an active lifestyle • Meals are eaten as a family • Fruit and vegetables are available and easily accessible in the home • Child has access to safe outdoor playing areas • Parent and child engage joint physical activities • Parent offers transport to sporting venues 	<p><i>Risk Factors</i></p> <ul style="list-style-type: none"> • Restrictive child-feeding practices (i.e. parent rarely gives child choices about what to eat and how much) • Permissive child-feeding practices (e.g. parent accommodates child's neophobic responses) • Coercive parenting style (e.g. parent shows anger when child misbehaves) • Inconsistent parenting style (e.g. parents fails to follow through with discipline) • Low self-efficacy (i.e. parent lacks confidence in managing child's weight related behaviour) <p><i>Protective Factors</i></p> <ul style="list-style-type: none"> • Parent monitors child food intake and activity patterns • Parent reinforces healthy behaviours (e.g. through praise and modelling) • Parent sets firm limits about food and activity
EARLY GROWTH & DEVELOPMENT	CHILD ACTIVITY PATTERNS		
<p><i>Risk Factors</i></p> <ul style="list-style-type: none"> • High birth weight • Early adiposity rebound <p><i>Protective Factors</i></p> <ul style="list-style-type: none"> • Breastfeeding (versus formula-feeding) 	<p><i>Risk Factors</i></p> <ul style="list-style-type: none"> • High levels of sedentary activity (e.g. >2hrs screen time per day) • Poor sleep patterns (e.g. poor routines or sleep apnoea) <p><i>Protective Factors</i></p> <ul style="list-style-type: none"> • Regular physical activity (e.g. >60 minutes moderate-vigorous organised activity or energetic play per day) 		

Source: Participant notes for Group Lifestyle Triple P Provider Training. University of Queensland (2010).



APPENDIX E: (SEHA) Weight Assessment Process





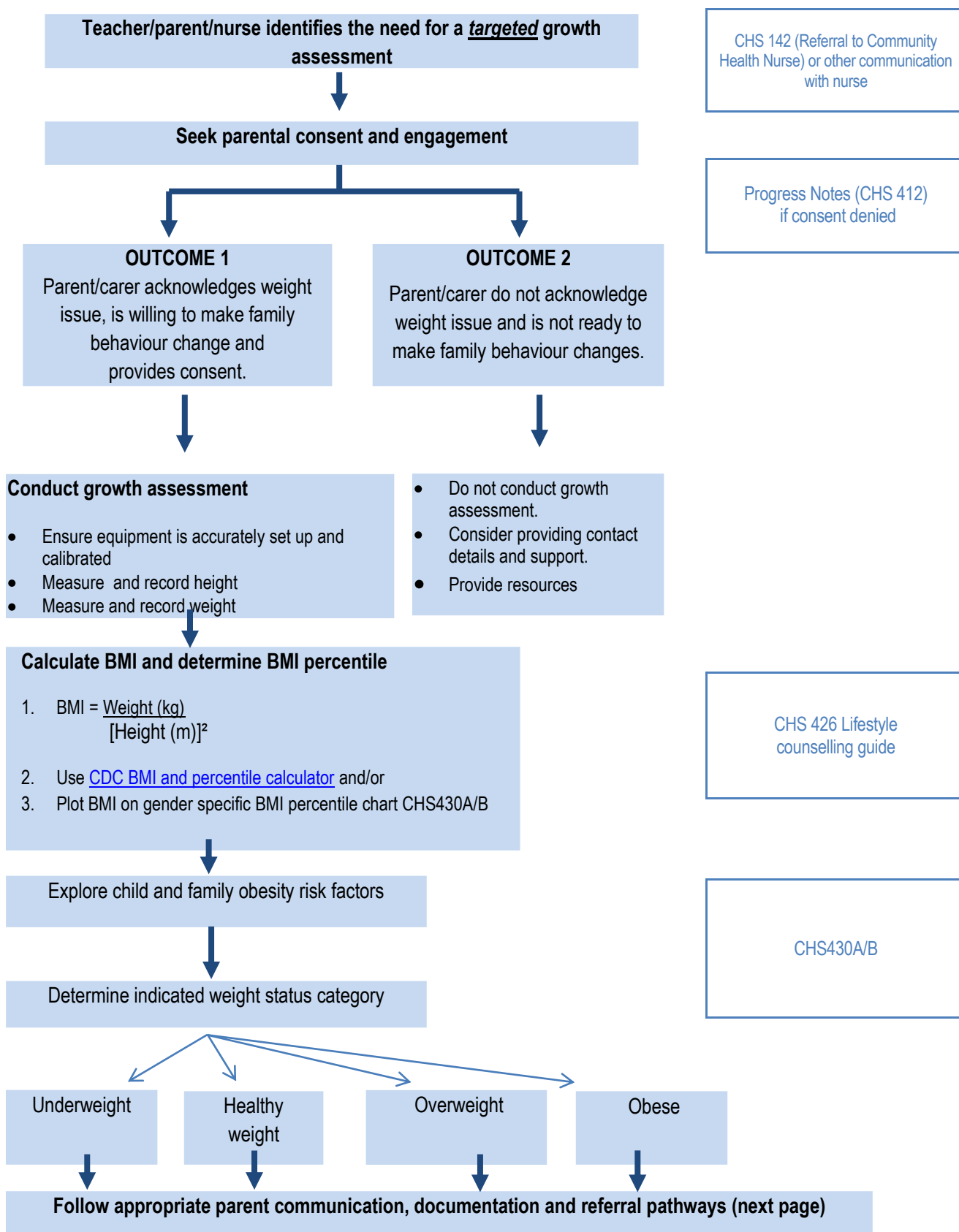
	Parent Communication	HS Record Keeping	Follow up / Referral
UNDERWEIGHT (less than 5 th percentile)	<ul style="list-style-type: none"> Note weight, height, BMI, percentile and "underweight" on CHS409-2 Contact parent to discuss result Discuss result Provide CHS430A/B Provide appropriate handouts and links to resources. 	<ul style="list-style-type: none"> Complete and file CHS430A/B Document conversation on progress notes and/ or electronic data systems 	<ul style="list-style-type: none"> Refer if parent concern or clinical judgement indicates (with parent consent) Follow up in 3- 12 months if clinical judgement indicates and parent accepts.
HEALTHY WEIGHT (5 th to < 85 th percentile)	<ul style="list-style-type: none"> Note weight, height, BMI, BMI percentile and "healthy weight" on CHS 409-2 <p>NOTE: completing CHS430A/B is not essential for the healthy weight category of a SEHA assessment.</p>	<ul style="list-style-type: none"> CHS409-2 and electronic data systems where required 	<ul style="list-style-type: none"> None required
OVERWEIGHT (85 th to < 95 th percentile)	<ul style="list-style-type: none"> Note weight, height, BMI, BMI percentile on CHS 409-2 and contact parent by phone or letter to discuss results. When discussing result with parent: <ul style="list-style-type: none"> Inform them of results Use CHS 426 'Lifestyle counselling guide' to explore family history, lifestyle and other factors that may impact on BMI results Reinforce positive nutrition, physical activity and screen time practices Assist parent to identify achievable goals for family change if required Provide parent with CHS 430A/B Provide appropriate handouts and links to resources. If parent is resistant to engagement do not persist with brief intervention, instead offer contact details so parent may contact you later if they wish. 	<ul style="list-style-type: none"> CHS409-2, progress notes and electronic data systems where required Use CHS 430A/B if required Note on class list for easy future follow up or referral if new local intervention options become available. 	<ul style="list-style-type: none"> Consider and discuss referral options with parent for further assessment and treatment if required. Assist parent to develop a plan Provide additional support as required Seek permission to re-contact and agree a timeframe with the parent on when they would like follow-up contact. Aim to make follow up within 12 months (depending on referrals made and/or strategies agreed by parent).



	Parent Communication	HS Record Keeping	Follow up / Referral
<p>OBESE (95th percentile or above)</p>	<ul style="list-style-type: none"> Note weight, height, BMI, BMI percentile on CHS 409-2 and contact parent by phone or letter. Discuss growth assessment results and explore family history, lifestyle and other factors that may impact on BMI results Provide CHS430A/B Use CHS 426 'Lifestyle counselling guide' to explore family history, lifestyle and other factors that may impact on BMI results Reinforce positive nutrition, physical activity and screen time practices Assist parent to identify achievable goals for family change Provide appropriate handouts and links to resources If parent is resistant to engagement do not persist with brief intervention, instead offer contact details so parent may contact you later if they wish Try to organise follow-up appointment if parent/carer does not make contact within 12 months. 	<ul style="list-style-type: none"> CHS 430A/B, progress notes and electronic data systems where required Document conversation on progress notes if required Note on class list for easy future follow up or referral if new local intervention options become available 	<ul style="list-style-type: none"> Refer to GP for further assessment and treatment as a priority. For severe cases, consider referral to the PMH CLASP program via GP (see referral criteria under 'Useful resources section' of procedure) Consider and discuss other referral options with parent Reinforce positive nutrition, physical activity and screen time practices with verbal and written information Assist parent to develop a plan Provide additional support as required Seek permission to re-contact and agree a timeframe with the parent on when they would like follow-up contact. Aim to make follow up between 3 and 12 months (depending on referrals made and/or strategies agreed by parent) Carefully consider family engagement or neglect, and if contact should be made with CPFS. Follow guidelines.



APPENDIX F: **Targeted** Growth Assessment Process





	Parent Communication	HS Record Keeping	Follow up / Referral
UNDERWEIGHT (less than 5 th percentile)	<ul style="list-style-type: none"> Discuss result with parent Provide CHS430A/B Provide appropriate handouts and links to resources. 	<ul style="list-style-type: none"> Complete and file CHS430A/B Document conversation on progress notes and/ or electronic data systems. 	<ul style="list-style-type: none"> Refer if parent concern or clinical judgement indicates (with parent consent) Follow up in 3- 12 months if clinical judgement indicates and parent accepts.
HEALTHY WEIGHT (5 th to < 85 th percentile)	<ul style="list-style-type: none"> Provide CHS430A/B Reinforce positive nutrition, physical activity, screen time and body image practices in the form of Kindy Talks and newsletter items Make handouts and links to resources available to all parents. 	<ul style="list-style-type: none"> CHS430A/B and electronic data systems where required. 	<ul style="list-style-type: none"> None required.
OVERWEIGHT (85 th to < 95 th percentile)	<ul style="list-style-type: none"> Discuss results (refer to <i>Talking About Weight</i> online training for guidance) Provide CHS430A/B Provide lifestyle counselling brief intervention. Use CHS 426 Lifestyle counselling guide Provide additional support as required Provide appropriate handouts and links to resources If parent becomes resistant to child's growth assessment do not persist with conversation. Offer contact details so parent may contact you later if they wish. Try to organise follow-up appointment if parent/carer does not make contact within 12 months. 	<ul style="list-style-type: none"> CHS 430A/B Document conversation on progress notes if required and record on electronic data systems Note on class list for easy future follow up or referral if new local intervention options become available. 	<ul style="list-style-type: none"> Seek parent engagement and collaboration Reinforce positive nutrition, physical activity and screen time practices with verbal and written information Consider and discuss referral options with parent for further assessment and treatment. Assist parent to develop a plan Provide additional support as required Seek permission to re-contact and agree a timeframe with the parent on when they would like follow-up contact. Aim to make follow up within 12 months (depending on referrals made and/or strategies agreed by parent).



	Parent Communication	HS Record Keeping	Follow up / Referral
<p>OBESE (95th percentile or above)</p>	<ul style="list-style-type: none"> Discuss result (refer to <i>Talking About Weight</i> online training for guidance) Provide CHS430A/B Provide lifestyle counselling brief intervention. Use CHS 426 Lifestyle counselling guide If parent becomes resistant to child's growth assessment do not persist with conversation. Offer contact details so parent may contact you later if they wish. Try to organise follow-up appointment if parent/carer does not make contact within 12 months Provide appropriate handouts and links to resources Provide additional support as required. 	<ul style="list-style-type: none"> CHS 430A/B Document conversation on progress notes if required Record on electronic data systems as required Note on class list for easy future follow up or referral if new local intervention options become available. 	<ul style="list-style-type: none"> Refer to GP for further assessment and treatment as a priority. Consider referral to the PMH CLASP program via GP (see referral criteria under 'Useful resources section' of procedure) Consider and discuss other referral options with parent Reinforce positive nutrition, physical activity and screen time practices with verbal and written information Assist parent to develop a plan Provide additional support as required Seek permission to re-contact and agree a timeframe with the parent on when they would like follow-up contact. Aim to make follow up within 12 months (depending on referrals made and/or strategies agreed by parent) Carefully consider family engagement or neglect, and if contact should be made with CPFS. Follow guidelines.