This document provides guidance on child and young people’s growth for NHS Grampian staff involved in measuring, plotting and discussing growth.

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1.0 Child healthy Weight Integrated Care Pathway

Who is this document for?
This document provides guidance and information for child healthy weight (2-18 year olds).

Included in this document is general information on dietary and physical activity targets for this age group. In addition it provides specific guidance for those who are more involved with child growth monitoring e.g. health visitors, school nurses, and appropriate hospital based staff.

Measuring growth and plotting onto growth charts has to be accurate. This document will provide guidance on this along with how to refer a child and young person whose growth is causing concern. It will also signpost to appropriate information and contains hyperlinks to key documents and to relevant sections within the document.

Background
In February 2010 SIGN 115 ‘Management of Obesity A National Clinical Guideline’\(^1\) was published superseding SIGN 69. The remit of the guideline is to provide evidence based recommendations on the prevention and treatment of obesity within the community and clinical setting, for children, young people and adults. The focus is on primary prevention. The health consequences of childhood obesity range from Cardiovascular, metabolic and endocrine complications. In addition obese children are more likely to show evidence of psychological distress and there is a high rate of tracking of obesity, with obese children becoming obese adults.

Scotland currently has one of the highest levels of obesity among Organisation for Economic Co-operation & Development (OECD) countries, second only to United States of America. The Scottish Health Survey records data on children aged 2-15 years. In 2010, 29.9% of children (31.1% of boys and 28.5% of girls) were overweight or obese. 15.6% of children aged 2-15 were overweight (>=85\(^{th}\) percentile and <95\(^{th}\) percentile), 7.4% obese (=95\(^{th}\) percentile and <98\(^{th}\) percentile), and 6.9% morbidly obese (BMI>=98\(^{th}\) percentile).\(^2\)

In 2008, Scotland’s “Healthy Eating Active Living action plan”\(^3\) was published to improve the diet and increase physical activity of the population. This was the first document in Scotland to address both healthy eating and physical activity together. NHS Grampian’s strategic framework for Healthy Eating, Active Living and Healthy Weight (HEAL) focuses on five key strategic issues,\(^4\) the second of which relates to:

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4. HEAL NHS Grampian Board April 2009
Patient pathways – improve the quality of healthcare and reduce ‘downstream’ healthcare costs through the integration, redesign, redirection and strengthening of services and programmes.

More recently in 2010, “Preventing Overweight and Obesity in Scotland. A Route Map Towards a Healthy Weight” was published. It specifically addresses the early years as this is the best opportunity to put in place healthy behaviours around food and physical activity which should continue into adulthood. Central to this is the involvement of families.

**Aim of the NHS Grampian Care Pathway for Child Healthy Weight Management**

To provide a Grampian-wide integrated, standardised pathway of care for child healthy weight fulfilling point 2 of the HEAL recommendation for NHS Grampian. The pathway will ensure that there is an equitable and standardised approach to growth measurements in children and young people. It will also provide appropriate signposting for information and will enable staff to refer a child or young person to the appropriate intervention.

**Objectives**

- Provide a clear patient pathway depending on BMI centile
- Provide appropriate information to give to child/young person and family when any child/young person measured and has a healthy weight.
- Provide equitable access to first-line interventions for who are overweight/obese.
- Ensure that only those who have agreed to an intervention will receive additional services (opt-in service)
- Provide progressive management for appropriately selected child/young person who have opted into the service and have fully completed a previous intervention.
- In addition to the first-line interventions those with a BMI ≥ 99.6th centile will receive a medical assessment (see appendix 7)
- Promote consistent, evidence-based weight management advice throughout Grampian.
- Outline clear roles and remits for different services / professions.

This Integrated Care Pathway (ICP) model is developmental, seeking initially to address inadequacies in the current service provision based on the best evidence available and on the practical experiences of those working locally in the field. The ICP provides a platform for service redesign. Over this time it is envisaged that the pathway will be adapted and refined based on evaluation, audit, and any emerging new evidence. Initially the usability of the pathway will be reviewed by the NHS Grampian Child Healthy Weight Reference Group which will be part of the Child Healthy Weight Steering Group [Appendix 1](#).

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The Care Pathway is built on 4 tiers as illustrated below.

For each of the four tiers there is a referral pathway. These are illustrated on pages 6-9.

**Tier 1:** General information on healthy eating and physical activity. Every child/family should be provided with this information if BMI has been measured. (Not suitable to give to a child/young person whose BMI is ≤2nd centile). This information can be given out by schools/after schools clubs/health visitors/Active schools coordinators.

**Tier 2:** Eat Play and Grow Well (EPGW) - Light Touch Session delivered by Health Visitors (2-5) and School Nurses (5-15) addressing healthy eating, physical activity and a whole family approach. Intervention Sessions tailored for those with a BMI ≥91st Centile. Grow Well Choices (GWC) – Delivered in primary schools by health coaches. GWC is arranged through schools and is 8 sessions long.

**Tier 3:** Eat Play Grow Well Specialist opt-in support provided by Community Dietetic Department for children whose BMI Centile is ≥99.6 after completing the appropriate Light Touch Session. Where appropriate the children will aim for a gradual weight loss to a maximum of 0.5-1.0 kg per month.

**Tier 4:** Specialist support provided by paediatric dietitian for those who are regularly seen by a paediatrician for a significant co-morbidity (endocrine/diabetes/renal).
Overview of full referral pathway and intervention for Child Healthy Weight ICP

Assessment of child/adolescent – measure and record height and weight on appropriate growth and BMI centile charts.

Is child growing normally for weight and height? (BMI ≥2nd centile and ≤91st centile)

- No

Is the child’s BMI below the 2nd centile?

- Yes

Refer/discuss with health visitor (if under 5 year old) and/or GP for further investigation. (Advise family/child of above discussion as measurement suggests under nutrition)

- No

Is the child’s BMI between ≥ 91st and <99.6th centile?

- No

Child’s BMI should be ≥ 99.6th centile. If not go back to beginning of pathway

- Yes

Does the child have a significant co-morbidity (endocrine, diabetes, renal) and is regularly seen by a paediatrician?

- No

Referral to medical assessment to School Doctors, RACH or Dr Grays – see Appendix 7 and discuss Tier 2 intervention Delivered by Dietetic Dept.

- Yes

Tier 1

In schools in Grampian, Grow Well Choices is delivered to a whole class. Children who are identified as being overweight (≥91st - <99.6th centile) can opt in to school nurse Light Touch Session see Tier 2 or opt in referral to EPGW if BMI Centile ≥99.6th - Tier 1

In schools in Grampian, Grow Well Choices is delivered to a whole class. Children who are identified as being overweight (≥91st centile) can opt in to school nurse Light Touch Session see Tier 2 or opt in referral to EPGW if BMI Centile ≥99.6th - see Tier 3.

For all others information should be provided and no further action required. HOWEVER:

Opt in information can be provided for Tier 2 intervention if:
- Family/Child express concern regarding child’s weight increasing.
- If BMI has an upward trend that is causing concern

Tier 2 – Health Visitor and School Nurse Light Touch Session

Discuss Tier 2 intervention, what it involves and number of sessions. Advise about intervention and that referral will be made and they will receive information in due course asking them to opt-in to do intervention.

(Tier 1 information should be provided to help start making changes before intervention commences)

Tier 3 – Community Dietetic Department Eat Play and Grow Well intervention

Discuss Tier 3 intervention, what it involves and number of sessions. Advise about intervention and that referral will be made and they will receive information in due course asking them to opt-in to do intervention.

(Tier 2 Light Touch Session should be delivered before referral to Tier 3).

Completed the intervention?

- Yes

Standard discharge letter to GP – Appendix 6
  • Completed the course no further input required

- No

Standard discharge letter to GP – Appendix 6
  • Failed to complete the course

Tier 4

Intervention provided by Paediatric Dietitian RACH or Dr Gray – please contact dietetic department

- Yes

NO
Referral Pathway for Health Visitors at 27 – 30 Month Assessment

Assessment of child – measure and record weight and height

- Child’s weight below the 9th centile
  - Calculate Child’s BMI
  - If Child’s BMI centile is ≥91st offer Tier 2 Light Touch Session.
    - In addition if a child’s BMI Centile is ≥99.6th then please see appendix 7 to refer for medical screening if appropriate.
      - After completion of the Light Touch Session, children’s whose BMI Centile remains ≥99.6th after their review at (3yrs 4 months), the Community Dietetic Department can offer further support. However, parental consent is required and this should be documented on the referral form.

- Child’s weight above 75th centile
  - Calculate Child’s BMI
  - Marked discrepancy between child’s weight and height centiles (ie 2 centile difference)
  - Calculate Child’s BMI
  - Child’s weight between the ≥9th & ≤75th with no marked discrepancy
    - No further action required

- Child’s weight between the ≥91st & ≤99.6th centile
  - Follow Growth Faltering Protocol
  - If child’s BMI centile is within ≥2nd centile & ≤91st centile use clinical judgement to decide whether Child needs further monitoring. For example if family express concern regarding child’s weight increasing. If there are concerns offer Tier 2 Health Visitor Light Touch Session
Referral Pathway for Primary Care (GP, HV) 2-18 year old children (using BMI Centile)

Assessment of child/adolescent – measure and record height and weight on appropriate growth and BMI centile charts.

Is child growing normally for weight and height? (BMI ≥2nd centile and ≤91st centile)

No  Yes

Is the child’s BMI below the 2nd centile?

GP/HV follow protocol for faltering growth.

Yes  No

Is the child’s BMI between ≥ 91st and <99.6th centile?

Yes

Child’s BMI should be ≥ 99.6th centile. If not go back to beginning of pathway

No

Does the child have a significant co-morbidity (endocrine, diabetes, renal) and is regularly seen by a paediatrician?

Yes

Referral to medical assessment to School Doctors, RACH or Dr Grays – see Appendix 7 and discuss Tier 4 intervention

No

Tier 1

In schools in Grampian, Grow Well Choices is delivered to a whole class. Children who are identified as being overweight (≥91st centile) can opt in to school nurse Light Touch Session see Tier 2 or opt in referral to EPGW if BMI Centile ≥99.6th – see Tier 3.

For all others information should be provided and no further action required. In addition opt in information can be provided for Tier 2 Intervention if:-

- Family/Child express concern regarding child’s weight increasing.
- If BMI has an upward trend that is causing concern.

Important to highlight the information provided for Tier 1 will help family/child make changes now rather than waiting to start making changes when Tier 2 intervention commences.

Tier 2 – Health Visitor and School Nurse Intervention

Discuss Tier 2 intervention, what it involves and number of sessions. Advise about intervention and that referral will be made and they will receive information in due course asking them to opt-in to do intervention.

(Tier 1 information should be provided to help start making changes before intervention commences)

Tier 3 – Community Dietetic Department Eat Play and Grow Well intervention

Discuss Tier 3 intervention, what it involves and number of sessions. Advise about intervention and that referral will be made and they will receive information in due course asking them to opt-in to do intervention.

(Tier 2 Light Touch Session should be delivered before referral to Tier 3).

You will be sent a letter confirming completion of the intervention by child/family.

You will also receive a letter to advise whether the child/family have failed to opt in or failed to complete the full intervention.

See Appendix 6 for all the standard letters relating to the EPGW intervention

Tier 4

Intervention provided by Paediatric Dietitian RACH or Dr Gray
Assessment of child/adolescent – measure and record height and weight on appropriate growth and BMI centile charts.

Is child growing normally for weight and height?  
(BMI ≥25th centile and ≤91st centile)

No

Is the child's BMI below the 2nd centile?  

Refer/discuss with health visitor (if under 5 year old) and/or GP for further investigation.  
(Advise family/child of above discussion as measurement suggests under nutrition)

Yes

Is the child's BMI below the 2nd centile?  

Tier 1  
In schools in Grampian, Grow Well Choices is delivered to a whole class. Children who are identified as being overweight (≥91st centile) can opt in to school nurse Light Touch Session see Tier 2 or opt in referral to EPGW if BMI Centile ≥99.6th - see Tier 3.  
For all others information should be provided and no further action required. HOWEVER,  
Opt in information can be provided for Tier 2 Intervention if:-  
• Family/Child express concern regarding child’s weight increasing.  
• If BMI has an upward trend that is causing concern.  
Important to highlight the information provided for Tier 1 will help family/child make changes now rather than waiting to start making changes when Tier 2 intervention commences.

Yes

No

Refer/discuss with health visitor (if under 5 year old) and/or GP for further investigation.  
(Advise family/child of above discussion as measurement suggests under nutrition)

Is the child's BMI between ≥91st and <99.6th centile?  

Child’s BMI should be ≥99.6th centile. If not go back to beginning of pathway

Yes

No

Does the child have a significant co-morbidity (endocrine, diabetes, renal) and is regularly seen by a paediatrician?

Yes

Referral to medical assessment to School Doctors, RACH or Dr Grays – see Appendix 7 and discuss Tier 3 intervention

No

Tier 3 – Community Dietetic Department Eat Play and Grow Well intervention  
Discuss Tier 3 intervention, what it involves and number of sessions. Advise about intervention and that referral will be made and they will receive information in due course asking them to opt-in to do intervention.  
(Tier 2 Light Touch Session should be delivered before referral to Tier 3).

Tier 4  
Intervention provided by Paediatric Dietitian RACH or Dr Gray

Yes

No

Does the child and family want to be referred to EPGW?  

See Appendix 5 a & b for referral forms for Aberdeen/Shires and Moray

Yes

Offer the child/family Pre EPGW sessions which will be done by you. At end of session offer referral again to EPGW. If yes then go to Tier 2 above, if no then record that family have declined.

No

No

Tier 2 – School Nurse Light Touch Session  
Discuss Tier 2 intervention, what it involves and number of sessions. Advise about intervention and that referral will be made and they will receive information in due course asking them to opt-in to do intervention.  
(Tier 1 information should be provided to help start making changes before intervention commences)
3.0 Assessment and Raising the Issue

Introduction

The growth of children and young people can be different at each developmental stage of their life. Two but preferably three accurate growth measurements are required to assess growth and any significant variation from a growth curve should be actioned as soon as possible. It is recommended that BMI Centile should be calculated if a child’s weight is above 75th centile or below the 9th centile or if there is a marked discrepancy between weight and height centile (2 centile difference).

A BMI Centile $\geq 91^{st}$ indicates that the child is overweight and a BMI centile $\leq 2^{nd}$ centile indicates that a child is underweight. The appropriate support should be offered for children out with the normal BMI Centile range. Please refer to the appropriate flowcharts on pages (6-9) for appropriate management of these children. There are no simple measurements of obesity in children as there are in adults i.e. BMI. In children, BMI Centile cannot be used in isolation and should be used along with weight and height centile measurements. It is important to recognise that each child is individual and therefore clinical judgement along with appropriate measurements is essential to identify those who potentially require further support.

Measurement

The assessment and management of childhood under/normal/overweight or obesity should be handled in a sensitive, empathic and non-judgemental manner, particularly as the children and their families sometimes feel embarrassed, defensive or may be concerned that their child is not ‘normal’.

When weight and height (see appendix 2) and BMI centile (see appendix 3) measurements have been completed, they must be plotted on the appropriate centile charts (see appendix 4).

The ICP does not accommodate families who have a special need which affects their learning and communication, nor has it addressed transition to the NHS Grampian Integrated Care Pathway for Adult Weight Management. This will be addressed in future developments to the Child Healthy Weight ICP and development of appropriate interventions.

All measurements should be plotted on the appropriate growth centile chart for weight, height and BMI centile.
Discussing growth

When discussing that a child or young person is underweight, overweight or obese, it is important not to make the family feel that they are to blame. However, they do need to understand that they have a part to play. A sensitive discussion is essential if the parents are to accept any advice and support. NHS Grampian have started to run training on ‘Raising the Issue’ in January 2013 based on the training package developed by Health Scotland. Before attending any face to face training run by NHS Grampian, individuals should complete the two on-line modules (“Introducing Health Behaviour Change” and “Raising the Issue of Child Healthy Weight”) developed by Health Scotland which can be accessed on the following link ‘Raising the Issue’\(^6\).

Once a child’s growth is measured and plotted on the appropriate BMI centile chart, this can be shown and explained to the child and family. Whilst this should not be the main focus of the intervention/discussion, it can provide an opportunity to explain healthy growth and an understanding of the health benefits of:-

- normal growth
- the associated health risks of underweight/overweight/obesity
- the information and opportunities available to families to eat healthily, be physically active and be less sedentary

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4. The following pages go through each of the four tiers and the appropriate information that relates to each of these.

Tier 1
There will be a number of people who will be in the position to provide information on healthy lifestyle to children and young people. The following information identifies key resources that are appropriate when discussing child healthy weight.

Box 1

**Key Resources**

**Professional**
- Healthy, happy kids …. Simple steps for a healthy weight at home. _A resource for professionals_ – Order from Health Scotland. Cost – free.

**Family**
- Healthy happy kids: simple steps to healthy weight (for family) – Order from Health Scotland. Cost – free
- Healthy, happy kids: _Z-card_ (for older children) – Order from Health Scotland. Cost - free

**Useful web resources for families and professionals**
- Take life on, one step at a time
- Active Scotland
- Healthy Eating - Live Well - NHS Choices

Additional resources relating to nutrition and physical activity are available from NHS Grampian’s Health Information Resources Service under the topic headings Nutrition and Physical Activity

**Schools within NHS Grampian**

Grow Well Choices is an intervention that is run in schools by Health Coaches. The programme is delivered over 8 sessions lasting 60 minutes. Each session has approx 20 minutes of theory and 40 minutes of physical activity.

Grow Well Choices is being delivered to one primary class (primary 4-7) in each school within Grampian. The table below reflects the learning for the 8 weeks.
<table>
<thead>
<tr>
<th>Week Number</th>
<th>Session Topic</th>
<th>Session Aims</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Introduction</td>
<td>• Introduce the programme and the health coaches to the class</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Speak about healthy choices and introduce ‘Grow Well Choices’ booklets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Record basic information (height and weight)</td>
</tr>
<tr>
<td>Week 2</td>
<td>Eatwell Plate</td>
<td>• Identify and explain the different food groups</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Explain the need for balance and variety in daily diet</td>
</tr>
<tr>
<td>Week 3</td>
<td>Energy Balance</td>
<td>• Pupils are able to identify the choices required to balance energy taken in</td>
</tr>
<tr>
<td></td>
<td></td>
<td>through food with energy expended through physical activity</td>
</tr>
<tr>
<td>Week 4</td>
<td>Snacks – parents are invited to this session</td>
<td>• Identify snacks that are healthier options</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Identify which snacks should be limited to reduce energy intake</td>
</tr>
<tr>
<td>Week 5</td>
<td>Sugars</td>
<td>• Identify the sugar content in a variety of foods</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Understand how to reduce sugar intake by making healthier choices</td>
</tr>
<tr>
<td>Week 6</td>
<td>Fat</td>
<td>• Identify the fat content in a variety of foods</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• To reduce fat intake by making healthier choices</td>
</tr>
<tr>
<td>Week 7</td>
<td>Eating Out</td>
<td>• To explore eating out</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• To identify how much fat, sugar &amp; Salt is contained in a variety of foods</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• To understand how to make healthier choices when visiting restaurants/outlets</td>
</tr>
<tr>
<td>Week 8</td>
<td>Review</td>
<td>• Review all the previous lessons</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Record height and weight</td>
</tr>
</tbody>
</table>
Healthy Eating

From two to five years

Children would normally be expected to eat three meals a day and two between-meal snacks.

Foods particularly high in fat and sugar such as sweets, cakes, crisps and deep fried foods should be kept to a minimum or avoided altogether.

Care should also be taken to limit salt intake (from 1-3 years not more than 2 g/day and a maximum of 3 g/day for 4-6 year olds).

From two years onwards, gradual introduction of low-fat dairy products should be considered for children who are growing well and eating a varied diet, so that by the age of five most children are eating in accordance with the “eatwell plate”. Portion sizes should be appropriate to the age and size of the child.

It is recommended that all babies and young children should be given vitamin drops containing vitamins A, C and D from age six months up to five years of age known as Healthy Start Vitamins. Children from dark skinned minority ethnic groups are at particular risk of vitamin D deficiency. The Healthy Start vitamin supplement is free to eligible families through the Healthy Start Scheme7 Healthy_Start_NHSG8. The scheme also provides background information and advice for families and professionals on giving the under 5’s a healthy start in life.

Further information on nutrition from two to five years is available in the NHS Health Scotland publication Ready_Steady_Toddler9 (up to age 3 years) and Healthy Eating – Live Well – NHS Choices10.

Children Over Five years

From age five a healthy, balanced diet in line with adult healthy eating guidelines should be encouraged for everyone except those with specific clinical dietary requirements.

Children over five years old and their family should be advised to choose foods from the five food groups in the proportions shown in the “eatwell plate” below. This includes everything eaten during the day, including snacks. Balance between the different groups is best achieved over a day or a few days rather than at each individual meal.

The eatwell plate is suitable for healthy people of all ethnic origins and people who are of a healthy weight or overweight. It is also suitable for vegetarians.

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7 The Healthy Start Scheme - http://www.healthystart.nhs.uk/
9 Ready Steady Toddler - http://www.readysteadytoddler.org.uk/
In line with the eatwell plate, individuals should aim to eat:

- Bread, rice potatoes, pasta and other starch foods. These should be part of every meal and choosing wholegrain varieties when you can.

- Fruit and vegetables. Eat plenty, at least five portions of a variety of fruit and vegetables a day.

- Milk and dairy foods. Eat some, choose lower fat alternative whenever possible or eat higher fat versions infrequently or in smaller amounts.

- Meat, fish, eggs, beans and other non-dairy sources of protein. Eat some, choose lower fat alternatives whenever possible or eat higher fat versions infrequently or in smaller amounts. Aim for at least two portions of fish a week, including a portion of oily fish.

- Foods and drinks high in fat and/or sugar. Consume just a small amount.

**Checking the labels**

Reading labels can help individuals to choose lower fat and lower energy items. To aid weight management it is important to encourage limiting the intake of energy-dense foods including confectionery, sugary drinks, fast foods and alcohol.

More information on the eatwell plate, ages and stages of nutrition and food labelling can be found on the [Food labelling - Live Well - NHS Choices web page](http://www.nhs.uk/livewell/goodfood/pages/food-labelling.aspx)\(^\text{11}\)

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Salt

The following maximum levels of salt per day for children are:-

1-3 years - 2g a day (0.8g sodium)
4-6 years - 3g a day (1.2g sodium)
7-9 years - 5g a day (2g sodium)
11 years upwards – 6g a day (2.5g sodium)

Use food labels to help you cut down on salt:

High is more than 1.5g salt per 100g (or 0.6 sodium)
Low is 0.3g salt or less per 100g (or 0.1g sodium)

Physical activity

Children and young people

Children and young people should be encouraged to increase their physical activity to help manage their weight and because of the other known health benefits, such as reduced risk of type 2 diabetes and cardiovascular disease.

Children under 5 should be encouraged to be physically active for 80 minutes (3 hours) per day. A factsheet\(^\text{12}\) which has been endorsed by Scottish Government and Department of Health provides more detailed information.

Children aged 5 – 18 years should be encouraged to do at least 60 minutes of moderate to vigorous activity each day. This can be accumulated in short bouts. Children who are already overweight may need to do more than 60 minutes activity, but should build up their physical activity time gradually. A factsheet\(^\text{12}\) which has been endorsed by the Scottish Government and Department of Health provides more detailed information.

Parents should be aware that more than two hours of sedentary behaviour, particularly of screen time (TV watching, computer use and playing video games), for children per day should be discouraged.

Children should be given the opportunity and support to be more active in their daily lives (such as walking, cycling, using the stairs and active play such as skipping) and supported to do more regular, structured physical activity (such as football, swimming or dancing).

The choice of activity should be made with the child, and be appropriate to their age, ability and confidence.

Encourage people to try to be more active as a family – for example, walking and cycling to school and shops, going to the park or swimming.

Providing information on local opportunities to be active will make it easier for individuals to access them and enable them to make a longer term commitment to being active. The Active Scotland\(^\text{13}\) website provides information of suitable activities near to the family home.

Active Schools Coordinators\(^\text{14}\) in Scotland coordinate the engagement of children in an active lifestyle – anything from hill-walking to rugby to aerobics to dance classes.

The deployment of Active Schools Coordinators varies across Scotland. This flexible staffing approach allows local authorities to tailor their staffing network to best deliver their needs. For example: some Coordinators will work full time and cover a cluster of primary schools or perhaps a number of primary and a secondary school. Others will work part-time and cover one or two secondary schools.

Key points to help children and young people to maintain a healthy weight

Encourage parents and carers to:

- Ensure that portion sizes are appropriate for the individual’s age, gender, current weight and activity level. It is important to highlight that children require smaller portions sizes than adults.
- Ensure their children have regular meals, including breakfast, in a sociable atmosphere without distractions (such as watching television)
- Whenever possible, eat meals with their children
- Comfort their children with attention, listening and hugs instead of food
- Separate eating from other activities such as watching television or using the computer
- Encourage their children to listen to internal hunger cues and to eat to appetite
- Avoid classifying foods as good or bad
- Keep foods that their child should be avoiding out of the house.
- Being physically active each day

\(^{13}\) Active Scotland - http://www.activescotland.org.uk/

\(^{14}\) Active Schools Co-ordinator - http://www.sportscotland.org.uk/ChannelNavigation/Topics/TopicNavigation/Active+Schools/
**Additional resources (SIGN 115)**

**Younger children**

Food for Thought ‘Yoobot’ game (www.yoobot.co.uk/) – British Heart Foundation Resource (blocked by NHS Grampian IT)

**Older children**

Yheart website (www.yheart.net/yheart/) – British Heart Foundation Resource (blocked by NHS Grampian IT)

Young Scot

**Professional**

HandsOnScotland Website
**Tier 2**

At the point of identification of a child being overweight, the family should be made aware of the services available to help them follow a whole family approach to a healthy lifestyle. Time should be taken to discuss which services are appropriate to them and whether they wish to opt in to these services.

The Tier 2 intervention for NHS Grampian is a Light Touch Session programme based on the Eat Play Grow Well (EPGW) which is delivered either by Health Visitors or School Nurses depending on the age of the child. The Light Touch Session like EPGW will cover: -

- Healthy Eating,
- Physical Activity,
- Goal Setting,
- Whole Family Approach

The intervention is delivered to the child and family. Those who are older (teenager) may have the intervention delivered to them without a family member.

All school aged children should be encouraged to join activities supported through groups such as Active Schools.

Anyone **not** wishing to take advantage of any service at this stage should be given appropriate information / contacts, for future reference should they change their mind. Information provided in Box 1 and Box 2 in **Tier 1** is appropriate.
Tier 3

This is delivered by the Community Dietetic Department. Referrals will be accepted from children whose BMI centile is ≥99.6th and have gone through the appropriate Light Touch Session. The EPGW focuses on:

- Healthy Eating,
- Physical Activity,
- Goal Setting,
- Whole Family Approach

This is delivered over 4 sessions with reviews at 6, 9 and 12 months. The family are sent an invite to attend this intervention and therefore opt-in if they wish to accept this intervention.
Tier 4

A child or young person whose is under the care of a paediatrician at RACH/Dr Grays for a significant co morbidity should receive their dietetic intervention from a paediatric dietitian. If clarification is required, please contact the community dietitians in the first instance for advice.
5.0 Monitoring, evaluation and tracking system

NHS Grampian has developed a database where all the EPGW interventions are recorded.

6.0 Recommendations

There will be support and training on implementing this Integrated Care Pathway to appropriate staff members. Notification on dates will be provided in due course.

7.0 Considerations from SIGN 115

SIGN 115 states that Orlistat should only be prescribed for severely obese adolescents (those with a BMI ≥ 99.6th centile of the UK 1990 reference chart for age and sex) with co morbidities or those with very severe to extreme obesity (BMI ≥ 3.5SD above the mean of the UK 1990 reference chart for age and sex) attending a specialist clinic.

Bariatric surgery can be considered for post pubertal adolescents with very severe to extreme obesity (BMI ≥ 3.5 SD above the mean on 1990 UK charts) and severe co morbidities.

NHS Grampian does not offer Orlistat or Bariatric Surgery for children.
Appendix 1

**Reference/Monitoring Group of ICP**

This group will be convened as and when it is required. The following Role and Remit still needs to be ratified.

**Intended Membership**

Child Healthy Weight Steering Group  
Dietetic Leads for CHW  
Public Health Leads CHP  
Medical representation  
School Nurse  
Health Visitor  
Member of the Public
Appendix 2

Measuring Equipment

Measuring a child’s height and weight requires specialist training. If you do not have the skills to do this then the following web page from RCPCH\textsuperscript{15} which has information on correct measuring techniques. The video clips are ¾ of the way down the page. You have to scroll down the page to see the link. Another useful resource for families is the NHS Choices\textsuperscript{16} web page which provides guidance on child measuring programme.

All scales require annual check-ups for calibration. Scales should be self-zeroing, electronic, stand-on Class III scales. Class 3 scales have been passed by trading standards and only weigh in kilograms. If the scales are dropped, then their calibration should be checked.

**Taking measurements – appropriate for those aged 2 years and above.**

**Weight**

Weight should be measured with the child standing squarely on the platform with no shoes and minimal clothing (can be weighed in pants and vest) and not holding onto any toys. Read off weight to the first decimal place (i.e. 23.1kg).

**Height**

From 2 years of age use a rigid rule with T piece stadiometer or Leicester meter; the child’s shoes should be removed. The child should stand straight on the base plate or floor. Heels should be together and touching the base of the vertical measuring column. The bottom and shoulder blades should also touch the column and arms relaxed at their side. Lower the measuring arm firmly onto head, position it in the Frankfurt Plane. Read off height to the nearest completed millimetre (i.e. 109.5cm)

The Royal College of Paediatrics and Child Health\textsuperscript{15} and Child Growth Foundation\textsuperscript{17} have provided guidance on child measurements and suitable equipment.

If you are still feel unclear then please address this as part of your CPD for further training or shadowing to gain competence.

---

\textsuperscript{15} Royal College of Paediatrics and Child Health (RCPCH) http://www.rcpch.ac.uk/what-we-do/college-projects/research-projects/uk-who-growth-charts-early-years/uk-who-growth-charts

\textsuperscript{16} The national child measurement programme http://www.nhs.uk/livewell/childhealth1-5/pages/childmeasurement.aspx

Appendix 3

Calculating BMI

It is important that the BMI calculated is accurate, therefore the following example in Box 1 below explains this procedure. Please note it is important that the BMI is calculated on the same date as the weight and height was measured. “Health for all children” have provided a on-line BMI calculator which can also be used.

BMI is defined as weight in kilograms divided by the square of height in meters (BMI=Wt/(Ht)^2). Thus a toddler who weighs 13.2 kg and is 91cm tall has a BMI of 13.2/0.91x0.91 = 15.9.

Box 1

Calculating BMI

\[
BMI = \frac{\text{Weight in kilograms}}{(\text{Height in metres})^2}
\]

For a toddler with a weight of 13.2kg and a height of 91.2 cm (0.912m)

\[
BMI = \frac{13.2}{0.912 \times 0.912} = 15.8
\]

Plot on BMI Centile Chart

It is normal for BMI centile to vary with increasing age and this variation is different between boys and girls. BMI should decrease during the toddler years as the body fat accumulated towards the end of infancy diminishes when the young toddler begins walking. With increased mobility the toddler’s energy expenditure rises and body fat is replaced with more muscle tissue. The average BMI at one year is 17.5, falling to about 15.5 at four to five years of age. The BMI of obese toddlers may not decrease or may decrease less than expected. Calculate the BMI to one decimal place.
Appendix 4

Plotting height and weight and BMI on Centile Charts

Children aged 0-4 years

Children aged 0-4 years should have their weight and height plotted on the WHO UK growth charts (which came into effect January 2010). **BMI Centile should only be plotted from two years of age.** These charts incorporate a Weight-height to BMI conversion chart.

In a child over 2 years of age, the BMI centile is a better indicator of overweight or underweight than the weight centile:-

- a child whose weight is average for their height will have a BMI between the 25th and 75th centiles, whatever their height centile.
- BMI above the 91st centile suggests that the child is overweight;
- a child above the 98th centile is very overweight (clinically obese). BMI below the 2nd centile is unusual and may reflect under nutrition.

Children Aged 4 and above

Children and adolescents aged 4 years and above should have their weight and height plotted on UK 90 charts. [http://www.healthforallchildren.co.uk/](http://www.healthforallchildren.co.uk/)

BMI Charts

There are two BMI Centile Charts, the ‘Identification’ and ‘Management’ Charts.

- Identification chart is appropriate for identifying those who are overweight or obese.
- Management chart should be used when a child is following an intervention for weight management.

Health Scotland have published a useful resource on the BMI Identification centile chart for both **Boys** and **Girls**

The value of BMI centile as a measure of childhood obesity has been assessed in clinical and anthropometric studies. The BMI cut-off ranges for BMI centile are associated with high specificity and moderate sensitivity for identifying the fattest children, particularly when the cut-off is greater than the 90th Centile.
## Child Healthy Weight Referral Form

**Child's Name:**

**Parent's Name:**

**Address:**

**Tel. No.:**

**Practice Address:**

**Practice Tel. No.:**

### Child Details

- **Date of Birth:**
- **Height:**
- **Weight:**
- **BMI:**
- **BMI Centile:**
- **Date Measurements Taken:**

**Referring Agent:**

(please print name, correspondence address and professional title.)

**School:**

**Tel. No.:**

### Source of Referral

- P1 screening
- 27-30 month review
- Other

**Reason for Referral:**

**Has any first line dietary advice (verbal or leaflets) been given?**

**Relevant Medical History/Medication/Other referrals e.g. to school medical service (e.g. for children >99.6th BMI centile), previous dietetic contact etc.**

**Relevant Social History (e.g. Will it be appropriate to have family/carers present?)**

**Has a parent/guardian consented to being contacted (please tick/delete as appropriate): Yes □ No □**

**Any additional Information (e.g. Directions to house, name of main carer etc.)**

**Signature**

**Date**
## Child Healthy Weight Referral Form

<table>
<thead>
<tr>
<th>CHILD’S NAME:</th>
<th>G.P.:</th>
</tr>
</thead>
<tbody>
<tr>
<td>PARENT’S NAME:</td>
<td>PRACTICE ADDRESS:</td>
</tr>
<tr>
<td>ADDRESS:</td>
<td></td>
</tr>
<tr>
<td>TEL. NO:</td>
<td>PRACTICE TEL. NO:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CHI Date of birth</th>
<th>Male / Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEIGHT</td>
<td>WEIGHT</td>
</tr>
<tr>
<td>BMI</td>
<td>BMI centile</td>
</tr>
<tr>
<td>Date measurements taken:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SCHOOL</th>
<th>TEL. NO.</th>
</tr>
</thead>
</table>

**Source of Referral (please tick or delete as appropriate):**
- P1 screening □
- 27-30 month review □
- Other □

**Reason for Referral:**

**Has any first line dietary advice (verbal or leaflets) been given?**

**Relevant Medical History/Medication/Other referrals e.g. to school medical service (e.g. for children >99.6th BMI centile), previous dietetic contact etc.**

**Relevant Social History (e.g. Will it be appropriate to have family/carers present?)**

**Has a parent/guardian consented to being contacted (please tick/delete as appropriate):** Yes □ No □
## Appendix 6

### Standard Letters

Below are the letters that are sent to referrer/family and GP in connections with the Eat Play and Grow Well Intervention for your information.

<table>
<thead>
<tr>
<th>Letter No</th>
<th>Who Letter is sent to and why</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Family Invite (GP or other referrer)</td>
</tr>
<tr>
<td>2</td>
<td>Family Invite School Nurse</td>
</tr>
<tr>
<td>3</td>
<td>Letter to referrer - family did not opt-in</td>
</tr>
<tr>
<td>4</td>
<td>Letter to referrer – Discharge/DNA never seen</td>
</tr>
<tr>
<td>5</td>
<td>Letter to referrer – Discharge/attended some appointments</td>
</tr>
<tr>
<td>6</td>
<td>Letter to referrer – Discharge completed EPGW</td>
</tr>
<tr>
<td>7</td>
<td>Letter to referrer – discharged one off appointment</td>
</tr>
<tr>
<td>8</td>
<td>Letter to family – informing them of the EPGW programme once they have opted in.</td>
</tr>
<tr>
<td>9</td>
<td>Letter to family – informing them of the one off appointment one they have opted in.</td>
</tr>
</tbody>
</table>
Dear Parent / Guardian

Re:

**Child’s name** was referred to the dietitians for dietary advice and has been offered a place in NHS Grampian’s Eat, Play and Grow Well (EPGW) programme.

NHS Grampian Dietitians have been developing a range of programmes to facilitate and support children and their families to achieve a healthy weight. Your family are being invited to take part in Eat, Play and Grow Well. Please refer to the information leaflet enclosed. Sessions can take place either in your own home or a clinic. Your dietitian will discuss the options with you.

Please call the Dietetic Department on **01224 555314** to arrange a time suitable to start Eat, Play and Grow Well or to find out more about the programme. Your GP will be advised of this invitation and will be kept informed of all outcomes.

If we do not hear from you within 6 weeks we will assume you no longer require an appointment and will remove the referral from our list.

Yours sincerely,

**Community Dietetic Department**
Dear Parent/Guardian,

Re:

A referral has been received for «Forename» at the Community Dietetic Department requesting an appointment to see a Dietitian.

We would like to invite you to call the Department on 01224 555258 to arrange an appointment suitable to you. After agreeing an appointment a letter of confirmation will be sent.

Unfortunately, waiting lists do exist in certain areas. In these circumstances you can either arrange a suitable alternative venue or you can, of course, wait for an appointment in your own area.

If we do not hear from you within 6 weeks we will assume you no longer require an appointment and will remove the referral from our clinic list.

Yours sincerely,

Community Dietetic Department.
Dear Dr

Re: Dietetic Appointment – Opt-In – System

NAME :-

The above child was referred to our service by……………. for dietetic advice. As part of our opt-in-system, a letter was sent inviting them to contact the department and arrange a suitable appointment.

To date we have had no response to this letter.

There may be some genuine reason for no contact (e.g. change of address) of which we are unaware. If this is the case we would be grateful if you could let us know and we will send a further invite.

We would be happy to receive any re-referral in the future if necessary.

Yours sincerely

Community Dietetic Department

cc Referrer
Dear Dr

Re:

The above child was referred to us by yourself and an opt in letter was sent asking them to contact the department to arrange a suitable appointment.

The parent/guardian called in to arrange an appointment for the date of appointment at the place of appointment to which they did not attend and they have not contacted the department to arrange another one.

I am therefore discharging this child. Please do not hesitate to re-referr if you feel it is appropriate.

Yours sincerely

Community Dietetic Department.
Dear Dr

Re:

The above child was referred to us by yourself and an opt in letter was sent asking them to contact the department to arrange a suitable appointment.

The family attended ___ appointments however failed to attend their last appointment and have not contacted the department to arrange another one.

I am therefore discharging this child. Please do not hesitate to re-refer if you feel it is appropriate.

Yours sincerely

Community Dietetic Department.
Dear

Re: ,
DOB/CHI:

The above child was referred to our service by ….referrer… for dietetic advice. The family were invited to participate and accepted a place on the Eat, Play and Grow Well programme that is currently being run by the Community Dietetic Department. The family have now completed the programme and I have therefore discharged the above child.

Child’s Measurements at 1st Appointment - Date:
Height:
Weight:
BMI:
BMI centile:

Child’s Measurements at final review – Date:
Height:
Weight:
BMI:
BMI centile:

If you have any queries please do not hesitate to contact the department on the above telephone number.

Yours sincerely,

Community Dietetic Department

Cc Referrer
Letter 7

Community Dietetic Department
Denburn Health Centre
Rosemount Viaduct
Aberdeen
AB25 1QB

Private & Confidential

Date 20 March 2013
Your Ref 
Our Ref DG
Enquiries to Extension 55314
Direct Line (01224) 555314

Dear

Re: ,
DOB/CHI:

The above child was referred to our service by …referrer… for dietetic advice. The family were seen in clinic and given appropriate dietary advice, including reducing energy intake, increasing physical activity and reducing sedentary behaviour. They were encouraged to keep a lifestyle monitoring diary and use goals & rewards to make healthy changes. This child has now been discharged.

Child’s Measurements at Appointment - Date:
Height:
Weight:
BMI:
BMI centile:

If you have any queries please do not hesitate to contact the department on the above telephone number.

Yours sincerely,

Community Dietetic Department
Cc Referrer
Dear Parent/Guardian,

Re – Child’s Name

An appointment has been arranged for you to start the Eat, Play and Grow Well programme at the Dietetic Clinic 
at «Clinic» on «App_Dt» at «Time»

If you are unable to attend this appointment please contact us on 01224 555314 at your earliest convenience so that we can arrange an alternative time, date and/or location. This will help us keep our waiting times as short as possible. For your information, it is our policy to notify your GP if you do not keep your out-patient appointment.

Please note that every effort is made to ensure patients are seen at their allocated times. If for any reason you arrive late it may not be possible for you to be seen and an appointment would be allocated for a future date.

Your initial appointment with the Dietitian, which is a parent-only session, will take up to 60 minutes and during this time you will have the opportunity to discuss the following:

- The Eat, Play & Grow Well programme structure and content.
- The role of healthy eating and active living in promoting healthy weight in children & young people
- Current eating & activity habits and preferences.
- Strategies to help change behaviour (goal-setting, rewards, monitoring, support)
- Fussy eating (if this is an issue)
- Any relevant issues/queries you may have about healthy eating/activity/healthy weight.

We look forward to meeting you.

Yours sincerely

COMMUNITY DIETETIC DEPARTMENT
Dear Parent/Guardian,

Re – Child’s Name

An appointment has been arranged for you at the Dietetic Clinic at [Clinic] on [App_Dt] at [Time].

If you are unable to attend this appointment please contact us on 01224 555314 at your earliest convenience so that we can arrange an alternative time, date and/or location. This will help us keep our waiting times as short as possible. For your information, it is our policy to notify your GP if you do not keep your out-patient appointment.

Please note that every effort is made to ensure patients are seen at their allocated times. If for any reason you arrive late it may not be possible for you to be seen and an appointment would be allocated for a future date.

Your appointment with the Dietitian will take up to 45 minutes and during this time you will have the opportunity to discuss the following:

- Current eating & activity habits and preferences.
- Strategies to help change behaviour (goal-setting, rewards, monitoring, support)
- The role of healthy eating and active living in promoting healthy weight in children & young people
- Fussy eating (if this is an issue)
- Any relevant issues/queries you may have about healthy eating/activity/healthy weight.

We look forward to meeting you.

Yours sincerely

COMMUNITY DIETETIC DEPARTMENT
Appendix 7

Guideline for Management of Obesity in CCH Service

This advice is based on SIGN115 – Management of Obesity in Children and Young People (see attached) and discussion with Endocrine Service, RACH.

Primary Care colleagues are advised to refer children for further assessment where their BMI is at or above the 99.6 percentile.

Role of Community Paediatrician

Aim: To exclude underlying medical cause and to assess co morbidity. Most children will not have an underlying medical cause and should be discharged back to management in the community.

BMI ≥ 99.6 percentile

1. Check height, weight and confirm BMI percentile and standard deviation
2. Obtain parental heights and ensure child’s height within or above target centile range
3. For children >11 years- check Urine sugar and Blood pressure (appropriate cuff). If urine dipstick not accessible request Nurse or GP

3. Refer to Endocrine Services RACH
   • if child’s height is below target centile range
   • if BMI is above 3.5 standard deviation and family and child motivated
   • if signs of endocrine cause or co-morbidity e.g. Cushingoid, Hypothyroid, Diabetes, Hypertension
   • if Dysmorphic
   • if parent has Type 2 Diabetes

4. If any other co-morbidity refer to appropriate services eg. Sleep apnoea- ENT

MARCH 2013
PROTOCOL FOR RefERRING TO COMMUNITY CHILD HEALTH PAEDIATRICIANS FOR OBESE CHILDREN EQUAL TO AND ABOVE 99.6\textsuperscript{TH} CENTILE

PLEASE REFER IF THE ANSWER IS YES TO THE FOLLOWING QUESTIONS:

1. Is the child’s BMI more than 3.5 standard deviation?
2. Is child’s height out with the Target centile range?
3. Does the child complain of
   a) Nausea
   b) Headache
   c) Visual symptoms- Double vision
4. Is there any history of
   a) Snoring or mouth breathing associated with morning tiredness/irritability
5. Any history of Polyuria/ Polydipsia and family history of Insulin dependent diabetes in the immediate family.
6. Any problems with stress incontinence
7. Any history/evidence of early puberty
   Girls- Pubic /axillary hair or periods before 8 years of age
   Boys- Pubic /Axillary hair/ breaking of voice before 9 years of age.
8. Any knee/ back pain or foot problems.
9. Any abnormal facial features
10. Any intolerance to cold along with constipation and tiredness
11. Any history of easy bruising, thin arms and legs compared to body.

March 2013