

Child Healthy Weight Programmes Development Guidance

Supporting the Delivery of HEAT Target (H3)

April 2008



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Contents

1.	Introduction	1
2.	Identification of target group	2
3.	Components of the interventions	4
4.	Approach	6
5.	Delivery methods	6
6.	Who should be involved and skills required	7
7.	Setting	8
8.	Equality and diversity	9
9.	Review of available resources	9
10.	Performance monitoring and evaluation	9
11.	Appendix 1 – NICE Evidence Statements and SIGN Recommendations	12
12.	Appendix 2 – Reference Group Membership	21

1. Introduction

1.1. Policy background

Addressing rising levels of overweight and obesity in the Scottish population is a priority for the Scottish Government. As highlighted in the Better Health, Better Care action plan, key elements of achieving the Government's health and wellbeing vision will be tackling health inequalities and targeting interventions at early years to break the link between health problems in early life and adult disease. Childhood overweight and obesity present a particular challenge.

In December 2007 a new HEAT target (H3) was introduced to monitor health boards achievement of agreed completion rates for child healthy weight intervention programmes by 2010/11. This will be measured according to the achievement of agreed rates for the number of children completing Scottish Government approved intervention programmes. The purpose of this guidance is to provide the minimum criteria for what constitutes an approved programme. The 'child healthy weight interventions' target is categorised as developmental and it will be an integral part of its function that it contributes to the growing evidence base of the effective programmes to tackle unhealthy weight in children.

The revised 2008-09 HEAT targets reflect the priorities and fresh approach of the new Government, and the underpinning strategic direction set out in the Better Health, Better Care action plan. A major component of the new approach is the National Performance Framework. This Framework sets out strategic objectives, national outcomes, and national indicators and targets for the whole of the public sector in Scotland for the first time. HEAT targets provide the operational description of how NHS Scotland will contribute towards achieving the national objectives and outcomes. As this guidance indicates, delivery of childhood healthy weight intervention programmes will be an opportunity to work with partners outwith the NHS to deliver shared goals. It will contribute to many of the fifteen National Outcomes set out in the National Performance Framework, and of the forty-five National Indicators it will most directly contribute to "reduce the rate of increase in the proportion of children with their Body Mass Index outwith a healthy range by 2018".

1.2. Purpose of this guidance

This guidance sets out what are the components of an "approved healthy weight intervention programme" as specified in the above HEAT target and what successful delivery looks like. It is a tool to assist NHS Boards in developing this

Child Healthy Weight Programmes Development Guidance

service or procuring and/or re-configuring existing services for this population. The guidance also sets out the key measures and data collection required to monitor performance as well as the plans for evaluation.

1.3. Evidence of effectiveness

The relevant sections of the NHS Health Scotland's Commentary on NICE Clinical Guideline 43 Obesity: guidance on the prevention, identification, assessment and management of obesity in adults and children (2007) has been used as the main evidence base for the development of this guidance. In addition other sources have been used including, SIGN 69 Management of obesity in children and young people (2003) (Full details of the evidence statements from NICE and SIGN recommendations are given in appendix 1) and NHS Health Scotland's Draft Commentary on NICE Public Health Guidance 6 Behaviour change at population, community and individual levels (2008).

2. Identification of target group

2.1. Age Range

The HEAT target sets the age range for the intervention at 5 - 15 years. Boards can be allowed to tailor their child healthy weight service to specific age groups within this age range.

The child healthy weight service must have a detailed care pathway for assessment and classification which must include the following:

2.2. Referral to the intervention programme

Identification of children for consideration of referral to the local healthy weight intervention should be accepted from a number of sources, this may include:

- Identification at the primary 1 school health check
- opportunistic screening by the child's general practitioner; nurses or nurses working in schools , other health care professionals
- self referral from the child and or parent.

2.3. Assessment and classification of overweight and obesity in children

Ascertaining a child's weight status is an important first step in childhood weight management. Parents who do not recognise the weight status of their overweight children may be less likely to provide them with support to achieve a healthy weight. Children will be considered eligible for enrolment in this intervention programme if their BMI is at 91st centile or above (classed overweight). However, children with a BMI at 99.6th centile or above or a BMI at 98th centile or above with comorbidities should be referred to hospital or community paediatrics before considering enrolment in the intervention programme.

2.3.1. Determine degree of overweight or obesity

- Use BMI; relate to UK 1990 growth charts to give age- and gender-specific information
- Discuss with child and family

2.3.2. Consider assessment and intervention

- Consider intervention programme if BMI at 91st centile or above (classed overweight)
- Consider assessing for comorbidities if BMI at 98th centile or above (classed severely overweight or obese)
- Consider referral to paediatrics either if BMI at 99.6th centile or above; and or BMI at 98th centile or above with comorbidities. Please see Section 2.4 below.

2.4. Addressing the needs of co-morbidities and complex needs

Overweight and obese children with comorbidities and complex needs should be referred to paediatrics. This includes any of the following:

- Serious morbidity related to diabetes mellitus or hypertension.
- Height below 9th centile, unexpectedly short for family or slowed growth velocity.
- Precocious or late puberty. (Before 8 years or no signs at 13 in girls, 15 in boys).
- Significant learning disability.
- Symptoms / signs of genetic or endocrine abnormalities.
- Other significant concerns.

Child Healthy Weight Programmes Development Guidance

It is not expected that children falling into these categories would be treated within this programme.

3. Components of the interventions

Programmes must contain elements that address diet modification and physical activity and be underpinned by behavioural change, as detailed below.

The main goal in managing overweight and obese children is to achieve a sustainable improvement in diet and activity level, rather than an ideal weight. A change in the child's BMI centile towards the healthy weight range will indicate success. This may involve some weight loss in very obese children. However, weight maintenance, or weight gain at a slower rate than normal for age, will also improve a child's BMI. The goal for most children is not to lose weight, but to maintain their weight or reduce their rate of weight gain while their height increases.

3.1. Assessment of lifestyle, comorbidities and willingness to change

- Presenting symptoms
- Risk factors and comorbidities
- Psychosocial distress – low self esteem, bullying
- Lifestyle – diet and physical activity, including those of the family
- Environmental, social and family factors
- Growth and pubertal status
- Readiness to change of both the child and family and review if not ready for intervention
- Referral to secondary care if required

3.2. Behaviour Change

The programme must integrate and be underpinned by interventions that motivate and support children and families to:

- understand the short, medium and longer-term consequences of their health-related behaviours.
- feel positive about the benefits of health-enhancing behaviours and changing their behaviour
- plan their changes in terms of easy steps over time

Child Healthy Weight Programmes Development Guidance

- recognise how their social contexts and relationships may affect their behaviour, and identify and plan for situations that might undermine the changes they are trying to make
- plan explicit 'if-then' coping strategies to prevent relapse
- make a personal commitment to adopt health-enhancing behaviours by setting (and recording) goals to undertake clearly defined behaviours, in particular contexts, over a specified time
- share their behaviour change goals with others.

The effectiveness of interventions tends to be positively associated with the number of behaviour change techniques taught to both parents and children. Behavioural treatment can be more effective if parents are included and are given the main responsibility for behaviour change.

3.3. Diet Modification

The main requirement of a dietary approach to weight control is a reduction in total energy intake, with caloric expenditure exceeding caloric intake. Energy imbalance is critical to weight loss. Energy expenditure must at least equal or exceed energy intake to achieve weight loss or maintenance.

Any recommended diet should be consistent with other healthy eating advice. Strict diets are not appropriate for children and adolescents except in rare occasions where combined with specialist supervision and intensive follow-up.

It would be valuable if programmes could include interactive skills based opportunities which will increase knowledge awareness and practical skills for the child and family.

3.4. Physical Activity

The programme should identify opportunities for increasing physical activity and decreasing sedentary behaviour, particularly TV viewing and other forms of screen time inactivity.

Currently it is recommended that children and young people should achieve a total of at least 60 minutes of at least moderate intensity physical activity each day. The programme should implement steps to help participants achieve this target, although it may be that this alone is inadequate to prevent the development of obesity. It is also important to seek to reduce sedentary behaviour, not only because this is inactive time, but also because of the potential for unhealthy eating or snacking habits during sedentary periods.

Child Healthy Weight Programmes Development Guidance

Current recommendations are that sedentary time for children should be limited to 2 hours per day outwith of school time, but it will be necessary in addressing high levels of sedentary behaviour to set realistic targets and encourage step by step changes.

It would be valuable if programmes could include interactive demonstrations, videos and discussions on practical issues such as ideas for activities, opportunities for active play, safety and local facilities.

The programme should be aiming to:

- Encourage active play – for example, dancing and skipping, football, cycling, skateboarding, basketball, etc
- Encourage families to be more active – for example, walking and cycling to school and shops, going to the park or swimming.
- Gradually reduce sedentary activities – such as watching television or playing video games – consider active alternatives such as dance, football or walking – and discourage unhealthy snacking habits during sedentary times
- Encourage children to participate in sport or other active recreation, and make the most of opportunities for exercise at school
- Identify resource and activities available locally for children and their families

4. Approach

The programme must take a family-centred approach as this ensures that families can incorporate changes into their daily routines and sustain long term benefits. Family-centred interventions that target improved weight maintenance in children can be effective, at least for the duration of the intervention. The delivery of the programme should be flexible to allow tailoring to suit individual family needs and it is unlikely that any single programme will fit all circumstances. All actions aimed at preventing excess weight gain and improving diet (including reducing energy intake) and activity levels in children and young people should actively involve parents and carers.

5. Delivery methods

The decision as to whether the intervention programme should be delivered at a group or an individual level, or using a combination of both approaches, is for individual boards; this will be dependent upon the specific issues faced by

Child Healthy Weight Programmes Development Guidance

boards, for example dispersed populations in rural areas. However, if a group approach is used for the majority of the delivery of the programme, consideration should be given to building in an individual contact component at the very least at an initial assessment session.

The duration of the programme is not specified here, but it must be sufficient to deliver all of the essential components, with adequate follow up and ongoing support. Long term follow up is probably required, of at least a year or more.

6. Who should be involved and skills required

Programmes will require the involvement of a number of professionals depending upon how the programme is delivered. The professionals required to develop or commission the programme may not necessarily be required to deliver it.

It is essential that staff delivering the programme have the appropriate skills, training and aptitude to deliver the appropriate components. In identifying which staff are the most appropriate, consideration should be given to their attitudes, enthusiasm and opportunities to contribute in a local context, not just their job descriptions.

Boards should pay particular focus on working with partners, including local authorities and the voluntary sectors in the development and delivery of these programmes.

The professionals that may be involved, include the following:

- Paediatric Dieticians
- Paediatric Nurses
- Nurses working in schools
- Public Health staff
- General Practitioners
- Paediatricians
- Health Support Workers
- School Staff
- Physical Activity Specialists
- Psychologists

Staff must be provided with training in the following:

- health benefits and the potential effectiveness of interventions which increase activity levels and improve diet (and reduce energy intake)

Child Healthy Weight Programmes Development Guidance

- the best practice approaches in delivering such interventions, including tailoring support to meet people's needs over the long term
- the use of motivational and counselling techniques.

Where possible, NHS Health Scotland will work with partners; including NHS Boards and NHS Education for Scotland to help support the delivery of these programmes. This will include a review of learning and development need and provision currently in place to support the workforce. Although it is recognised that each Board will need to meet its own unique workforce development requirements Health Scotland will support the sharing of information and practice across Scotland. Where appropriate, we will also seek to coordinate any workforce development solutions which would benefit from national delivery.

If you would like to discuss workforce development needs, issues and opportunities further in relation to this guidance please contact:

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7. Setting

The decision as to whether the intervention programme should take place in a clinical or non clinical community setting is for individual boards, although the following should be taken into consideration when making this choice.

- Treating children for overweight or obesity may stigmatise them and put them at risk of bullying. Confidentiality and building self-esteem are particularly important if help is offered at school.
- Programmes for a focused group that take place in a school setting should not occur during the normal school day as this may be a cause of stigmatisation.

8. Equality and diversity

Programmes must be flexible to ensure that they take account of inequalities and diversity issues of their local populations. There is some evidence that children in some ethnic groups may be at greater risk of becoming overweight or obese. Some children are more at risk of developing obesity and should be considered as priorities, for example children from families where at least one parent is obese.

Boards should ensure that equality impact assessments are carried out to ensure that programmes do not impact negatively on inequalities and that programmes are designed to achieve equitable access.

9. Review of available resources

Where possible, NHS Health Scotland will work with partners; including NHS Boards. This will include a review of resource and materials to support the delivery of these programmes and facilitating the sharing of good practice.

10. Performance monitoring and evaluation

10.1. Performance monitoring

The ambition is to develop a common data set that will enable reporting on performance and achievements in the future. This is within the context of the National Performance Framework where the Scottish Government has made a commitment to shift performance reporting onto the results of the services that are delivered.

Analytical Services Division (ASD) of the Scottish Government and Information Services Division (ISD) of NHS National Services Scotland will begin work during the first year of implementation of the guidance to develop a core dataset for recording interventions. In the interim Boards will be expected to collect information on the topic listed below to report on performance until the core dataset is established. Information should be recorded to provide details on the programmes implemented and also on the children treated.

An Excel sheet containing the essential variables for collection of data on individual children treated will be provided to health boards to assist in this exercise in the interim. These variables will provide a minimum requirement for

Child Healthy Weight Programmes Development Guidance

the monitoring and evaluation of healthy weight interventions. As development of the national dataset progresses, it is intended that this list will be enhanced. Boards are therefore encouraged to record as much information as possible on interventions in addition to the variables provided in the spreadsheet.

Boards must ensure that the following data are collected to assist in both monitoring in achieving the HEAT target, and local and national evaluation:

10.1.1. *Service delivery*

- Cost of service delivery
- Delivery agents - How the service is delivered (eg which professionals and organisations are involved in which aspects of service delivery)
- Source of referrals - the sources by which children are referred to the healthy weight service
- Level of contact between clients and service (eg number of appointments - initial, 3 month, 6 month, 1 year; duration of appointments; contact time with parent and child at each appointment)
- No. of children/families participating in the service activities including age, sex and postcode of children referred to and commencing the healthy weight service.
- No. of children completing the programme, this will initially be defined as participating in 75% of the delivered components of the intervention. This definition of completion will be kept under review as evidence of best practice emerges.

10.1.2. *Reach*

- Referrals - Number of children/families referred to the service
- Uptake - Number of children/families commencing service
- Reaction of children/families to the service - including the credibility and relevance of the service, its people and the information/advice provided
- Adherence – Number of children/families who continue to attend and adhere to advice

10.1.3. *Outcomes*

- A change in children/families knowledge, attitudes, skills and/or aspirations
- The adoption of new practices or behaviours within the family
- Physical activity level of child - at referral and at follow-up appointments
- Diet of child - at referral and at follow-up appointments
- Weight, height, BMI – BMI centile at referral and at follow-up appointments
- Quality of life - at referral and at follow-up appointments

Child Healthy Weight Programmes Development Guidance

10.2. Evaluation

There is a commitment from the Scottish Government to evaluate the NHS healthy weight intervention, following on from implementation of this guidance, to build further the evidence of what works on the ground in Scotland. The collection of the minimum dataset will be essential for this future evaluation work. NHS Health Scotland will work with Health Boards, the Scottish Government and ISD to develop evaluation plans. If you are currently doing evaluative work in this area and are interested in informing the development of the nationally led evaluation please contact:

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10.3. Clinical governance and audit

Boards must ensure that programmes comply with local clinical governance and audit requirements.

11. Appendix 1 – NICE Evidence Statements and SIGN Recommendations

11.1. NICE Evidence Statements and Grading

11.1.1. *Factors to be considered in the clinical assessment of children and adolescents who are overweight or obese*

No.	Evidence statement	Grade
1	Initial assessment should aim to identify children and adolescents at highest risk who have the potential to gain health benefits with weight loss	4
2	In children who are overweight or obese, individuals at highest risk and with the greatest potential to gain health benefits include those with current significant weight-related co-morbidities, high risk of developing significant co-morbidities in the future, or children with a significant level of psychosocial distress	2++
3	In children, contributors for energy imbalance can be as follows: <ul style="list-style-type: none"> ▪ Underlying causes of obesity (genetic, single-gene defects and obesity syndromes, artificial infant feeding, early adiposity rebound, medications, parental weight issues, in timing or rate of growth, endocrine disease, central nervous system pathology, acute lymphatic leukaemia therapy) ▪ Co-morbidities ▪ Lifestyle, environmental, social and family (television viewing, energy expenditure, dietary fat, dietary carbohydrate and eating patterns, social factors and other behavioural or psychological factors) 	1++, 2++, 3

11.1.2. *Lifestyle interventions in weight management and other outcomes in children and adolescents*

No.	Evidence statement	Grade
Weight loss		
1	The main requirement of a dietary approach to weight control is a reduction in total energy intake, with caloric expenditure exceeding caloric intake	GPP

No.	Evidence statement	Grade
	Energy balance is critical to weight loss. Energy expenditure must exceed energy intake	
2	In specialist weight management programmes, physical activity and diet combined are more effective in weight management in children aged 4–16 years, than diet alone	1++
3	There is no evidence on the effectiveness of physical activity alone in the treatment of childhood obesity in a clinical setting	
4	There is no clear evidence on which dietary intervention is the most effective in weight reduction and management in children and adolescents	
5	Any recommended diet should be consistent with other healthy eating advice Strict diets are not appropriate for children and adolescents except in rare occasions where combined with specialist supervision and intensive follow-up	GPP
6	As part of a specialist weight management programme in the USA, targeting sedentary behaviour ¹ was shown to be as effective as promoting physical activity in managing weight in obese children aged 8–12 years.	1+
7	As part of a specialist weight management programme in the USA, lifestyle ² exercise was shown to be more effective than aerobic and calisthenics exercise in maintaining weight loss in obese children aged 8–12 years.	1+
8	In specialist weight management programmes, behavioural treatment combined with physical activity and/or diet is effective in the treatment of obese children and adolescents aged 3–18 years	1++
9	In specialist weight management programmes behavioural treatment can be more effective if parents, rather than children (aged 6 to 16 years), are given the main responsibility for behaviour change.	1++
10	There is no evidence on which components of behavioural treatment are the most effective for childhood and adolescent obesity	

Outcomes other than weight loss (from trials that reported weight loss)

¹ Watching television, playing computer games, imaginative play, talking on the phone, and playing board games.

² Lifestyle exercise relates to integrating exercise into the person's lifestyle without the focus on exercise intensity. It can be walking or cycling to school, walking up and down stairs or walking at lunch.

No.	Evidence statement	Grade
11	As part of specialist weight management programmes, physical activity can improve levels of fitness in obese children aged 8–12 years	1+
12	There is conflicting evidence on whether weight management programmes improve HDL and LDL cholesterol, and triglyceride levels in obese children	1++
13	There is conflicting evidence on whether weight management programmes improve diastolic and systolic blood pressure in obese children	1–
14	Specialist weight management programmes including diet and physical activity can improve the eating behaviour of 8–12-year-old obese children	1++
15	In specialist weight management programmes, behavioural treatment can have a positive effect on dietary quality	1++
16	In a specialist weight management programme targeting black adolescent girls aged 12-16 years, behavioural treatment improved self-esteem and feelings of depression	1+
17	In specialist weight management programmes, behavioural treatment can improve self-control in regard to weight-related behaviours in children aged 5–13 years	1+
18	In specialist weight control programmes, decrease in weight loss was associated with a decrease in consumption of ‘red foods’ in obese children aged 6–12 years	1+
19	Inpatient weight management programmes, with cognitive behaviour therapy can improve quality of life over time in obese children and adolescents aged 9–19 years	1+
Harms (from trials that reported weight loss)		
20	Both a protein-sparing modified diet and a hypocaloric balanced diet delivered in a school and outpatient programme setting can produce mild to moderate side effects such as: fatigue, weakness, muscle cramps, bad breath, headaches and abdominal pain in obese children aged 7–16 years	2+

GPP, good practice point ; HDL, high-density lipoprotein; LDL, low-density lipoprotein.

11.1.3. *Harms arising in children and adolescents who undergo weight management/maintenance programmes*

No.	Evidence statement	Grade
Harms (from trials that reported weight loss)		
1	There is no evidence to suggest that professionally administered weight management programmes for children and adolescents increase the likelihood of developing eating disorders or cause psychological harm	2+
2	There is no evidence to suggest that professionally administered weight management programmes for children and adolescents have a negative impact on growth or lean mass loss	2–
3	There is no evidence to suggest that professionally administered weight management programmes for children and adolescents have a negative impact on psychosocial well-being	2+
Generalisability (from trials that reported weight loss)		
4	Generalisability of the findings remains unclear, as no study was conducted in the UK and majority of the studies were based in highly specialised research settings	N/A
5	Generalisability of the findings is hindered by the methodological limitations of the retrieved studies	N/A

11.1.4. *Levels of evidence for intervention studies*

Level of evidence	Type of evidence
1++	High-quality meta-analyses, systematic reviews of RCTs, or RCTs with a very low risk of bias
1+	Well-conducted meta-analyses, systematic reviews of RCTs or RCTs with a low risk of bias)
1–	Meta-analyses, systematic reviews of RCTs or RCTs with a high risk of bias ^a
2++	High-quality systematic reviews of non-RCT, case–control, cohort, CBA or ITS studies High quality non-RCT, case–control, cohort, CBA or ITS studies with a very low risk of confounding, bias or chance and a high probability that the relation is causal
2+	Well-conducted non-RCT, case–control, cohort, CBA or ITS studies with a very low risk of confounding, bias or chance and a moderate probability that the relation is causal
2–	Non-RCT, case–control, cohort, CBA or ITS studies with a high risk of confounding, bias or chance and a significant risk that the relationship is not causal ^a
3	Non-analytic studies (for example, case reports, case series)
4	Expert opinion, formal consensus

^a Studies with a level of evidence ‘–’ should not be used as a basis for making a recommendation.

RCT – randomised controlled trial; CBA – controlled before-and-after; ITS – interrupted time series

The full NHS Health Scotland on the commentary on the Public Health aspects of the NICE guidance can be found at:

<http://www.healthscotland.com/scotlands-health/evidence/NICE.aspx>

Further details and information regarding the evidence statements the full NICE guidance can be found at:

<http://www.nice.org.uk/guidance/index.jsp?action=byID&o=11000>

<p style="text-align: center;"><u>Weight Maintenance</u></p> <p>In most obese children (BMI \geq 98th centile) weight maintenance is an acceptable goal</p> <p>The benefits of weight maintenance should be demonstrated to families by charting weight over time on the BMI percentile chart</p> <p>Weight maintenance and/or weight loss can only be achieved by sustained behavioural changes eg.</p> <ul style="list-style-type: none"> • healthier eating • increasing habitual physical activity (eg brisk walking) to a minimum of 30 minutes/day. In healthy children, 60 minutes of moderate-vigorous physical activity/day has been recommended. <p>reducing physical inactivity (eg.watching television and playing computer games) to <2 hours/day on average or the equivalent of 14 hours/week</p>	<p style="text-align: center;">D</p> <p style="text-align: center;"><input checked="" type="checkbox"/></p> <p style="text-align: center;">D</p>
<p>In overweight children (BMI \geq 91st centile) weight maintenance is an acceptable goal. Annual monitoring of BMI percentile may be appropriate to help reinforce weight maintenance and reduce the risk of children becoming obese</p>	<p style="text-align: center;">D</p>
<p style="text-align: center;"><u>When to refer</u></p> <p>The following groups should be referred to hospital or community paediatric consultants before treatment is considered:</p> <ul style="list-style-type: none"> • children who may have serious obesity-related morbidity that requires weight loss (eg benign intracranial hypertension, sleep apnoea, obesity hypoventilation syndrome, orthopaedic problems and psychological morbidity) • children with suspected underlying medical (eg. Endocrine) cause of obesity including all children under 24 months of age who are severely obese (BMI \geq 99.6th centile) • all children with BMI \geq 99.6th centile (who may have obesity-related morbidity) <p>Suspect an underlying medical cause of obesity if a child is obese and also short for their age</p>	<p style="text-align: center;">D</p> <p style="text-align: center;"><input checked="" type="checkbox"/></p>

-
- Family support is necessary for treatment to succeed
 - Generally, the aim of treatment is to help children maintain their weight (so they can “grow into it”)
 - A medical cause of obesity is more likely in the child who is obese and short
 - Most children are not obese because of an underlying medical problem but as a result of their lifestyle
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These recommendations are graded A B C D to indicate the strength of supporting evidence.

Good practice points are provided where the guideline development group wishes to highlight specific aspects of accepted clinical practice

The full SIGN guideline can be found at:
<http://www.sign.ac.uk/guidelines/fulltext/69/index.html>

12. Appendix 2 – Reference Group Membership

Ruth Campbell	Public Health Nutritionist	NHS Lanarkshire
Jim Chalmers	Head of Programme, Women and Children's Health Information Programme	Information Services Division
Michael Craig	Public Health Advisor (Food, Nutrition & Health Weight)	NHS Health Scotland
Anne Gebbie-Diben	Principal Health Promotion Officer for Nutrition, Physical Activity and Weight Management	NHS Greater Glasgow and Clyde
Cathy Higgison	Programme Manager (Food & Health)	NHS Health Scotland
Ian Hunter	Consultant Paediatrician	NHS Lanarkshire
Graham Mackenzie	Consultant in Public Health Medicine (Children and Women)	NHS Lothian
Zelda Mathewson	Consultant in Public Health Medicine (Children and Young People)	Directorate of Public Health, Tayside NHS Board
Julia Murphy	Public Health Advisor, Policy Evaluation & Appraisal	NHS Health Scotland
Emily Postan	Policy Officer	Health Improvement Strategy Division, Scottish Government
Julie Ramsay	Statistician	Analytical Services Division, Scottish Government
Graeme Scobie	Public Health Advisor (Physical Activity)	NHS Health Scotland
Fiona Smith	Public Health Dietician	NHS Ayrshire and Arran
Judith Tait	Child Health Information Team Leader	Information Services Division
Joyce Thompson	Dietetic Consultant in Public Health Nutrition	NHS Tayside

Written comments were also received from the following:

David Elder	Learning and Development Adviser	NHS Health Scotland
Laurence Gruer	Director of Public Health Sciences	NHS Health Scotland
Sally Haw	Principal Public Health Adviser	NHS Health Scotland
Janet Murray	Public Health Fellow	Health Improvement Strategy Division, Scottish Government
John J Reilly	Professor of Paediatric Energy Metabolism	University Division of Developmental Medicine, Royal Hospital for Sick Children
David Wilson	Consultant in Paediatric Gastroenterology and Nutrition	Royal Hospital for Sick Children
Erica Wimbush	Head of Policy Evaluation & Appraisal	NHS Health Scotland