Royal College of Physicians

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The training of health professionals for the prevention and treatment of overweight and obesity

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1 Introduction

Background

1.1 There has been a dramatic increase in the prevalence of overweight and obesity in the UK in the last 20 years.[1] This increase in a clinical significant condition has not been matched by a proportionate expansion of the provision of continuing education and training provided for health professionals, irrespective of their discipline. Too often health professionals ignore the obvious signs or symptoms of obesity or simply instruct the individual to go on a diet and lose significant weight. It is therefore not surprising that most healthcare intervention only happens when medical complications and morbidity are apparent. This oversight by healthcare professionals reflects a poor understanding and lack of recognition of the social and environmental determinants of obesity, complexity of nutritional issues and physical activity, and lack of understanding of the factors that impact behavioural change.

1.2 There is limited information provided in both undergraduate and postgraduate training programmes and scant focus on weight management in specialist medical training. Health professionals either lack appreciation of the health and medical consequences of obesity or lack confidence and the ability to help.[2] This is reflected by the limited number of community based services, specialist units in regional hospitals and reluctance to consider pharmacotherapy or surgery for patients most at risk. Since clinical teachers have had little or no training in the subject they tend not to teach it or refer to overweight and obesity as an integral component of long term care management. As a result many health professionals ignore the need to prevent or tackle overweight and obesity; the perception is that it is too difficult to tackle or is not a medical problem.

1.3 Regardless of the particular discipline of the health professional, or the setting in which he/she works the message that needs to be heard, is that ‘managing overweight and obesity is everybody’s business’.

2 Public perception of obesity

2.1 People gain weight over time from a variety of causes requiring a range of different solutions to enable weight maintenance or to support sustainable weight loss. The message that obesity leads to increased mortality and morbidity is now widely promoted as a population problem but many individuals deny the risk factors which their overweight leads to. Personal awareness of body size and shape and associated media coverage are still linked to seasons and special events with a short term approach to results. For those with a weight problem there is a focus on drugs and surgery to suggest a quick answer rather than a long term significant change to lifestyle.

2.2 The recent escalation in obesity prevalence has resulted from a complex mixture of societal changes in eating habits and physical activity levels.[3] The causes of obesity are complex and the solutions for individuals are equally so. Healthcare professionals need to understand the complexities connected with people being obese.

2.3 News on obesity makes the headlines on an almost daily basis. Poor public understanding of the hazards of obesity is highlighted by media attention of celebrity and cosmetic issues. Whilst most people are aware that an active lifestyle and healthy eating will promote a healthy body many are unaware of how this applies to them or do not have the knowledge or support to put into practice. There is a conflict between the value placed on short term cosmetic gains and the long term health gains of sustained weight loss.[4] The public will gain from health professionals promoting a simple and consistent approach to this health hazard.

3 The importance of educating health professionals about managing overweight and obesity

3.1 A health professional's primary role is to care for their patients, promote health and support self care and self reliance. They need to understand the fundamentals of nutritional science, physical activity and the social, psychological and environmental factors that underpin obesity and be able to apply these to their clinical practice on an everyday basis.

3.2 The Foresight Report[1] acknowledges the importance of any comprehensive long-term strategy addressing both prevention and treatment. The NHS has a responsibility to treat people who are overweight or obese, and any weight reduction strategy must incorporate a programme to address those with an established weight problem in order to prevent or ameliorate further deterioration in health.

3.3 To meet the increased demand, every health professional will need to be trained to identify those at risk from increasing body weight, and be skilled in the initial management of the condition. This report provides a starting point to inform each of the health professions about what this will mean.

3.4 The scope of this report is to provide a framework for specific disciplinary curricula. It is recognised that much is taught at present about obesity but often in a fragmentary or disconnected way - the intention of the framework is to bring together good professional practice that span health disciplines and extend this.

3.5 Obesity is a form of malnutrition. It is clear that a substantial and increasing proportion of the World's population consume food and drink that increase the likelihood of developing obesity and long term conditions including cardiovascular diseases, diabetes, joint pain and some cancers.[5] At the same time, certain diets and patterns of foods and beverages consumed are associated with increased risk of poor micronutrient intake

(vitamins and minerals) and ultimately deficiencies, in some cases in the same communities as those with obesity.

3.6 Obesity is also caused by the society-wide reduction in incidental physical activity resulting from changes in transport and in the mechanisation of work, as well as less active home and leisure behaviour.

3.7 Modern lifestyle has resulted in overweight and obesity being accepted as near normal conditions arrived at by change over three decades in work patterns, transport, leisure pursuits, food production, high calorie drinks and food sales. The Foresight report predicts that, by 2050, around 60% of the adult population will be obese with a further 35% overweight.[6] An understanding of these changes is critical to effectively supporting individuals in combating these influences which promote obesity.

3.8 Obesity is estimated to reduce life expectancy by between 3 and 13 years.[7]

3.9 The scale of the challenge to prevent and manage obesity is magnified by the complex nature of the condition. The scale of change required to make significant impact at the population level needs to be substantial, raising difficult and complex economic and social questions about how public policy can be reshaped across very diverse areas. Policies relating to health inequalities are identified as particularly critical in a strategy to tackle obesity.

3.10 Foresight has noted that the greater prevalence of obesity among poorer social groups implies that efforts to counter health inequalities must take account of obesity; conversely, action on obesity must take account of socioeconomic factors. Efforts to combat obesity in lower-income groups will have positive consequences for both health and inequality. Obesity is not exclusively a matter of social class and inequality; the suggestion that it is primarily a feature of lower-income groups disguises the society-wide character of the problem.

3.11 Good nutrition, sufficient physical activity and a healthy weight are essential goals for health at every stage of life from conception through to old age. Eating habits that include consumption of foods and drinks that are high in calories contribute to poor health alongside smoking, excessive alcohol consumption. Physical inactivity needs to become recognised as a serious independent risk factor for ill health; so, the importance of regular Health Enhancing Physical Activity (HEPA) should be emphasised to health professionals from the earliest stages of their training and incorporated within the foundations of a student's understanding of health and wellbeing.

3.12 A better understanding of such fundamentals will inform professional roles and practice:

Educational – healthcare professionals are held in high regard by the public as providers of authoritative information and advice on food, health and nutrition – and self care in general. Healthcare professionals need to keep up-to-date on healthy weight and healthy lives information to ensure consistency in the key messages about food and physical activity. This is an essential element of all health professionals' continuing professional development. Ability to motivate individuals and families to prevent or reverse overweight and obesity is key as well as understanding factors that influence change and options for moving change on and sustaining health gains.

Advisory – the importance of health professionals working beyond immediate clinical settings and with local multi-agency teams – including public health, health promotion and primary care professionals, and strategic planners in both the NHS and local government has been highlighted in a toolkit published by the Faculty of Public Health to accompany the Department of Health's 'Healthy Weight, Healthy Lives' strategy, www.fphm.org.uk/resources/AtoZ/toolkit_obesity.

Organisational – health professionals should be encouraged to initiate or contribute to programmes for the maintenance of a healthy weight and treatment of overweight and obesity by working as individuals, through professional societies or other health care

organisations. They should be able to signpost overweight or obese individuals to local support services such as physical activity and weight management programmes. This aspect of care should be included in training programmes.

Financial in addition to health gains – health professionals should appreciate the escalating cost of overweight and obesity for the national economy from loss of production or ill health. Effective measures to prevent and manage excessive body weight will promote long term sustainable cost savings.

3.13 Healthcare professionals need the insight to acknowledge the effect their own obesity or overweight status has on their interactions with patients. They need to be adequately skilled to be able to raise lifestyle issues sensitively with patients, their families or parents, prevent resistance and offer appropriate advice.[8]

Education and training – opportunities to increase physical activity and nutrition training

3.14 Public health skills relating to nutrition and the promotion of physical activity are well suited to group or individual project work. A suitable time to introduce such concepts may be during evidence-based medicine or critical appraisal modules within undergraduate curricula.

3.15 Pre-registration or clinical training will allow further refinement of these skills through patient contact. Many health professionals are taught to take a 'social history', or enquire about 'risk factors' as part of their assessment. This includes questions about occupation, alcohol consumption and smoking. In future health professionals should be encouraged to include a brief assessment of regular diet and physical activity within this part of their assessment. Many health professionals use this part of their assessment to opportunistically advise people on smoking cessation or moderate alcohol consumption. This is also the right time to initiate discussion about improving physical activity habits

and diet. For children this should also include assessment of physical inactivity (TV viewing, Playstation, Internet, etc) and the lifestyle habits (physical activity, eating and drinking) of other members of the family.

3.16 Medical, physiotherapy, nursing, pharmacy and other health science students can begin to learn about health screening, taking dietary histories, exercise testing and exercise prescription when "shadowing" experienced clinicians in clinical placements who are engaged in the process. Understanding risk factor assessment should develop in parallel with increasing clinical knowledge of different medical conditions, and through the use of specific risk assessment tools.

3.17 Any curriculum which seeks to have an impact on health professionals' ability to manage overweight and obesity must adequately prepare them to be able to both promote food and nutrition and physical activity at a population and individual level, and safely recommend or prescribe physical activity and nutrition, as part of a holistic weight management programme for an individual.

3.18 Nutrition and physical activity offer the potential of 'horizontal integration' across disciplines as a component of problem-based approaches. Problem-based learning (PBL) engages students in small groups to investigate and solve clinically-based problems presented as case scenarios. PBL is well suited to inter-professional approaches.

3.19 Education about nutrition and physical activity must not stop at the time of graduation but continue through the postgraduate training period and throughout continuing professional development.

Physical Activity: Education and training for healthcare professionals

3.20 Physical Activity forms one half of the **weight management equation**, where:

Energy In (Dietary Calories from Food & Drink) v Energy Out (Basal Metabolic rate + Physical Activity) = Energy Balance (Weight gain, Weight Loss or Weight Maintenance).[9] All forms of physical activity contribute to energy expenditure, but only moderate or higher intensity activity has additional benefits in cardiovascular and metabolic fitness.

3.21 Any movement of the human body requiring the voluntary activation of skeletal muscle is defined as Physical Activity (eg walking). For Physical Activity to become Health-Enhancing independently of its effects on energy expenditure, its intensity must reach a certain minimum threshold to produce metabolic stress (e.g. brisk walking, jogging or cycling to work). It is this metabolic stress ('overload') that stimulates physiological adaptation, producing associated health benefits. Thus all recommendations for Health-Enhancing Physical Activity (HEPA), endorse the fact that it must be at least moderate in intensity, rather than merely low intensity (eg casual slow walking).[10 11]

3.22 Whereas physical activity often occurs as part of the routine of daily life, the word 'exercise' implies an intentional bout of physical activity, often occurring outside the daily routine and has the express purpose of improving or maintaining physical fitness. The word 'sport' implies exercise that is organised into a competitive setting with winners and losers.

3.23 All health professionals must understand the above weight management equation, and be able to discriminate between minimally beneficial physical activity, health-enhancing physical activity (HEPA), exercise and sport and be able to usefully apply these concepts to their patients.

3.24 Health professionals should understand that whilst HEPA is both essential and applicable to all parts of society, the concept of regular exercise or sport is both alien and inconvenient to the majority of the UK population. In recent years rhetoric has switched importantly from 'Sport for all' to 'Physical Activity' for all.[12 13 14]

3.25 Health professionals need to understand the value and limitations of incidental physical activity that occurs whilst commuting, at work or during activities of daily living. Furthermore health professionals should increasingly appreciate physical inactivity as an independent risk factor for disease, and should be encouraged to promote physical activity to all people, even those with apparent good health. This includes recognition of particularly sedentary occupations and children's sedentary activities.

3.26 The knowledge and skills required to promote and facilitate physical activity have recently been brought together under the banner of 'Exercise Medicine'. Exercise Medicine is a new concept in the United Kingdom, and many health professionals may not appreciate the field as a distinct entity.[15] Exercise Medicine seeks to bring together the knowledge and skills required to allow patients to exercise safely. Components include:

- Physical activity promotion (populations)
- Physical activity promotion (individuals), including motivational interviewing
- Cardio-pulmonary exercise testing to enable safe exercise
- Health screening
- Exercise prescription in low risk individuals
- Exercise prescription in high risk patients and specific disease states
- Management of medical problems arising as a consequence of exercise.

Although Exercise Medicine is a distinct medical speciality, all health professionals should develop a basic understanding of the field in order to be able to effectively promote and prescribe health-enhancing physical activity to their patients.[16]

Sport & Exercise Medicine

There has been an increasing focus, supported by Government, on the need to increase physical activity levels in the general population. The approaching London 2012 Olympics promises to deliver a lasting health legacy for the UK in terms of increased participation in physical activity and sport. Alongside the 2012 bid, a new medical specialty – Sport & Exercise Medicine (SEM) was created. Consultant physicians in SEM will play an important role in the future in training health professionals in physical activity promotion, and exercise testing and prescription.

Undergraduate / Pre-registration training

3.27 Undergraduate study is an excellent time to introduce both the public health and clinical aspects of exercise medicine. Traditionally, exercise science and coaching have been seen as falling under the remit of Sport Science education only, and are not in health professionals' curricula. In the future health professionals must begin to learn how to apply exercise training principles to their patients, as physical activity becomes increasingly utilised as a therapeutic modality.

Seeking Help – referring an overweight or obese patient for specialist advice

3.28 Health professionals must be fully aware of when, how and to whom to refer within or outside their multidisciplinary team for expert help or local services relating to physical activity. Some individuals, such as those with severe childhood obesity, obesity during pregnancy and morbid obesity, will require more specialist input.

Postgraduate and Post-registration training – Continuing Professional Development

3.29 Health professionals should be able to recognise low risk individuals and safely recommend physical activity without further assessment, in addition to recognising individuals who need more detailed assessment or referral to a specialist.[17] [18]

3.30 All health professions should recognise that there are different types of beneficial physical activity, namely aerobic and resistance exercise, and should understand that there are nationally approved recommendations for the minimum amounts of physical activity required to maintain health. Furthermore all health professionals should feel confident in promoting these recommendations to low risk individuals. Health professionals need to understand that physical activity includes activities other than sport, and to be able to discuss opportunities for physical activity with their patients which realistically fit into their lives.[19]

3.31 Components of an exercise prescription include: volume, frequency, intensity, recovery and type. The ability to prescribe exercise in the above manner requires specialist level knowledge, however most health professionals should be able to appreciate that these components exist and follow them where prescribed.

3.32 Maintaining good nutrition through the life course forms the other half of the **weight management equation.** Nutrition is relevant to every health professional discipline. Many curricula contain a wealth of information relevant to diet and nutrition but generally as a classical approach through biochemistry and physiology. It remains uncommon for nutrition to be taught in a holistic way including metabolism at the whole body level and the psychological and social influences on food choice. Education about nutrition needs to start from the beginning of health professional training programmes and continue through the postgraduate – post registration period.

Undergraduate / Pre-registration training

3.33 Every opportunity should be taken to introduce nutritional concepts into undergraduate training. Nutrition is a key component of health and illness and should be identified as such by students. There have been advances in teaching nutrition. However, the time allocated to nutritional issues remains difficult to identify, and information about how well nutrition is incorporated into curricula of health professional education is not available. This could be addressed in the following ways:

3.34 Nutrition should be promoted as a model subject for teaching across the entire undergraduate curriculum. Human nutrition can be incorporated as an integrated theme to link basic sciences, clinical and public health aspects of health and disease in the core curriculum.

3.35 Nutrition should be seen as central to the maintenance of health, and not just an issue when dealing with ill health.

3.36 Nutritional screening and assessment should be included as part of the teaching of clinical skills and students should be instructed about relevant practical skills as the assessment of swallowing and body composition/fat distribution.

3.37 An agreed procedure for clinical assessment of the nutritional status of patients should be included as a core skill: this should be part of any routine examination. Health professionals must ensure that a written statement is always made in the clinical notes of patients about their nutritional state, including oral health, as part of the history and physical examination of every new patient. For children, this should include growth and development. Health professionals should be aware of the influence of nutritional status on susceptibility to illness and its effect on child growth and development. Inclusion of questions on nutrition in professional examinations, and incorporation into assessment procedures, are the key to the acceptance of nutrition by teachers and students as an important and valued subject area.

3.38 Teaching of nutrition should draw widely on available skills across disciplines, including medicine, dentistry, pharmacy, dietetics, psychology and nursing.

3.39 Health professionals should be taught to consider nutrition as an integral part of all patient pathways: for example long term conditions such as diabetes, coronary heart disease or chronic kidney disease, arthritis, back and knee joint problems, palliative care, substance misuse, neurological conditions, physical activities including sports, etc.

3.40 The complexity of factors influencing food choice and drink, including psychological factors and the family, social and cultural environment as well as issues affecting food availability and access, should be integral part of nutrition training.

Postgraduate and Post-registration training – Continuing Professional Development

3.41 Postgraduate nutritional training should form a continuum with undergraduate training and lead to an appreciation that nutrition is important in all disciplines of medicine and professions allied to medicine. Health professionals should be motivated to regard nutrition as important in the prevention and management of disease.

3.42 Interprofessional teaching should include nutrition within clinical training. Courses should involve the breadth of professional expertise in delivering the teaching including practitioners (eg dietitians, psychologists/behavioural therapists and pharmacists) who can provide nutrition knowledge, practical skills and the application of these skills in a patient-centred approach.

3.43 Such programmes should include formative assessments to evaluate how well knowledge and competence are maintained through practice (see section 4.10). For doctors, there is a nutrition component in the Foundation Years curriculum. The Intercollegiate Group on Nutrition of the Academy of Medical Royal Colleges runs an Intercollegiate Course in Human Nutrition that fulfils the prescribed learning needs. www.icgnutrition.org.uk/cgi-bin/forum/show.cgi?699/739

Training programmes for the prevention and management of overweight and obesity

3.44 Although the assessment of attitudes towards obesity has been limited, available evidence suggests a very negative approach to obese people with many health professionals believing its management to be frustrating, time consuming and pointless.[20] Many health professionals do not consider that obesity is a 'medical problem' and thus abdicate professional responsibility.

3.45 Health professionals should understand their own attitudes to obesity, the aetiology and pathophysiology of increasing body fatness and appreciate the importance of prevention and intervention where the condition is established. They should also acknowledge the familial and environmental basis to obesity, as well as the relationship between childhood weight gain and adult obesity, and bear this in mind when managing the individual and their family. Obesity management could be divided in a modular training programme to enable health professionals to gain knowledge and skills in a stepwise manner. Importantly, this may also facilitate the acquisition of appropriate attitudes towards individuals who are overweight.

4 Advice, motivation and behaviour change in the maintenance of a healthy weight and the management of overweight and obesity

4.1 Health professionals need sufficient knowledge and skills to support patients and families in changing behaviours to prevent weight gain and to initiate and maintain weight loss. Evidence shows that increasing knowledge does not necessarily lead to behaviour change. Lifestyle behaviours can be deeply embedded, created from the social, cultural and financial situations in which people live. These behaviours are difficult to change and may not always be understood by practitioners who may themselves have a different set of embedded behaviours. However behaviour change has enormous potential to alter patterns of obesity, health and quality of life. Building capacity and capability of practitioners to deliver behaviour change at individual and population level is key to achieving weight management targets.[21]

4.2 Practitioners' attempts at changing behaviours have often been unsuccessful because of a lack of understanding of the theoretical basis and the need for a consistent patient centred approach. Current evidence suggests that developing a set of competencies and skills is more important than focussing on one particular model of behaviour change.[22] The knowledge and skills required are laid out in the training framework. (see above)

4.3 Any Health professional should be able to raise the issue of weight loss with a patient or parent sensitively, by building rapport and actively listening to their concerns and understanding.

4.4 Health professionals can then ensure that the patient or parent has sufficient information to allow them to make an informed decision about the need to lose weight or reduce weight gain and is aware of the support options available.

4.5 This patient centred problem solving approach allows patients to identify and develop their own solutions to the barriers to behaviour change. Practitioners need to understand how to support this process rather than merely give advice.

4.6 Health professionals working with children and families need additional knowledge and skills in supporting parents to make family lifestyle changes and help their child(ren) to control their weight. Parents need to strike an appropriate balance; with sensitivity and responsiveness to a child's needs and wishes whilst remaining able to set clear limits and boundaries. This authoritative style of parenting, along with whole family lifestyle changes is most likely to be successful.[23]

4.7 Training should therefore focus on how to raise weight management issues with patients and parents, assess their views, build rapport and facilitate discussion about the barriers and challenges of change.[24] In addition, health professionals need to be skilled in helping a patient or parent identify appropriate behaviour change targets and supporting them in the change process.

4.8 Every health professional should be aware of these behavioural principles and the potential to increase resistance to change if support is delivered inappropriately

4.9 For weight loss, evidence suggests that self-monitoring is the most effective technique when combined with specific goals, stimulus control and feedback or review of previous goals. These need to be skills for all.[25]

Evaluation and assessment of health professionals' knowledge and skills about nutrition, physical activity and obesity

4.10 **Nutrition:** Nutritional topics should be assessed at all levels throughout undergraduate/pre-registration and postgraduate training – the objective structured clinical examination, (OSCE) provides a practical examination format. OSCEs are a series

of examination stations where the student's skills are observed by an examiner, who marks the student's performance using a structured marksheet.

4.11 **Physical activity:** suitable assessments for physical activity include project submissions and presentations, or short answer/essay based examination questions. Multiple choice questions and OSCE exams are less suitable forms of assessment for these skills.

4.12 **Behaviour Change:** suitable assessment of understanding and ability to promote behaviour change in patients and their families should be assessed at various stages of health professional training.

4.13 **Clinical audits:** clinical audits of the care of long term conditions should include patient-reported physical activity levels, weight, and other associated measures such as waist circumference or body mass index (BMI), as well as other clinically related outcome measures including serial blood pressure measurements.

5 Children and young people

5.1 This document uses the term 'early years' to mean very young children from birth to pre school, ’children’ to mean all those under 18 years of age, with ’young people’ meaning those under 18 who are in their teenage years.

Early Years

5.2 The early years may be the one of the most effective times to prevent excessive weight gain and normalise good nutrition and active behaviours. In addition the experience of becoming a parent is a often a factor triggering behavioural change in adults. An understanding of the principles of extended exclusive breastfeeding (up to 6 months) and appropriate weaning patterns and activity are critical for all health professionals.[26]

5.3 Health professionals should support parents in promoting the development of healthy habits through appropriate authoritative parenting.[10 27] This will include giving children suitable choices within clear boundaries.

Definitions

5.4 Obesity and overweight are more difficult to define in children than in adults.

5.5 BMI is accepted as the most practical way of assessing body fatness, but as in adults, it is only an approximation, not accounting for differences in body composition.

5.6 In addition, BMI alters with normal growth in children, so definitions of obesity and overweight that use a simple BMI value are inappropriate. The BMI value must be related

to a gender specific centile chart (UK-WHO Growth Charts: Early Years and UK 1990 charts).

5.7 There is no single agreed definition of overweight or of obesity. This is partly because there is no clear link between the degree of overweight / obesity and morbidity or mortality in childhood. A child can be very obese but have no significant metabolic consequences, whilst another child is metabolically affected at a relatively lower level of obesity. It is important that the definition being used in any circumstance is clear.

5.8 In clinical practice in the UK, the following thresholds are currently preferred: Overweight if on or above the 91st centile for age and gender. Obese if on or above the 98th centile.

5.9 In epidemiological practice and in the National Childhood Measurement Programme in England the thresholds are often 85th and 95th centiles respectively.

5.10 International thresholds were developed by the International Obesity Task Force. These meet with adult definitions at age 18. They are often used in international work and research, but are not in regular clinical use in the UK.

Additional challenges for prevention and management in childhood

5.11 Any advice or intervention for a child needs to take into account:

- The family and social context. For success in changing behaviour, the involvement of the parent / family is of prime importance.
- The child's need for adequate nutrition for healthy growth and development
- The child's age and gender
- Their intellectual and physical abilities
- Their physiological maturity eg pre or post puberty.

5.12 Advice and intervention must be safe. For example, all dietary advice should be based on and compatible with appropriate health eating advice for different ages (such as the Eatwell Plate).[28] Physical activity advice needs to be age appropriate, with adult supervision if needed.

Treatment goals for children and young people

5.13 In most overweight and obese pre-pubertal children, weight maintenance (or slower weight gain) while they grow in height is an appropriate goal. It is important to remember that in the grids any reference to weight loss should be interpreted as effective weight management in children.

5.14 However, more severely obese children and those young people who have stopped (or nearly stopped) growing in height will need to lose weight. Weight loss should be carefully supervised, particularly in pre-pubertal children, to ensure nutrition for healthy growth and development is not compromised.

6 Commissioning

6.1 Commissioning is a rapidly developing field in health services Currently World Class Commissioning clearly outlines the standards that primary care trusts , as the commissioning organisations of the NHS in England, must strive for. In addition, the Next Stage Review (England) describes an NHS where clinical engagement is integral to the commissioning process. While the solutions to obesity are political, social and economic this document is addressing the training needs of healthcare professionals. Healthcare professionals need to be aware of the wider context.

6.2 Health professionals are increasingly becoming involved in and helping the commissioning process through practice based commissioning and other mechanisms. In this environment many health professionals will need to develop the skills which will enable them to be an effective part of the commissioning of healthy weight services.

7 A framework to educate and train health professionals about overweight and obesity

7.1 Clinical teachers must be encouraged to attend training courses on both physical activity and nutrition because much of the learning, will be acquired in a work-based setting. Education and training in nutrition and in physical activity will only become successful when a multi-disciplinary core of staff is established with the necessary experience and teaching skills

7.2 There are high demands placed on health care resources arising from the majority of the population of the UK being overweight or obesity and it is thus important to introduce appropriate intervention in order to be able to provide prevention and management for those at greatest risk. The responsibility for this is shared across all health professions.

7.3 The grids developed for this report have the objective of establishing a standardised training framework. They are aimed at all healthcare professionals, recognising that obesity is such a threat to health that there needs to be consistency of approach across all areas of health care. The grids are intended as a starting point for professional groups who make up the health professional workforce to ensure that they have explicitly defined competences which address the needs of overweight and obese patients. The grids are not intended or designed to be the curricula for training – they are simply a framework to which more detailed learning objectives can be assigned.

7.4 They identify areas of general knowledge and skills applicable across all health disciplines at all stages of careers, and aspects of specialised knowledge and skills applicable to specialist health professionals and centres. It is hoped that they will initiate discussion and agreement within and across health professions about how best the objectives can be addressed within a specific discipline's training curricula and continuing professional development programme

7.5 The grids are additionally intended to provide the necessary roadmap to encourage inter-disciplinary approaches to the problems of overweight and obesity with the skills, knowledge and competencies being applied in the context of a multidisciplinary training programme.

7.6 The grids cover the following areas:

- Knowledge and understanding of causes, prevention and management of overweight and obesity (including recognition of risk of becoming overweight and obese, especially amongst children)
- Assessment skills
- Advice and motivation, including appropriate targets and goals
- Food and nutrition
- Physical activity
- Non pharmacological interventions for both prevention and treatment of overweight and obesity
- Pharmacological and surgical treatments for obesity
- Knowledge and understanding of antenatal and obstetric care of the overweight and obese patient
- Commissioning of obesity services.

Application of the grids

7.7 The grids of knowledge and skills have additional columns: 'Both', 'Adults' and 'Children'. These indicate the relevant group or groups for each item. Some items will be marked for Adults and Children separately because the knowledge or skill is significantly different for the two groups. Others are marked 'Both', because the knowledge or skill is largely similar for both adults and children.

7.8 The grids are divided into two training frameworks:

Generalist is intended to be applicable to all health professionals who encounter overweight and obese patients as part of their daily clinical practice. This may be in primary care, in the community or within a hospital setting.

Specialist is addressed to health professionals who work in a specialist setting that has particular interest and expertise for the management of overweight and obesity. This will include physicians, anaesthetists and surgeons with particular expertise, specialist nurses and dietitians with specific interests, public health directors, exercise specialists and so forth.

7.9 With respect to the **Commissioning grids**, the 'generalist' table is aimed at this group, who will include GPs, nurses and other clinicians involved with Practice Based Commissioning (England). Clinical advisors to the commissioning process, clinical governance leads, clinical directors and public health professionals should also engage with this agenda. The effective input of this group of health professionals will greatly increase the quality and appropriateness of the services commissioned and is to be welcomed and encouraged.

7.10 Some health professionals will find themselves in more strategic positions, taking the lead in the complex multi-professional and multi-organisational response to the healthy weight epidemic facing the country. The 'specialist' table is aimed at these few, highly specialised health professionals, some public health consultants and specialist commissioners.

Knowledge and understanding – generalists

'Generalist' is intended to be applicable to all health professionals who encounter overweight and obese patients as part of their daily clinical practice. This may be in primary care, in the community or within a hospital setting.

Aims:

- to enhance awareness and understanding of obesity as a significant medical condition
- to extend knowledge and understanding of the aetiology of obesity and the physiological consequences of excess weight
- to recognise the medical importance of modest weight loss and maintenance
- to recognise the social stigma and personal values and attitudes towards obesity

	Both	Adults	Children
1. Aware of the impact on body weight of longterm conditions, treatments such as steroids, poor mental health and learning disabilities	**X**		
2. Aware of societal attitudes and your own individual attitudes to overweight and obesity and the social implications of obesity	**X**		
3. Understand the long and short term health implications of obesity and why it should be managed	**X**		
4. Understand the definition and classification of obesity/overweight by BMI and its problems / limitations, including the difference in the adult and child definitions of obesity and overweight.		**X**	**X**
5. Understand that BMI varies with the age of children and the ability to use and interpret centile charts and the importance of tracking weight and height			**x**
6. Understand the importance of a coherent approach within the multiprofessional team when tackling obesity	**X**		
7. Aware of the importance of and ability to determine realistic weight goals		**X**	**X**
8. Aware of the concept of cyclical weight gain and loss		**X**	**X**
9. Aware of national and local obesity prevalence and probable future trends	**X**		
10. Aware of obesity epidemiology, prevalence and health risk differences according to Social and Economic status, ethnicity and gender	**X**		

	Both	Adults	Children
11. Understand factors contributing to obesity in the population and individuals, and how these might be altered	**X**		
12. Understanding of the direct and indirect costs of obesity	**X**		
13. Aware of the multifactorial aetiology of obesity.	**X**		
14. Understand influence of abdominal obesity – definition, visceral fat distribution, subcutaneous fat distribution, clinical assessment	**X**		
15. Understand and promote the benefits of modest weight loss and potential benefits to associated complications (eg diabetes and hypertension) from weight loss of 5-10% presenting weight.	**X**		
16. Understand the role of pharmocotherapy, behavioural change and surgery as adjuncts to lifestyle management in certain selected individuals		**X**	**X**
17. Knowledge of the emerging evidence-base for successful interventions to promote healthy weight		**X**	**X**
18. Understand the importance of maintaining lowered weight or in those with difficulty losing weight, avoiding additional weight gain.			
19. Able to direct people to sources of information on local community facilities to support weight management – cooking clubs, leisure facilities, walking groups	**X**		
20. Aware of psychological factors in obesity – causes, perpetuating factors and consequences	**X**		
21. Aware of the physical factors in the aetiology of obesity – medication, excess alcohol, chronic disease and disability	**X**		
22. Aware that overweight children may be encouraged to grow into their current weight through a healthy eating and drinking and increased activity			**X**
23. Aware that some obese children may need to aim for a weight below their current weight with gradual weight loss and appropriate supervision			**X**
24. Knowledge and understanding of health risks, cardiovascular risk factors and status and potential benefits from modest weight loss.	**X**		

	Both	Adults	Children
25. Recognise features suggesting serious pathology as a cause of obesity	**X**		
26. Recognise features suggesting serious pathology resulting from obesity	**X**		
27. Knowledge of, and ability to assess and advise on, the roles of diet and physical activity in promoting health and in managing and maintaining weight loss.	**X**		
28. Be aware of, and able critically to appraise conflicting evidence and controversy regarding obesity and lifestyle	**X**		
29. Understand the importance and relevance of motivational interviewing	**X**		

Knowledge and understanding – specialists

Specialist is addressed to health professionals who work in a specialist setting that has particular interest and expertise for the management of overweight and obesity. This will include physicians, anaesthetists and surgeons with particular expertise, specialist nurses and dietitians with specific interests, public health directors, exercise specialists and so forth

Aims:

- to enhance awareness and understanding of obesity as a significant medical condition
- to extend knowledge and understanding of the aetiology of obesity and the physiological consequences of excess weight
- to recognise the medical importance of modest weight loss and maintenance
- to recognise the social stigma and personal values and attitudes towards obesity

	Both	Adults	Children
1. Understanding of the origins of societal attitudes and cultural factors and an ability to address them when working with overweight and obese people and other members of Multiprofessional Healthcare Teams	**X**		
2. Understand the potential effect of the health professional's weight status on the nature of the interaction with patients	**X**		
3. Understand the complexity of safe weight loss in obese children			**X**
4. Detailed knowledge of national and local obesity prevalence and probable future trends	**X**		
5. Detailed knowledge of obesity epidemiology, prevalence and health need differences according to SE status, ethnicity and gender	**X**		
6. Detailed understanding of and ability to address the multifactorial aetiology of obesity at an individual or population level	**X**		
7. Recognise the role in building resilience to the obesogenic environment by influencing work, education and leisure settings	**X**		
8. Detailed knowledge of the significance of abdominal obesity – definition, visceral fat distribution, subcutaneous fat distribution, clinical assessment	**X**		

	Both	Adults	Children
9. Detailed knowledge of the physiology of weight control and the implication of endocrine, neurological and gastrointestinal systems	**X**		
10. Detailed understanding of the role of pharmocotherapy, behavioural change and surgery as adjuncts to lifestyle management in certain selected individuals		**X**	**X**
11. Detailed knowledge of evidence-based interventions to promote and achieve healthy weight	**X**		
12. Knowledge of the rate of optimum weight loss or weight gain in some growing children			**X**
13. Knowledge of the effects of weight loss on risk and management of chronic diseases	**X**		
14. Understand the importance of, and ability to influence, the availability of opportunities for increasing physical activity and improving diet		**X**	**X**

Knowledge and skills – pregnancy and childbirth

Aims:

- to enhance awareness and understanding of obesity as a significant medical condition during pregnancy and childbirth

- to extend knowledge and understanding of the pathophysiological consequences of excess weight to both mother, foetus and newly born infant

	Both	Adults	Children
1. Aware of the risks to mother and child caused by maternal obesity	X		
2. Able to convey the risks of maternal obesity to patients	X		
3. Aware of the need for / ability to advise on safe weight management during pregnancy	X		
4. Aware of and ability to use the particular opportunities of pregnancy for behaviour change	X		
5. Aware of / able to signpost to local services to enable pregnant women to tackle their weight issues	X		
6. Aware that attitudes to maternal obesity may differ with ethnicity and cultural differences	X		
7. Understand / able to undertake strategies to minimise the antenatal risk of obesity to mother and child	X		
8. Understand / able to undertake strategies to minimise the obstetric risk of obesity to mother and child	X		
9. Able to advise mothers, post-natally, about their weight issues	X		
10. Able to advise mothers post-natally about the benefits of breast feeding to managing obesity for mother and child	X		
11. Understand the link between maternal obesity and gestational onset diabetes and its risks to mother and baby in the long and short term	X		

Nutrition and eating patterns – generalists

Aims:

- to facilitate understanding and awareness of the role of healthy eating and drinking in the management of overweight and obesity
- to increase the nutritional knowledge and skills required for best practice in the management of overweight and obesity

	Both	Adults	Children
1. Understand and be able to demonstrate how to make a basic dietary assessment to identify patterns of eating including helping an individual explore how their food intake and eating behaviours affect them		**X**	**X**
2. Understand the importance of offering dietary advice that is tailored to an individual's normal patterns of eating but which also encourages regular family meals and limited snacking	**X**		
3. Understand the main food groups and the key messages involved in promoting a healthy diet and healthy eating behaviours and be able to demonstrate practical advice using the five food groups appropriately to reduce energy intake relevant to the individual		**X**	**X**
4. Understand the importance for children of eating together with carers or as a family			**X**
5. Knowledge of the energy requirements and portion sizes of adults and appropriate energy requirements for weight loss		**X**	
6. Understand the changing energy requirements and portion sizes of children and young people with age and development			**X**
7. Knowledge of the energy, fat, saturated fat, sugar and salt content of a range of commonly eaten foods and soft and alcoholic drinks	**X**		
8. Understand techniques for promoting healthy eating and drinking, including increasing variety of foods and drink and preventing faddy eating			**X**
9. Understand how to interpret nutritional and front of pack information on food labels	**X**		

	Both	Adults	Children
10. Knowledge of the roles of diet and physical activity in promoting health and in managing weight loss and maintenance	**X**		
11. Knowledge of the effect of weight gain and weight loss for patients with diabetes and an understanding of how to provide appropriate dietary advice		**X**	
12. Aware of personal preferences, religious and cultural variations in food intake and different eating/drinking patterns within the UK population and how these have changed over the last few decades 13. knowledge of alternative dieting practices, diet trends, myths and misconceptions and the nutritional implications of such practices	**X**		
14. Knowledge of food preparation and cooking methods to reduce energy content of food		**X**	**X**
15. Understand how to develop strategies for eating out, social drinking, special occasions, etc.		**X**	**X**
16. Understand the importance of self monitoring and self-management of food intake and drinks consumed for weight management		**X**	**X**
17. Understand the diagnostic criteria for eating disorders with particular reference to binge eating disorder and knowledge of appropriate referral strategies. Be able to judge when an individual may be presenting with a significant eating disorder and requires further referral		**X**	**X**
18. Understand the importance of influencing settings to provide healthy food and drinks for adults and children eating away from home (childcare, schools, workplaces, prisons, hospitals, etc)		**X**	**X**

Nutrition and eating patterns – specialists

Aims:

- to facilitate understanding and awareness of the role of nutritional advice in the management of overweight and obesity

- to develop specialist nutritional knowledge and skills required for best practice in the dietary management of overweight and obesity

	Both	Adults	Children
1. Knowledge of the specialist nutritional requirements of some individuals		**X**	
2. Understand the complex range of factors that influence patterns of food intake and eating and drinking behaviours	**X**		
3. Understand a range of dietary assessment methods and appropriate application		**X**	**X**
4. Understand the importance of matching and tailoring dietary strategies to an individual's requirements including relevant co morbidities	**X**		
5. Knowledge of any existing indicators or potential health risks related to overweight/obesity including clinical indicators, medication, lifestyle factors and family history	**X**		
6. Knowledge of the nutritional requirements of babies and children including breast feeding, introduction of solids and drinks, understanding portion sizes and meal frequencies for children of different ages			**X**
7. Understand the function, sources, and recommended intakes of macronutrients and estimated requirements of relevant micronutrients.(iron, zinc, calcium, sodium, folate, vitamins A, C and D) and to be able to understand the factors that affect the nutritional requirements of individuals		**X**	**X**
8. Be able to demonstrate how to translate nutritional aims of weight management into realistic food changes tailored to the individual, taking into account cultural diversity, family preferences and any additional requirements of pregnancy, breast feeding or co morbidities		**X**	**X**
9. Knowledge of the nutritional content of foods and understanding of the effect of different foods on satiety and blood glucose levels.	**X**		
10. Understand personal preferences, religious and cultural variations in food intake and different eating patterns within the UK population. Knowledge of the nutritional content of various ethnic and vegetarian foods and common cooking/eating patterns	**X**		

	Both	Adults	Children
11. Knowledge of preparation and cooking methods and food manufacturing processes and their effect on the nutritional value of food.	**X**		
12. Knowledge of weight management guidance, policies and best practice influencing maternal health, breast feeding, infant feeding and pre school and school food		**X**	**X**
13. Understand importance of eating behaviour on energy intake and strategies to manage eating behaviour	**X**		
14. Understand the importance of, and practical strategies to use in, the self monitoring and self-management of food intake		**X**	**X**
15. Be able to give advice on how to provide healthy food and drinks for adults and children eating away from home (childcare, schools, workplaces etc)		**X**	**X**

Physical activity – generalists

Aims:

- to facilitate understanding and awareness of the role of physical activity in the management of obesity

- to provide a foundation in the knowledge and skills required to safely, competently and effectively advise on physical activity in the overweight and obese populations

	Both	Adults	Children
1. Have insight into the common barriers to physical activity change and practical strategies for tackling such barriers	**X**		
2. Understand the impact of personal preferences, religious and cultural variations and environmental factors on levels of physical activity	**X**		
3. Aware of benefits from health lifestyle independent of weight loss	**X**		
4. Aware of the effects of physical activity on body mass and body composition	**X**		
5. Aware of the value of improved physical fitness as having merit regardless of weight change	**X**		
6. Understand and advise how increased physical activity can be incorporated into the normal daily routine, rather than requiring separate and programmed exercise	**X**		
7. Aware of the beneficial psychological effects of regular physical activity on mood, self-esteem and body image	**X**		
8. Aware of the lack of importance ascribed by many patients to the role of regular physical activity in weight management, lifestyle links and other factors beyond the HP's area of expertise	**X**		
9. Understand how activity trends in the population have changed over time	**X**		
10. Understand the recommended minimum physical activity levels for children and adults			
11. Understand the beneficial effect of different levels of exercise on risk factors associated with obesity - blood lipids, blood pressure, insulin resistance	**X**		

	Both	Adults	Children
12. Understand the difference between low and moderate intensity activity and their proportionate benefits on weight management and physical fitness	**X**		
13. Aware of the impact of physical activity on the blood glucose control of people with diabetes			
14. Understand how physical activity differs with age and gender	**X**		
15. Understanding of the role of regular physical activity in the management of mental health and cognitive decline	**X**		
16. Understand the importance of influencing settings (childcare, schools , workplace etc) to promote physical activity	**X**		
17. Understand the usefulness and limitations of workplace activity on daily energy expenditure		**X**	
18. Understand the importance of physical inactivity such as TV viewing in the aetiology and management of obesity	**X**		

Physical activity – specialists

Aims:

- to facilitate understanding and awareness of the role of physical activity in the prevention and management of obesity

- to provide a foundation in the knowledge and skills required to safely, competently and effectively advise on physical activity in the overweight and obese populations

	Both	Adults	Children
1. Understand how exercise intensity changes the relative contributions of fat and carbohydrate as fuels , and the role it can play in changing body mass and composition	**X**		
2. Assessment of habitual physical activity, including the ability to estimate total daily energy expenditure from basal metabolic rate and physical activity	**X**		
3. Provide a detailed exercise prescription including: volume, frequency, intensity and type of exercise	**X**		
4. Be skilled in Motivational Interviewing for the promotion of physical activity behaviour change		**X**	
5. Have a detailed knowledge of the common barriers to physical activity change and be skilled in enabling people to overcome them	**X**		
6. Be able to advise people with diabetes on how to exercise safely		**X**	**X**
7. Understand the recommended minimum physical activity levels for children and adults, and how these have been determined		**X**	**X**
8. Understand the differences between low, moderate and high intensity activity and their benefits on weight management and physical fitness	**X**		
9. Understand the importance of influencing settings (childcare, schools, workplace etc) to promote physical activity, and be skilled in developing bespoke health promotion programmes in these different settings.		**X**	**X**

Treatment – generalists

Aims:

- to be able to identify the appropriate patient, the appropriate time and type of therapy other than medical or surgical intervention; and be able to change or combine the type of intervention as appropriate

- to be aware of the importance of monitoring patients prior, during and after intervention

- to be able to identify the appropriate patient, the appropriate time and type of medical and/or surgical intervention

- to be aware of the importance of monitoring patients prior, during and after therapeutic intervention

	Both	Adults	Children
1. Able to signpost motivated patient to try to lose weight via community based physical activity or weight management programme – instead of, or as well as, prescribed therapy		**X**	**X**
2. Aware of the evidence base supporting the effectiveness of some commercially available weight management programmes		**X**	
3. Able to share care of obese patient with other colleague(s) in multidisciplinary team who can provide intervention that does not involve prescribed drug or surgery via shared protocol	**X**		
4. Able to optimise behaviour change models to avoid or minimise medical interventions (prescribed drugs or surgery)	**X**		
5. Aware of the need for multi-faceted interventions for children and young people, that tackle eating behaviour, diet, physical activity, inactivity and self esteem.			**X**
6. Aware of the effectiveness and acceptability of the range of available treatment programmes		**X**	**X**
7. Able to support and encourage children and families to take part in treatment programmes and to make sustainable changes in their lifestyle.		**X**	**X**

	Both	Adults	Children
8. Aware of the need to follow up patients following bariatric surgery on a lifetime basis in a multi-disciplinary clinic	**X**		
9. Aware of the long term consequences from bariatric surgery	**X**		
10. Be aware of the range of community and health service weight management programmes, service and information that may be useful / available		**X**	**X**
11. Able to share care of obese patient with other colleague(s) in extended multidisciplinary team who can provide intervention that does not involve prescribed drug or surgery via shared protocol	**X**		
12. Able to optimise behaviour change models to avoid or minimise medical interventions (prescribed drugs or surgery	**X**		
13. Aware of and know how to combat presence of obesity arising as side effect of drug therapy for long term condition	**X**		

Treatment – specialists

Aims:

- to be able to identify the appropriate patient, the appropriate time and type of therapy other than medical or surgical intervention; and be able to change or combine the type of intervention as appropriate

- to be aware of the importance of monitoring patients prior, during and after intervention-work within a multi-disciplinary team based within a hospital that has experience and practical knowledge about the management of obesity and related complications.

	Both	Adults	Children
1. Understand the detailed inter-relationships between increasing body weight and associated medical complications and apply this knowledge to their management.	**X**		
2. Ability to apply specialist skills to the management of obesity-related cardiac failure, liver disease and sleep related breathing disorders	**X**		
3. Understand the association between rare genetic disorders and obesity and be able to investigate and treat such patients.	**X**		
4. Be part of a multi-disciplinary team that includes specialist dietary advice, clinical psychology, specialist anaesthesia and appropriate surgical expertise.	**X**		
5. Involvement of the MDT for the immediate and intermediate follow up of patients following bariatric surgery.	**X**		
6. Be aware of the possible nutritional deficiencies that may complicate the longer term well being of patients following bariatric surgery and be able to manage these.	**X**		
7. Appreciate the importance of reversing a bariatric surgical procedure if complications do not resolve following management.	**X**		

Assessment skills – generalists

Aims:

- to be able to make a comprehensive assessment of overweight and obese subjects to facilitate individualised management

- to be able to select the appropriate treatment(s)

- to be able to define and demonstrate appropriate communication skills, tools and techniques to develop a therapeutic relationship with a range of individuals

NB all assessments will be done at the appropriate level for a generalist or specialist in their field

	Both	Adults	Children
1. Judge the timeliness and appropriateness of initiating opportunistic intervention (or not)	**X**		
2. Assess the patients' psychosocial history. For children this should include assessment of both child and family factors	**X**		
3. Able to explore behaviours, habits and patterns relating to eating and physical activity without raising resistance	**X**		
4. Aware of specific issues related to weight loss / weight control which should be addressed - eg self efficacy, knowledge, motivation, goals for change, treatment expectations.	**X**		
5. Able to carry out a basic assessment of dietary intake - eating and drinking patterns	**X**		
6. Able to make a basic assessment of physical activity and inactivity (eg TV viewing)	**X**		
7. Assess presenting symptoms and consider underlying causes of overweight or obesity	**X**		
8. Assess existence of comorbidities and other risk factors for future disease	**X**		
9. Assess environmental, social and family factors relating to motivation / ability to change	**X**		
10. Assess child's and family's eating habits, diet, physical activity and inactivity (TV viewing etc)			**X**
11. Assess the significance of overweight or obesity to the child and other members of the family			**X**
12. Assess child's growth using standard centile charts and assess stage of puberty			**X**

	Both	Adults	Children
13. Assess medical drivers and explain to the patient behavioural contraindications to treatment - bulimia nervosa, psychiatric disorders, major life crisis.	X		
14. Assess health risks, cardiovascular risk factors and status	X		
15. Understand that there is a difference in the interpretation of BMI in children and adults			X
16. Understand the importance of, and be able to undertake, accurate measurement of height, weight and waist circumference and classification of BMI for adults		X	
17. Understand the importance of, and able to undertake, accurate measurement of height and weight in children and young people			X
18. Able to calculate and understand the significance of BMI and BMI centile for children			X
19. Know that the assessment for adults should include at a minimum a careful history, physical assessment of weight, height, waist circumference and blood pressure		X	
20. know that the assessment for children should include at a minimum a careful history, physical assessment of weight, height and blood pressure with appropriate sized cuff			X
21. Understand that obesity in childhood and adolescence is a risk factor for obesity later in life.			X
22. Understand that several prescription medications are associated with weight gain.	X		
23. Appreciate that quitting smoking can cause significant weight and be able to advise about measures to prevent this		X	
24. Know when to refer to a specialist	X		

Assessment skills – specialists

Aims:

- Individualised management – to be able to select the appropriate treatment(s)

- to be able to define and demonstrate appropriate communication skills, tools and techniques to develop a therapeutic relationship with a range of individuals

	Both	Adults	Children
1. Recognise that the initial assessment should aim to identify an individual's level of risk and the appropriate level of intervention to gain health benefits with weight loss and maintain weight loss.		**X**	**X**
2. Understand that an evaluation is needed to identify those who either have, or are at risk for, obesity-related medical complications.		**X**	**X**
3. Take a history that includes eating and drinking and activity behaviours, current obesity-related medical illnesses and health risks, weight history and previous weight loss attempts		**X**	
4. Perform a physical assessment and utilise information to exclude associated co-morbidities such as hypertension, type 2 diabetes, hyperlipidaemia, and obstructive sleep apnoea.		**X**	
5. Apply information about obesity-related health risks, the presence of other disease risk factors and co-existing obesity complications as determinants for the need for obesity therapy, and the intensity of the treatment approach.	**X**		
6. Identify the presence of psychiatric illness (for example severe depression, substance abuse or binge-eating disorders) and include such information in the overall assessment, recognising that such disorders can derail weight loss attempts.		**X**	**X**
7. Appreciate that single gene mutations may cause, on rare occasions, severe obesity disorders which usually manifest in early life.	**X**		
8. Understand the importance of different patterns of body fat distribution in children and young people			**X**
9. Perform physical examination of a child in order to identify features of co-morbidity or of underlying pathology / syndromes			**X**
10.			

	Both	Adults	Children
11. Assess pubertal status in children and young people			**X**
12. Understand the significance of different patterns of growth in height and weight			**X**
13. Identify a history suggestive of sleep apnoea	**X**		
14. Determine the need for further investigation such as biochemical, endocrine and genetic			**X**

Commissioning

For practice-based commissioning GPs, PEC members, clinical advisors to the commissioning process, clinical governance leads, clinical directors, public health professionals

Aim:

-To possess the knowledge and skills applicable to the commissioning process

	Both	Adults	Children
1. Understand how obesity and overweight can impact directly and indirectly on a wide variety of disease areas and thus the need for consideration of overweight and obesity in the commissioning of a wide range of health services.	**X**		
2. Awareness of, and ability to work with, partnerships with NHS and non-NHS partners involved in the commissioning of services directly and indirectly affecting overweight and obese. (including local authority, schools, voluntary sector, business, acute trusts and GPs).	**X**		
3. Knowledge of the local strategic approach to tackling overweight and obesity, including non-NHS partners (including local authority, schools, voluntary sector, business)	**X**		
4. Aware that different groups of the population are affected differently by frequency and effects of obesity / overweight and understand the relevance of a needs assessment for a specific population in respect of overweight and obesity	**X**		
5. Awareness of the latest evidence base regarding the importance of minimising obesity and overweight.	**X**		
6. Understand the theory of behaviour change and the need to apply this to the design of a service to tackle obesity and overweight directly	**X**		
7. Understand the necessity of involving service users in the planning, commissioning, delivery and ongoing development of the new service / service change	**X**		
8. Able to consider health and wellbeing in the widest sense, taking into account factors such as lifestyle, ethnicity, environment and emotional wellbeing.	**X**		

	Both	Adults	Children
9. Able to understand and support a case for a service change or a new service in respect of directly or indirectly combating overweight and obesity based on effective health and care pathways	**X**		
10. Able to assist the development of a robust financial business case for a new service or service change effectively to tackle overweight / obesity in local population	**X**		
11. Able to assist in the development of a service specification, including clinically valid Key Performance Indicators, for services to combat obesity and overweight and for services for disease areas which are affected by overweight and obesity.	**X**		
12. Understand how to demonstrate the impact of any commissioned service on obesity and overweight – including the role of audit, evaluation and health equity audit	**X**		
13. Understand how to demonstrate the impact of any commissioned service, or service change, on the quality of people's health and wellbeing including prevention and self care; audit and evaluation should demonstrate the extent and nature of this impact and that service is meeting the needs of all (potential) service users	**X**		
14. Understand and support the need to reduce inequalities of access: ie commission service or service change so that it is accessible to a diverse range of users.	**X**		
15. Understand the need to create a robust governance structure for commissioned service / service change.	**X**		

Commissioning

For strategic leads for PCTs and local authorities, specialist commissioners including practice based commissioners who take responsibility for commissioning services relating to obesity

Aim:

- To commission obesity support services effectively and in partnership between the NHS and other stakeholders (local authority, schools, community groups etc)

	Both	Adults	Children
1. Able to lead partnership work with NHS and non-NHS partners in tackling obesity and overweight, its causes and solutions (including local authority, schools, voluntary sector, business, acute trusts and GPs).	**X**		
2. Able to understand, influence and develop the local strategic approach to tackling overweight and obesity, including non-NHS partners (including local authority, schools, voluntary sector, business)	**X**		
3. Detailed knowledge of how different parts of the population are affected by obesity / overweight.	**X**		
4. Able to lead the development of partnerships with NHS and non-NHS partners (including general practice teams, local NHS Trusts, social care, schools and local organisations) in order more effectively to commission services directly and indirectly affecting the overweight and obese.	**X**		
5. Understand the latest evidence base regarding the impact of obesity and overweight on health and wellbeing	**X**		
6. Able to undertake, and articulate the outcomes of, a needs assessment for a specific population in respect of overweight and obesity	**X**		
7. Able to apply a detailed understanding of behaviour change to the design of a service to tackle obesity and overweight directly	**X**		
8. Able to lead the involvement of service users in the planning, commissioning, delivery and ongoing development of the new service / service change	**X**		

	Both	Adults	Children
9. Able to consider health and wellbeing in the widest sense, taking into account factors such as lifestyle, ethnicity, environment and emotional wellbeing.	**X**		
10. Able to make a case for a service change or new service in order to combat, directly, or indirectly, overweight and obesity based on effective health and care pathways	**X**		
11. Able to construct a robust financial business case for a new service or service change effectively to tackle overweight / obesity, directly or indirectly, in local population	**X**		
12. Able to commission to reduce inequalities of access and outcome through the design of a service	**X**		
13. Able to create a robust governance structure for commissioned service / service change.	**X**		
14. Able to develop a service specification including clinically valid Key Performance Indicators for services to combat obesity and overweight and for services for disease areas which are affected by overweight and obesity.	**X**		
15. Able to demonstrate the impact of any commissioned service (including prevention) on obesity and overweight and quality of life - using audit, evaluation and health equity audit	**X**		

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