HEALTH AND SPORT COMMITTEE

AGENDA

14th Meeting, 2016 (Session 5)

Tuesday 6 December 2016

The Committee will meet at 10.00 am in the James Clerk Maxwell Room (CR4).

1. **Decision on taking business in private:** The Committee will decide whether to take item 3 in private.

2. **Obesity:** The Committee will take evidence from—

   Professor Linda Bauld, Chair and Professor of Health Policy in Behavioural Research for Cancer Prevention, University of Stirling, Cancer Research UK;

   Claire Hislop, Organisational Lead, Diet and Obesity Prevention, NHS Health Scotland;

   Lorraine Tulloch, Programme Lead, Obesity Action Scotland;

   Professor Nanette Mutrie, Chair and Director, Physical Activity for Health Research Centre (PAHRC), University of Edinburgh;

   Ian Findlay, Chief Officer, Paths for All;

   Dr Drew Walker, Director of Public Health, NHS Tayside, Scottish Directors of Public Health Network;

   Joyce Thompson, Chair, British Dietetic Association Scotland;

   and then from—

   Aileen Campbell, Minister for Public Health, Daniel Kleinberg, Head of Health Improvement, and Tony Rednall, Policy Officer, Health Improvement Division, Scottish Government.
3. **Health Service Medical Supplies (Costs) Bill (UK Parliament Legislation):**
The Committee will consider its approach to scrutiny of the legislative consent memorandum.

4. **Obesity (in private):** The Committee will consider the main themes arising from the oral evidence heard earlier in the meeting.

5. **Recruitment and retention (in private):** The Committee will consider a revised draft letter on recruitment and retention.

6. **Mental Health (in private):** The Committee will consider its approach to the mental health.

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The papers for this meeting are as follows—

**Agenda item 2**
Written Submissions  
PRIVATE PAPER  
HS/S5/16/13/1

**Agenda item 3**
PRIVATE PAPER  
HS/S5/16/13/2 (P)

**Agenda item 5**
PRIVATE PAPER  
HS/S5/16/13/4 (P)
Introduction

Thank you for the opportunity to provide evidence to the Committee’s inquiry into obesity. The BDA believes this is a welcome move.

The BDA, founded in 1936, is the professional association for dietitians in the UK. It’s the nation’s largest organisation of food and nutrition professionals with over 8,000 members. The BDA is also the trade union for the dietetic profession.

Dietitians are the only qualified health professionals that assess, diagnose and treat diet and nutrition needs at an individual and wider public health level. Uniquely, dietitians use the most up to date public health and scientific research on food, health and disease, which they translate into practical guidance to enable people to make appropriate lifestyle and food choices.

Dietitians are the only nutrition professionals to be statutorily regulated, and governed by an ethical code, to ensure that they always work to the highest standard. Dietitians work in the NHS, private practice, industry, education, research, sport, media, public relations, publishing, Non-Government Organisations and government. Their advice influences food and health policy across the spectrum from government, local communities to individuals.

Key Messages

The BDA will –

1. Advocate that the Scottish Government, NHS Health Scotland, Food Standards Scotland, NHS Scotland and Local Authorities:
   a. Establish overweight and obesity as a national priority
   b. Lead an effective and joined up approach to tackling the issue across the life course
   c. Allocate adequate funding to support development, implementation, evaluation and research around a national plan for healthy weight
   d. Recognise the role of registered dietitians in the prevention and treatment of obesity
2. Partner with other organisations to jointly influence action for population prevention of obesity and individual treatments for those suffering from excess weight

3. Contribute to policy and advisory forums about the promotion of healthy weight for children, young people and adults

4. Inform and mobilise its members in support of the prevention and management of obesity

The BDA notes that:

1. The prevalence of overweight and obesity in Scotland continues to rise in adults and is affecting two thirds of the adult population. In Primary 1 children between 2004/05 and 2014/15, prevalence has remained broadly similar at around 14-16% but levels increase as deprivation increases.

2. Overweight and obesity in Scotland is associated with substantial present and future social, health and economic costs.

3. As the factors contributing to overweight and obesity are complex, no single intervention can halt the rise of the obesity epidemic. A range of strategies over the long term are needed that take into account consideration of the interaction between the individual, the environment and the social determinants of health.

4. The public health problems of obesity, poor diet and inadequate physical activity cannot be solved by education and personal responsibility. Creating healthy food and physical activity environments will enable the population to exercise their personal responsibility in relation to food choices and physical activity levels between more and less disadvantaged groups.

5. The selection and resourcing of interventions to promote healthy weight should be guided by the best available scientific evidence, incorporate a balance between individual and societal responsibility, and avoid contributing to discrimination on the basis of body weight.

6. Population strategies need to address weight maintenance among healthy weight individuals and, for those who are overweight or obese, both prevention of further weight gain and weight loss, while improving diet and physical activity behaviours for all is required.

7. The Scottish Government and COSLA published Scotland’s first obesity prevention strategy (The Route Map) in 2010 focusing on four preventive actions. The Scottish Government also require NHS Boards to deliver on Child Healthy Weight interventions, a tiered approach to Adult Weight
Management and a range of Health Promoting Health Service Actions (HPHS) actions. The Route Map and the Child Healthy Weight programme were recently reviewed and recommendations made to build on the work.

8. The success of tobacco control highlights the need to bring individuals ‘on board’ to support policy work (i.e. smoke free public places) and, to find ways to assist people who already suffer (i.e. national smoking cessation services). This example signals the need for a long term and multi-sectoral approach to prevention alongside the provision of support for those individuals who are already suffering from excess weight.

The BDA believes that following steps should be undertaken:

1. Create a comprehensive obesity policy for Scotland which includes both public health (e.g. taxation, access to affordable healthy lifestyle choices) AND individual action i.e. it must also address weight management in those who are already overweight or obese.

2. Tackle the concern that talking about obesity will induce blame, guilt and stigma:
   a. Policy tends to talk ‘diet’ and ‘physical activity’ in a way that avoids talking about end points of body weight and body weight gain.
   b. The HPHS has the ethos of getting everyone on board to support healthy eating and physical activity but obesity is not explicitly included as part of the remit and signifying to NHS staff that weight cannot be important enough.

3. Utilise the expertise of Registered Dietitians:
   a. There are a range of effective weight management programmes developed in Scotland that can attain >5% weight loss. Many are also great examples of non NHS specialist staff delivering effective interventions for weight loss e.g. football coaches within the FFIT project. It is time to consider a weight support service within the NHS whereby dietitians train community counsellors to deliver.
   b. A forward thinking multi-sectoral and coproduction approach to obesity prevention within selected geographic communities is already underway in Dundee. Dietitians are leading on this work in partnership with local authority staff, volunteers and the public.
4. Provide adequate and ongoing investment that is at least comparable to smoking prevention and cessation.
   a. Physical activity suggests active living is the cornerstone of good health and it is certainly very important but you can’t outrun a poor diet.

   b. More health gain will be achieved by weight loss (in those with excess weight) than by physical activity alone.

   c. Some NHS Boards have had to decommission some of their weight management services due to budget cuts and others may have to consider similar action.

Childhood obesity and sugar tax

- The BDA supports a range of measures to tackle childhood obesity.

- As part of that it supports in principle a tax on sugary sweetened beverages (SSBs) such as non-diet fizzy drinks and energy drinks. This is on the back of the UK Scientific Advisory Committee on Nutrition (SACN) and Public Health England in 2014 which makes a consistent and compelling case for a reduction in the nation’s sugar intake.

- Evidence (Avery, Bostock, McCulloch 2014) does suggest that education delivered through the school curriculum about alternative drinks (e.g. water and ‘diet’ drinks) does help to reduce sugar consumption.

- A tax on sugar-sweetened beverages would in principle be supported by the BDA

- The BDA also supports restrictions on advertising of high sugar and high fat products

Further information:

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Joyce Thompson, Chair, BDA Scotland Board, scotland @ bda.uk.com
Obesity

Introduction

- One in two people in the UK will be diagnosed with some form of cancer during their lifetime. In 2015, around 31,900 people in Scotland were diagnosed with cancer.
- Yet **4 in 10 cancers could be prevented** by actions like not smoking, keeping a healthy bodyweight, cutting back on alcohol, eating a healthy balanced diet, keeping active and enjoying the sun safely.
- Scotland has often led the way on the prevention agenda, pioneering the smoking ban and minimum unit pricing of alcohol.
- **However, more can and must be done in Scotland to help prevent more obesity-related cancers.**
- **Not only does obesity cause cancer, it hits the poorest hardest, and represents a significant drain on the NHS in Scotland and on the economy.**

Who we are

Cancer Research UK is the world’s leading cancer charity dedicated to saving lives through research. We support research into all aspects of cancer through the work of over 4000 scientists, doctors and nurses. Cancer Research UK spent over £33 million last year in Scotland on some of the UK’s leading scientific and clinical research. Our Cancer Research UK Centres in Edinburgh and Glasgow are bringing together experts in the local medical and scientific community – working in partnership to translate research into benefits for patients as quickly as possible. The charity’s pioneering work has been at the heart of the progress that has seen cancer survival in Scotland move from 1 in 4 in the 1970s to 2 in 4 today.

Obesity and cancer

1. **Obesity is the single biggest preventable cause of cancer after smoking.** It is linked to 13 types of cancer including the two most common, breast and bowel cancer. Each year it is estimated that 18,100 cases of cancer across the UK are linked to excess weight. However, our research shows that almost three quarters (74%) of adults in Scotland are unaware of the links between obesity and cancer.

2. A study by Cancer Research UK and the UK Health Forum found that if trends in obesity continue, it could cause 670,000 cases of cancer in the UK over the next twenty years.
Obesity prevalence in Scotland and cost to Scotland

3. Three in four Scottish adults think obesity is a big problem\(^{vi}\) and this is borne out by the evidence. **Scotland continues to have the worst weight outcomes of any of the UK nations and among the worst of any OECD nation.** In 2015, 36% of adults (16+) were overweight, and 29% were obese\(^{v}\). Therefore almost 2 in 3 adults (65%) were overweight or obese. **In 2015, 28% of children were also overweight or obese\(^{vi}\).** Prevalence of unhealthy weight in children increased notably between 1995 and 2008, and has plateaued at a high level ever since.

4. Obesity represents a significant drain on the NHS in Scotland and on the economy. The cost of overweight and obesity in Scotland has been estimated at up to £600 million a year to the NHS, with wider economic costs of up to £4.6 billion per year.\(^{vii}\)

5. The causes and consequences of obesity are not borne equitably among the Scottish population. An expert report by the Scottish Public Health Network has identified that Scottish overweight and obesity rates could be negatively correlated with SES.\(^{viii}\) The most deprived quintile in Scotland consume the highest levels of energy dense foods, sugar, processed meat products, chips and drink non-diet soft drinks at least once a day.\(^{ix}\) Moreover, 45% of children from the most deprived quintile consume non-diet soft drinks on a daily basis, compared to 30% from the least.\(^{xi}\)

**Comprehensive strategy**

6. We welcome the commitment to tackle obesity in Scotland and the plans for a new diet and obesity strategy. We share the disappointment expressed by the Scottish Government following the publication of the UK Government’s ‘Childhood Obesity: A Plan for Action’ and its previous calls to introduce restrictions on junk food marketing before the 9pm watershed.\(^{xii}\)

7. To combat obesity, we need a comprehensive cross-governmental strategy to tackle the root causes of obesity. In particular targeted action is needed to address the obesogenic environment – that is the environmental factors that lead to excess calorie consumption and insufficient physical activity.

8. While obesity is the result of a number of interlocking factors, the rise in obesity is likely to be due to an increase in calorie consumption. Research from the WHO shows that increases in calorie intake alone are sufficient to explain higher rates of overweight and obesity in high income countries\(^{xiii}\). This has been backed up by evidence from the Behavioural Insights Team (the ‘Nudge Unit’) who found that it is likely that both calorie consumption
has been rising in the UK over the last forty years and that the rise in obesity is too large to be explained by declines in physical activity.xiv

9. Therefore while a comprehensive obesity strategy should seek to increase physical activity, particularly through supporting active travel, this should not be the focus of Government intervention. Reducing excessive calorie consumption through reducing consumption of foods high in sugar, salt and fat (HFSS foods) should be the priority as it is likely to have the biggest impact on obesity rates in Scotland.

10. Food Standards Scotland has identified wide-ranging proposals on measures to improve the diet of the Scottish public. xv We want to see a comprehensive obesity strategy in Scotland that builds on these recommendations, underpinned by clear and enforceable targets, and interventions that are effectively monitored and evaluated. Price promotions

11. Both the recommendations of Food Standards Scotlandxvi and Public Health England’s review of the evidencexvii acknowledge the problem of price promotions. Food retail price promotions are more widespread in Britain than anywhere else in Europe, and are described as ‘probably among the highest in the world’. Foods on promotion account for around 40% of all expenditure on food and drinks consumed at home.

12. The review by PHE found that these promotions increase the amount of food and drink people buy by around one-fifth (22%), and increase sugar purchased from higher sugar foods and drinks by 6.1%. xviii It also found that high sugar products were promoted more extensively and more deeply promoted than other foods. xix The problem is more acute in Scotland. Nearly 40% of all calories, 42% of energy derived from fats and saturated fats, and around 53% of regular soft drinks were purchased as a result of price promotions.xx

13. Research with young people in Scotland also found that price based promotions and advertising are the most salient forms of marketing for this audience.xxi Temporary price reductions are dominant across Scotland, with more prominent use of less healthy food and drink categories using ‘Y for £X’ and multibuy promotions.xxii

14. To effectively change the impact of price promotions on poor diet, a comprehensive review of the use of price promotions on HFSS foods is needed including price reductions, extra product price promotions and premium promotions. Given the competition between

November 2016
supermarkets, regulation is likely to be the most effective way to reduce unhealthy price promotions across Scotland.

15. Three-quarters of Scottish adults (75%) support reductions on price promotions on junk food. xxiii Therefore in the first instance, the Scottish Government should restrict the use of multi-buy discounts such as ‘2 for 1’ for HFSS foods. To define HFSS foods the Scottish Government should use the updated Nutrient Profile Model which is under review by Public Health England.

16. The Scottish Government should also support Food Standards Scotland to undertake further research into the impact of price promotions on diet and options for regulatory and voluntary interventions.

17. The Scottish Government should also consider action on non-price in-store promotions including the use of end of aisle displays and displays at the retail check-out to promote HFSS foods.

Junk Food Advertising

18. Public Health England’s review of the evidence on sugar consumption found that ‘all forms of marketing consistently influence food preference, choice and purchasing in children’. xxiv The evidence base acknowledges the promotion of food influences children’s food intake xxv, their brand xxvi and food xxvii xxviii preferences, and consumption behaviours xxix xxx.

19. Currently rules set out by the Broadcast Committee of Advertising Practice do not permit the advertising of foods deemed to be less healthy by the Department of Health’s Nutrient Profiling Model during shows that have a particular appeal to children. This means that these products cannot be advertised during children’s TV shows or on children’s channels. However, these rules fail to take into account that these are not the most popular shows for children.

20. Ofcom research shows that implementing restrictions on junk food advertising xxxi on TV before the 9pm watershed would reduce the amount of HFSS adverts seen by children by more than half compared to the current approach xxxii, and we want to see the UK Government close this loophole.

21. Research by Ofcom found that television advertising has a ‘modest direct effect on children’s food preferences, consumption and behaviour’, and that ‘indirect effects are likely to be larger’ xxxiii. These habits that are heavily influenced by marketing are likely to remain with children for life and
influence their eating behaviour and health in adulthood. Ultimately food and
drink brands want to build long-term relationships with their customers and
targeting them early in life can be an effective way to secure customer
loyalty.

22. Cancer Research UK shares the disappointment expressed by the Public
Health Minister about the UK Government’s Childhood Obesity Strategy’s
failure to stop the advertising of junk food before the 9pm watershed and
agree the UK Government should “rethink its position on this policy” xxxiv
Around 8 in 10 (79%) of Scottish adults support restricting junk food
advertising on TV before the 9pm watershed xxxv

23. We believe that Scottish Government should continue to press the UK
Government in the strongest terms to close the loophole that allows
children to be regularly influenced by junk food advertising on TV.

Sugary drinks tax

24. Cancer Research UK welcomes the UK’s Government’s commitment to a
soft drinks industry levy. Such a measure is necessary to reduce
consumption of sugar-sweetened beverages (SSBs) in young people and
reduce their sugar intake.

25. Evidence from other countries with such taxes xxxvi, as well as research
modelling the impact on the UK xxxvii, demonstrates that a levy could reduce
the purchase and consumption of sugar-sweetened beverages. Our
research demonstrates that a sugary drinks tax could prevent 3.7 million
people in the UK being obese in just a decade, and save £10 million in costs
to the NHS and social care in the year 2025 alone. xxxviii

26. The benefits of this measure are likely to be greater in Scotland as
evidence shows Scottish households also spend over a quarter more
than other UK nations (£2.60 per week) on soft drinks. xxxix

27. The UK Government plans to ring-fence the revenue raised from the levy to
fund an expansion in the provision of school sports, after-school activities
and breakfast clubs in primary and secondary schools. Cancer Research UK
believes that any additional revenue for Scotland allocated through the
Barnett Formula as a result of the soft drinks industry levy should be
invested in primary prevention to reduce obesity. Monitoring children’s
weight

28. We welcome the fact that children are routinely weighed and measured at
P1 in primary school. Monitoring BMI status of children is vital to both
monitor societal trends, the impact of interventions and identify social
inequalities linked to obesity. We believe that this measurement programme should be expanded to include the routine measurement of children in P6 (the last year of primary school) as is currently done in England.

Support for GPs

29. GPs can play an important role in helping to support weight loss and prevent additional weight gain. Research suggests that intervention by GPs with a supportive system can lead to significant weight loss in adults. We believe that the Scottish Government should provide more support and training to GPs to enable them to have effective conversations with patients and refer them to weight management services.

Monitoring and Evaluation

30. It is vital that any effective obesity strategy is fully evaluated and monitored. A good example of a comprehensive monitoring programme was the Scottish Government’s MESAS programme for the alcohol strategy. The Scottish Government should in particular fund research to monitor the impact of the Government’s Diet and Obesity Strategy on health inequalities and the effectiveness of new interventions.

For further details please contact Gregor McNie, Senior Public Affairs Manager: Gregor.McNie@cancer.org.uk / 0131 718 6358


Cancer Research UK. (2016). ‘Three in four don’t know obesity causes cancer’. (website). Scottish data was not published in this report but provided to journalists in a press release.


Ibid, Scottish Health Survey.


Ibid, Scottish Health Survey.


Ibid, Food Standards Scotland.


Figure 13 from PHE report.

Food Standards Scotland. (2016) 'Foods and drinks purchased into the home in Scotland using data from Kantar WorldPanel'. (pdf)


Food Standards Scotland. (2016) 'Foods and drinks purchased into the home in Scotland using data from Kantar WorldPanel'. (pdf)


Foods identified as high in fat, sugar and salt under the Department of Health's Nutrient Profiling Model, and additional discretionary product categories such as sugar-sweetened beverages or confectionery.


Ofcom (March 2006) ‘Television Advertising of Food and Drink products to Children: Options for new restrictions: A consultation’


ONS. (2015). Detailed household expenditure by UK countries and regions, 2012 to 2014. (website)

NHS HEALTH SCOTLAND

SCOTTISH PARLIAMENT HEALTH AND SPORT COMMITTEE

OBESITY

Prevalence
Obesity rates in Scotland have been relatively stable since 2008 but the prevalence remains stubbornly high. In 2014 around two thirds (65%) of adults were overweight or obese, with around 1 in 4 (28%) classified as obese. Around 1 in 6 children (17%) were identified as at risk of obesity, with a further 14% at risk of overweight.¹

Consequences of obesity and financial cost
Obesity is associated with reduced social wellbeing and quality of life. A useful resource that sets out the evidence on the consequences of obesity is the Public Health England presentation and fact sheets on Making the case for tackling obesity – Why invest?² Obesity contributes to a number of health issues including: type 2 diabetes, stroke, cancer, depression and anxiety, liver disease, osteoarthritis and back pain, asthma, reproductive complications, and sleep apnoea. Obesity reduces life expectancy by an average of 3 years, and severe obesity by 8-10 years.

Obesity is associated with worse employment outcomes (lower wages, early exit from the workforce through sickness or early retirement) and is a source of discrimination for applicants and in the workplace.³,⁴ Given obesity, particularly severe obesity, is related to lower educational attainment and living in material deprivation, the link between poor employment outcomes and obesity is likely to be the result of multiple insults of disadvantage – including, but not limited to, the adverse impact of obesity.

The economic impacts on health, social care and other services, and on productivity are increasingly being recognised but are difficult to quantify. NHS Health Scotland is currently undertaking analysis to estimate the burden and cost of hospital admissions in Scotland as a result of obesity-related illnesses. Previous Scottish Government analysis estimated that overweight and obesity combined were responsible for health care costs of £312 million in 2007/08, or £363 million at 2015 prices.⁵ There is no universally agreed method for calculating wider economic costs and estimates therefore vary widely, but the estimates available all suggest the figure runs into billions of pounds for the Scottish economy as a whole.

The key and consistent message is therefore that overweight and obesity together place a significant and growing burden on NHS and social care services and on the Scottish economy as a whole. In the light of recent trends in obesity and as the population ages, the strain from obesity on public services, particularly health and social care, is likely to increase.
Causes of obesity

Obesity occurs when energy intake from food and drink consumption is greater than energy use over a prolonged period of time, resulting in the accumulation of excess body fat. Both food and activity are important but there is a growing consensus that the recent rapid population rises in obesity can largely be explained by increased energy intake rather than decreased energy expenditure. The causes of obesity are complex encompassing biology, psychology and behaviour, set within a cultural, environmental and social framework. An increase in the prevalence of obesity is in many ways an inevitable consequence of living in a society where relatively cheap, energy dense foods are marketed relentlessly and where physical activity becomes dissociated from the normal means of getting around and working. The current food environment exploits people’s biological, psychological, social and economic vulnerabilities, making it easier for them to eat too much unhealthy food. This reinforces preferences and demand for foods of poor nutritional quality, furthering the unhealthy environment.

Tackling obesity

Increasing physical activity and reducing calorific intake are both important components of a comprehensive strategy to maintain a healthy weight and tackle obesity. The benefits of being physically active also go beyond contributing to a reduction in obesity. The 2011 CMO guidelines for Physical Activity detail the recommended levels of physical activity to maintain general health and wellbeing at different life-stages. There are currently no targets for meeting these new guidelines. The Active Scotland Outcomes Framework is accompanied by a set of national indicators and will be the key mechanism for measuring progress.

In 2014 76% of children and 63% of adults were meeting the activity component of the guideline. However, there are considerable differences in activity levels between boys and girls, men and women, and older adults. Participation in sports also shows variation with a significant decline with age amongst both men and women from early adulthood. Reducing inactivity (a fifth of the adult population do less than 30 mins of activity per week) and reducing sedentary time (adults in Scotland sit for 5.4 hours a day on average) are also important in helping to maintain a healthy weight and reduce chronic disease.

A major development in Scotland was the publication in 2014 of the Physical Activity Implementation Plan. This cross sector action plan aims to promote physical activity across different sectors such as the environment, health care, schools, workplace and sports, by encouraging each sector to provide opportunities for all people to be active in their daily life. Planning and design of buildings, urban space and greenspaces, active travel etc are important so that opportunities to be active are easy to do. Implementing the Place Standard, a tool which provides a simple
framework to structure conversations about place and community, including moving around and play and recreation, is also likely to be beneficial to activity levels.

As already stated, there is growing consensus that the recent rapid population rises in obesity can largely be explained by increased energy intake rather than decreased energy expenditure. The Scottish dietary goals are therefore also important. A Food Standards Scotland report showed that we are failing to meet the dietary goals concerned with intake of calories, fruit and vegetables, fats, sugar and fibre, diet has not changed in the last 15 years, and poor diet exists across all socio-economic groups but the most deprived tend to have the poorest diets.\textsuperscript{16}

Successfully tackling obesity is a long term, large scale commitment that requires a sustained and integrated portfolio of preventative measures to address the obesogenic environment and social norms so that healthy (food and activity) behaviours become easier for all.\textsuperscript{17} A range of complementary solutions, including regulatory actions from governments, increased efforts from industry and civil society and services for those wanting to lose weight is needed. There is a large and consistent body of literature outlining the policies needed to address obesity through the environment, personal responsibility and education. The so-called McKinsey report, How the world could better fight obesity,\textsuperscript{ibid} proposes 74 interventions across 17 groups supported by the cost-effectiveness evidence (see Box 1 for adapted summary\textsuperscript{18} and Appendix 1 for an adapted list of interventions).

**Box 1: Areas of effective interventions for obesity reduction**

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<thead>
<tr>
<th>Environment</th>
<th>Personal responsibility</th>
<th>Education</th>
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<tr>
<td>High calorie food and drink access</td>
<td>Weight management programmes</td>
<td>Parental education</td>
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<tr>
<td>Workplace wellness</td>
<td>Healthy meals</td>
<td>School curriculum</td>
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<td>Labelling</td>
<td>Pharmaceuticals</td>
<td>Public-health campaigns</td>
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<td>Media restrictions</td>
<td>Surgery</td>
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<td>Reformulation</td>
<td>Active transport</td>
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<td>Price and promotions</td>
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<td>Portion control</td>
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<td>Subsidies, taxes and prices</td>
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<tr>
<td>Urban environment</td>
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There is activity in place in Scotland relevant to many of these interventions. For example:

- The Healthy Living Award\textsuperscript{19}, which aims to increase healthy options in the out-of-home food retail environment.

- Scottish Grocer Federation Healthy Living Programme\textsuperscript{20}, which supports small retailers promote healthier food.
• The Healthcare Retail Standard\textsuperscript{21}, which aims to reduce the promotion of HFSS food and drink in shops in healthcare settings
• Nutritional requirements for food and drink in schools\textsuperscript{22} and Universal free school meals for P1-3\textsuperscript{23}
• The Place Standard\textsuperscript{23}
• The Physical Activity Implementation Plan\textsuperscript{24}, which makes the case for increased action in tackling physical inactivity.
• Weight management services, pharmaceuticals and surgery provided through the NHS.

If Scotland is serious about achieving population change then this cross-sector systems approach must be further resourced and implemented, with multiple actions and strategies being implemented concurrently, whilst being mindful of the codependencies and sequencing of actions required.

Existing Scottish policy such as the Obesity Route Map,\textsuperscript{25} guidance for weight management,\textsuperscript{26, 27} the Physical Activity Implementation Plan and the Place Standard together contain many of the important elements of a comprehensive strategy to reduce obesity. The Obesity Route Map sets out a broad multi-component package for cross-government measures to prevent obesity and remains a groundbreaking strategy internationally. A review of the Obesity Route Map undertaken for the Scottish Public Health Network concluded that progress on implementation has been slow and requires better monitoring.\textsuperscript{28} Food Standards Scotland have set out the additional evidence-based proposals to change the Scottish diet based on the McKinsey Report (Box 2).\textsuperscript{29}

Box 2: Food Standards Scotland Proposals

<table>
<thead>
<tr>
<th>Food Standards Scotland\textsuperscript{29} proposes action on:</th>
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<tbody>
<tr>
<td>• Price and promotions ☒ Empowering consumers</td>
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<tr>
<td>• Portion size reduction ☒ Public Information campaigns</td>
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<tr>
<td>• Advertising and marketing ☒ Education on diabetes</td>
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<tr>
<td>• Reformulation ☐ Affordability and acceptability of a healthy diet ☐ Taxation</td>
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<tr>
<td>☐ Provision of consistent messaging</td>
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</table>

**Obesity-related inequalities**

Levels of obesity are higher in those living in the most deprived areas, with lower income and lower educational attainment.\textsuperscript{30} The link between material deprivation and obesity has been found to be stronger for women and children than men.\textsuperscript{ibid,31, 24} As awareness of the harms of obesity and necessary individual level action becomes understood those with the personal and financial resources are able to make changes to their lifestyle and immediate environment, opening an inequalities
gap. Those living in the most socio-economically deprived circumstances experience multiple vulnerabilities and exposures that increase their risk of obesity. Obesity-related inequalities are thus symptomatic of inequalities in the fundamental causes of health outside the scope of obesity policy. From an obesity policy perspective it is important that an inequalities lens is applied to potential policy options to ensure that, as a minimum, proposals do not increase inequalities and ideally that effort is focused on interventions most likely to reduce the gap.

The available evidence suggests that, as with the overall population rises in obesity, increased energy intake—rather than decreased physical activity—is the main driver behind the obesity epidemic in lower socio-economic groups. Interventions that rely on individual agency for behaviour change are more likely to increase inequalities while interventions focused on structural change are likely to have a neutral effect or reduce inequalities, and are also more likely to be cost effective.

Conclusion
Tackling obesity requires addressing the social, physical and economic environment through an array of measures. There is substantial evidence on the sorts of policies that are needed to tackle obesity and a substantial body of analyses of the economics of obesity prevention supports the case for physical, economic and socio-environmental measures to reduce obesity. These are cost-effective in their own right and they are also required to maximise the duration of weight loss arising from weight management programmes for individuals. The most cost-effective measures to prevent and manage obesity, and the most likely to help tackle inequalities, are regulatory and fiscal based measures that have wide reach and lie outside the health sector. The challenge is building the will to support these policies and translating them into feasible implementation with enough dose, scale, consistency and coordination to make a difference.

Appendix 1: Effective interventions across 16 groups

Highlighted interventions were assessed for potential scaled impact and cost-effectiveness. Those not assessed either did not have sufficient quality data or were not relevant in the context of the United Kingdom (our pilot geography for this analysis)

<table>
<thead>
<tr>
<th>Area</th>
<th>Theme</th>
<th>Activities</th>
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<tbody>
<tr>
<td>1. Active Transport</td>
<td>Urban redesign: walking</td>
<td>Government authorities redesign urban planning to facilitate and encourage walking</td>
</tr>
<tr>
<td></td>
<td>Urban redesign: cycling</td>
<td>Government authorities redesign urban planning to facilitate and encourage cycling</td>
</tr>
</tbody>
</table>
Disincentivise driving

Government authorities redesign tariffs, pedestrianization, and parking laws, and improve the quality of public transport.

2. Healthy meals

<table>
<thead>
<tr>
<th>Plan</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free compulsory meals for all</td>
<td>Government provides free compulsory school meals and improves quality</td>
</tr>
<tr>
<td>Subsidized compulsory school meals for all</td>
<td>Government subsidizes compulsory meals and improves health quality.</td>
</tr>
<tr>
<td>Free healthy meals in the workplace</td>
<td>Employers provide free healthy meals</td>
</tr>
<tr>
<td>Supermarket targeted promotions</td>
<td>Grocery retailers promote healthy eating through campaigns and recipes</td>
</tr>
<tr>
<td>Lower-calorie options in the workplace</td>
<td>Employers introduce healthy options in canteens but do not remove existing options</td>
</tr>
</tbody>
</table>

3. High calorie food and drink availability

<table>
<thead>
<tr>
<th>Plan</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supermarket layout: space</td>
<td>Grocery retailers allocate greater share of space to healthier products and categories</td>
</tr>
<tr>
<td>Supermarket layout: prominence</td>
<td>Grocery retailers allocate greater prominence (aisle ends, checkout counters, store entry) to healthier products</td>
</tr>
<tr>
<td>Reduced access to high calorie food in schools: regulated</td>
<td>Government bans vending machines and snack shops in schools</td>
</tr>
<tr>
<td>Reduced access to high calorie food in schools: selfregulated</td>
<td>Schools voluntarily ban vending machines and snack shops</td>
</tr>
<tr>
<td>Reduced access to high calorie food in the workplace</td>
<td>Employers remove vending machines and easy access to high calorie foods</td>
</tr>
<tr>
<td>School canteen layout</td>
<td>Schools place healthier canteen areas (e.g. vegetables, fruit and salad) more prominently</td>
</tr>
<tr>
<td>Workplace canteen</td>
<td>Employers place healthier canteen</td>
</tr>
</tbody>
</table>

4. Labelling

<table>
<thead>
<tr>
<th>Plan</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calorie/nutrition ‘plain’ labelling on package: regulated</td>
<td>Government mandates nutritional labelling on all packaged foods</td>
</tr>
</tbody>
</table>

layout

areas (e.g. vegetables, fruit and salad) more prominently
<table>
<thead>
<tr>
<th>Topic</th>
<th>Regulation Status</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calorie/nutrition 'plain' labelling on package: selfregulated</td>
<td>Industry self-regulates nutritional labelling on all packaged foods</td>
<td></td>
</tr>
<tr>
<td>Calorie/nutrition 'engaging' labelling on package: regulated</td>
<td>Government mandates front of pack 'engaging’ format nutritional information (e.g. traffic-light labels) on all packaged foods.</td>
<td></td>
</tr>
<tr>
<td>Calorie/nutrition 'engaging' labelling on package: selfregulated</td>
<td>Industry self regulates front of pack ‘engaging’ format nutritional information (e.g. traffic-light labels) on all packaged foods.</td>
<td></td>
</tr>
<tr>
<td>Portion size 'engaging' labelling on package: regulated</td>
<td>Government mandates ‘engaging’ portions information on each package in a clearly communicated way.</td>
<td></td>
</tr>
<tr>
<td>Portion size 'engaging' labelling on package: selfregulated</td>
<td>Industry self-regulates engaging portions information on the front of the package in a clearly communicated way.</td>
<td></td>
</tr>
<tr>
<td>Nutrition labelling in restaurants: regulated</td>
<td>Government mandates labelling on menus and shelf choices in fast-food restaurants</td>
<td></td>
</tr>
<tr>
<td>Nutrition labelling in restaurants: selfregulated</td>
<td>Fast food restaurants label menus and make shelf choices</td>
<td></td>
</tr>
<tr>
<td>Nutrition ‘plain’ labelling: workplace</td>
<td>Employers provide workplace canteen nutritional labelling</td>
<td></td>
</tr>
<tr>
<td>Nutrition ‘engaging’ labelling: workplace</td>
<td>Employers provide engaging workplace canteen nutritional labelling (e.g. traffic light labels?</td>
<td></td>
</tr>
<tr>
<td>Aggregate meal calorie labelling: workplace</td>
<td>Employers provide aggregated nutritional content and traffic light labels at checkout</td>
<td></td>
</tr>
<tr>
<td>Aggregate meal calorie labelling: restaurants</td>
<td>Fast food restaurants provide aggregated nutritional content and traffic light labels at checkout</td>
<td></td>
</tr>
<tr>
<td>Aggregate meal calorie labelling: retailers</td>
<td>Retailers provide traffic light rating of basket contents at checkout</td>
<td></td>
</tr>
<tr>
<td>5. Media restrictions</td>
<td>Government restricts advertising of high calorie foods on all advertising supports</td>
<td></td>
</tr>
<tr>
<td>Media restrictions on high calorie food advertising on all supports: regulated</td>
<td></td>
<td></td>
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<tr>
<td>Media restrictions on</td>
<td></td>
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</tr>
<tr>
<td>Section</td>
<td>Action</td>
<td>Details</td>
</tr>
<tr>
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</tr>
<tr>
<td>6. Parental education</td>
<td>Media restriction: self-regulated</td>
<td>Food and beverage industry voluntary restricts high-calorie food advertising (e.g., to children)</td>
</tr>
<tr>
<td>6. Parental education</td>
<td>Parental education: pre-schoolchildren</td>
<td>Government authorities provide educational program (e.g., 12-week course) to parents of pre-schoolchildren covering nutrition and parental feeding styles, and providing opportunities for physical activity</td>
</tr>
<tr>
<td>6. Parental education</td>
<td>Parental education: schoolchildren</td>
<td>Government authorities provide educational program (e.g., 12-week course) to parents of schoolchildren covering nutrition and parental feeding styles, and providing opportunities for physical activity</td>
</tr>
<tr>
<td>7. Pharmaceuticals</td>
<td>Over-the-counter pharmaceuticals</td>
<td>Provision of non-prescription weight-loss drugs</td>
</tr>
<tr>
<td>7. Pharmaceuticals</td>
<td>Prescription pharmaceuticals</td>
<td>Medical prescription of weight-loss drugs</td>
</tr>
<tr>
<td>8. Portion control</td>
<td>Reduced portion size</td>
<td>Food producers reduce average portion sizes</td>
</tr>
<tr>
<td>8. Portion control</td>
<td>Reduced portion size: restaurants</td>
<td>Restaurants reduce average portion size of meals and snacks</td>
</tr>
<tr>
<td>8. Portion control</td>
<td>Reduced portion size: workplace</td>
<td>Employers reduce average portion size of foods in workplace canteens</td>
</tr>
<tr>
<td>8. Portion control</td>
<td>Reduced portion size: reduce portions of high-calorie beverages</td>
<td>Beverage producers reduce average portion sizes of high-calorie beverages</td>
</tr>
<tr>
<td>8. Portion control</td>
<td>Eliminate “supersize” items from menus and product ranges</td>
<td>Remove extra-large single-serve portions from packaged food ranges and restaurant menus</td>
</tr>
<tr>
<td>9. Price Promotions</td>
<td>Price promotion reconfiguration: regulated</td>
<td>Retailers and producers restrict promotional activity (e.g., two-for-one) of high-calorie food and Beverages</td>
</tr>
<tr>
<td>---------------------</td>
<td>------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Price promotion reconfiguration: voluntary</td>
<td>Food producers/retailers voluntarily increase price of high-calorie food and beverages</td>
</tr>
<tr>
<td>10. Public Health campaign</td>
<td>Comprehensive public-health campaign</td>
<td>Government launches public-health campaign promoting healthy habits across various media (e.g., TV, radio, out-of-home advertising)</td>
</tr>
<tr>
<td>11. Reformulation</td>
<td>New “better for you” products</td>
<td>Introducing new product ranges with improved nutritional profile, and advertised as such</td>
</tr>
<tr>
<td></td>
<td>Stealth product reformulation: food</td>
<td>Food producers deliver small, incremental changes to formulation of food products (e.g., reduction in sugar) that consumers do not notice</td>
</tr>
<tr>
<td></td>
<td>Stealth product reformulation: beverages</td>
<td>Beverage producers deliver small, incremental reduction in the caloric content of beverages that consumers do not notice</td>
</tr>
<tr>
<td></td>
<td>Stealth product reformulation: restaurants</td>
<td>Fast-food retailers deliver small, incremental changes in the formulation of food products that consumers do not notice</td>
</tr>
<tr>
<td>12. School Curriculum</td>
<td>School temporary diet and exercise programs</td>
<td>Schools provide short-term intensive nutritional education or exercise programs</td>
</tr>
<tr>
<td></td>
<td>School curriculum mandates physical activity: regulated</td>
<td>Schools mandate or increase the amount of physical activity in the curriculum</td>
</tr>
</tbody>
</table>
### School curriculum includes nutritional health education:

<table>
<thead>
<tr>
<th>School curriculum includes nutritional health education: regulated</th>
<th>Schools include or increase the amount of nutritional-health education</th>
</tr>
</thead>
</table>

### 13. Subsidies, taxes and prices

<table>
<thead>
<tr>
<th>Relative price increase: regulated</th>
<th>Government introduces a tax in order to drive price increases on certain types of food or nutrient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative price increase: reduced agricultural subsidy</td>
<td>Government reduces subsidies on certain food commodities that drive prices (e.g., processed foods such as corn, sugar, and palm oil)</td>
</tr>
<tr>
<td>Relative price decrease on fresh produce and staple foods: personal subsidies</td>
<td>Government subsidizes fresh food such as fruit and vegetables</td>
</tr>
</tbody>
</table>

| foods: increased agricultural subsidy | Relative price decrease on fresh produce and staple foods: personal subsidies | Government provides personal subsidies (e.g., food stamps for low-income individuals for sole use on certain healthy food types) |

### 14. Surgery

<table>
<thead>
<tr>
<th>Bariatric surgery: gastric banding</th>
<th>Provision of gastric-bandung surgery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bariatric surgery: gastric bypass</td>
<td>Provision of gastric-bypass surgery</td>
</tr>
</tbody>
</table>

### 15. Urban Environment

<table>
<thead>
<tr>
<th>School physical exercise facilities</th>
<th>Government authorities/schools invest in higher-quality physical exercise facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved community sports facilities and programs</td>
<td>Government authorities increase access to community sports facilities and programs</td>
</tr>
<tr>
<td>Supermarket availability</td>
<td>Retailers increase presence in areas with poor access to grocery stores</td>
</tr>
<tr>
<td>16. Weight management programmes</td>
<td>Personal technology and wearables to support healthy eating and physical activity: crossplatform</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Health systems/employers provide personal technology platforms and wearable technology to support goal setting, tracking, and measuring of key behaviour and health outcomes</td>
</tr>
<tr>
<td>Health-system individual counselling</td>
<td>Health system provides a short-term (e.g., 12-week) one-to-one counselling program on nutrition and how to change dietary and physical activity behaviour</td>
</tr>
<tr>
<td>Health-system group counselling</td>
<td>Health system provides a short-term (e.g., 12-week) group counselling program on nutrition and how to change dietary and physical activity behaviour</td>
</tr>
<tr>
<td>Physical activities on prescription</td>
<td>Health system prescribes physical activities and provides free gym membership or other facilitative measures</td>
</tr>
<tr>
<td>Commercial weightmanagement programs</td>
<td>Commercial provision of weightmanagement programs (e.g., Weight Watchers) that include group counselling, goal setting, and community support</td>
</tr>
<tr>
<td>Short-term, intensive weight-management programs: adults</td>
<td>Health-care system or commercial market provides short-term (e.g., two- to six-week) residential “boot camp” providing nutritional education and physical activity to adults</td>
</tr>
<tr>
<td>Short-term, intensive weight-management programs: children</td>
<td>Health-care system or commercial market provides short-term (e.g., two- to six-week) residential “boot camp” providing nutritional education and physical activity to children</td>
</tr>
<tr>
<td>Weight management around childbirth</td>
<td>Health-care system provides weightmanagement advice as part of pre- and postnatal care</td>
</tr>
</tbody>
</table>
### Workplace Wellness

<table>
<thead>
<tr>
<th>Workplace team challenge incentive schemes</th>
<th>Employers provide team challenge activities to encourage physical activity and improved key health indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workplace individual challenge incentive schemes</td>
<td>Employers provide individual challenge activities to encourage physical activity and improved key health indicators</td>
</tr>
<tr>
<td>Employer material (financial) incentive</td>
<td>Employers provide material incentives for improved key health indicators (e.g., discounts on insurance premiums, gym membership, prizes)</td>
</tr>
</tbody>
</table>

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10. For example, for children aged 5-18 the guidelines recommend 60mins a day of moderate to vigorous activity and to minimise the amount of time spent being sedentary for extended periods. For adults aged 19-64yrs the guidelines recommend 150mins a week of moderate intensity activity and to minimise the amount of time spent being sedentary for extended periods.

18 The source document refers to 18 groups but we have omitted Health-care payouts as it relates to health insurance and is less relevant to UK context.

19 http://www.healthylivingaward.co.uk/index


24 http://www.gov.scot/Topics/ArtsCultureSport/Sport/MajorEvents/Glasgow-2014/Commonwealthgames/Indicators/Active-Travel


The Challenge

- Obesity is a serious public health threat in Scotland: affecting one in four adults and almost one in five children
- Overweight and obesity rates have remained stubbornly high in Scotland since 2008.
- Two in every three adults in Scotland (65%) are overweight; people of normal weight are now in the minority
- Scotland has the highest prevalence of obesity in pregnant women when compared to 11 other European countries (where BMI data available)
- Obesity rates in Scotland are amongst the highest in the world
- There is a significant inequalities dimension to obesity particularly for women and children

The Consequences

- Obesity increases the risk of many diseases including Type 2 diabetes, 11 types of cancer, cardiovascular disease and Alzheimer’s.
- Obesity reduces life expectancy by an average of 3 years and severe obesity (BMI >40) by 8-10 years
- Obesity reduces productivity and physical activity; it increases sickness absence and demand for health and social care services
- The annual cost to the NHS in Scotland of overweight and obesity is estimated to be between £360million and £600million

Causes of Obesity

Obesity, understood as the accumulation of excess body fat, occurs when energy intake from food and drink is greater than the body’s energy requirements over a prolonged period. Both diet and physical activity are important but there is now a consensus of opinion that the recent rise in obesity can largely be explained by increased energy intake rather than decreased energy expenditure. We now know that people have been under reporting their calorie intake in national surveys for a number of years.

We currently live in an obesogenic environment that promotes weight gain. Although personal responsibility plays a role in weight gain, in obesogenic
environments inactivity and overconsumption of energy dense foods are easy, affordable and widely accepted, making an unhealthy lifestyle the default option.

Obesity is a result of an interaction between an individual and their environment. These two are interdependent. Environment may act to either support or undermine individual’s ability to make healthy choices\textsuperscript{4}. For example, preference for and demand for unhealthy products may be shaped by an environment promoting junk food. As it is a two way relationship this preference is likely to cause changes in the environment that then encourage further unhealthy choices. Breaking this vicious cycle can only be achieved by a government’s regulatory actions supported by joint efforts of industry and civil society.

What can be done?
In recent years there have been a number of reports (McKinsey\textsuperscript{5}, Lancet Series\textsuperscript{6}, WHO\textsuperscript{7}, UK Health Select Committee\textsuperscript{8}) which have advocated the need for as many interventions as possible to be deployed across a number of areas but that a particular focus on improving diet and nutrition through regulatory and fiscal measures is required to change the obesogenic environment in which we live. Whilst physical activity is important to general health and wellbeing there is limited evidence that it can blunt the surge in obesity on population level\textsuperscript{9,10}.

Existing Policy
The Scottish Government’s Obesity Route Map was launched in 2010 and at the time was a ground breaking approach the problem\textsuperscript{11}. It has since been reviewed by ScotPHN and independent researchers\textsuperscript{12}. A journal paper published in 2015 assessed the appropriateness and likely impact of the balance of measures proposed within the ORM Action Plan\textsuperscript{13}. It concluded that the number of interventions aimed at attitudes, values and behaviours outweighed those aimed at costs and regulation. This was at odds with the balance of international evidence on what would be most effective for obesity prevention.

Amongst the conclusions of ORM review by ScotPHN in 2015 was that a minority of actions have been successful in achieving their milestones. Most have shown a little progress and a few have not started or have progressed slowly. It also highlights that there have been challenges working on food and nutrition and that more effort is required to achieve impact in this area.

What action is required?
Obesity Action Scotland firmly believe that to achieve success we need a programme of action that has at its core, brave and bold fiscal and regulatory
measures to change our food environment. A new diet and obesity strategy must include the following actions for the retail and out of home sector

1. Regulation to tackle price promotions on unhealthy foods
2. Restricting advertising and sponsorship associated with unhealthy food
3. Regulate to control portion size
4. Support for the Soft Drinks Industry Levy to be implemented and monitored
5. Support for the UK reformulation programme to be implemented and extended

We want to see a Scotland where we meet health based dietary goals, where healthy food choices are valued and celebrated and where the healthy choice is the easy choice.

Summary

The summary of our evidence submission is as follows:

• There is a need for a wide definition of physical activity (PA) as sport is only one domain of activity.
• Current evidence suggests the following:
  o Exercise combined with diet interventions are more effective than diet-only interventions
  o Moderate-intensity to high-intensity exercise only interventions, without prescribed diet, are also effective
  o Walking interventions that promote increases in step counts can result in 1-1.5% weight loss without calorie restrictions.
  o There is an important role for PA in maintaining weight loss
    It is likely that the volume of activity required for weight loss is higher than the current public health dose.
• ‘Football Fans in Training’ has provided Scottish data on an approach to weight loss for men and resulted in 5% weight loss at one year and maintenance of weight loss over baseline levels at 3.5 years.
• There are many ‘myths’ about the role of PA in weight management and we have shown how these were based on unsound understanding of scientific evidence
• PA provides mental and physical health benefits even if weight loss is not experienced. It is a ‘win-win’ behaviour.

Definitions

We encourage the use the term physical activity [PA] in this discussion rather than ‘sport’ to make the point that everyday modes of activity such as walking or cycling, which have a higher prevalence than sport in the population, have the potential to contribute to weight management and the treatment or prevention of obesity. Sport is only one domain of activity and others include leisure-time activity and exercise, active travel (walking and cycling), occupational activity, gardening and housework. Our recently published a paper, within the Scottish population, underlines this point (Strain et al., 2016).
The role of PA in weight management.

Creating a negative energy balance by increasing PA and reducing calorie intake is a common strategy for weight loss and weight maintenance but it is fair to say that the evidence for this approach remains inconclusive. A recent review has provided a detailed critique of the previous literature and provided new input from high quality studies (Chin, Kahathuduwa, & Binks, 2016). We have considered this review as the most recent and reliable evidence. The authors make the following conclusions:

1. Exercise combined with diet interventions are more effective than diet-only interventions in creating weight loss at 6 months and result in 8–11% weight loss.

2. Moderate-intensity to high-intensity exercise only interventions, without prescribed diet, are also effective and result in 2–3% loss of the initial weight within 6 months.

3. Walking interventions that promote increases in step counts can result in 1-1.5% weight loss without calorie restrictions in 3-6 months.

4. There is an important role for physical activity in maintaining weight loss but the exact dose of activity needed for this purpose remains unclear.

In addition to this review we would like to note that it is likely that the volume of activity required for weight loss is higher than the current public health dose. The Scottish Intercollegiate Network Guidelines recommend a minimum of 45 minutes of activity every day for weight loss.

Scottish data from the Football Fans in Training (FFIT) project.

Football Fans in Training (FFIT) was devised as a way of incentivising overweight men to attend weight management groups by giving them behind-the-scenes access to professional football clubs in Scotland. Grounded in current behaviour change theory, the project used fans’ ‘home’ stadiums as supportive environments for a 12 week programme of classroom-based advice and pitch-side physical activity sessions.

The programme, and the evidence it was based on, centred on encouraging overweight men to make changes to their eating habits and to engage in more physical activity. The University of Edinburgh’s particular contribution – led by Professor Nanette Mutrie and colleagues in the Physical Activity for
Health Research Centre (PAHRC) - was to develop a walking programme for the physical activity (PA) element and advise on how to approach the pitch side physical activity sessions.

Graduated over 12 weeks, the walking programme was designed to help participants increase their day-to-day PA levels. This complemented what they were doing weekly, in groups, at the stadia, and involved wearing a pedometer to help them measure progress and meet their goals.

By the end of the 2013-2014 football season, over 3,000 men had participated in the programme. Over these, 747 took part in one of the world’s first randomised control trials of a health programme delivered through professional sports clubs.

Funded by the National Institute for Health Research [NIHR], the trial showed that FFIT was extremely popular among both participants and coaches and, being relatively inexpensive to deliver, was value for money. It also showed that a year after the programme participants’ step counts were higher and that, overall, the difference in their weight loss, compared to non-participants, was around 5% of weight loss from baseline levels (Hunt et al., 2014). A follow up of these participants has just been completed with further funding from [NIHR] and it has shown that 3.5 years after the intervention there has been maintenance of weight loss over baseline levels.

PA and obesity myths

There are myths about PA and obesity which require refutation. Recent narratives have suggested that PA is irrelevant when considering weight management or weight loss (Malhotra, Noakes, & Phinney, 2015). We have shown how these narratives were wrong, had been misunderstood, or were based on unsound understanding of scientific evidence (Kelly et al., 2015). We note that while these “eye catching” publications were picked up by certain media outlets, they included no empirical evidence and amounted to personal opinion of individuals. They do not meet the standards usually required for public health evidence, and should be disregarded in this discussion.

PA is a ‘win-win’.

Increasing levels of PA may not result in weight loss. People compensate for increasing activity by sometimes decreasing the amount of everyday activity they undertake [ for example on days when people go to the gym they may
not take the stairs or take an active journey to work] or increasing their food intake. However the increased PA will benefit physical and mental health in many ways for people who compensate and do not experience intended weight loss. These benefits are now strongly evidenced and documented.

Professor Nanette Mutrie, Director of PAHRC and Dr Paul Kelly
University of Edinburgh

References


PATHS FOR ALL
SCOTTISH PARLIAMENT HEALTH AND SPORT COMMITTEE
OBESITY

Summary
 Physical activity has an important role in preventing obesity and can play a complimentary role in addressing it. Physical activity brings a range of other health and well-being benefits. Walking is the most accessible form of physical activity and represents extremely good value for money. The implementation of the National Walking Strategy will be particularly important in working to prevent obesity. The work of Paths for All and our partners offers a range of support that complements efforts to reduce obesity in Scotland.

Background
Paths for All was established in 1996 and is a partnership of 29 organisations. Paths for All is currently primarily supported by the Scottish Government to promote physical activity and walking for health in Scotland and is a key delivery partner for the Scottish Government's National Walking Strategy, the Active Scotland Outcomes Framework and the Cycling Action Plan for Scotland.

Paths for All champions everyday walking in Scotland and we want to get more people walking - everyone, everywhere and every day. We aim to significantly increase the number of people who choose to walk in Scotland - whether that's leisure walking or active-choice walking to work, school or shops.

Obesity and physical activity
The extent and the effects of the obesity problem are well documented. Physical activity plays an important role in preventing and reducing obesity. Paths for All believes it will be most effective if we can encourage people to be physical activity every day, supporting people to incorporate physical activity into their daily routines at every stage of life and ensuring that there are attractive and accessible opportunities for everyone.

Walking is the most accessible and practical way to achieve the recommended levels of physical activity, particularly for those suffering from obesity. Walking also, if incorporated into daily routines, reduces the risk of obesity and brings a host of wider health benefits.
To encourage behaviour change towards everyday walking, we must tackle obesogenic environments - creating places and spaces that encourage physical activity and promoting active travel.

The Review of the Obesity Route Map (2015) noted that: *The recent walking strategy Let’s Get Scotland Walking should be included in future action on obesity. There are many health benefits from greater support for walking, cycling and active travel, but new initiatives are needed, targeted specifically for prevention of weight gain* (and regain). These initiatives will require environmental changes in transport and planning, including easy access to community facilities, and open and green space. Given the current level of investment in sport, and that which may be required to get inactive people active, consideration needs to be given to how cultural and behavioural change initiatives are resourced.

**The benefits of physical activity**

*Physical activity is the “best buy in public health”* (Faculty of Public Health)

*If a medication existed which had a similar effect to physical activity, it would be regarded as a ‘wonder drug’ or ‘miracle cure’* (CMO 2009)

Physical activity has a role in preventing and tackling obesity but it also has a raft of other health and well-being benefits. For example - benefits (reduction in risk) for adults and older adults: CMO 2011 ‘Start Active, Stay Active’

- Type 2 Diabetes - 40%
- Cardiovascular Disease - 35%
- Falls, Depression and Dementia - 30%
- Joint and Back Pain - 25%
- Cancers (Colon and Breast) - 20%

The Scottish Government’s Active Scotland Outcomes Framework describes Scotland’s ambitions for sport and physical activity and the key outcomes over the next ten years. The headline measure of progress is the proportion of the population who meet the recommended level of physical activity. This is a National Indicator.

**Walking – value for money**

*Walking is the most likely way all adults can achieve the recommended levels of physical activity (NICE 2012)*

Walking is highly cost-effective and demonstrates that prevention really is better than cure. The health risks of inactivity are stark – 7 Scots die every day due to inactivity, often long before they have to. Shona Robison, Cabinet Secretary for Health and Sport – National Walking Strategy 2014
A Social Return on Investment (SROI) study to analyse the impact of the Glasgow Health Walk programme revealed that for every £1 invested in Health Walks in Glasgow, there were £8 of benefits generated for society. Two further SROI studies, in Stirling and the Scottish Borders, showed that for every £1 invested in Health Walks £9 and £8 worth of benefits were delivered respectively.

Health Walks deliver an array of social benefits including making people fitter, healthier and improving their mental health. This in turn makes cost savings to the NHS and local authorities such as reduced spend on care and prescriptions due to clients being more fit, healthy and able.

There is a clear need for increased and sustained funding to support physically active lives – and, in this context, promotion of walking offers the best value investment. There should be better coordination between funders (including Lottery) and the delivery of key policy outcomes.

**National Walking Strategy**

The National Walking Strategy action plan brings together local government, transport, planning, climate change, education and community sectors to create environments in Scotland which encourage and support walking and cycling for everyday journey’s and leisure.

It has three strategic aims:

- To deliver on creating a culture of walking where everyone walks more often as part of their everyday travel and for recreation and well-being
- To achieve better quality walking environments with attractive, well designed and managed built and natural spaces and places for everyone
- To enable easy, convenient and safe independent mobility for everyone

The SHS results show that for the fifth year in a row, more people are walking recreationally. 69% of the population now walk regularly for recreation, an increase of 5 percentage points from last year and strong endorsement of the National Walking Strategy. The greatest increase between 2014 and 2015 was in those aged 75 and over, who are amongst those most likely to be inactive.

**Walking for Health**

The national Walking for Health programme, managed by Paths for All, consists of 145 local projects delivering volunteer led health walks in communities across Scotland. We are working with health professionals and Community Planning Partnerships to signpost these opportunities more widely.

- 36% of new walkers report joining a walking group to lose weight
- 12% of new walkers report that they are overweight
As well as providing a supportive environment to encourage regular physical activity, health walks also help to manage and prevent other long terms conditions that arise because of obesity such as type 2 diabetes, heart disease, cancer and stroke.

Since I started walking I have lost a lot of weight and I am managing to keep it off” and “I have lost weight before but not managed to keep it off - this time I do because of the walking

Stirling Walking Network Participant

Joining the walk has made such a difference to my health as I have lost just over 2 stone in weight.

NEG Walker

Walking with the group gave me the motivation to make lifestyle changes which have improved my health. I have lost over 2.5 stone in weight, changed my diet and feel much healthier.

Helix Walking Group Participant

I’m so pleased to have lost just over a stone in weight & by walking longer every day I am managing to keep the weight off.

Friends of Insch Walking Group Participant

Step Count Challenge

The use of pedometers has proven to be a valuable tool for many to manage their weight and set realistic and effective daily physical activity goals. We supply pedometer packs to health professionals and others encouraging people to be more active.

Paths for All’s Workplace Step Count Challenge has had 24,000 participations since it started 5 years ago, with many people reporting weight loss alongside other health, social and productivity benefits. The challenge has been particularly successful in highlighting levels of sedentary behaviour for some employees and is a strong motivator to increase physical activity levels and in weight reduction.

We have worked with the University of Edinburgh to look at the impact the challenge had on people’s activity levels and motivation to become more active. We found that people were walking more and sitting less. At the eight-week follow-up, the results showed that there was an increase in the amount of time people were walking each week. The biggest increase was around active travel (e.g. walking to work) where there was a weekly increase of 109 minutes. There was also a 55-minute increase in walking as part of people’s leisure time. This suggests that workplace walking interventions offer a scalable opportunity to effectively promote walking for health.
'A maintained weight loss of 8kg. Dropped dress sizes to 12. Much fitter and able to participate in activities – I recently walked part of the West Highland Way and plan to do a few Munros and the Moonwalk. I have much more energy and I’m able to do more. People comment ‘you look so well’ and I don’t worry anymore about looking good in my clothes. My self-confidence and self-esteem have increased.'

**Step Count Challenge Participant 2015**

“Walking to work helped me with losing weight and also made me realise after many years doing nothing that I was capable and enjoyed exercise and led me to join our local sports centre. I now go to the gym/fitness classes 3/4 times a week as well as walking (weather permitting) in my lunch hour.”

**Step Count Challenge Participant 2015**

'I lost half a stone just by walking'

**Step Count Challenge Participant 2015**

We have also been working with NHS Health Scotland in the development of the Exemplar Physical Activity Employer Award.

**Active Environments**

Creating an environment where people actively choose to walk and cycle as part of everyday life can have a significant impact on health and may reduce health inequalities.

The work of our Active Environments team offers support, funding and technical expertise to local communities across Scotland working to develop and maintain welcoming and safe routes. These routes allow people to be physical active where they live, every day. There is far more demand for the grant funding than we are able award.

*The project has improved a key access route that local people use not only for recreational purposes but also as a life line to get to and from community facilities, bus routes and local shops. There is definitely a lot more people using the path to get to and from places and just people going out to enjoy themselves. Renfrewshire Environmental & Restoration Group, Paths for All Community Path Grant Recipients*

Our partners, Living Streets Scotland, also support community organisations to develop greater capacity to ask for improved places for walking.

**Active travel**

Changes in mode of travel from car to active travel have been demonstrated to reduce BMI. Martin A et al, JECH. 2015

Twenty two percent of journeys reported in the SHS travel diary in 2015 had walking as the main mode of transport. A lot needs to be done if we are to meet
our ambitions on active travel – with a significant change in priorities and spending on transport. The review of the National Transport Strategy offers an opportunity to address this and the recently announced Active Travel Task Force, chaired by Transport Scotland, should give focus to this.

Paths for All’s Smarter Choices, Smarter Places programme, now in its second year, is funded by Transport Scotland and supports local authorities and their partners to deliver active travel behaviour change interventions across Scotland.

The funds (£5m / year) have been allocated on a population basis to local authorities and the initiatives aim to support people to make walking and cycling part of their daily lives.

**Schools**

Our partners Living Streets Scotland are encouraging more pupils walk to school through the Walk Once a Week programme. This session, by the end of September, 45,000 pupils in 185 schools were registered to take part across 16 local authority areas.

We are also working with The Daily Mile to promote the concept more widely within workplace and community settings.

**Conclusion**

The WHO (Obesity and Overweight Report) identifies physical inactivity and dietary choices as a major cause of obesity, much of it caused by increasing urbanisation, sedentary jobs and less active modes of transport.

A walkable environment can provide the basis to encourage a wide range of active and healthier lifestyles across the population. Investing in walkable environments and interventions can significantly improve lifestyles, increase peoples’ resilience and reduce the number of people affected by chronic diseases.

‘*Above all, do not lose your desire to walk. Every day I walk myself into a state of well-being and walk away from every illness. I have walked myself into my best thoughts*’ Soren Kierkegaard (1829-48)

**Paths for All November 2016**
SCOTTISH DIRECTORS OF PUBLIC HEALTH NETWORK (ScotPHN)
SCOTTISH PARLIAMENT HEALTH AND SPORT COMMITTEE
OBESITY

Thank you for inviting the Scottish Directors of Public Health and the Scottish Public Health Network to give evidence to the Health and Sport Committee of the Scottish Parliament.

This written evidence, we are bringing to the attention of the Committee two recent documents concerning aspects of the Scottish obesity epidemic. These reports, which were produced by the Scottish Public Health Network (ScotPHN) on behalf of the Scottish Directors of Public Health, threw light on the importance and achievements of the Child Healthy Weight Programme and the work undertaken across Scotland in support of the *Obesity Route Map for Scotland*.


We consider that these reports make essential reading both in what they say about the important progress we have made in Scotland, and the step change in action which is needed to address the obesity epidemic amongst the people of Scotland. In particular we would wish to highlight the points made in the Executive summary of the *Review of the Obesity Route Map* (See annex 1) and the recommendations of the Expert Group report on the Child Healthy Weight Programme (See: annex 2).

However, obesity is also a potential future threat to the vision set out in the Chief Medical Officer’s *Realistic Medicine* initiative and is likely to be a key challenge to the successful, sustainable implementation of the National Clinical Strategy as many of the diseases that the future NHS in Scotland will face will be obesity-related and will have been preventable.

Looking to the future, the Scottish Directors of Public Health welcome the commitment made in *A Plan for Scotland: The Government Programme for Scotland 2016/17* that 2017 will see a consultation on a refreshed strategy on diet and obesity which aligns with other health improvement initiatives.

The Scottish Directors of Public Health, ScotPHN and the wider Public Health community in Scotland welcome this commitment and hope that weight management and obesity prevention – in line with the far-reaching vision set out in
the *Obesity Route Map for Scotland* - will be an essential component of the new strategy. We stand ready and willing to provide the necessary local public health leadership to tackling the obesity epidemic in Scotland with more determination than ever before.

Phil Mackie, Lead Consultant, Scottish Public Health Network  
Drew Walker, Director of Public Health, NHS Tayside

On behalf of Scottish Directors of Public Health and ScotPHN

18 November 2016
Annex 1: Extract from *Review of the Obesity Route Map (2015)*

**Executive Summary**

**On obesity in Scotland:**

1. The prevalence of overweight and obesity in Scotland is high, and the underlying trend is increasing and shows a strong link with inequalities, particularly for women and children. Measurement and data reporting would benefit from review to improve our understanding and track progress.

2. Overweight and obesity are major contributors to ill health in Scotland. Two areas of particular concern are:
   - type II diabetes where almost 90% of people with the condition have a Body Mass Index (BMI) of over 25 (1); and
   - the impact on the short and long term health of both mothers and babies of obesity in pregnancy (2).

3. Overweight and obesity result from an obesogenic environment acting on individual biology and psychology to influence individual lifestyles leading to overconsumption of energy dense foods and inactive lifestyles expending less energy. Simply encouraging individual choices that change behaviour is not a sufficient approach to dealing with the complex interplay or factors that create obesity and overweight.

**On the Obesity Route Map in Scotland:**

4. The Obesity Route Map (ORM) (3) focuses on prevention, and not on the treatment of obesity. Overweight and obesity can be seen as an epidemic, if a slow moving one, and would benefit from the coordination of prevention, risk management and treatment that an epidemic requires.

5. The ORM and its subsequent Action Plan are still relevant and constituted a reasonable response to the evidence at the time. Our review of subsequent evidence supports the continuation of a broad range of actions.

6. A minority of actions in the Action Plan have been successful in reaching their milestones. Most have progressed towards the milestones set. A few did not start or progressed poorly despite considerable effort.

7. Where carried out, evaluations generally show small positive effects. It is not possible to recommend any individual actions to be scaled up and further work is needed to examine the benefits of scaling up such actions.
8. There are distinct characteristics of both the more successful and least successful ORM actions. Successful ones have focused on opt-in interventions with individuals and actions are largely those that were underway or already planned at the time of launch; new developments require greater support. Structural and environmental changes are slow to progress and require sustained effort.

9. The ORM’s 4 ‘pillars’ of energy in, energy out, early years and workplace remain important, however, the way in which they are delivered may not be as effective as it could be. A move is proposed towards community and place-based approaches focused on areas of deprivation, with broad lifestyle, and whole life course interventions, alongside continued work with individuals.

10. There have been challenges in working on food and nutrition. Whilst recognising that significant work has taken place more effort is required to achieve impact, and if progress cannot be made then moves should be made to regulate.

11. The following generic commitments in the ORM did not translate into the Action Plan and progress on them was limited. Further action is required on:
   • increasing public awareness and professional education; improved national leadership and accountability; and an integrated research strategy.

On emerging obesity challenges for Scotland:

12. In addition this review has highlighted the need for:
   • a stronger infrastructure locally to enable effective coordination of action to achieve impact;
   • the integration of policies across all fields, and strategies for effective implementation without unintended effects to promote obesity. This would include greater coordination of outcomes, indicators, evaluation and reporting;
   • a review of direct and indirect funding for the prevention, management and treatment of overweight and obesity to ensure effective investment in view of the high cost burden of later disease; and
   • the NHS to be an exemplar in many aspects, particularly with supporting those of its staff who are overweight and obese and could benefit from weight management.

Summary of Recommendations to the Minister for Public Health

Recommendation I

The Scottish Government should refresh its strategic approach to healthy weight management and obesity reduction. Drawing on the work of the Scottish Public Health Obesity Special Interest Group (SPHOSIG), this refresh must start with a review of “Preventing Overweight and Obesity in Scotland: A Route Map towards Healthy Weight” to ensure the necessary cross-departmental involvement to effect change in the environmental factors that promote healthy weight.

Recommendation II

(a) NHS Health Boards and their Community Planning Partners should be required to develop existing Child Healthy Weight programmes into comprehensive services across the full range of settings. Services should include:

- a tiered approach to population prevention, intervention and treatment;
- clear pathways to appropriate behavioural interventions and clinical treatment;
- support for parental involvement and family participation, including social marketing and incentivised approaches;
- support for the emotional wellbeing of children and families;
- training of staff in health behaviour change or motivational interviewing techniques; and
- support those at greatest risk of increasing health inequality associated with childhood obesity.

(b) Updated national guidance should be developed to aid development of these services. This should draw on experience from existing programmes and research-based guidelines.

Recommendation III

(a) Development and delivery of new child healthy weight services should be agreed by NHS Boards and Local Authorities’ Children and Family and Education services, within the context of local Community Planning Partnerships, and coproduced with children, their families and local communities.
(b) NHS Board Local Delivery Plans and local Community Planning Partnership
Single Outcome Agreements should be in place to identify additional, local
funding and resources to augment and develop the existing treatment and
prevention programmes to create the comprehensive service.

(c) As a minimum the existing ring-fenced funding from the Scottish Government
should be maintained. However, this funding should only be confirmed when
local plans for the development and delivery of Child Healthy Weight Services
are agreed.

**Recommendation IV**

Child healthy weight should be seen as a priority for action in all areas of children’s
policy in Scotland, including:

- the planning, design and delivery of services for children and young people
  under the terms of the Children and Young People (Scotland) Act 2014;
- meeting the requirements of GIRFEC and monitored as part of SHANARRI; and
- delivering Curriculum for Excellence and the aspirations of Beyond the School
  Gate; and

**Recommendation V**

NHS Health Scotland should extend its current support for CHW programmes by
developing approaches to:

- reduce the inequalities that give rise to obesity across the life-course;
- increase public understanding of obesity and child healthy weight;
- identify and mobilise community assets to reduce obesity; and
- integrate overweight and obesity impact within health and health inequality
  impact assessment tools.

**Recommendation VI**

(a) Scottish Government should provide new funding to develop longitudinal,
population-wide surveillance of the obesity epidemic and outcomes of CHW
services.

(b) To support this, the frequency of height and weight (BMI) measurement for
children should continue to be measured around primary school entry and a
secondary school entry measurement be introduced.

(c) Outcome monitoring will require the development of new cross-sectoral
indicators, drawing on previous HEAT targets and EY Framework indicators.
These should be co-produced with Scottish Government and families within
local communities. NHS Boards, Local Authorities and all Community Planning Partnerships should be subject to performance management of their CHW services, using these indicators.