High Income Country Efforts

The evolution of policy and actions to tackle obesity in England

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Received 14 August 2013; accepted 14 August 2013

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Summary

Tackling obesity has been a policy priority in England for more than 20 years. Two formal government strategies on obesity in 2008 and 2011 drew together a range of actions and developed new initiatives to fill perceived gaps. Today, a wide range of policies are in place, including support for breastfeeding and healthy weaning practices, nutritional standards in schools, restrictions on marketing foods high in fat, sugar and salt to children, schemes to boost participation in sport, active travel plans, and weight management services. Data from annual surveys show that the rate of increase in obesity has attenuated in recent years, but has not yet been reversed. This paper considers the actions taken and what is known about the impact of individual policies and the overarching strategy to tackle obesity in England.

Keywords: England, obesity, policy, public health, strategy.

The emergence of obesity as a policy priority

In 1991, the Conservative Government in England formally recognized that obesity was a sufficient threat to the health of the nation to warrant specific action. A target was set to reduce the prevalence of obesity among adults to 7% by 2005, representing a return to the prevalence recorded in 1980 (1). This was part of a broader acknowledgement of the importance of interventions to improve public health and spawned task forces to consider actions to promote healthy eating and physical activity. The recommendations from these groups were highly regarded by professionals in the field but their recommendations were not adopted as public policy. Obesity did not return to the political agenda until 1999, in the labour government strategy Saving Lives: Our Healthier Nation (2) although a few specific policies emerged, and by 2001 the National Audit Office (NAO), a body charged with considering ‘value for money’ across government, reported that obesity had trebled in England in the previous 20 years. It was highly critical of the government response, described as ‘patchy and inadequate’ (3).

A year later, the government’s Chief Medical Officer called obesity a ‘time bomb’ (4). This coincided with an inquiry by the parliamentary health committee who held a series of oral evidence sessions, in which they heard from scientists and health professionals of the burgeoning evidence of the health harms of obesity and calls for specific new policies (5). This public inquiry brought key individuals from the food industry and elsewhere into the spotlight to account for their actions and exposed the limitations of the government actions on obesity. The conclusion of their report that ‘today’s generation of children will be the first for over a century for whom life-expectancy falls’ fuelled the growing media chorus demanding more effective intervention.

The government responded with a proactive approach to obesity with a specific focus on children and new policy initiatives began to emerge. In 2004, a national public service agreement (PSA) was announced ‘to halt, by 2010, the year-on-year increase in obesity among children under 11 years in the context of a broader strategy to tackle obesity in the population as a whole’. The Department of Health published a public health strategy with specific
action plans for diet and physical activity (6–8). Nevertheless, the prevalence of obesity continued to rise unabated and a further report by the NAO was highly critical of the Department of Health’s approach, saying ‘there is little evidence as yet to determine whether the Departments’ range of programmes and initiatives to improve children’s health and nutrition generally is sufficient to achieve the target’ (9). This scrutiny intensified the media and public awareness of obesity and a climate was created in which government felt compelled to take more overt and specific action to tackle obesity which was continuing to rise year by year (Fig. 1).

Developing the evidence base for action – Tackling Obesities: Future Choices

It had gone largely unnoticed that in 2005 the prime minister had asked the government chief scientific advisor to establish a project under its Foresight programme with the aim of using scientific evidence to ‘develop a sustainable solution to obesity over the next 40 years’ (2). Through a series of short science reviews on key issues (10), modelling of the prevalence of obesity and related health burden (11), a causal-loop system map showing the key drivers of positive energy balance (12), and qualitative future scenarios of plausible actions (13), the project developed a comprehensive scientific analysis of the aetiology of obesity and potential solutions.

In October 2007, Foresight released its report with a clear and stark message; obesity is a complex problem with multiple drivers, most of them outside the health sector, it has huge cost implications for government and the wider economy and it will become even more serious unless a comprehensive, co-ordinated approach is taken (14). The report set out five core principles for tackling obesity:

• A system-wide approach, redefining the nation’s health as a societal and economic issue.
• Higher priority for the prevention of health problems, with clearer leadership, accountability, strategy and management structures.
• Engagement of stakeholders within and outside government.
• Long-term, sustained interventions.
• Ongoing evaluation and a focus on continuous improvement.

Its proposed solution did not take the form of a list of recommendations, but instead set out a framework on
which a delivery strategy could be developed. This distinction was intentional and was to prove critical in securing a clear sense of direction for obesity policy but with the latitude to allow for the delivery to be informed by the prevailing circumstances. It called for:

- Systemic change across the system map.
- Interventions at different levels: individual, local, national, global.
- Interventions across the life course.
- Short-, medium- and long-term plans for change.
- A mixture of initiatives, enablers and amplifiers.
- Opportunistic and planned synergies with other agendas for change.

The report was unique, having developed as a partnership between scientists and policymakers with inputs from wider stakeholders. It created a shared analysis of the problem, a sense of ownership and a willingness to embrace the findings. Moreover, the experience of the Foresight unit in developing solutions to other long-term issues was critical in identifying the need for robust governance structures to secure continuing action, and the report emphasized that any strategy should:

- Offer senior (cabinet-level) government support.
- Develop a high-level, long-term comprehensive strategy.
- Obtain and act on strategic expert advice on an ongoing basis.
- Deliver a sustained long-term view and short-term interim measures.
- Develop synergies with other cross-cutting policy issues.
- Coordinate implementation within and outside government.
- Further develop relationships and partnerships with stakeholders.
- Further develop and resource mechanisms of surveillance and evaluation.
- Have sufficient resources to meet the rising challenges.
- Build on existing best practice.

A cross-government strategy to tackle obesity – Healthy Weight, Healthy Lives

In January 2008, the government released its report Healthy Weight, Healthy Lives (15). Responsibility for obesity was shared between the Departments of Health and Education and supported by a large ring-fenced budget of £372 million over 3 years. Crucially, it was positioned as a cross-government strategy, managed by a committee of senior civil servants (although not the cabinet committee called for by Foresight) and contained commitments across a range of departments including transport and local government. The status of obesity as a national priority for the National Health Service (NHS) was set out in the NHS operating framework and Primary Care Trust and their local partners were required to prioritize action to tackle obesity from April 2008 with the goal set out as part of a revised PSA on child health and well-being: ‘Our ambition is to be the first major nation to reverse the rising tide of obesity and overweight in the population by ensuring that everyone is able to achieve and maintain a healthy weight. Our initial focus will be on children: by 2020, we aim to reduce the proportion of overweight and obese children to 2000 levels.’ This wording reflected a subtle but important change, adding overweight children alongside the obese as a focus for action and effectively creating a target to increase the proportion of children with a healthy weight.

In doing so, it shifted the emphasis from a narrow focus on treating established childhood obesity to a broader societal obesity prevention agenda.

The Healthy Weight, Healthy Lives strategy was organized into five themes, intended to draw together a plethora of ongoing actions with specific new initiatives to fill perceived gaps. It placed the emphasis on changes in the environment intended to make it more likely that individuals and particularly families with young children would adopt a healthy diet and increase their physical activity.

- Children: healthy growth and healthy weight – early prevention of weight problems to avoid ‘tracking’ into adulthood.
- Promoting healthier food choices – reducing the consumption of foods that are high in fat, sugar, and salt, and increasing the consumption of fruits and vegetables.
- Building physical activity into our lives – getting people moving as a normal part of their day.
- Creating incentives for better health – increasing the understanding and value people place on the long-term impact of decisions.
- Personalized advice and support – complementing preventative care with treatment for those who already have weight problems.

From national to local policies – A Call to Action on Obesity

Following the election of a new coalition government in May 2010, a series of high-level decisions for the organization of health care and public health were made, which had implications for the ongoing delivery of obesity programmes. In addition, the economic crisis and review of public spending necessitated a review of the obesity programme.

The new Call to Action on Obesity, launched in November 2011, had a renewed emphasis on the need for individual-level behaviour change while recognizing that the environment can make it difficult for individuals to
Table 1  Nuffield ‘ladder of interventions’ for public health policies (47)

<table>
<thead>
<tr>
<th>Interventions Type</th>
<th>Description</th>
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<tbody>
<tr>
<td>Eliminate choice</td>
<td>Introduce laws that entirely eliminate choice, e.g. compulsory isolation of</td>
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<td>people with infectious diseases.</td>
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<td>Restrict choice</td>
<td>Introduce laws that restrict the options available to people, e.g. removing</td>
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<td>unhealthy ingredients from foods, or unhealthy foods from shops or</td>
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<td>restaurants.</td>
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<td>Guide choice through disincentives</td>
<td>Introduce financial or other disincentives to influence people’s behaviours,</td>
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<td>e.g. increasing taxes on cigarettes, or bringing in charging schemes to</td>
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<td>discourage car use in inner cities.</td>
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<tr>
<td>Guide choice through incentives</td>
<td>Introduce financial or other incentives to influence people’s behaviours,</td>
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<td>e.g. offering tax breaks on buying bicycles for travelling to work.</td>
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<td>Guide choices through changing the default policy</td>
<td>For example, changing the standard side dish in a restaurant from chips to</td>
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<td>a healthier alternative, with chips remaining as an option available.</td>
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<tr>
<td>Enable choice</td>
<td>Help individuals to change their behaviours, e.g. providing free ‘stop</td>
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<td>smoking’ programmes, building cycle lanes or providing free fruits in</td>
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<td>schools.</td>
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<tr>
<td>Provide information</td>
<td>Inform and educate the public, e.g. campaigns to encourage people to walk</td>
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<td></td>
<td>more or eat five portions of fruits and vegetables a day.</td>
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<td>Do nothing or simply monitor the current situation</td>
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maintain healthy lifestyles, effectively justifying action by government, local authorities and others to support individuals in changing their behaviours (16).

The new strategy stressed the importance of overconsumption as a key driver of the contemporary increases in obesity and placed the emphasis firmly on reducing energy intake, with increases in physical activity playing a supporting role in weight control and contributing to wider improvements in obesity-related health outcomes (17). It charged local areas with developing strategies and commissioning services for the prevention and treatment of obesity and placed strong emphasis on partnership working with the private sector and with community groups.

It also established two new ambitions against which progress will be measured:

- A sustained downward trend in the levels of excess weight in children by 2020.
- A clear halt to the rising trend (and where possible a downward trend) in levels of excess weight across all adult age groups by 2020.

These indicators mark a shift towards a stronger life course approach, acknowledging the importance of addressing weight control in adults as well as children and, implicitly, recognizing the need for treatment services for people who are already obese alongside the actions to prevent excess weight gain. It placed particular emphasis on policies that encourage personal autonomy and leaned towards a voluntary, rather than mandated approach, to changing behaviour. This was based upon the model of liberal paternalism set out in the Nuffield Council on Bioethics report on public health, which included a ‘ladder of interventions’ to guide policymaking (Table 1).

Most significantly, it marked a move away from policies led by central government towards locally led actions. This reflected the changing structures for health care in England. However, the priority given to tackling obesity by central government is reflected in the indicators included within the public health outcomes framework, which include measures of both adult and child obesity and an emphasis on reducing inequalities. A new body, Public Health England, was also established to support local areas by providing evidence and sharing good practice across local areas.

Policy actions to tackle obesity

The evolution of strategies to address obesity and the diet and activity behaviours that underpin weight gain has resulted in a mix of policy actions that have been shaped over time, listed in Table 2. Consistent with the shifts in strategic approaches, the forms of policy actions have also evolved. The earlier emphasis on top-down standard-setting – such as restrictions on advertising certain foods to children and mandatory school food standards – has been replaced by an approach favouring greater co-production with partners. For example, there has been a shift towards developing voluntary actions to restrict food marketing beyond television.

A number of actions have featured prominently. These include a social marketing campaign, Change4Life, which aims to support individuals and families in making healthier decisions about food and activity. It includes information for adults seeking to lose weight and is closely integrated with advice provided through the NHS Choices website, primarily aimed at those with specific medical conditions. A sub-brand, Start4Life, is focused on pregnancy and early years, especially weaning. First-time parents under the age of 20 years are also supported by the Family Nurse Partnership, a structured programme of home visits from birth to 2 years, which includes support for breastfeeding and healthy weaning practices.
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<th>Name</th>
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<td>Social marketing</td>
<td><a href="http://www.nhs.uk/change4life/">Change4Life</a></td>
<td>2009</td>
<td>£12 million per year</td>
<td>A social marketing campaign based around the strapline ‘Eat Well, Move More, Live Longer’ to support individuals and families in making healthier decisions about food and activity. Established with a specific focus on families with children under 11 years to foster healthy behaviours intended to reduce the risk of obesity, it has since broadened to include adults whose current behaviours put them at imminent risk of developing long-term conditions. The Change4Life brand is now a vehicle for other health messages, including reductions in salt and alcohol.</td>
<td>In first year, 87% mothers of children under 11 years had seen the advertising campaign. The Change4Life brand is now a vehicle for other health messages, including reductions in salt and alcohol.</td>
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<td>Start4Life</td>
<td><a href="http://www.nhs.uk/start4life/">Start4Life</a></td>
<td>2010</td>
<td>£12 million per year</td>
<td>Start4Life was launched in February 2010 as a sub-brand to Change4Life specifically devoted to pregnancy and early years. It was originally based on messages around breastfeeding, starting solid food and physical activity for infants. Most recently, Start4Life main campaign activity ran from May to early July 2012 and the focus was on maternal health, encouraging expectant mothers to adopt healthy behaviours during their pregnancies. The activity aimed to increase awareness of Start4Life among the target audiences and increase awareness of the importance of good maternal health relating to: a. Healthy eating b. Alcohol consumption c. Quitting smoking d. Physical activity e. Supplements. Start4Life has now been expanded to campaign on maternal health and children up to the age of 5.</td>
<td>Post-campaign tracking in July 2012 showed that a third (31%) of pregnant women recognized the Start4Life logo. A total of 68% of those aware of the advertising agreed the advertising made them realise how important being healthy in pregnancy was to the development of their babies. Overall, 64% claimed to have done something as a result of the campaign activity. (TNS Tracking Presentation based on fieldwork conducted 18-21 May and 4-9 July). Of those who had picked up the leaflet Healthy habits for baby and you, 25% had visited their GP surgery in total. 90% stated that they undertook further consultation. (Report for the Department of Health on the Poster and WUS Leaflet campaign, Healthy habits for baby and you and other leaflets within IDS Waiting Room Information Services Q4 November 2012–January 2013, IDS UK). The leaflet pickup rate (91%) was higher than the average pickup percentage (72%) across 34 other leaflet campaigns in the same period. (IDS Waiting Room Information Services [WRS] Poster &amp; Leaflet Pickup Rate Report for ‘Healthy habits for baby and you’, Q4 November–January 2013, IDS UK).</td>
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<td>Early year interventions</td>
<td>National Helpline for Breastfeeding Mothers</td>
<td>2008</td>
<td>Unknown</td>
<td>The Department of Health provides funding for The Breastfeeding Network to run the National Breastfeeding Helpline, working jointly with the Association of Breastfeeding Mothers. Year to March 2012, 35,915 calls received with an average call time of 17 min (51).</td>
<td>By 2012, 600 places were available, with a commitment to increase to 13,000 by 2015. Mothers who receive support from family nurses show positive results, including: stopping smoking during pregnancy, high levels of breastfeeding, improved self-esteem, being much more likely to return to education or employment when their children are old enough (52).</td>
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<td><a href="http://www.nationalbreastfeedinghelpline.org.uk/">National Breastfeeding Helpline</a></td>
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<td>Family Nurse Partnerships</td>
<td>2007</td>
<td>£3,083 per case per annum</td>
<td>An intensive, structured, home visiting programme, offered to first-time parents under the age of 20 years. A specially trained family nurse visits the mother regularly from early pregnancy until the baby is 2 years old and builds a close, supportive relationship with the family.</td>
<td>By 2012, 600 places were available, with a commitment to increase to 13,000 by 2015. Mothers who receive support from family nurses show positive results, including: stopping smoking during pregnancy, high levels of breastfeeding, improved self-esteem, being much more likely to return to education or employment when their children are old enough (52).</td>
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<td>Healthy Child Programme</td>
<td><a href="https://www.gov.uk/government/publications/healthy-child-programme-pregnancy-and-the-first-5-years-of-life">https://www.gov.uk/government/publications/healthy-child-programme-pregnancy-and-the-first-5-years-of-life</a></td>
<td>2004</td>
<td>Embedded in other routine services</td>
<td>The Healthy Child Programme provides families with a programme of screening, immunization, health and development reviews, supplemented by advice around health, well-being and authoritative parenting from 0 to 19 years. It includes both a universal service offered to every family and progressive services for children and families with additional needs and risks, especially in the first 5 years. The team delivering the HCP includes a range of health professionals and children’s practitioners within Sure Start children’s centres, general practice and the wider children’s workforce. Among its specific goals is a commitment to healthy eating and increased activity, leading to a reduction in obesity and early recognition of growth disorders and risk factors for obesity as well as increased rates of initiation and continuation of breastfeeding. This was supported by a specific framework document for tackling obesity (53).</td>
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<td>Schools Nutritional Standards and Requirements for School Food</td>
<td><a href="http://www.education.gov.uk/schoolfoodplan/news/a00221479/school-food-plan-cook-curric">http://www.education.gov.uk/schoolfoodplan/news/a00221479/school-food-plan-cook-curric</a></td>
<td>From 2014</td>
<td>–</td>
<td>A number of studies have noted measurable improvements in the nutritional quality of food provided at school and there is evidence of improvements in nutritional quality of food consumed in primary (55) and secondary (56) schools, although there are still areas that need further improvement where intakes are not meeting nutritional standards (57). S. Kirk, unpublished data. Also, the impact on dietary intake is unknown. A wider review of the impact of the standards alongside other improvements in school food was published by the Children’s Food Trust (58).</td>
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<td>Cooking Skills</td>
<td><a href="http://www.education.gov.uk/schoolfoodplan/news/a00221479/school-food-plan-cook-curric">http://www.education.gov.uk/schoolfoodplan/news/a00221479/school-food-plan-cook-curric</a></td>
<td>From 2014</td>
<td>–</td>
<td>All pupils in primary school will learn the principles of healthy eating and where food comes from. They will also be taught basic cooking techniques and how to cook a variety of savoury dishes. In secondary schools, food will be compulsory to age 14 years. Pupils will be taught about the importance of nutrition, a balanced diet and about the characteristics of a broad range of ingredients. They will also be taught to cook a repertoire of savoury meals and become confident in a range of cooking techniques.</td>
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<td>School Sport Funding</td>
<td><a href="http://www.gov.uk/government/news/150-m-olympic-legacy-boost-for-primary-school-sport-in-england">http://www.gov.uk/government/news/150-m-olympic-legacy-boost-for-primary-school-sport-in-england</a></td>
<td>From 2013</td>
<td></td>
<td>A new School Sport Funding worth £150 million per annum for the next 2 years (funded by the Department for Education [£80 million], the Department of Health [£60 million] and the Department for Culture, Media and Sport [£10 million]) will provide funding directly to primary school head teachers for them to spend on improving the quality of sport and PE.</td>
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<tr>
<td>Physical Education and Sport for Young People</td>
<td>[<a href="http://www.youthsporttrust.org/how-we-can-help">http://www.youthsporttrust.org/how-we-can-help</a> programmes/change4life/sports-club.aspx](<a href="http://www.youthsporttrust.org/how-we-can-help">http://www.youthsporttrust.org/how-we-can-help</a> programmes/change4life/sports-club.aspx)</td>
<td>2003</td>
<td>Primary schools will receive £150 million per year in 2013–2014 and 2014–2015. In 2009/2010 there were 21,486 schools and 357 FE colleges arranged into 450 School Sport Partnerships to help deliver the government commitment to 2 h of curriculum PE and the proportion at least 0 h of high-quality PE and school sport in a typical week. This has been recently increased to 0 h per week.</td>
<td>An evaluation of the Partnership programme was conducted in 2005 (61). An annual PE and Sport survey shows increases in PE and sport within and outside school. For example, in 2004/2005, the average number of minutes for years 1–11 was 107, compared with 123 in 2008/2010 (62).</td>
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<td>Name</td>
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<tr>
<td>Change4Life School Sports Clubs</td>
<td><a href="http://www.youthsporttrust.org/how-we-can-help/programmes/">http://www.youthsporttrust.org/how-we-can-help/programmes/</a>...</td>
<td>2012</td>
<td>Average investment of £1,842 per club</td>
<td>A new type of extracurricular sports club, designed to increase physical activity levels in less active children in primary and secondary schools, funded by the Department of Health and managed by the Youth Sport Trust</td>
<td>In 2010/2011, 61,000 young people participated in Change4Life School Sport Clubs in 2010/2011. A total of 90% of participants were choosing to play sport every week, an increase of 166% and those positive about sport increased by 99%. A summary of the first-year experience and recommendations for improvements has been published (63).</td>
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<tr>
<td>The School Games</td>
<td><a href="http://webarchive.nationalarchives.gov.uk/+http://www.dft.gov.uk/pgr/sustainable/schooltravel/travelling/">http://webarchive.nationalarchives.gov.uk/+http://www.dft.gov.uk/pgr/sustainable/schooltravel/travelling/</a></td>
<td>2012</td>
<td>Over £128 million of lottery and government funding is being invested to support the school games. This includes up to £35.5 million lottery funding from Sport England between 2010 and 2015, £23.5 million from the Department of Health and £16 million from Sport England to fund 450 School Games Organizers, £9.5 million from the Department for Education to release a PE teacher for 1 day a week in all secondary schools (ends September 2013).</td>
<td>A cross-government programme involving the Department of Culture, Media and Sport, Department of Health, Sport England and the Department for Education that aims to motivate and inspire millions of young people across the country to take part in more competitive sport. It includes intra-school, inter-school, county festivals and national finals. By summer 2012, 12,000 schools were registered.</td>
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<td>Travel to School Initiative (TTSI)</td>
<td><a href="http://webarchive.nationalarchives.gov.uk/+http://www.dft.gov.uk/pgr/sustainable/schooltravel/travelling/">http://webarchive.nationalarchives.gov.uk/+http://www.dft.gov.uk/pgr/sustainable/schooltravel/travelling/</a></td>
<td>2003</td>
<td>By March 2010, £120 million of capital investment to local authorities and schools to help implement School Travel Plans, and £35 million of revenue funding, principally for TTSI staffing roles. Estimates of value for money using Benefit Cost Ratios based on health benefits to children and decongestion benefits suggests the scheme represents ‘poor to low’ value for money using DfT Guidance. There are concerns that the programmes may not be sustainable without specific funding.</td>
<td>A joint initiative between DfT and DCMS to tackle car dependency by supporting all schools to develop a School Travel Plan (STP) with additional funding for supportive measures such as cycle storage facilities, parent waiting shelters, traffic calming measures, cycle training initiatives and safety equipment, including high-visibility jackets and helmets. By March 2009, 81% of schools in England had a STP in place.</td>
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<td>Workplaces</td>
<td><a href="http://sd.defra.gov.uk/advice/public/buying/products/food/standards/">http://sd.defra.gov.uk/advice/public/buying/products/food/standards/</a></td>
<td>2011</td>
<td>–</td>
<td>A set of standards produced by the Department for Environment, Food and Rural Affairs as part of the government sustainable development strategy, to promote procurement of food and catering services to higher sustainability standards, including nutritional standards. The Department of Health has developed a toolkit for organizations seeking to develop healthier and more sustainable catering services which meets the standards (65).</td>
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<tr>
<td>Public Sector Challenges</td>
<td><a href="http://www.sportandphysicalactivity.nhs.uk/">http://www.sportandphysicalactivity.nhs.uk/</a> <a href="http://www.civilservice.gov.uk/about/improving/health-and-wellbeing/activity-challenge">http://www.civilservice.gov.uk/about/improving/health-and-wellbeing/activity-challenge</a></td>
<td>2011</td>
<td>–</td>
<td>The NHS and Civil Service are two of England’s largest employers. The Sport and Physical Activity Challenge aims to help create more active workplaces to improve health and to promote staff morale. The NHS Challenge includes a range of sports and activities arranged with national partners, e.g. English Cricket Board and the National Trust and encourages workplaces to develop their own activities.</td>
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One specific initiative within the programme, the NHS Walking Challenge, encouraged NHS staff to walk 305,624 miles before the opening of the Olympics in 2012. Staff could enter details of their walk on a website and view the cumulative total. By May 2013, only 24,926.74 miles (8%) had been registered (63).
### Table 2 Continued

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<tr>
<td>Communities Healthy Challenge Fund</td>
<td>–</td>
<td>2008</td>
<td>£30 million matched funding over 3 years to nine Healthy Town pilot projects (Dudley, Halifax, Manchester, Middlesbrough, Portsmouth, Sheffield, Telford, Thetford, and Tower Hamlets) and £425 k in 16 other areas to implement specific actions.</td>
<td>This programme funded a number of pilot projects across the country intended to test and evaluate different approaches to making regular physical activity and healthy food choices easier for local communities, with the aim of preventing overweight and obesity in England.</td>
<td>Twenty qualitative interviews with local programme stakeholders and national policy actors were conducted to understand the views of stakeholders on the development of the programme nationally and locally (18). Several local areas developed formal logic models to guide their interventions and many report positive changes, but quantitative data are sparse. For example, Dudley (64) had a focus on transforming parks into family health zones and linking green spaces around the town. They have reported increased park use and increased value placed on the parks by those who use them. An independent evaluation by Worcester University will consider physical activity levels, park use, perceptions of safety, walking, and cycling levels, and diet status. A national evaluation across the whole programme has not yet reported its findings.</td>
</tr>
<tr>
<td>Convenience Stores Project</td>
<td>–</td>
<td>2008</td>
<td>Average cost to DH per development store approximately £5,100 and £300 per roll-out store.</td>
<td>A scheme developed by DH in collaboration with the Association of Convenience Stores to increase access to and availability of fresh fruits and vegetables in deprived areas, in order to help reduce health inequalities. The objectives of the programme were to increase sales of fruits and vegetables by focusing on improving range, merchandising, quality and communication in stores and to drive awareness of fruits and vegetables to the consumer through good sign posting within retail stores facilitating the Change4Life brand. A pilot project was run in 12 development stores (later expanded to 17) in the North East of England, including support for new dedicated chiller cabinets. A less intensive roll-out programme was trialled in 85 other stores, based mostly on point of sale materials to rebrand existing chiller space.</td>
<td>Analysis of sales data from both development and roll-out stores indicates that sales of fruits and vegetables increased as the programme progressed. Increases in fruit and vegetable sales ranged from 6% to 48% with an average increase of 14%. The majority of roll-out stores experienced some increase in fruit and vegetable sales although the pattern was less consistent and the rise generally smaller than for development stores. Significantly more shoppers (57–73%) claim to be eating fruits or vegetables more (23–34%) claiming to eat 5 a day most or every day 7 months after the start of the project. However, the impact on overall dietary intake was not measured (66).</td>
</tr>
<tr>
<td>Changing the Food Environment</td>
<td>–</td>
<td>2007</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Television Advertising Restrictions</td>
<td><a href="http://stakeholders.ofcom.org.uk/binaries/consultations/foodads_new/statement/statement.pdf">http://stakeholders.ofcom.org.uk/binaries/consultations/foodads_new/statement/statement.pdf</a></td>
<td>April 2007 for programmes of particular appeal to 4–9 years and January 2008 for children aged 10–15 years</td>
<td></td>
<td>A package of measures to restrict the scheduling of television advertising of food and drink products that are assessed as HFSS as defined by the FSA’s nutrient profiling scheme. As a result, advertisements for HFSS products must not be shown in or around programmes specifically made for children (which includes pre-school children) or shown in or around programmes of particular appeal to children under 16 and these restrictions will apply equally to programme sponsorship by HFSS food and drink products. Key elements of the content rules include a prohibition on the use of licensed characters, celebrities, promotional offers and health claims in advertisements for HFSS products targeted at pre-school or primary school children.</td>
<td>Compared with 2005, in 2009 younger children (4– to 9-year-olds) saw 52% less and older children (10– to 15-year-olds) saw 22% less (1.4 bn impacts) of television adverts for HFSS foods (67). An evaluation using a repeated cross-sectional design 6 months before and 6 months after the legislation found that while adherence to the restrictions is good, limitations in the scope of legislation mean there was no reduction in children’s exposure to HFSS foods and exposure of all viewers to HFSS foods increased (68).</td>
</tr>
<tr>
<td>Voluntary Scheme for Front-of-pack Labelling of Food and Drink Products</td>
<td><a href="https://www.gov.uk/government/publications/response-to-consultation-on-front-of-pack-nutrition-labelling">https://www.gov.uk/government/publications/response-to-consultation-on-front-of-pack-nutrition-labelling</a></td>
<td>2007</td>
<td></td>
<td></td>
<td>Prior research has considered the comprehension and use of UK nutrition signpost labelling schemes (69). An examination of the impact of front of pack labelling on purchases of ready meals and sandwiches in a major retail store found no significant impact on purchases (70).</td>
</tr>
<tr>
<td>Name</td>
<td>Link</td>
<td>Year</td>
<td>Cost (where known)</td>
<td>Summary</td>
<td>Evaluation</td>
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<tr>
<td>Calorie Labelling on Menus</td>
<td><a href="https://responsibilitydeal.dh.gov.uk/">https://responsibilitydeal.dh.gov.uk/</a> pledges/pledge/?pl=8</td>
<td>2011</td>
<td>–</td>
<td>As part of the Public Health Responsibility Deal, a pledge was developed for calorie labelling on menus in out-of-home eating establishments. This requires calorie information to be available per portion at point of choice across all standard items and with reference information on energy requirements also displayed clearly and prominently. Guidance on voluntary calorie labelling for caterers (2011) <a href="https://responsibilitydeal.dh.gov.uk/wp-content/uploads/2013/04/Illustrative-guidance-on-voluntary-calorie-labelling-for-caterers-2011.pdf">https://responsibilitydeal.dh.gov.uk/wp-content/uploads/2013/04/Illustrative-guidance-on-voluntary-calorie-labelling-for-caterers-2011.pdf</a></td>
<td>In May 2013, there were 48 signatories. By end 2012, labelling was in use in approximately 9,000 outlets, including 71% of quick-serve outlets.</td>
</tr>
<tr>
<td>Calorie Reduction Pledge</td>
<td><a href="https://responsibilitydeal.dh.gov.uk/">https://responsibilitydeal.dh.gov.uk/</a> pledges/pledge/?pl=23</td>
<td>2012</td>
<td>–</td>
<td>As part of the Public Health Responsibility Deal, a pledge was developed for companies to commit to initiatives to encourage and enable people to consume fewer calories. Actions include reformulation to reduce fat and sugar reductions in portion size, development of lower calorie options, incentives for consumers to choose lower calorie options.</td>
<td>In May 2013, 33 companies had made calorie reduction pledges and will report annually on progress.</td>
</tr>
<tr>
<td>Physical Activity</td>
<td>Children’s Play Strategy</td>
<td>2008</td>
<td>A commitment to invest £235 million to develop 3,200 new or refurbished play spaces and 30 new adventure playgrounds. The programme was closed in 2010.</td>
<td>In 2008, the Labour government launched a play strategy, to improve children’s play opportunities through a dedicated play programme, working with Play England (69) as the national delivery partners. This included a commitment to new community playgrounds, support for local authorities implementing 20 min H2 zones around places and spaces where children play, training programmes for professionals who have a role in making neighbourhoods more child friendly and higher level training for PlayWorkers.</td>
<td>–</td>
</tr>
<tr>
<td>Cycling Demonstration Towns</td>
<td><a href="https://www.gov.uk/government/">https://www.gov.uk/government/</a> organisations/department-for-transport/ series/background-to-the-cycling -city-and-towns-programme</td>
<td>2008</td>
<td>£50 million Cycling City and Towns in 2008–2011 and a further £107 million for cycling from 2011 to 2015.</td>
<td>A series of initiatives to boost participation in cycling. From six initial Cycling Demonstration Towns in 2005, the programme was expanded between 2008 and 2011 to include one further cycling city and 11 cycling towns. In 2013, the coalition government announced new schemes in three further cities to make cycling easier and safer for people in urban areas, a scheme to improve conditions for cyclists in national parks and support for the community linking places scheme to improve cycle/road integration and enhance community cycling.</td>
<td>The cycling demonstration projects showed an average increase in cycling across all six towns of 27%, which was not observed in comparable towns over the same period and, for the first time, reversed the national trend of a decline in cycling outside London (70).</td>
</tr>
<tr>
<td>Bikeability – on road cycle training</td>
<td><a href="http://www.dft.gov.uk/bikeability/">http://www.dft.gov.uk/bikeability/</a></td>
<td>2007</td>
<td>£20 million or £40 per child</td>
<td>A scheme designed to equip children with the skills and confidence for on-road cycling, leading to a National Standard for cycle training. Level 1 teaches trainees basic bicycle control skills in an off-road environment; level 2 is delivered on road, where trainees learn the basics of on-road cycling; and level 3 teaches trainees advanced on road cycling skills.</td>
<td>By 2012, almost 500,000 young people had received training. Data from the School Census show that across the country there has been no increase in the proportion of trips made by bicycle (&lt;2%), although there are regional differences, with a 0.3% point increase in East of England, South West, Yorkshire and Humber. A more detailed analysis in Hertfordshire secondary schools shows an increase in cycling in schools where Bikeability training is provided, compared with a decrease in schools with no training scheme operating. There are also correlations between the longevity of the training scheme and the total funding provided and the proportion of journeys to school by bicycle. <a href="http://www.dft.gov.uk/">http://www.dft.gov.uk/</a> bikeability/wp-content/uploads/2013_Cycling_to_School _Bikeability_Data_Report_v_Final.pdf</td>
</tr>
<tr>
<td>Name</td>
<td>Link</td>
<td>Year</td>
<td>Cost (where known)</td>
<td>Summary</td>
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<tr>
<td>Olympic Legacy</td>
<td><a href="https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/78105/201210_Legacy_Publication.pdf">https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/78105/201210_Legacy_Publication.pdf</a></td>
<td>–</td>
<td>–</td>
<td>A range of initiatives including Change4Life, Play schemes, School Games, the School Sport Funding and others, supported by government and partners in the private and voluntary sectors to fulfill the commitment to harnessing the United Kingdom’s passion for sport to increase school-based and grass roots participation in competitive sports and to encourage the whole population to be more physically active (71).</td>
<td>An interim evaluation report on the impact of the games prior to the event itself showed that adult participation in sport and physical activity in England was increasing. Active sport participation in the last 4 weeks increased from 53.7% in 2005/2006 to 55.2% in 2011/2012, 1 × 30 min sessions of moderate intensity sport in the last week increased from 41.2% in 2005/2006 to 43.8% in 2011/2012 and 3 × 30 min sessions of moderate intensity sport in the last week increased from 23.2% in 2005/2006 to 25.9% in 2011/2012. Future reports will examine available evidence of the impacts and legacy post-games up to the end of 2012. An evaluation of the longer term impacts and legacy will be commissioned separately at a later date and cover the impacts up to 2020 (72).</td>
</tr>
<tr>
<td>Treatment Services</td>
<td>Let's Get Moving <a href="https://www.gov.uk/government/news/let-s-get-moving-resources-help-promote-physical-activity">https://www.gov.uk/government/news/let-s-get-moving-resources-help-promote-physical-activity</a></td>
<td>2009</td>
<td>–</td>
<td>Let’s Get Moving is an evidence-based approach to preventing and managing chronic disease linked to the CMO guidelines on physical activity (23). It helps primary care practitioners to identify and assess sedentary adults and helps them to become more active. It includes guidance on commissioning, information for professionals, information and resources for patients, templates to help patients with physical activity.</td>
<td>Process evaluation shows good support for the feasibility of Let’s Get Moving, but there is a need to improve the fidelity of the intervention protocols (73).</td>
</tr>
<tr>
<td>NHS Health Checks</td>
<td><a href="http://www.nhs.uk/planners/NHSHealthCheck/Pages/NHSHealthCheckWhat.aspx">http://www.nhs.uk/planners/NHSHealthCheck/Pages/NHSHealthCheckWhat.aspx</a></td>
<td>–</td>
<td>–</td>
<td>NHS Health Checks are a face-to-face assessment with a healthcare professional. Individuals aged 40–74 years are invited for a health check every 5 years designed to identify the risk of developing heart disease, stroke, type 2 diabetes, kidney disease and certain types of dementia. This includes a measurement of weight and height. People at risk of obesity-related disease are encouraged to achieve and maintain a healthy weight and in some cases will be offered a referral to weight management services.</td>
<td></td>
</tr>
<tr>
<td>NHS Choices</td>
<td><a href="http://www.nhs.uk/LiveWell/GoodFood/Pages/GoodFoodHome.aspx">http://www.nhs.uk/LiveWell/GoodFood/Pages/GoodFoodHome.aspx</a> <a href="http://www.nhs.uk/LiveWell/Fitness/Pages/FitnessHome.aspx">http://www.nhs.uk/LiveWell/Fitness/Pages/FitnessHome.aspx</a> <a href="http://www.nhs.uk/LiveWell/Weight-Loss-Guide/Pages/weight-loss-guide.aspx">http://www.nhs.uk/LiveWell/Weight-Loss-Guide/Pages/weight-loss-guide.aspx</a></td>
<td>–</td>
<td>–</td>
<td>NHS Choices provides web-based advice and information on a wide range of health matters. It includes extensive information on obesity and weight management including a Healthy Weight calculator, BMI tracker, 12-week weight loss programme, supermarket health checker to identify foods high in fat, sugar and salt and offer swaps, and Couch to 5k app to help people train for mass participation events. It also has information on diet and physical activity.</td>
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</table>
There have been numerous initiatives based in schools. The most prominent was the introduction of mandated nutritional standards for food in state-run schools in 2007. There is also a school fruit and vegetable scheme, in place since 2004, which provides a portion of fruits or vegetables each school day to children aged 4–6 years and compulsory cooking lessons for all 11- to 14-year-olds. Action on physical activity in schools is based around sports participation and active travel. There is a commitment to 3-, later increased to 5-h PE or sport a week in and out of school. The school games initiative is part of the wider Olympic legacy programme and £150 million has been provided to improve skills coaching for primary school children. This means a typical primary school with 250 primary aged pupils would receive £9,250 per year, equivalent to around 2 d a week of a primary teacher or a coach’s time. Meanwhile, Change4Life school sports clubs are focused on the needs of less active children. Over 80% of schools have an active travel plan and there is a programme of training for children in on-road cycling.

Support for active travel extends into the community with specific investment in cycling. This includes pilot work in six cities and towns to develop local initiatives to increase bicycle use. This was recently extended to a further three city-wide initiatives and a scheme within national parks and the ‘Community Linking Places Fund’ to improve cycle-rail integration. More broadly, the Healthy Community Challenge Fund was a £30 million investment in nine pilot areas to develop comprehensive system-wide actions to tackle obesity and a further £425 k in 16 other areas to implement specific actions. Proposals included linking up areas of green space and creating ‘green gyms’ to increase physical activity in Dudley, the creation of community allotments and gardening clubs in Middlesborough, or a loyalty card scheme to incentivize local residents to engage in physical activity or purchase healthy foods in Manchester. Local evaluations of these schemes are beginning to emerge and a national evaluation has been commissioned (18).

Initiatives to improve the treatment of obesity have largely focused on raising awareness of obesity as a medical condition and encouraging greater engagement of health professionals in the promotion of a healthy diet and active lifestyle. The NHS Choices website provides resources for weight management for both patients and practitioners. Additionally, a growing number of local areas offer free or subsidized referral schemes for weight management in the community (19,20).

Supporting actions

Underpinning these and other specific policy actions are broader systems to develop guidance, strengthen delivery mechanisms, and monitor changes in obesity and provide feedback.

Policy guidance

Policy guidance aims to set the goals for action and to identify effective interventions. Clinical and public health guidance on obesity has been primarily developed by the National Institute for Health and Care Excellence and is collated in their web-based Obesity Pathway, including recommendations for the prevention and treatment of obesity and obesity-related diseases (Table 3). The Department of Health has recently issued guidance on local commissioning of behavioural weight management services (21) while other guidance relevant to obesity prevention includes the roll-out of the WHO (World Health Organization) infant growth charts (22) to promote appropriate weight gain in the early years of life and the Chief Medical Officer guidelines for physical activity across the life course (23).

An important development has been guidance jointly issued with other government departments which recognizes the contribution of other policies to efforts to tackle obesity, e.g. the Department of Transport Active Travel Strategy (24), or the incorporation of health concerns within other strategies developed by other departments, e.g. the Department for Education Healthy Child Programme (25) or the Department of Communities and Local Government National Planning Policy framework (26). The latter has informed the ‘Healthy Places Planning Resource’ (27) that explains how planning law and regulation can be used by both planning and health practitioners to create and support healthy communities.

Strengthening delivery

Many well-intentioned strategies fail because of poor implementation. A number of efforts have been made to improve the delivery of services through training of staff and sharing good practice. For example, a toolkit (28) has been developed to assist local areas to develop and implement local strategies to tackle obesity, along with an online resource, the Obesity Learning Centre (20), to share good practice and provide a forum for discussion among practitioners.

Online training modules have been developed and made available through BMJ Learning for doctors and other health professionals (29,30), and there is a directory of providers (23) of training for obesity prevention and treatment. There is a contractual requirement for pharmacists to provide healthy lifestyle advice and the quality outcomes framework for primary care physicians incentivizes the recording of body mass index (BMI) to create a clinical register of patients aged 16 and over with a BMI > 30 recorded in the previous 15 months, although it does not at present require doctors to offer an active intervention (31). There will be central commissioning of services for adult and child severe and complex obesity, including surgery,
through NHS England to promote more consistent access across the country.

The importance of partnership working is increasingly recognized within and outside government. Partnerships with other government departments arise directly from some of the joint strategies. For example, the Department for Transport has recently announced £560 million from 2011 to 2015 for projects to promote active travel as part of the local sustainable transport fund (25). There is also cross-government working on Olympic legacy activities, including £155 million invested in activities aimed at increasing sports participation by adults and young people (26).

Partnerships with the private sector have taken a prominent place as part of the Call to Action on Obesity. The Responsibility Deal (27) is a voluntary partnership among government, business, non-governmental organizations (NGOs) and public health bodies. It provides an opportunity for businesses and other organizations to shape the environment positively to improve public health and support people to make informed choices. Businesses make a public pledge to take action focused on one of four areas: food, alcohol, physical activity or health at work, and some pledges in each network are directly relevant to obesity. Independent evaluation of the Responsibility Deal is ongoing (32) but, meanwhile, companies are required to produce annual updates on their progress which are available for public scrutiny.

By mid-2013, 314 companies have committed to improvements in the workplace including actions to promote healthy eating and staff health checks and 274 companies were committed to physical activity for their employees and actions to boost physical activity in the wider community. Action in the food and alcohol networks has the potential to reduce energy intake. Thirty-three companies in the alcohol industry have pledged to remove 1 billion units of alcohol and some companies will develop labelling schemes that include calorie information on pack. Within the food sector, 34 businesses have committed to a range of actions to support and enable consumers to reduce their energy intake. Action spans a number of areas: reductions in the portion size of individual items,
e.g. chocolate bars or bags of savoury snacks; reformula-
tion, e.g. to decrease the fat content of ready meals or sugar
content of beverages; promotional activities such as the use
of loyalty card points to encourage consumers to select
healthier, lower energy options; and activities to enhance
information and education relating to energy balance. In
addition, 48 businesses, representing 9,000 outlets by the
end of 2012, including 71% of quick-serve outlets, have
committed to calorie labelling on menus in a standardized
format, and at its launch in June 2013, 26 companies,
including 10 major retailers and representing nearly two-
thirds of the market, signed up to a voluntary traffic light
labelling scheme.

This represents the latest stage in a long running policy-
led effort to encourage a consistent front of pack nutri-
tional labelling scheme for food. The Food Standards
Agency issued guidance on their preferred traffic light
scheme in 2007, although this did not specifically include
information on energy content. This was adopted by a
small number of retailers and manufacturers, but could
not be mandated in the UK because labelling is a European
Union (EU) competency. Recent discussions with industry
in the UK, alongside the EU Food Information Directive,
and strong ongoing campaigning by NGOs to raise con-
sumer awareness, led to the recent voluntary UK-wide
agreement to the traffic light format, including additional
information on energy content (33). This experience illus-
trates the additional challenges of securing national-led
public health action where it relates to international busi-
nesses operating within a global market. It implies the need
for a stronger role for international agencies, such as
WHO, to strengthen national delivery mechanisms.

Monitoring and feedback

England is fortunate to have extensive systems in place for
population monitoring and this data collection and dis-
semination is a vital part of the system to galvanize further
action by providing feedback on progress. The National
Child Measurement Programme (34) was introduced in
2005/2006 to provide data on the prevalence of obesity.
The National Child Measurement Programme (NCMP)
measures the weight and height of every child aged 4/5 or
10/11 years in two school years. It now reaches 93% of all
eligible children and has evolved to provide feedback to
parents on the weight status of their children, which
includes basic information on healthy lifestyles, with links
to Change4Life, and encourages parents of obese children
to seek further support by contacting a health professional.
Data are collated and synthesized centrally by Public
Health England Obesity Knowledge and Intelligence Team
(formerly the National Obesity Observatory) and made
available to local areas who benchmark their progress
against others. From 2013, individual data can be centrally
linked to other health records for analysis and surveil-
lance purposes. A large-scale self-report measure of adult
weight status is being piloted with sufficient scale to
provide local level reporting on progress to inform delivery
strategies.

Evaluating impact

Stakeholder perceptions

The strategy outlined in Healthy Weight, Healthy Lives has
been subject to an independent assessment to identify
stakeholder perceptions of the actions and their impact
(35). The study confirmed that national and local stake-
holders afford greater priority to obesity as a result of the
emergence of specific actions to address obesity. The strat-
 egy was perceived to have made a positive difference to
efforts to address obesity in England by engaging more
stakeholders, stimulating and facilitating action, and
changing attitudes; but it failed to catalyse action across
all government departments and sectors, and to build in
adequate systems for learning and evaluation of the
actions. The respondents felt that the key elements of the
strategy that led to positive differences were its multifac-
ted nature, governance structure, the presence of targets at
the national and local levels, and a monitoring programme
to assess progress.

Project evaluations

The Foresight report highlighted the paucity of evidence
on ‘what works’ to tackle obesity (14). The commitment
to evaluation expressed in both Healthy Weight, Healthy
Lives and the Call to Action has been manifest in numerous
evaluation reports from individual projects at both national
and local levels (Table 2). In many cases, the process eval-
uation has helped shape the delivery of the programme, and
many have reported short-term impacts on knowledge, atti-
dudes or self-reported behaviour.

The NOO Standard Evaluation Framework (36) encour-
ges the evaluation of individual interventions to tackle
obesity against specific measures. To date, it has been
deployed mostly in the evaluation of treatment pro-
grammes with an emphasis on the change in body weight or
BMI Z-score. However, complementary frameworks for
diet (37) and physical activity (38) interventions have now
been developed which may foster greater evaluation of
changes in these specific behaviours. Many of these evalu-
ation reports are available through the Obesity Learning
Centre (20). However, there has been no systematic attempt
to draw together the learning from individual projects
into an overarching evaluation which considers what may
work well in what context and therefore inform future
implementation.
Surveillance data

Policymakers and the media seek to observe changes in headline obesity statistics and surveillance data have dominated the agenda for evaluation (39). Surveillance data on obesity, diet and physical activity from a variety of sources are collated by the Health and Social Care Information Centre (40).

The main source of data on obesity trends in adults is the Health Survey for England, an annual nationally representative, cross-sectional survey of approximately 15,000 people with occasional boosts to include specific population subgroups. It provides an annual snapshot of the prevalence of BMI and waist circumference. Figure 1 shows that in recent years the rate of increase in the prevalence of adult obesity has slowed, although it is still increasing year by year.

For children, the NCMP, which includes >1 million children in two school year groups, gives a more reliable measure of prevalence. There is some evidence of a plateauing of obesity in younger children and a reduction in the rate of increase in older children. However, these modest improvements conceal growing inequalities (Fig. 2). Children living in the most-deprived areas are approximately twice as likely to be obese as those in the least-deprived areas (41).

It is harder to reliably measure diet and activity behaviours. The Health Survey for England collects data on fruit and vegetable intake which show an increase in the percentage of adults eating five or more portions of fruits and vegetables per day between 2001 and 2011, from 22 to 24% for men, and from 25 to 29% for women (42). The National Diet and Nutrition Survey is a smaller but nationally representative, cross-sectional survey of approximately
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Conclusions

It is of course impossible to know what may have happened to trends in obesity in England without the series of actions undertaken or to precisely identify the contribution of individual elements. The greater attenuation in the prevalence of obesity in young children and in younger adults than their older peers offers a glimmer of hope for inter-generational changes. It is possible that insufficient time has elapsed to see the full impact and it is also plausible that improvements in diet and physical activity may have health and social benefits beyond just tackling obesity that have not been considered here.

While very good data on the population level prevalence of obesity exist from surveillance programmes, there has been little systematic attempt to link the evaluation of the various policy interventions to understand the mechanisms underpinning changes in obesity prevalence. The difficulty in answering the basic question of ‘has the strategy worked’ might suggest a failure to capitalize on the opportunities for learning afforded by such an intense period of investment, but it also reflects the complexity of the question which requires a more nuanced summary of what works, for whom, and in what circumstances, and demands new evaluation paradigms. There is qualitative evidence of increased awareness and engagement and reports of positive actions implemented by practitioners as part of the obesity strategies, but there is only limited evidence of changes in behaviour linked to specific policy interventions. More detailed time series analyses would provide more information on the links between policy actions and changes in behaviour.

Looking to the future, as responsibility for many of the actions to reduce obesity is devolved to a local level, the challenge for evaluation is likely to increase as some areas may lack sufficient resources or capacity for detailed analysis. This is a concern given the potential for an increasing diversity of policies as local areas take independent responsibility for tackling obesity. Public Health England will have a key role in establishing systems and building capacity for evaluation at a local level so that good practice can be rapidly shared to accelerate progress and to avoid an increase in health inequalities.

The limited evidence of tangible success reflected in the obesity prevalence data, despite substantial investment of resources to tackle obesity in England, reinforces the magnitude of the challenge to the whole of society. It has led some to suggest that rather than attempting to build a strategy through incremental change in individual policy areas we may need to consider a different ‘whole systems’ approach (37).

Acknowledgements

We thank Dr Hilary Jones and Alison Cairns of MRC Human Nutrition Research for their assistance in collating information and preparing this paper. This work was in part funded by MRC Programme Number: MC_U105960389. We thank the Rockefeller Foundation’s Bellagio Center for support for this meeting. We also thank the University of North Carolina Nutrition Transition Program for funding travel, administrative support, editing and funding of this publication and Bloomberg Philanthropies for supporting all phases of final paper preparation.

Conflicts of interest

None.

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68. Adams J, Tyrrell R, Adamson AJ, White M. Effect of restrictions on television food advertising to children on exposure to advertisements for ‘less healthy’ foods: repeat cross-sectional tations on television food advertising to children on exposure to