

Health and Public Services Committee

Tipping the scales Childhood obesity in London

April 2011





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The Health and Public Services Committee agreed the following terms of reference for an investigation into childhood obesity in London on 9 June 2010:

"To review the Mayor's role in tackling obesity among young Londoners (aged 0-15) through encouraging healthy eating and participation in sport and physical activity by focusing on the following questions:

- What strategic role should the Mayor have in tackling obesity?
- How does the Mayor's work fit within the national, regional and local context of work to tackle obesity?
- What is the overall vision behind the Mayor's initiatives to tackle obesity?
- Why has the Mayor chosen to take forward this range of initiatives?
- Is there anything else the Mayor should be doing to help tackle child obesity?"

The Committee would welcome feedback on this report. For further information contact Richard Berry on 020 7983 4199 or richard.berry@london.gov.uk. For media enquiries contact Lisa Moore on lisa.moore@london.gov.uk or Julie Wheldon on julie.wheldon@london.gov.uk, or phone 020 7983 4228.

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Chairman's foreword

In public policy terms there is often a lively debate about whether and how much government should intervene, or intrude, in people's private behaviour. People's eating and exercise habits are very personal areas of their life and it could be argued that the life choices made by well informed individuals should be nothing to do with the State.

Whatever your views on the philosophical debate about personal choice, the facts about childhood obesity in London are stark. London has the highest percentage of obese children in the England and obesity prevalence has increased sharply in recent years. The resource implications are significant – if the current generation of obese children become obese adults the financial cost is projected is to be about £111m per year – and the effect on the personal life and wellbeing of the individuals themselves are serious.

While respecting personal choice is important, children and young people need education and guidance to make informed choices. The work we did with the GLA's own Children and Young People's outreach team, the Lynk-Up Crew, showed us that young people's eating choices were being distorted and their choices sometimes ill informed. Ultra cheap and convenient high fat food options compare with a relative lack of available healthier food alternatives. Familial history of obesity, peer attitudes, and behaviour all have an impact on individual choices and the levels of childhood obesity.

The moral case for a non-interventionist policy is hard to justify, and more significantly, the Mayor has chosen to intervene in this issue. His intervention was found to be welcomed by many individuals and organisations. As the scrutiny body for the Mayor, our duty is to find out whether his plans are having the desired outcome and are cost effective. As the Mayor has influence, either directly or indirectly, over planning and housing, public and private transport, open spaces and parks, and grass-roots sports provision, we also wanted to see if his activities in these areas was co-ordinated and strategic.

Having taken evidence from children and young people themselves, the food industry, planning and licensing authorities, and academia from both the UK and USA, we produced a focused set of recommendations which we believe are implementable and could help to address an issue which has a huge potential impact on London.

James Cleverly AM Chairman of the Health and Public Services Committee



Executive summary

In this report the Health and Public Services Committee considers how the Mayor can address the problem of childhood obesity in London.

In our investigation we found that around one in five children in London is obese, and obesity prevalence has increased sharply in recent years. Prevalence is higher in the capital than elsewhere in England, although there are significant variations between boroughs.

Obesity is a serious health condition for individuals, and it is also a significant drain on the London economy. Research commissioned by the Committee found that today's generation of obese children will cost London at around £111 million per year in healthcare costs and productivity losses, if they come to enter the workforce as obese adults.

We examined the causes of childhood obesity, and found a multitude of economic, cultural and environmental factors contributing to obesity. A child is much more likely to be obese if their parents are obese, and if they live in a deprived area. A range of factors combine to create the conditions in which many young Londoners consume much more energy in their diets than they use up in physical activity, resulting in excessive weight gain. We reviewed data for London, which showed among other things that the consumption of healthy food and participation in physical activity among young Londoners is lower than it should be.

To address obesity, it is necessary to tackle this complex set of causes as a whole. We considered the available evidence on the costeffectiveness of different childhood obesity interventions. We found that the most effective interventions are multi-faceted, supporting children and their families to eat more healthily and become more active. This kind of approach can be used for a targeted group of children, but it can also be implemented on a larger scale to help prevent and reduce obesity. A whole range of different interventions, spanning health services, schools, the transport system, the food industry and the physical environment are likely to be required.

The Mayor has introduced a large number of different initiatives to help combat childhood obesity, either directly or indirectly. He has used several parts of the GLA Group to do this, including Transport for London, the London Development Agency, the GLA's health, planning and environment teams, the London Food Board and the London Community Sports Board. Independently of the Mayor, the London Health Commission has also been running a 'Well London' programme in 20 targeted areas.

The Mayor's interventions have been welcomed by the many individuals and organisations who the Committee heard from during this investigation. What has not yet been developed, however, is a London-wide strategic approach to childhood obesity. The Mayor's initiatives do address a wide range of factors related to obesity, but their impact could be greater as a whole if different programmes were better coordinated – both within and beyond the GLA Group – and linked to shared outcomes.

To ensure London does have a coordinated, strategic approach, the Committee believes the Mayor's role should have three key elements:

- Setting the strategic direction for London's response to childhood obesity. To achieve this, we recommend the Mayor use his anticipated new powers as chair of the proposed London Health Improvement Board to develop a London-wide childhood obesity strategy.
- Directly supporting and funding city-wide interventions. To address the current uncertainty over the continued funding of the GLA Group's obesity programmes, we recommend the Mayor set out his funding plans beyond 2012.
- Promoting evaluation and spreading good practice. We recommend that the Mayor use the resources of the GLA to lead the evaluation of obesity interventions and promote findings through the London Health Improvement Board.

1 Introduction

- 1.1 The Mayor has made addressing childhood obesity his number one health priority.¹ Around 240,000 children in London are obese – one in five children – and the number has been growing.² It is a problem that not only affects the wellbeing of individuals but also has a detrimental impact on the London economy.
- 1.2 This report sets out the findings of the Health and Public Services Committee's investigation of childhood obesity in London. We set out to consider what the Mayor and his partners should be doing to reduce obesity, and to what extent their existing efforts are making a difference.
- 1.3 In conducting this investigation the Committee has gathered views and information from a large number of individuals and organisations. We have received submissions from London boroughs, NHS organisations, voluntary groups involved in tackling obesity, major food companies and academic experts. In late 2010 we held a meeting to discuss the topic with the Mayor's sport, food and health advisers and other leading experts. For further details of the submissions received and meeting participants please see Appendix 3.
- 1.4 We also spoke directly to young people about the problem. We met with the Greater London Authority's Lynk-Up Crew, including children from across London aged 5-15 years old. We asked them about the food they eat and the exercise they do, and what they thought should be done to help children live healthier lives.³
- 1.5 The report is structured in the following way:
 - Chapter two discusses the prevalence of childhood obesity in London, the underlying causes, and explores the costs of obesity for the city.

¹ Boris Johnson, Health Leadership Summit, City Hall, 1 November 2010 ² For adults, obesity is defined as having a body mass index of higher than 30 kilograms per square metre, and overweight is having a BMI over 25. For children, BMI is used differently. A child is considered to be obese if they are in the 95th centile (the highest 5%) of the BMI scale, and overweight if they are in the 85th centile (the highest 15%). These thresholds are conventionally used for population monitoring and are not the same as those used in clinical settings.

³ A video showing the children sharing their ideas and experiences can be viewed on the London Assembly website here: http://www.london.gov.uk/who-runslondon/the-london-assembly/investigations/childhood-obesity

- Chapter three considers the case for Mayoral intervention and discusses the obesity interventions made by the Mayor across transport, public health, planning, sports and food policy.
- Chapter four examines evidence on the cost-effectiveness of measures to reduce childhood obesity.
- Chapter five considers how the Mayor could enhance his impact on reducing childhood obesity in London through strategic interventions delivered in partnership with other organisations.

2 Childhood obesity in London

Key points

- One in five children in London is obese. Prevalence is higher in London than the rest of the country.
- Obesity is a complex disease caused by many factors. Childhood obesity is strongly linked to parental obesity and deprivation;
- The London economy incurs significant costs as a result of obesity, from medical treatment and productivity losses.

Prevalence

- 2.1 The weight of every schoolchild in London is assessed as part of the National Child Measurement Programme: the most recent results showed that more than one-fifth of children in London are obese. Over one-third of children are either obese or overweight.⁴ In total, it is estimated that around 240,000 children aged 2-15 in London are obese, with a further 160,000 overweight.⁵
- 2.2 The problem is more severe in London than in the rest of the country. London has a higher childhood obesity rate (22 per cent among Year 6 pupils) than any other English region, and is above the national average (19 per cent). This is illustrated in Figure 1 overleaf.
- 2.3 Childhood obesity has increased significantly in London in the past fifteen years. Health Survey for England results show that between 1995 and 2008, obesity prevalence in London increased from 14 to 18 per cent among boys, and 12 to 20 per cent among girls.⁶ In the most recent survey results, prevalence among boys fell. The National Child Measurement Programme results show that prevalence among all

⁴ 21.8% of children in Year 6 (aged 10/11) in London are obese; 14.7% are overweight. *National Child Measurement Programme: England, 2009/10 school year*, NHS Information Centre, 2010

⁵ Based on 2008 Health Survey for England data showing 18% of boys and 20% of girls in London are obese and 2009 mid-year population estimates. *Health Survey for England 2008: Volume 1: Physical activity and fitness,* NHS Information Centre, 2009; *Estimated Resident Population Mid-Year by single year of age,* London Datastore [Office for National Statistics]. 2010

⁶ Health Survey for England 2006: Volume 2: Obesity and other risk factors in children, NHS Information Centre, 2007; Health Survey for England 2008: Volume 1: Physical activity and fitness, NHS Information Centre, 2009

children has risen slowly in London over the past four years, from 21 per cent in 2006/07 to 22 per cent in 2009/10.⁷

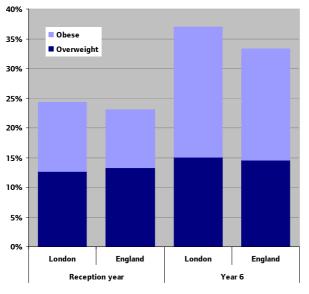


Figure 1: Prevalence of overweight and obese children, 2009/10

2.4 Obesity is a significant problem in every London borough, although there are large geographical variations, with higher prevalence in inner London particularly. Prevalence ranges from 12 per cent in Richmond to 28 per cent in Westminster, among Year 6 pupils.⁸

Conclusion

2.5 The number of obese children in London has increased sharply in the past fifteen years. Some recent measures show prevalence among particular groups has either held steady or reduced slightly, but there are no signs of an overall downward trend.

Causes of obesity

2.6 The London Health Observatory describes the causes of the obesity in the following way:

Source: National Child Measurement Programme

⁷ National Child Measurement Programme: England, 2009/10 school year, NHS Information Centre, 2010; 2008/09 school year, 2009; 2007/08 school year, 2008; 2006/07 school year, 2007

⁸ National Child Measurement Programme: England, 2009/10 school year, NHS Information Centre, 2010

"Obesity is a complex disease, caused by a wide range of factors. At a basic level, people gain weight by eating more calories than they use over a prolonged period of time. Excess calories accumulate and are stored by the body as fat, leading to overweight and obesity. However, there are many variables, including biological, behavioural and societal influences that increase the likelihood of an individual gaining excessive weight."⁹

2.7 The 2007 Foresight report on obesity by the Government Office for Science provides a summary of the causes of obesity.¹⁰ The report suggests that the cause appears straightforward: obesity results from energy intake exceeding energy expenditure over a sustained period of time. But this energy imbalance does not have a simple explanation: there are many complexities in the ways people acquire and use energy. For the general population, the report argues:

"...it is now generally accepted by health and other professionals that the current prevalence of obesity in the UK population is primarily caused by people's latent biological susceptibility interacting with a changing environment that includes more sedentary lifestyles and increased dietary abundance."

- 2.8 Both physical activity and diet are central in the explanation of obesity. Over recent decades there have been significant societal changes in both of these areas, contributing to our current obesity problem. Within this overall picture, the Foresight report highlights the range of contributory factors affecting energy use and intake, relating to biology, early life development, and behavioural, environment and economic drivers. These factors are summarised in Table 1 on the next page.
- 2.9 Not all contributory factors will apply to every obese individual. For each person the causes of obesity are varied. Obesity can be the result of a wide variety of 'causal pathways', which differ between individuals and between social groups, and change across a person's life course. Correspondingly, this variability of causal pathways points to a need for a range of different solutions to obesity.¹¹

"A lot of children in London want to be active and they try to be active, and sometimes they can't because of the facilities." Zaine, age 11

⁹ Overweight and obesity, London Health Observatory, 2010

¹⁰ *Tackling Obesities: Future Choices – Project Report*, Government Office for Science, 2007

¹¹ *Tackling Obesities: Future Choices – Project Report,* Government Office for Science, 2007

Table 1: Causes of obesity identified in research

Biology

- Humans have a powerful 'hunger drive' (a biological compulsion to search out food), and a limited 'sensitivity to abundance' (feeling of having 'had enough' easily overridden by the sight or taste of food).
- Genetic: a number of specific genes associated with obesity have been identified.
- However, evidence indicates there is no physiological difference between the slim and the obese: suggesting biology is not the root cause of obesity.

Early life and growth patterns

- Higher weight gain soon after birth is associated with obesity in later life.
- Breastfed babies have slower weight gain and are less likely to be obese.

Behaviour

- There is evidence of long-term reductions in energy expenditure: for adults because of employment patterns, car ownership and labour-saving devices; for children because of reduced walking and cycling to school and parental fears of outside play.
- Sedentary behaviours, in particular TV viewing, are a particular risk factor for obesity.
- Consumption of energy-rich foods, foods high in fat and low in fibre and sugar-rich drinks is a significant risk factor for obesity.
- There are complex psychological reasons behind people's food and activity-related behaviour. For instance people form habits, which are triggered by environmental cues. People have a reduced motivation to acquire new information that is inconsistent with habitual behaviour.
- Organisation cultures, social processes and the media play a significant role in cuing individual behaviour. For instance, organisations choose the food available in a workplace, or provide incentives for particular means of travel.

The living environment

- Technology has tended to engineer physical activity out of the environment for instance decreasing the need to walk, to undertake household labour although no direct link to obesity has been proven.
- There is evidence of a relationship between physical activity and perceptions of our physical environment, in terms of safety, aesthetics, convenience, and so on. Residents of 'walkable' neighbourhoods tend to be more active and weigh less than others.
- Food and drink access: some studies show that constrained availability of high-quality, affordable 'healthy' food in a neighbourhood is associated with poor diet and obesity.

Economic drivers

- The price of food and drink frames the context in which consumer choices are made: studies have shown that fruit and vegetables have increased as a component of food budgets, while fats and oils, starches and sugars have decreased
- Working practices: for adults, there is correlation between longer working practices and higher obesity prevalence.

Summarised from Tackling Obesities: Future Choices – Project Report, Government Office for Science, 2007

- 2.10 There are correlations between childhood obesity and other variables, particularly parental BMI. Children with obese parents are much more likely to be obese. Health Survey for England results show that 24 per cent of children in households where both parents (or the lone parent) are overweight/obese are obese themselves. Meanwhile, only 11 per cent of children in households where the parents are normal weight/ underweight are obese.¹²
- 2.11 There are also economic, demographic and spatial factors. These variables are likely to be inter-related; for instance, differential prevalence by ethnicity or geography may be a consequence of higher deprivation among city-dwellers or certain ethnic groups, and vice versa.
 - Spatial: Children who live in urban areas are more likely to be obese. National Child Measurement Programme results show that 19 per cent of urban children are obese, compared to 15 per cent of children living in rural areas.¹³
 - Economic: Children from lower-income households are more likely to be obese. Health Survey for England results show 20 per cent of boys in the lowest income quintile are obese, compared to 12 per cent of boys in the highest income quintile.¹⁴ The correlation between deprivation and childhood obesity in London is illustrated on the next page, in a mapping analysis produced by the National Obesity Observatory.
 - Demographic: Childhood obesity prevalence has been found to vary among ethnic groups. National Child Measurement Programme results show that obesity among black, Asian and mixed children is higher than the national average, while it is lower among white and Chinese children.¹⁵

¹² Statistics on obesity, physical activity and diet: England, 2010, NHS Information Centre, 2011

¹³ National Child Measurement Programme: 2007/08 school year headline results, NHS Information Centre, 2008

¹⁴ *Health Survey for England 2008: Volume 1: Physical activity and fitness,* NHS Information Centre, 2009

¹⁵ National Child Measurement Programme: 2007/08 school year headline results, NHS Information Centre, 2008

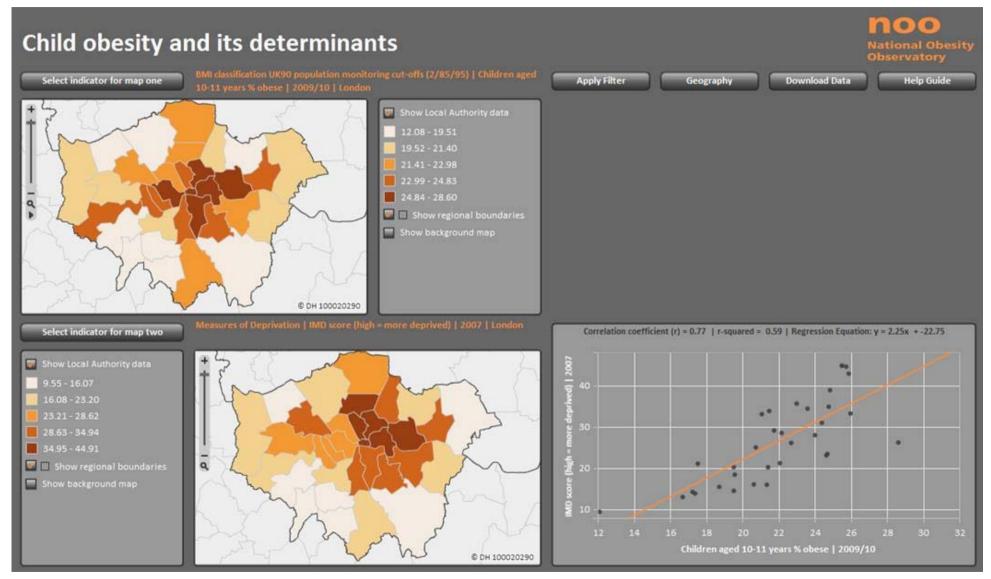


Figure 2: Relationship between childhood obesity (aged 10-11 years) and deprivation in London

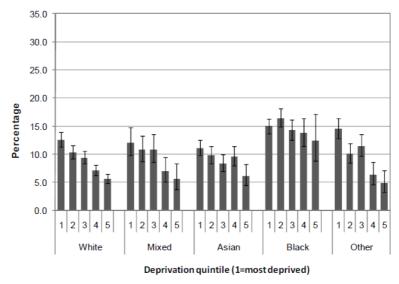
Source: Modified from Child dual map LA/PCT e-atlas, National Obesity Observatory, 2011

Causes in London

Economic

- 2.12 The most convincing explanations for London's relatively high prevalence are based on the other variables that correlate with obesity, particularly deprivation. The extent of deprivation in London is relatively high. According to the English Indices of Deprivation, 28 per cent of neighbourhoods in London are in the most deprived fifth of all neighbourhoods in England. Meanwhile only nine per cent of neighbourhoods in London are in the least deprived fifth.¹⁶
- 2.13 The London Health Observatory (LHO) has demonstrated the relationship between childhood obesity prevalence and deprivation in London. The LHO ranked every neighbourhood in the capital by deprivation, and found that among reception year children, obesity prevalence in the most deprived ten percent of areas is almost double the prevalence in the least deprived areas.¹⁷

Figure 3: Obesity prevalence among reception year girls by ethnic group and deprivation quintile, London 2008/09



Source: London Health Observatory

¹⁶ 'Neighbourhood' refers to lower-layer super output areas, which have around 1,500 residents. *The English Indices of Deprivation*, Department for Communities and Local Government, March 2008

¹⁷ Weighty matters: The London findings of the National Child Measurement Programme 2006 to 2008, London Health Observatory, 2009

Demographic

2.14 Figure 3 on the previous page illustrates the relationship between deprivation, ethnicity and childhood obesity.¹⁸ Obesity prevalence in London is higher among African, Caribbean and other black children, and lower among Chinese and mixed Asian/white children. However, there is little evidence that ethnicity has an independent impact on obesity: it appears that higher prevalence among children of certain groups is largely related to the higher deprivation levels among these groups.

Spatial/geographic

- 2.15 Childhood obesity is higher in urban areas, which clearly applies to London. Particular spatial indicators that have been identified are:
 - Exposure to unhealthy food in London appears to be high. In 2007 the School Food Trust found that London had 28 'junk food' outlets per secondary school, compared to a national average of 23.¹⁹ In 2009 environmental health officers analysed the meals children bought at takeaway outlets near 45 schools, across 16 London boroughs. They found that 96 per cent of meals purchased fell into the 'red light' labelling category for high salt and fat content.²⁰ The School Food Trust has published data showing that less than half of schoolchildren in London eat a school meal. Take-up is 48 per cent at primary school level and 41 per cent at secondary; this is, however, higher than the national average.²¹
 - London has a relatively limited amount of open space, which may discourage physical activity. According to 2005 land use statistics, 38 per cent of land in Greater London is green space.²² This compares to 61 per cent in the Greater Manchester conurbation and 44 per cent in the West Midlands. These figures may not be directly comparable because of the different ways conurbation boundaries are defined. However we can also compare the central areas of each conurbation, which again shows London performs

²⁰ Fast Food Make-over, Chartered Institute of Environmental Health, 2010

"Children's diets are not healthy. A lot of people eat junk food. Shops normally don't sell healthy food." Mikey, age 13

¹⁸ Causes of childhood obesity in London: diversity or poverty?, London health Observatory, 2010

¹⁹ New research reveals the scale of junk food temptation, School Food Trust, 2008

²¹ Written submission, School Food Trust, 2010, page 1. Copies of the written submissions received by the Committee are available on our website at http://www.london.gov.uk/who-runs-london/the-london-assembly/publications/health

²² Child Obesity and its determinants, National Obesity Observatory, 2010

poorly: inner London has 23 per cent green space, while Manchester has 35 per cent and Birmingham 34 per cent. The correlation between open space and childhood obesity in London is illustrated on the next page, in a mapping analysis produced by the National Obesity Observatory.

Cultural/lifestyle

- 2.16 The Committee has examined data on a range of relevant cultural or lifestyle trends in London, relating to the factors that contribute to childhood obesity. For some indicators London scores above the national average, although still below recommended levels. This applies to breastfeeding²³ and to consumption of fruit and vegetables.²⁴ Indicators on which London performs less well, both below the national average and/or failing to meet recommended levels:
 - Children's participation in physical activity tends to be significantly below recommended levels in London. The 2008 Health Survey for England found only 33 per cent of boys and 24 per cent of girls aged 2-15 in London participated in the recommended 60 minutes of moderate activity every day. These results are in line with the national average 32 per cent for boys and 24 percent for girls.²⁵
 - Only a minority of children in London use active travel methods to get to school. The 2009 Young Londoners' Survey found that 38 per cent of 11-16 year olds in London walked and 3 per cent cycled to school, with the remainder travelling by public transport or car.²⁶

²³ The Department of Health recommends exclusive breastfeeding in the first six months of life. 39 per cent of infants are exclusively breastfed in London at age 6-8 weeks. *Breastfeeding initiation and prevalence at 6 to 8 weeks: Quarter 4, 2009/10,* Department of Health, 2010

²⁴ The Department of Health recommends eating five portions per day. 23 per cent of boys and 24 per cent of girls in London meet this. *Health Survey for England 2008: Volume 1: Physical activity and fitness*, NHS Information Centre, 2009

²⁵ Health Survey for England 2008: Volume 1: Physical activity and fitness, NHS Information Centre, 2009

²⁶ GLA Young Londoners' Survey 2009 Report, Greater London Authority, 2009

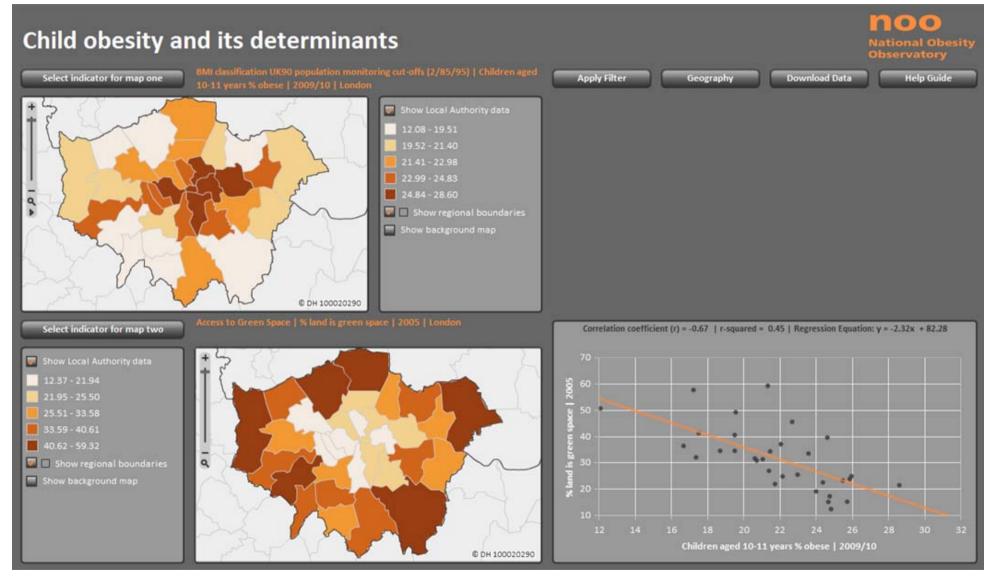


Figure 4: Relationship between childhood obesity (aged 10-11 years) and access to green space in London

Source: Modified from *Child dual map LA/PCT e-atlas*, National Obesity Observatory, 2011

Conclusion

2.17 Childhood obesity is a highly complex phenomenon. A child's energy balance is the root cause, but a wide range of spatial, demographic, economic and cultural factors help determine a child's intake of food and level of physical activity. The specific variables with the strongest correlation with childhood obesity are parental BMI and deprivation. Beyond this, the available data for London on sports participation, fruit and vegetable consumption, breastfeeding and open space in London suggests that all of these contributory variables need to be addressed. Although for some of these variables London appears to be performing better than the national average – particularly breastfeeding and fruit and vegetable consumption – most young Londoners are still in breach of medical recommendations.

Costs

2.18 Obesity is a disease with potentially very serious consequences. Researchers have highlighted a range of other health conditions that childhood obesity can lead to, as listed in Table 2 below.

Psychosocial	Poor self-esteem, anxiety, depression, eating disorders, social isolation, lower educational attainment	
Neurological	Pseudotumor cerebri	
Endocrine	Insulin resistance, type 2 diabetes, precocious puberty, polycystic ovaries (girls), hypogonadism (boys)	
Cardiovascular	Dyslipidemia, hypertension, coagulopathy, chronic inflammation, endothelial dysfunction	
Pulmonary	Sleep apnea, asthma, exercise intolerance	
Gastrointestinal	Gstroesophageal reflux, steatohepatitis, gallstones, constipation	
Renal	Glomerulosclerosis	
Musculoskeletal	Slipped capital femoral epiphysis, Blount's disease, forearm fracture, back pain, flat feet	

Table 2: Complications of childhood obesity

Source: 'Childhood obesity – The shape of things to come', Ludwig, D, New England Journal of Medicine, 357: 23, 2007

2.19 The costs associated with obesity can be divided into two parts: the direct costs of treating obesity and other conditions caused by obesity, and the indirect economic costs caused by loss of earnings among obese people. For this investigation the Committee has commissioned research to estimate the costs that are and will be

incurred by London as a result of childhood obesity. The research has been published alongside this report.²⁷

- 2.20 According to the research, the direct cost to the NHS in London of treating childhood obesity is estimated to be \pounds 7.1 million per year (2007/08 prices). This is derived from cost estimates included in the government's 2007 Foresight report on obesity. It includes the cost of children's GP consultations, ordinary admissions, day cases, outpatient appointments and prescriptions for obesity and conditions caused by obesity.
- 2.21 The future costs of childhood obesity are significantly higher. Our research shows that the current generation of obese children (aged 2-15) will cost the London economy £110.8 million per year (2007/08 prices) if they become obese adults. This is based on the direct NHS costs and indirect costs, which are made up of loss of earnings due to obesity-related sickness and premature death.²⁸ This projection is likely to be an under-estimate, because of the probability that prolonged obesity that is, if an adult has been obese since early childhood has more serious health and other consequences. However, there is not yet sufficient research available on the economic impact of prolonged obesity.
- 2.22 The Committee's research also identified the current direct and indirect costs of adult obesity. The NHS treatment costs for adult obesity in London are estimated to be £265.2 million per year (2007/08 prices): this represents approximately two per cent of all expenditure on health services in London.²⁹ The indirect costs are estimated to be £618.4 million, giving a total of £883.6 million per year. This is approximately 0.4 per cent of London's Gross Value Added (an indicator of the value of London's economy).

Conclusion

2.23 The Committee's research on the cost implications of childhood obesity further highlights the pressing need to reduce obesity. The

²⁷ Childhood obesity in London, GLA Intelligence Unit, April 2011

²⁸ The indirect costs do not include the cost of lower educational attainment, which is associated with childhood obesity. The estimate does not make allowance for potential government savings that can be made as a result of early mortality, for instance reduced pension payments and health care costs.

²⁹ To put this figure in context, the NHS in London is estimated to spend £546 million every year treating cancer (2009/10 prices). *Cancer services: Case for change*, Commissioning Support for London, 2010

consequences of obesity can be severe for individuals, with a range of other health problems directly linked to the condition. This means that London is faced with a large bill to treat obesity, and that the city's economy suffers through productivity losses. This burden will only increase if today's obese children become tomorrow's obese adults.

3 The Mayor's interventions

Key points

- There is a strong case for the Mayor to intervene to address childhood obesity, although his powers are limited.
- A number of Mayoral strategies including those on health inequalities, transport and spatial development are relevant to childhood obesity.
- Actions taken by the Mayor include programmes to encourage active travel, sports participation and food growing.

The case for Mayoral intervention

- 3.1 The Mayor has said that addressing childhood obesity is his top health priority,³⁰ and he has introduced and supported a number of actions associated with obesity-reduction across several policy areas. This chapter outlines the interventions he has made.
- 3.2 It is possible to make a strong case for the Mayor to intervene in his role as the head of a strategic, city-wide authority, to reduce childhood obesity:
 - Childhood obesity is a significant problem for London, occurring in every borough, with little evidence that the problem is being alleviated. High costs are incurred as a result, with a detrimental impact on the city's economic development.
 - The Mayor has control of some important policy levers and associated funding – that could be used to address obesity. These include his powers in relation to Transport for London, the Metropolitan Police Service and potentially the Royal Parks,³¹ his planning powers and strategic responsibility for health inequality.
 - Some key obesity-reduction interventions or elements of them may be more effectively delivered at a city-wide rather than borough level.
 - The high profile and city-wide position of the Mayor and Greater London Authority could mean there is greater opportunity to exert influence in negotiations with major private companies and other organisations that operate throughout London.

³⁰ Boris Johnson, Health Leadership Summit, City Hall, 1 November 2010

³¹ The government has proposed that responsibility for the eight Royal Parks in London will be transferred to the Greater London Authority. See *Transfer of the Royal Parks Statement*, Department for Culture, Media and Sport, January 2011

- The Greater London Authority has the resources and expertise to lead the evaluation of obesity-reduction interventions introduced in different parts of the city, and share best practice among partner organisations including boroughs and NHS commissioners.
- 3.3 This case was supported by stakeholders who submitted views to the Committee about what role the Mayor should play. A number of respondents emphasised the Mayor's role in promoting effective partnership working across the city. Professor Eileen O'Keefe of London Metropolitan University told the Committee that London has a *"chronic problem of lack of coordination with serious difficulties in coming up with pan-London solutions to big problems which cannot be resolved more locally [such as obesity]"*.³² Similarly MEND argued that, *"The Mayor is in a position to bring partners together in an innovative way to tackle childhood obesity, from education, health and local authorities, though employers and leisure providers, to private funders and globally recognised centres of expertise."* ³³

3.4 Other respondents emphasised the Mayor's role in spreading good practice throughout London. NHS Kensington and Chelsea (the primary care trust) suggested the Mayor should *"track costs and outcomes of borough level strategies and facilitate opportunities for local authorities within London to adopt evidence-based interventions implemented in neighbouring boroughs."*³⁴

3.5 Several respondents highlighted interventions that should be delivered directly by the Mayor. A joint response from the London Borough of Lewisham and NHS Lewisham argued the Mayor's role was to, *"deliver initiatives that can only be successfully coordinated, funded or delivered on a pan-London basis."*³⁵ A number of respondents specifically cited 'social marketing'³⁶ as a type of initiative best delivered city-wide: for instance the London Borough of Camden and NHS Camden suggested London-wide branding developed by the Mayor would enhance the effectiveness of obesity-reduction programmes.

"I think growing your own vegetables is quite good, because as you're eating them you can say 'I did this, this is what I've made."" Tia, age 15

³² Written submission, Professor Eileen O'Keefe, 2010, page 2

³³ Written submission, MEND, 2010, page 1

³⁴ Written submission, NHS Kensington and Chelsea, 2010, page 2

³⁵ Written submission, London Borough of Lewisham and NHS Lewisham, 2010, page 1

³⁶ The National Social Marketing Centre defines this concept as, "The systematic application of marketing, alongside other concepts and techniques, to achieve specific behavioural goals, for a social good." See www.nsmc.com

3.6 Others emphasised the Mayor's role in negotiating on behalf of London with major organisations that operate throughout the city, and are important partners in reducing obesity. The London Borough of Havering and NHS Havering suggested that, *"The Mayor's office also carries greater weight in terms of negotiations with food manufacturers who supply to all London Boroughs."*³⁷ For instance, there may be opportunities for the Mayor to work with companies such as McDonalds, Coca-Cola and Cadbury, which are sponsors of the 2012 Olympic and Paralympic Games, to use the Games to help address childhood obesity.

Conclusion

3.7 There is a strong case for the Mayor to intervene to reduce childhood obesity, and the Committee supports him in taking action in this area. In doing so, the Mayor should seek to take advantage of his strategic powers, such as in transport and planning, and focus on interventions best delivered at the city-wide level.

The Mayor's powers

3.8 The Mayor does not have the formal powers to take action directly on all of the causes of childhood obesity. For instance, the Mayor's powers over the key areas of health, education and planning are relatively limited. London differs in this respect from New York, which has a similar childhood obesity problem. Academics from London Metropolitan University and City University New York recently collaborated on a report comparing how the two cities were responding to obesity. Professor Eileen O'Keefe, one of the lead researchers, told the Committee how the Mayor of London's more limited powers constrained what action he was able to make:

> "We found that on a number of fronts the New York Mayor was able to take more vigorous action than his London counterpart because of the range of his direct powers which include provision of most municipal services including publicly funded schools, hospitals, prisons."³⁸

3.9 For example, The Mayor of New York has used his powers over health and education to provide free breakfasts in all public schools, to improve the nutritional quality of food served in schools, to train

 $^{^{\}rm 37}$ Written submission, London Borough of Havering and NHS Havering, 2010, page 1

³⁸ Written submission, Professor Eileen O'Keefe, 2010, page 1

teachers to provide exercise for children in classrooms, and to require restaurants to display the calorie content of meals and ban restaurants from selling food with 'transfats'.³⁹ In London, these measures would have to be implemented primarily by central government or boroughs.

- 3.10 However, there is a prospect that the Mayor of London will gain new powers over public health, as part of the government's reforms of the NHS. Responsibility and funding for public health is transferring from NHS primary care trusts to local authorities. In London, the Mayor and boroughs have agreed that there should be a new 'London Health Improvement Board' (LHIB), chaired by the Mayor with representatives from the boroughs and other health leaders.⁴⁰
- 3.11 The Board would oversee health improvement measures across London and develop the London Health Inequalities Strategy. The Mayor and boroughs would also have a duty to support each other's health strategies and work toward a shared public health outcomes framework. It is anticipated that the Mayor would receive an automatic three per cent top-slice of boroughs' public health funding allocation – to spend on London-wide public health measures – with a further three per cent available to the Mayor if the LHIB agrees.

The Mayor's interventions

3.12 The Mayor does not have a specific strategy or set of policies focused on childhood obesity, although some of the recommendations from the London Healthy Weight, Healthy Lives Taskforce have been included in the Mayor's Health Inequalities Strategy (see Appendix 1). The Mayor has however introduced or proposed measures to help reduce childhood obesity in a number of different domains. These include interventions to increase walking and cycling, food growing and participation in sport, improve open spaces and parks, and widen access to healthy food. He has done this through several different parts of the GLA Group, particularly the GLA's health, planning and environment teams, the London Food Board, London Community Sports Board, Transport for London and London Development Agency. The Mayor's interventions are summarised in Table 3 overleaf.

³⁹ Trans-fats are artificially created fats used in the manufacture of foods. See A *Tale of Two Obescities: Comparing responses to childhood obesity in London and New York City,* City University of New York and London Metropolitan University, January 2010; Kimberly Libman, Transcript of Health and Public Services Committee meeting, 3 November 2010, page 19

⁴⁰ Letter from Boris Johnson, Mayor of London and Jules Pipe, Chair of London Councils to Andrew Lansley MP, Secretary of State for Health, 17 January 2011

Table 3: Summary of the Mayor's obesity interventions

Physical activity

- The Mayor is promoting **sports participation** with £15.5 million of London Development Agency funding over three years. It is led by the London Community Sports Board, which the Mayor established and appoints. Projects funded include mobile swimming pools, street athletics events and training for coaches.⁴¹
- Transport for London has introduced a number of initiatives aimed at increasing walking and cycling. TfL accredits school travel plans. It has funded 'walk to school' initiatives including two 'Step2Get' pilots in which children are rewarded for walking to school. It has funded cycling training for children and the 'Bike It' programme to promote cycling.⁴² TfL's 2009/10 spending on 'walking, cycling and accessibility' was around £54 million.⁴³
- The Mayor has promoted **parks and open spaces**. £6 million is being invested by the GLA over three years to improve eleven parks across London,⁴⁴ while the Mayor is establishing a new award for parks. In spatial development policy, the supplementary planning guidance published by the previous Mayor stated that new housing developments should have at least 10sqm of play space per child.⁴⁵
- The Mayor's Health Inequalities Strategy includes additional measures on encouraging physical activity. It proposes that the GLA develops a pan-London referral scheme for participants in charity walks and runs. It also commits the GLA to implementing or piloting new design features for public buildings to encourage physical activity.⁴⁶

Diet

- The Mayor is supporting the Capital Growth programme to create new **food growing** spaces. This is led by the London Food Board, which the previous Mayor established and the Mayor appoints: it is aiming to create 2,012 growing spaces by 2012. The Mayor has provided £5 million of funding from the London Development Agency for the Board's programmes over three years.⁴⁷
- The Mayor's Health Inequalities Strategy includes several proposed actions on access to healthy food. It proposes the GLA works with government and the food industry to encourage clearer nutritional information, and reduce unhealthy content. It commits the GLA to promoting healthier food for staff in the public sector. It proposes working with environmental health officers to encourage them to provide advice on healthy options to food outlets.⁴⁸

Early years and parenting

 The Mayor's Health Inequalities Strategy proposes that the GLA will promote effective parenting and early years development. It states that the GLA will improve the delivery of integrated early years and family services, and shift investment toward earlier interventions. It proposes a roundtable meeting for partner organisations and experts to call them to action on this topic.⁴⁹

⁴² Written submission, Transport for London, 2010, pages 3-7

⁴¹ The London Assembly has recently published a report on the use of this fund. See A sporting legacy for London?, Economic Development, Culture, Sport and Tourism Committee, London Assembly, February 2011

⁴³ Business Plan 2009/10 to 2017/18, Transport for London, November 2008

⁴⁴ Response to James Cleverly AM, [3121/2009], Mayor's Question Time, 14 October 2009

⁴⁵ Supplementary Planning Guidance: Providing for Children and Young People's Play and Informal Recreation, Greater Condon Authority, March 2008

⁴⁶ Written submission, Pamela Chesters, 2010, pages 6-7

⁴⁷ Capital Growth launches £150,000 fund to help Londoners boost food growing, Greater London Authority, December 2009; The London Food Programme 2009-2012 [MD 388], Greater London Authority, August 2009

⁴⁸ Written submission, Pamela Chesters, 2010, pages 6-7

⁴⁹ The London Health Inequalities Strategy: First Steps to Delivery to 2012, Greater London Authority, April 2010

- 3.13 Few of the interventions introduced by the Mayor are focused exclusively on obesity-reduction. For instance, walking and cycling measures also aim to reduce traffic congestion, and food growing aims to combat climate change. None of the Mayor's interventions to date have been evaluated for their effectiveness in reducing obesity.
- 3.14 In addition to the initiatives outlined in Table 3, another London-wide programme linked to the Mayor is the Well London programme overseen by the London Health Commission, a body established by the previous Mayor.⁵⁰ Well London was awarded £9.5 million from the Big Lottery Fund, to run a four-year programme ending in March 2011. The University of East London is conducting an evaluation of the programme's impact, to be published in 2012. More information is given in Table 4 below.

Project	Activities	
Buywell	Making it easier to buy good quality, affordable food in local shops. It has supported new food co-operatives, mobile food stores, healthy menus in cafes and new fresh produce displays in convenience stores.	
Eatwell	elping people learn about healthy eating, through 'cook id eat' classes and community feasts.	
Healthy Spaces	Improving the quality of local spaces to encourage people to make more use of them. This includes creating new food growing spaces, wildlife walks and improving playgrounds.	
Activate London	Helping people to become involved in sport and active recreation. There is 'activator training' for people to learn how to be active and to encourage others, and football, dance and martial arts events.	
WellNet	A learning network for communities and professionals to share good practice on improving health, using the internet, newsletters and events.	
Active Living Map	Producing web-based maps in each community to show where opportunities for healthy activities are located.	

Table 4: Well London projects⁵¹

"Schools usually do unhealthy things. I know people who have three slices of pizza every day of the week." Zaine, age 11

⁵⁰ The Commission was established in 2000, with representatives from the NHS, boroughs and other partners in the public, private and voluntary sectors. The Mayor appoints the chair; in 2008 the current Mayor appointed Councillor Mary O'Connor to this role. The Commission's staff is based in the Greater London Authority, although the Commission operates independently.

⁵¹ This table does not cover all Well London projects. For more information see Written submission, Well London, 2010 and www.london.gov.uk/welllondon

3.15 Well London takes place in 20 targeted areas – neighbourhoods with around 1,500 residents each – that are considered to be among the most deprived in London. Each Well London area has projects to help people become more active, eat more healthily and improve their mental health; there is also a range of 'community-building' initiatives.

Conclusion

- 3.16 The Mayor has used his powers to implement or promote a wide range of initiatives in relation to walking and cycling, open space, planning, sports participation and healthy eating. Alongside these programmes the London Health Commission has developed an innovative approach involving multiple, linked interventions through its Well London programme. However, these programmes are not coordinated into a London-wide, strategic approach to tackling childhood obesity.
- 3.17 Very little information has been produced so far about the impact of the Mayor's interventions on obesity. In part this is because many of the programmes have wider aims – with a reduction in obesity as a second-order effect – such as reducing traffic congestion or combating climate change. It is not therefore possible to conclude how effective each programme has been, which makes mapping a way forward difficult. The Committee has commissioned research on what types of obesity intervention are most cost-effective. The next chapter considers this evidence in more detail.

4 The effectiveness of obesity interventions

Key points

- Evidence suggests the most cost-effective obesity interventions combine dietary changes and physical activity, involve parents and are delivered early in life.
- Multi-faceted interventions are effective in both supporting children already obese, and helping to prevent obesity in the general population.
- 4.1 The Committee has commissioned research to assess the evidence on the cost-effectiveness of the range of different obesity interventions. The findings of this research have been published in full alongside this report.⁵² Table 5 overleaf presents a summary of the evidence on specific interventions that have been proven to be cost-effective and highlights the characteristics of these schemes. Table 6 does the same for non-cost-effective interventions.
- 4.2 In assessing whether the interventions listed below could be implemented by the Mayor, it is important to understand the scope of the Mayor's powers. For instance, fiscal and regulatory policy which could be used to tax unhealthy food or restrict advertising is determined by central government. Even with community-based programmes, the Mayor would be required to work in partnership with local authorities, schools and health organisations, over which he does not have direct control.
- 4.3 There is a general lack of robust evidence on cost-effectiveness for a number of other obesity-reduction interventions, including those that have been introduced in London. It is also the case that obesity-reduction interventions may have benefits beyond their impact on obesity: for instance, 'walk to school' programmes may help to reduce traffic congestion and pollution, while sports clubs may be effective at improving social inclusion.

⁵² Childhood obesity in London, GLA Intelligence Unit, April 2011

Table 5: Cost-effective obesity interventions

Table 5. Cost effective obesity interventions			
Intervention	Characteristics		
 MEND - 'Mind, Exercise, Nutrition Do it!' (UK). A community-based weight management programme for overweight children and their families, providing nutrition education and physical activity. <i>Costs £1,700 per QALY</i>. LEAPs - Local Exercise Action Pilots (UK). Programme where interventions to increase physical activity were introduced in a pilot area, including classes and groups, exercise referrals, motivational interviewing and mentoring. <i>Costs £50-150 per QALY</i>. Planet Health (USA). Programme to introduce a multi-disciplinary health-based curriculum into schools, enabling teachers to promote healthy food choices and exercise. <i>Costs US\$4,300 per QALY</i>. CATCH - Coordinated Approach to Child Health (USA). School-based programme to promote healthy food choices and physical activity, including classroom education, intensive PE lessons, healthier school food and parental involvement. <i>Costs US\$900 per QALY</i>. Reduction in television viewing (USA). A school-based programme for teachers to instruct pupils in intelligent TV viewing, including a weekly TV budget for children. <i>Costs AU\$3,000 per DALY</i>. Redical interventions (Australia). Interventions to reduce calorific intake such as gastric banding (surgical) and Orlistat therapy (pharmaceutical). <i>Costs AU\$4,000-8,000 per DALY</i>. 	Combined dietary and physical activity focus: The most successful interventions combine both elements, as part of a general 'health promotion' approach rather than focusing on 'weight reduction'. Parental involvement: Reflecting the importance of parents in making choices that affect a child's weight, successful interventions also address parental behaviour. Early years programmes: behaviour and cognitive patterns set in early life have a long-term influence; risk factors are more easily modified at this stage. Community delivery: This helps to reduce stigmatisation and increase participation rates among overweight children.		
Summarised from <i>Childhood obesity in London</i> , GLA Intelligence Unit, April 2011. Cost-effectiveness has been assessed in terms of the 'cost per Quality Adjusted Life Year' (QALY), a measure of how many additional years of life (adjusted for			

Summarised from *Childhood obesity in London*, GLA Intelligence Unit, April 2011. Cost-effectiveness has been assessed in terms of the 'cost per Quality Adjusted Life Year' (QALY), a measure of how many additional years of life (adjusted for quality) are gained by the person receiving the intervention. Australian studies use a similar measure of 'Disability Adjusted Life Year' (DALY). The National Institute for Health and Clinical Excellence determines an intervention is cost-effective if it costs less than £20,000 per QALY.

Table 6: Non-cost-effective obesity interventions

Intervention	Characteristics
 TravelSmart schools and Walking School Bus (Australia). Programmes to encourage active travel methods among school pupils; these have been shown to have only a small impact on children's BMI. Costs AU\$260,000-770,000 per DALY Active After-School Community Programme (Australia). Programme to provide free, structured physical activity to primary school children after school; there has been no evidence of an impact on obesity. Costs AU\$90,000 per DALY. 	 Insufficient intensity in physical activity programmes, including 'walk to school' initiatives. Poor engagement with target audiences, resulting in low participation and retention rates. Lack of involvement of parents, families and communities.
Lifestyle counselling by GPs (various). Programmes where GPs identify overweight children and advise them on healthier lifestyles; the costs of this are very high, and there is inconsistent evidence it has an impact on children's BMI. <i>Not cost-effective</i> .	Clinical programmes that are stigmatising and/or expensive to deliver.

Summarised from Childhood obesity in London, GLA Intelligence Unit, April 2011

4.4 Our research shows that there are certain key characteristics determining how effective interventions are in reducing childhood obesity. Involving parents and intervening in the early years of a child's life make success more likely. Interventions are also more likely to be effective when the content is multi-faceted, addressing the range of factors that contribute to a child becoming obese: This means helping children become more physically active as well as improving their diet. This was the conclusion of a recent physician-led study published by the consultancy McKinsey:

"To identify the interventions that are most effective in helping people lose weight or maintain a healthy weight, we evaluated more than 1,000 studies published in the past ten years. The studies covered a wide range of approaches, including medical management, commercial weight-loss programs, and communitybased health-promotion efforts. Our research revealed that singleintervention programs, such as low-calorie diets and exercise regimens, generally produce only modest weight loss. Better results are obtained when several interventions are used together."⁵³

⁵³'Why governments must lead the fight against obesity', Algazy, J, Gipstein, S, Riahi, F and Tryon, K, *McKinsey Quarterly*, October 2010

Multi-faceted interventions

- 4.5 There are different ways to conceive of multi-faceted childhood obesity interventions:
 - Individual programmes can be multi-faceted, by incorporating different activities that address a number of the factors contributing to obesity: this would apply to several of the programmes listed in Table 5.
 - There are also broader interventions, usually referred to as the 'whole community' approach, in which numerous different programmes are introduced simultaneously across an entire area, designed to reach the general population.
- 4.6 MEND ('Mind, Exercise, Nutrition... Do It!') is a programme devised by the University College London Institute of Child Health and Great Ormond Street Hospital. There are 400 MEND programmes running across the UK and Australia, with over 20 in London. Participants are overweight children and their families, who can be self-referred or referred by a health professional. The programme includes twiceweekly sessions after school, lasting for ten weeks.⁵⁴ Sessions include interactive workshops for children and their parents in which they learn about nutrition and healthy lifestyles, and an hour's exercise for the children.
- 4.7 Evidence from the MEND programme shows that it achieves significant reductions in participants' BMI, waist circumference, blood pressure and sedentary time, while self-esteem and time spent physically active increased; these changes were sustained at 12 months, long after the programme concluded.⁵⁵ In terms of cost-effectiveness, MEND has been shown to cost around £1,700 per quality adjusted life year (QALY), based on weight loss among child participants. This is comfortably within the cost-effectiveness threshold used by the National Institute for Health and Clinical Excellence (NICE).⁵⁶ However, we have to take into account that these results may not be replicated if every eligible child participated in the programme. Many MEND participants are self-referred and

"I think children are quite active. There are lots of people my age trying to get into the London 2012 Games." Tia, age 15

⁵⁴ This refers to the programme designed for 7-13 year olds. See www.mendprogramme.org

⁵⁵ The MEND Study: Sustained improvements on health outcomes in obese children at one year, Sacher, P, Chadwick, P, Kolotourou, M, Cole, T, Lawson, M and Singhal, A, www.mendprogramme.org

⁵⁶ Childhood obesity in London, GLA Intelligence Unit, April 2011

- 4.8 For the 'whole community' approach, the strongest evidence comes from France, where the EPODE ('*Ensemble, Prévenons l'Obésité Des Enfants*', or 'Together, Let's Prevent Childhood Obesity') programme has been running for many years across entire towns. The programme – which is part-funded by private sponsors – involves making a wide range of interventions, including:
 - Educating children about healthy lifestyles and the consequences of obesity.
 - Improving food in school cafeterias.
 - Providing family breakfasts at schools.
 - Cooking classes for children and parents.
 - Employing sports educators and dieticians in schools.
 - Building new sports facilities.
 - Introducing walk to school groups.
 - Encouraging GPs to identify all overweight children and refer them to a dietician.
 - Running a social marketing campaign to promote health behaviours.⁵⁷
- 4.9 Each town has a programme manager to oversee the entire project, leading a multi-disciplinary team with representatives from all relevant organisations or professions, reporting directly to the town's mayor.⁵⁸
- 4.10 The Committee heard about EPODE from Kimberly Libman, an obesity researcher from City University of New York, at its Committee meeting late last year:

"The one promising approach [for reducing population levels of obesity]... is a study that was done in France a few years ago where they found that a whole community approach did bring down citywide levels of obesity. That whole community approach really required doing things in the school, doing things with shop owners,

⁵⁷ Why governments must lead the fight against obesity', Algazy, J, Gipstein, S, Riahi, F and Tryon, K, *McKinsey Quarterly*, October 2010

⁵⁸ Borys, JM, EPODE: A methodology to prevent childhood obesity, involving local stakeholders in a sustainable way, www.health.sa.gov.au, 2008

doing things with local provision of spaces for play and sport. So, doing all of these things together, they were able to bring down the population levels of obesity."⁵⁹

- 4.11 In the first two towns where EPODE was introduced, Fleurbaix and Laventie, childhood obesity prevalence fell in 2000-2004 from 14 per cent to 9 per cent after increasing steadily for many years before that. In nearby towns used for comparison, prevalence continued to rise and by 2004 was double the rate in Fleurbaix and Laventie. EPODE was subsequently introduced by ten other French towns and all showed a reduction in childhood obesity prevalence within two years. By 2008, 167 towns and cities across France, Spain, Greece, Belgium and Canada had adopted EPODE.⁶⁰ It is important to note that all of the towns where this approach has been shown to be successful so far are relatively small; introducing it across a large city could prove to be more challenging.⁶¹
- 4.12 There have been community programmes operating in London over recent years that are broadly similar to EPODE:
 - The 'Well London' programme overseen by the London Health Commission, an independent body whose chair is appointed by the Mayor. This is a four-year programme ending in March 2011. Well London is not exclusively focused on obesity, but has included many interventions associated with obesity reduction. Twenty neighbourhoods (each with around 1,500 residents) were selected as Well London sites: in these areas coordinated interventions have been introduced to improve diets and increase physical activity. Well London is discussed in more detail in the next chapter.
 - The 'Healthy Borough' programme in the London Borough of Tower Hamlets. This is a two-year programme also ending in March 2011. It is part of the national Change4Life programme, in which nine towns have been selected to pilot a range of interventions to address the social and environmental causes of obesity. Projects are intended to help children and families become

⁵⁹ Transcript of Health and Public Services Committee meeting, 3 November 2010, pages 7-8. Minutes and transcripts of Committee meetings are available at <u>http://www.london.gov.uk/moderngov/ieListMeetings.aspx?CommitteeId=148</u> or from the London Assembly secretariat.

⁶⁰ Borys, JM, EPODE: A methodology to prevent childhood obesity, involving local stakeholders in a sustainable way, www.health.sa.gov.au, 2008

⁶¹ The largest of the initial pilot towns have a population of around 100,000.

more active and eat more healthily, covering the design of the physical environment, parks and open spaces, active travel, modifying menus and recipes in food outlets, social marketing and school and workplace-based interventions.⁶²

Conclusion

- 4.13 The results of the Committee's investigation indicate that to reduce childhood obesity, it is necessary to ensure multiple contributory factors are addressed simultaneously. For instance, there is little sense encouraging children to walk to school or take part in sport if the food they eat at lunchtime contains many more calories than they could possibly need. Equally, making healthy food or sports facilities available to children in the local community will not have the desired impact if their parents continue to encourage poor eating habits and sedentary behaviour at home. The involvement of families is vital; parental obesity needs to be addressed alongside childhood obesity.
- 4.14 The Committee wants to ensure that the interventions being made in London are designed and delivered in a way that enables people to address the complex, multiple causes of obesity in their lives. For children who are already obese or overweight, evidence suggests that participating in targeted, intensive programmes that encourage them to become more active and eat healthily are cost-effective. To prevent and reduce childhood obesity in the general population, action should be taken across a number of domains to address social, economic and environmental causes. In the next chapter we consider to what extent the Mayor can support the delivery of such a costeffective, multi-faceted approach to childhood obesity.

⁶² *Healthy Borough Programme: Annual Report 2009/10*, London Borough of Tower Hamlets, NHS Tower Hamlets and Tower Hamlets Partnership, 2010

5 Recommendations to the Mayor

Key points

- The Mayor needs to set a new strategic direction for London's response to childhood obesity based on coordinated, multi-faceted interventions.
- The Mayor should continue to directly support obesity interventions as part of a London-wide strategy; uncertainty over his ability to maintain funding for current interventions should be addressed.
- The Mayor should expand the role of the Greater London Authority in spreading good practice in tackling obesity throughout London.
- 5.1 The previous chapter concluded that interventions to tackle childhood obesity should be multi-faceted. That is, children and their families should be supported to address the multiple factors that contribute to obesity simultaneously. This could happen through single programmes for particular children, particularly those that are already overweight or obese. On a wider scale, to prevent or reduce obesity in the general population, we need a coordinated set of interventions across a number of policy domains.
- 5.2 The Committee has considered what the Mayor is and should be doing to promote this approach. Based on the evidence about what obesity interventions are effective and the discussion in Chapter 3 about the scope of the Mayor's powers, the Committee has identified three key elements of the Mayoral role:
 - The first, overarching role for the Mayor we identified is to set the strategic direction for London's response to childhood obesity. The other two elements derive from the first.
 - The second is to directly support and fund interventions that are required at the city-wide level.
 - The third is to promote evaluation of obesity interventions and spread good practice within London.

Setting the strategic direction for London

5.3 London's strategy for addressing childhood obesity should be based on a coherent set of multi-faceted interventions. To deliver this approach, many different organisations in London – both within and beyond the GLA Group – will need to take coordinated action. With NHS London set to abolished, the Mayor is alone in having strategic responsibility for health improvements on a London-wide basis. It is therefore appropriate that he seeks to set the direction for London's response to obesity, and promote his strategy among partner organisations.

- 5.4 Although the Mayor has intervened in a number of domains, it is not clear that he has promoted or delivered a strategy based on multi-faceted obesity interventions. To do so would mean that action aiming to address one factor contributing to obesity is coordinated with actions addressing other factors. Examples where this could be implemented by the Mayor and partners are:
 - There is little evidence that food growing projects, on their own, influence children's diets; however it has been shown that linking food growing to nutritional education and changes in school meals is effective.⁶³ The Mayor's London Food Board's Capital Growth programme aims to support teachers in making wider changes at schools where new growing spaces are created. This could go further: the Mayor's Healthy Weight, Healthy Lives Taskforce recommended in 2009 that Capital Growth should work with local health partners to ensure that complementary cooking and healthy eating classes are offered as part of the programme.
 - Similarly, there is little evidence that 'walk to school' projects are effective at reducing obesity on their own. TfL's investment in this area may be more effective if it is linked to other programmes promoting physical activity more generally. For example, the Step2Get pilots in Bexleyheath and Wimbledon use a reward system to encourage children to walk to school. Greater impact on obesity might be achieved if children could also gain rewards by taking part in other types of exercise, including in schemes run by local boroughs, voluntary groups or the Mayor's London Community Sports Board.

⁶³ Written submission, Rosie Boycott, London Food Board, 2010, page 3

5.5 The Mayor has been criticised for not developing a coherent childhood obesity strategy. The obesity charity MEND told the Committee:

"MEND supports many of the initiatives undertaken by the Mayor to date. In particular, we welcome The Mayor's Strategy on Health Inequalities, The Mayor's Food Strategy, and Capital Growth. It is apparent, however, that there is no clear, joined up and sustainable action plan. MEND recommends that the Mayor adopt an integrated plan which incorporates approaches to both nutrition and physical activity, aims to empower families and communities rather than individuals, and focuses on early intervention."⁶⁴

5.6 Similarly, the Southwark Healthy Weight Steering Group – a partnership body in the borough including NHS and local authority representatives – expressed concern that that Mayor's actions are not implemented on a strategic basis:

"...many of the programmes are disparate and short-term and reach relatively small numbers of people. The Mayor's work must support what is going on locally and enhance it. Small piecemeal initiatives only in some areas decided at regional level may not work as well as funding being devolved to local areas to be able to offer local sports facilities and healthy living activities for young people."⁶⁵

- 5.7 Setting the strategic direction for London would also mean the Mayor promotes shared outcomes for obesity interventions across the city. This is not yet the case for the Mayor's own strategies. The Mayor's transport, food, sports participation and health inequalities strategies all refer to the goal of reducing obesity; the Mayor's draft London Plan includes a policy on reducing health inequalities, but not specifically on obesity. These strategies could include common outcome measures by which the impact of the strategies on obesity can be assessed, and this could be extended to borough-level strategies.
- 5.8 The proposals for new public health arrangements could help the Mayor to play a greater role in setting the strategic direction for London's response to obesity. As chair of the proposed London Health Improvement Board, the Mayor would be leading a body bringing together key partners in the effort to tackle obesity,

"You should make healthy food lower in price so people can buy it and fattening food higher so they don't buy it often." Rebecca, age 8

⁶⁴ Written submission, MEND, 2010, pages 1-2

⁶⁵ Written submission, Southwark Health Weight Steering Group, 2010, page 2

including the GLA, NHS and boroughs. This should enable the Mayor to promote multi-faceted obesity interventions and identify how partners will work to deliver them. It is also proposed that there will be a public health outcomes framework for London, which will allow all partners to agree the outcomes they are aiming for and include these in their own strategies.

Conclusion

- 5.9 The evidence gathered by the Committee in this investigation indicates that to tackle the problem of childhood obesity London needs a coordinated strategy based on multi-faceted interventions. The cooperation of numerous different organisations within and beyond the GLA Group is required to implement this strategy. This type of approach will help ensure that actions taken to address one obesity-causing factor are not introduced in isolation from actions addressing other factors. In the future, interventions made through schools, health services, the transport system, planning authorities, food and sports bodies should form part of a coordinated set of actions that helps every London child receive the support they need to maintain a healthy weight.
- 5.10 It is anticipated that the Mayor will take on an enhanced role in public health as part of the government's reforms to the NHS. As chair of the London Health Improvement Board he will have the opportunity to take London's fight against childhood obesity to the next stage, by exerting greater influence on the strategic direction of interventions introduced across the city. Taking advantage of this opportunity should be his immediate priority.

Recommendation 1

The Mayor should build on the findings of this report by leading the development of a new obesity strategy for London by April 2013

The key element of London's strategy should be a commitment to support coordinated, multi-faceted obesity interventions, ensuring that actions taken to address one obesity-causing factor is not introduced in isolation from actions addressing other factors.

The strategy should be produced and agreed by the London Health Improvement Board. It would include a shared set of priorities, outcomes and actions between the Mayor, GLA Group, boroughs and other partners. It would set out what obesity interventions are recommended for implementation by different organisations:

- Interventions to be taken forward directly by the Mayor, through TfL, the London Food Board, the London Community Sports Board and the GLA's health, planning and environment teams.
- Interventions that are recommended for implementation by boroughs and NHS commissioners, subject to local priorities.
- Interventions that could be delivered by private and voluntary organisations.

In his position as chair, the Mayor should ask that the proposal for a London obesity strategy is discussed at the first meeting of the London Health Improvement Board.

The Mayor should write to the Committee by the end of July 2011 to indicate whether he agrees with our findings on the need for a coordinated approach to obesity based on multifaceted interventions, and what steps he will take via the London Health Improvement Board to implement this recommendation.

Direct intervention to support the strategy

- 5.11 As discussed in Chapter 3, the Mayor has made a number of interventions to reduce childhood obesity. The Mayor is particularly well placed to make certain types of interventions, including action best delivered on a London-wide basis, action dependant on exercising Mayoral powers such as over transport, and pilot schemes that help to improve the evidence base for intervention.
- 5.12 Submissions received by the Committee suggest there is widespread support for the action taken by the Mayor. Several additional interventions have been recommended, however, which he has not yet chosen to implement. For instance, one primary care trust suggested he adopt the 'Change4Life' branding for his projects, in particular applying it to his Cycle Hire scheme.⁶⁶ Another trust urged a review of the provision of free travel for children, suggesting it discourages cycling and walking.⁶⁷ The Mayor's Healthy Weight, Healthy Lives

⁶⁶ Written submission, NHS Sutton and Merton, 2010, page 2

⁶⁷ Written submission, NHS Wandsworth. 2010, page 3

Taskforce suggested he introduce measures to make the transport system breastfeeding-friendly.⁶⁸

- 5.13 Aside from any possible new measures, it is uncertain whether the Mayor will have the resources to continue funding his existing interventions:
 - London Development Agency funding is used by the Mayor for food and sports programmes. The Mayor's food adviser Rosie Boycott and his sports adviser Kate Hoey MP both told the Committee that the LDA funding of their projects up until 2012 is protected.⁶⁹ However, the LDA is set to be abolished in 2012 with its functions transferred to the GLA. It is not clear precisely how much of its prior funding will be available to the Mayor to continue funding these programmes, although the recent announcement of the LDA's funding settlement for 2011/12 to 2013/14 suggests that there will be substantial reductions in programme spending.⁷⁰
 - Transport for London funding for active travel measures is expected to be reduced in the future. Following the government's spending review in 2010, TfL's four-year grant was reduced by £2.2 billion, or 21 per cent. It is expected that funding of a range of measures aimed to encourage walking and cycling will be reduced.⁷¹
 - The core funding of the Greater London Authority is also likely to • fall. Grants from central government to local authorities will be reduced by an average of 26 per cent over four years from 2012; it is not known whether the reduction in the GLA grant will match this as the GLA's grant beyond 2011/12 has not been confirmed. This money is the source of funding for the GLA's health team, which is responsible for implementing the measures proposed in the Health Inequalities Strategy.

⁶⁸ The Mayor's Healthy Weight, Healthy Lives Action Plan for London, Greater London Authority, 2009

⁶⁹ Transcript of Health and Public Services Committee meeting, 3 November 2010, pages 14 and 18⁷⁰ Mayor of London confirms financial settlement, Greater London Authority, 16

March 2011

⁷¹ Assembly response to the Mayor's consultation draft budget 2011/12, Budget and Performance Committee, London Assembly, January 2011

5.14 As part of proposals for a new London Health Improvement Board, it is anticipated that the Mayor would receive new funding – a three per cent top-slice from borough public health allocations – for public health measures. Again, however, it is not clear how much this will be in total. It is expected there may be £4 billion funding per year in England, divided between the national body Public Health England and local authorities; local allocations will be ring-fenced.⁷² There will be financial incentives for local authorities to improve public health and reduce inequalities, but it is not clear whether incentives would be applied at the London-wide level.

Conclusion

- 5.15 The Committee believes the Mayor should continue to make direct interventions to reduce childhood obesity. Several additional interventions have been suggested to the Mayor, for example on breastfeeding, free travel and social marketing. The Committee has not seen sufficient evidence to recommend these specific measures, although the Mayor may want to consider how they might fit into his overall strategic approach. The most important point is that all of the Mayor's interventions should occur as part of a coordinated Londonwide strategy, and where appropriate in partnership with other organisations.
- 5.16 The Mayor's ability to play this role will depend on the availability of continuing funding for programmes delivered by the GLA Group. While some new funding may be available in the future via the London Health Improvement Board, existing funding streams are under considerable pressure. Greater long-term certainty about the resources the Mayor will have to deploy directly in the fight against obesity would be beneficial.

Recommendation 2

Direct interventions by the Mayor are a key part of London's strategic response to childhood obesity. This will require continued funding via the GLA Group.

The Mayor should write to the Committee by the end of July 2011 to set out his expectations for future spending on obesity-reduction programmes. For each of the current programmes run by the London Food Board, London

⁷² Public Health England: A new service to get people healthy, Royal Society for Public Health, 30 November 2010

Community Sports Board, Transport for London and the GLA referred to in Table 3, the Mayor should indicate:

a) What approximate level of funding will be available for each programme from April 2012; or

b) Whether the programme will cease to be funded beyond April 2012.

Promoting evaluation and good practice

- 5.17 The London Health Improvement Board could play a leading role in the evaluation of obesity interventions in London, and spreading good practice. There are numerous organisations in London – including boroughs and NHS commissioners – that implement obesity interventions. In order to combat obesity most effectively these organisations need to know about the results of interventions elsewhere, whether in other parts of the city or outside London.
- 5.18 There are examples of boroughs making interventions that might be considered by others. For instance, several boroughs including Waltham Forest and Barking and Dagenham have introduced restrictions on new fast food outlets being opened near schools. The London Borough of Islington has introduced universal free school meals for nursery and primary children in the borough. In Tower Hamlets, a range of interventions have been introduced as part of the multi-faceted 'Healthy Borough' programme supported by central government. Rather than boroughs undertaking individual evaluations of these initiatives, the London Health Improvement Board could lead a London-wide evaluation, which compares results across all boroughs that have implemented particular interventions restrictions and compares them to those that have not.
- 5.19 Alongside the London Health Observatory, the Greater London Authority is well placed to support the evaluation of interventions and sharing of good practice. The GLA is set to become the only city-wide body with direct responsibility for public health, and the authority has considerable expertise in policy evaluation through the GLA Intelligence unit. The GLA also manages the London Datastore, a resource through which obesity-related data for London can be published.

Conclusion

- 5.20 Evaluation of obesity interventions and sharing good practice throughout the city are key elements of London's response to childhood obesity. This should happen through the London Health Improvement Board, with evaluation results presented to the Board and disseminated to member organisations. The GLA could deploy its resources and expertise to support this. This could help raise the quality of evaluation, and ensure all relevant organisations are aware of good practice in combating childhood obesity.
- 5.21 There are several schemes underway in London that appear to be potential candidates for an evaluation process led by the London Health Improvement Board. In particular, the measures being introduced by several boroughs to restrict new fast food outlets from being opened near schools could be evaluated on a London-wide basis and the results presented to other boroughs.

Recommendation 3

The Mayor should propose to the London Health Improvement Board that by April 2013 it develop processes for evaluating obesity interventions and sharing good practice among members. He should also make the expertise of the Greater London Authority available to the Board to support this work.

The first priority for this work should be to evaluate the effectiveness of measures being introduced by London boroughs to restrict new fast food outlets from being opened near schools.

The Mayor should write to the Committee by the end of July 2011 to set out what steps he will take via the London Health Improvement Board to implement this recommendation.

Appendix 1 The Mayor's Healthy Weight, Healthy Lives Taskforce

In 2008 a London Healthy Weight, Healthy Lives Taskforce was set up by the previous Mayor to identify priorities for inclusion in the Health Inequalities Strategy (HIS), based on the content of the national obesity strategy.⁷³ It published an action plan in January 2009. Some, but not all of the taskforce's recommendations were included in the Mayor's subsequent Health Inequalities Strategy.

Children: healthy growth and healthy weight

1. The Mayor should encourage the Mayor's Fund for London to support health promoting and especially targeted healthy weight projects.

2. The Mayor should work with the Regional Public Health Group and other partners to make City Hall and other Greater London Authority group premises 'breastfeeding friendly', and to build on previous work to make London's transport system more 'breastfeeding friendly'.

Promoting healthier food choices

3. The Mayor should work with local authorities, the food industry and the Food Standards Agency to establish calorie labeling on restaurant menus and on signage within takeaway outlets across London.

4. The Mayor should require that urban food-growing projects supported by Capital Growth funding offer complementary healthy eating and cooking courses. He should encourage local health partners to support these initiatives by providing advice on healthy eating and nutrition to project organisers.

Building physical activity into our lives

5. The Mayor should work with the London Parks and Green Spaces Forum and Natural England to develop a standard to measure and capture the health benefits of parks, to complement the Green Flag Scheme. He should also encourage London boroughs to recognise within their Local Area Agreements, the contribution that wellmanaged parks and green spaces can make towards delivering on health targets.

6. The Mayor should encourage TfL, Natural England and other partners to build on walking initiatives targeted at groups that have

⁷³ *The Mayor's Healthy Weight, Healthy Lives Action Plan for London;* Greater London Authority, 2009

high levels of obesity. The Mayor should also work with London boroughs, PCTs and other partners to ensure that every borough has a dedicated officer who promotes walking and is linked into the PCT and local service user groups.

7. The Mayor should ensure that his Legacy Action Plan for Sport includes objectives to increase physical activity in London, particularly among those who are currently relatively inactive. The Mayor should also challenge the NHS in London to match his investment in sport with a similar investment in physical activity, especially for young Londoners and in areas with high levels of obesity.

Creating incentives for better health

8. The London Development Agency should build on its current programmes to support small to medium sized businesses to promote health and healthy lifestyles among their employees.

9. The Mayor should work with the government of another world city such as New York to develop an intercity healthy weight 'challenge' where the city populations 'compete' in mass participation sport and physical activity events.

Personalised advice and support

10. The Mayor should encourage London boroughs to carry out community-based audits of local health promotion activities and produce a resource so that health care professionals can raise awareness of these activities to their patients.

11. The Mayor should challenge all PCTs in London to regularly feedback National Child Measurement Programme results to parents, or at least pilot the approach in 2008/09, as a way to engage parents about healthy living and signposting local services and programmes to support them and their families to eat healthy and be more active.

Overall recommendation: Change for Life

12. The Mayor should fully support the national social marketing programme for obesity – Change4Life. Additionally he should challenge all London boroughs, PCTs and others to play a full part in the campaign.

The members of the Taskforce were:

Tony Armstrong	Chief Executive, Living Streets
Alex Bax (Chair)	Senior Policy Advisor – Health & Sustainable Development, GLA
Dr William Bird	Strategic Health Advisor & GP, Natural England
Peter Bishop	Director of Design for London
Caroline Boswell	Team Leader of the Children & Young People's Unit, GLA
Dr Will Cavendish	Director of Health & Wellbeing, Department of Health
Rob Coward (administration)	Senior Co-ordinator (Administration & Communications), GLA
Donna Cullen	Tottenham Hotspur FC
Dr Penny Gibson	Paediatric Specialist, Royal College of Paediatrics & Child Health
Gulnar Hasnain	Head of Health and Sustainability, LDA
Sean Holt	Director, Sport England
Hilary McCollum	Director of Social Policy & Grants, London Councils
Ben Plowden	Director, Smarter Travel Unit, TfL
Elaine Seagriff	Head of Strategy & Policy, TfL
Valerie Solomon	Health & Social Care Policy Officer, London Councils
Rebecca Smith	Senior Policy Officer – Health, GLA
Dr Simon Tanner	Regional Director of Public Health for London, NHS London & Health Advisor to the Mayor
Robert Whittaker	Deputy Director, London South Locality, Government Office for London

Appendix 2 Recommendations

Recommendation 1

The Mayor should build on the findings of this report by leading the development of a new obesity strategy for London by April 2013. The key element of London's strategy should be a commitment to support coordinated, multi-faceted obesity interventions, ensuring that actions taken to address one obesity-causing factor is not introduced in isolation from actions addressing other factors.

The strategy should be produced and agreed by the London Health Improvement Board. It would include a shared set of priorities, outcomes and actions between the Mayor, GLA Group, boroughs and other partners. It would set out what obesity interventions are recommended for implementation by different organisations:

- Interventions to be taken forward directly by the Mayor, through TfL, the London Food Board, the London Community Sports Board and the GLA's health, planning and environment teams.
- Interventions that are recommended for implementation by boroughs and NHS commissioners, subject to local priorities.
- Interventions that could be delivered by private and voluntary organisations.

In his position as chair, the Mayor should ask that the proposal for a London obesity strategy is discussed at the first meeting of the London Health Improvement Board.

The Mayor should write to the Committee by the end of July 2011 to indicate whether he agrees with our findings on the need for a coordinated approach to obesity based on multi-faceted interventions, and what steps he will take via the London Health Improvement Board to implement this recommendation.

Recommendation 2

Direct interventions by the Mayor are a key part of London's strategic response to childhood obesity. This will require continued funding via the GLA Group.

The Mayor should write to the Committee by the end of July 2011 to set out his expectations for future spending on obesity-reduction programmes. For each of the current programmes run by the London Food Board, London Community Sports Board, Transport for London and the GLA referred to in Table 3, the Mayor should indicate: a) What approximate level of funding will be available for each programme from April 2012; or

b) Whether the programme will cease to be funded beyond April 2012.

Recommendation 3

The Mayor should propose to the London Health Improvement Board that by April 2013 it develop processes for evaluating obesity interventions and sharing good practice among members. He should also make the expertise of the Greater London Authority available to the Board to support this work.

The first priority for this work should be to evaluate the effectiveness of measures being introduced by London boroughs to restrict new fast food outlets from being opened near schools.

The Mayor should write to the Committee by the end of July 2011 to set out what steps he will take via the London Health Improvement Board to implement this recommendation.

Appendix 3 Views and information

The Committee held a public meeting as part of this investigation on 3 November 2010 with the following guests:

- Pamela Chesters, Mayoral Adviser on Health and Youth Opportunities
- Rosie Boycott, Chair of London Food Board
- Kate Hoey MP, Mayor's Sports Commissioner
- Paul Sacher, MEND and University College London
- Kimberly Libman, City University New York
- Andrew Emmerson, Domino's Pizza Group

Minutes and transcripts of this meeting are available on request and can also be found on the London Assembly website via: http://www.london.gov.uk/moderngov/ieListDocuments.aspx?Cld=14 8&MId=4172&Ver=4

The Committee received written submissions from the following individuals and organisations:

- Rosie Boycott, Chair of London Food Board
- Pamela Chesters, Mayoral Adviser on Health and Youth Opportunities
- Child Growth Foundation
- Children's Food Campaign
- Coca-Cola Great Britain
- Daniel Cohen, London Metropolitan University
- Living Streets
- London Borough of Camden and NHS Camden
- London Borough of Croydon and NHS Croydon
- London Borough of Havering and NHS Havering
- London Borough of Lewisham and NHS Lewisham
- · London Borough of Islington and NHS Islington
- · London Borough of Tower Hamlets and NHS Tower Hamlets
- London Play
- London Youth
- Mars Chocolate UK
- McDonald's Restaurants
- MEND
- National Heart Forum
- NHS Bromley
- NHS Confederation
- NHS Haringey

- NHS Kensington and Chelsea
- NHS Kingston
- NHS London
- NHS Sutton and Merton
- NHS Waltham Forest
- NHS Wandsworth
- Professor Eileen O'Keefe, London Metropolitan University
- Sainsbury's
- School Food Trust
- Southwark Healthy Weight Steering Group
- Sustrans
- Transport for London
- Well London
- · Westminster Healthy Schools/Pupil Wellbeing team

Copies of written submissions are available on request and can also be found on the London Assembly website via: http://www.london.gov.uk/who-runs-london/the-londonassembly/publications/health

Appendix 4 Orders and translations

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