Careless EATING

COSTS LIVES

MATT JAMES • CAIL BEER

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2020health
MAKING HEALTH PERSONAL

ABSugar

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Foreword

As we reflect this year upon the First World War centenary and the sacrifice of those who gave their lives for our freedom, it's timely to think about some of the wider social implications of wartime life.

With food in short supply, rationing was commonplace and making foodstuffs go further was a daily challenge for many households. We can infer from history that the general focus was on getting a balanced diet and equality of access to nutrition. During the interwar period counting calories was not the main aim but rather developing a holistic perspective which saw weight loss as part of a wider transformation in lifestyle (Zweiniger-Bargielowska 2010). Self-discipline and moderation were the buzz words of the day.

The war years brought much grief and loss along with physical hardship, but the health challenges were infectious diseases and trauma, not the 'obesity epidemic' which faces us today. To quote social commentator Alvin Toffler, "If we do not learn from history, we shall be compelled to relive it. True. But if we do not change the future, we shall be compelled to endure it". So what might we learn from the past in order to address the challenge of obesity?

The post-war era has seen a global food system emerge which affords us a grand array of food choices that are highly processed, more affordable and persuasively marketed. In parallel to this, we live an increasingly sedentary lifestyle enabled by transport, technology and a move from rural to urban habitat. Convenience, excess, wealth, changing family lifestyles and media have all played their part in turning us into the fat man of Europe. Whilst various initiatives have sought to reduce the nation's waistband, the core issue remains that today people are generally consuming too much of everything. To adapt a familiar wartime slogan, careless eating cost lives.

As this report demonstrates there is no magic pill which will help provide the cure. There are a whole range of factors which need to be considered. It is a complex issue because it underpins not only what we eat but how we live our daily lives, the environment and the way in which we live and work and how we feel about ourselves. The report's findings indicate that much like wartime Britain, we need to once again adopt a holistic, 'health in the round' approach and that moderation at every level has to become fashionable again.

This project has aimed to start assessing what has been most effective, for whom, and where progress can be practically made in today's culture and environment, seeking to work out where personal responsibility ends and the state's role begins. Simply participating in a culture of blame is pointless.

During the course of this work we benefited from interviews and discussions with many of those working in this field. We would like to thank all those who contributed to this piece of work, and in particular we would like to thank our steering group for their advice and support throughout the project.

This report was funded by an unrestricted educational grant from AB Sugar. We are indebted to AB Sugar for their support and for their willingness to engage on this topic and accept where the evidence leads. As well as driving our ongoing work, involving frontline professionals in policy development, sponsorship enables us to communicate with and involve officials and policymakers in the work that we do. Involvement in the work of 2020health is never conditional on being a sponsor.

Julia Manning
Chief Executive
2020health

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Executive summary

Obesity is a problem of modern society. Statistics have been collected only in the last 50 years, but within this relatively short time frame obesity has escalated into a global pandemic.

A recent report by the World Health Organization (WHO) stated that the UK is facing a "public health time bomb" with obesity rates in the UK, "just about the worst in Europe" (Collins 2013). This time bomb poses a significant threat to individuals and communities, to national economies and has a significant impact on society as a whole.

The Labour Government's seminal Foresight Report into obesity published in 2008 stated that almost half of the UK population could be obese by 2050, and that the total cost of it could reach £50 billion a year. Seven years on from the report there are mounting concerns that the situation could be even worse with figures exceeding the predicted levels for 2050 (National Obesity Forum 2014).

A variety of attempts have been made to tackle the issue by focusing on the population's intake of energy dense, high calorie ingredients such as fat, sugar and alcohol. The Government's Scientific Advisory Committee on Nutrition (SACN) recommended a reduction in the daily energy intake from sugar; echoing similar advice by the WHO. Yet the problem really lies with people consuming too much of everything, and as this report demonstrates, there is no single cause for the observed rise in obesity.

Changing people's behaviour is a huge challenge. This report examines initiatives which have been explored – from consumer education through to legislative initiatives – in an attempt to address this challenge given the world in which we live in today.

The empirical evidence shows that simply "pushing" and legislating has not worked particularly effectively to date. However it is essential that further action should be mandated in conjunction with "nudging" appropriately in a variety of ways.

There is the imperative of coordinating and integrating a national public health strategy rather than merely having individual strategies for alcoholism, smoking cessation, obesity and vaccination. Learning from each, and tackling behaviours and the underlying causes in the round is vital.

A formal, national, multi-departmental framework is imperative to ensure that obesity receives priority and sufficient funding as well as the focus and support necessary to make fundamental change.

Obesity is more than just a physical issue to be addressed by the latest recommended diet. It is much more complex because it underpins how we live our daily lives, the environment in which we live and work and how we feel about ourselves. It is only when the bigger picture is taken into consideration and a wide range of organisations and individuals become involved, that we will really begin to address the obesity challenge.

The research demonstrates that a strategic approach and determined government action is needed if the obesity problem is to be solved. Simply targeting one ingredient or one cause or proffering one solution - educate or regulate - will not make people lose weight.

Executive summary

This report along with others recognises that this is the start of the journey of tackling obesity.

Recommendation	Action taken by
Introduce tax incentives for larger businesses to make wellbeing provision (such as access to occupational health, nutritionist, gym facilities) available to smaller local businesses.	Treasury
Introduce licensing for fast food outlets to control the location and numbers of outlets in a local community.	Local government planning departments Health & Wellbeing Boards
Mandatory for all Health and Wellbeing Boards to have professional representation of a nutritionist or obesity specialist. Boards to back up this broad level of representation by hard specifications in their Joint Strategic Needs Assessment (JSNA) that help form effective strategies to tackle obesity.	Local authorities Department for Communities and Local Government
Recognising the positive response to the Responsibility Deal Government should require all companies to follow the excellent example of participants. The Responsibility Deal to turn into a legislative framework which is phased in over the next 5-10 years.	Department of Health
Introduce guidelines for food retailers on creating a healthy supermarket environment. This to cover display of unhealthy and fresh foods within the store and the positioning of in-store promotions. Compliance should be on public display.	Public Health England Supermarkets
Requirement for all schools to have a meaningful holistic strategy for health and wellbeing with rigorous criteria for assessment.	Department for Education
Practical cookery skills and clear food education to be a compulsory part of the school curriculum for pupils up to the end of key stage 3 (age 14).	Department for Education School Food Plan Children's Food Trust
Clear disclosure of calories per items on restaurant and cafe menus which adhere to a defined standard for font size, formatting, contrast and layout of menus.	Department of Health
A mandatory universal system of food labelling which provides clear and consistent information on the nutritional content of food. This to be supported by a national media campaign.	Food Standards Agency Department of Health Department for Food, Environment and Rural Affairs

Executive summary

Recommendation	Action taken by
The ban on advertising of unhealthy foods aimed at children should be extended to daytime television, applying from 7am to 9pm.	OfCom
A review needs to be undertaken of the economic and societal impacts of a hypothecated tax on a range of food and drink contents at levels which are deemed harmful to health.	Treasury Department for Business, Innovation & Skills (BIS)
Increase awareness, coordination and reach of the Government's 'Healthy Start' Voucher scheme. Extend voucher scheme to incentivise those who become active partners in their health by quitting smoking, reducing weight, walking a set number of steps etc.	NHS England and HM Treasury
Commission a health education and prevention strategy which covers all stages of life.	Department of Health Public Health England
Establish a cross departmental permanent government task force on obesity. This supports similar recommendations made by other health organisations (cf. BBC News Online 2014).	Cabinet Office
All new policies to be reviewed and assessed against an 'obesity test'.	Central government Department of Health
Improved screening and normalisation of discussion about diet and weight at medical appointments.	Department of Health Royal Colleges
Curriculum reviews of healthcare professionals in light of nutrition and health with a focus on prevention.	Royal Colleges Department of Health Department for Business, Innovation & Skills (BIS)

1. Introduction

1.1 Background

Overeating and poor diet. Lack of health literacy. Not enough time for exercise and a rise in sedentary lifestyles. These are just some of the reasons often cited for the rise in the obesity 'epidemic'. It is clear from the statistics that England's obesity issue shows no sign of abating.

- The proportion of adults with a normal Body Mass Index (BMI) decreased between 1993 and 2012 from 41.0 per cent to 32.1 per cent among men and from 49.5 per cent to 40.6 per cent among women (HSCIC 2014).

- There was a marked increase in the proportion of adults that were obese between 1993 and 2012 from 13.2 per cent to 24.4 per cent among men and from 16.4 per cent to 25.1 per cent among women (HSCIC 2014).

- For the first time ever since records began life expectancy may actually be about to fall. Moderate obesity cuts life expectancy by two to four years and severe obesity could wipe an entire decade off your life (Lancet 2009).

- The National Health Service is spending £5 billion a year treating various consequences of obesity, including heart attacks, strokes, diabetes, cancer and hip and knee joint replacements. Estimates predict that it will reach £15 billion within a few decades.

- Worldwide obesity has nearly doubled since 1980 (European Association for the Study of Obesity 2014).

The Labour Government's seminal Foresight Report into obesity published in 2008 stated that almost half of the UK population could be obese by 2050, and that the total cost of this problem could reach £50 billion a year. Seven years on from the report there are mounting concerns that the situation could be even worse with figures exceeding the predicted levels for 2050 (National Obesity Forum 2014).

A recent report by the World Health Organization (WHO) stated that the UK is facing a "public health time bomb" with obesity rates in the UK, "just about the worst in Europe" (Collins 2013). This time bomb poses a significant threat on several different fronts: individual and community health as well as financial implications and impact on society as a whole.

Research to date indicates levels of obesity are growing in a population which is health illiterate and unable to make healthy and nutritious choices. While messages on eating less and exercising more have been consistent, they have not been effective.

36 percent of adults participate in 30 minutes of moderate physical activity once a week. Other findings showed that only 29 percent of women and 24 percent of men consume five portions of fruit and vegetables a day – the figures for children are less than 20 percent.

Changing people's behaviour is a huge challenge, and realism is required rather than knee-jerk "banning" responses. There is also an ongoing debate around the virtue of "pushing" rather

1. Introduction

than "nudging". Numerous research papers have explored what constitutes a healthy diet, describing "good foods" and "bad foods" and detailing the effects they have. Yet despite all this, many people are still confused about healthy eating.

Regulation and legislation have an important role to play but what is also crucial is facilitating behavioural change. Ensuring the right mix of interventions are directed to the right people, at the right time in the right place requires careful, coordinated and strategic planning. In order to move forward we need to know what has been most effective for whom, and where progress can be practically made in today's culture and environment.

The objective of this project was to examine the role that education and regulation should and could play in tackling the obesity epidemic. Two key areas were explored:

- Consumer education and information - how can consumers' understanding of the benefits of healthy eating and exercise be improved?

- Legislation - what role is there for legislation and regulation in these choices? Where does personal responsibility end and the state's role begin? Are there legislative proposals that are acceptable and workable?

1.2 Methodology

A selection of research methods were employed to gather evidence and perspectives for the project. The work was undertaken between April and July 2014 and consisted of four key strands:

- **Desk-based literature review and research** – Reviewing and evaluating the development of various European and international responses to tackling obesity through both regulatory and education interventions.

- **Series of expert telephone interviews** – In-depth telephone interviews were conducted with 14 key stakeholders from across the UK. Participants included public policy experts, academics, nutritionists, industry representatives and healthcare professionals. A semi-structured schedule was used to establish a basic interview framework, whilst also allowing opportunities for respondents to explore specific issues in depth, drawing upon their areas of expertise and experience. Interviewees were assured that their comments would be unattributable and were encouraged to offer their personal opinions.

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The interviews prompted thoughts and opinions on the following issues:

a) Health literacy levels in England

b) Public health education strategy and responsibility

c) Educating young people

d) Making the most of new technologies to empower and educate

e) The effectiveness and limitations of regulation in tackling obesity

f) How best to go about devising a regulatory strategy to address obesity

g) Successful models and initiatives from which to learn

h) Behaviour change and promoting healthy choices as a default

i) Exploring what success looks like for the UK in responding to the challenge of obesity.

- **Polling** – ComRes interviewed 2,039 adults in Great Britain online between 6th and 8th June 2014. Data were weighted to be representative of all adults in Great Britain aged 18+. Five questions were posed which covered the themes of healthy eating, behaviour and the role and responsibilities that individuals, government and the food and drink industry should have in helping to shape healthy choices.

- **A roundtable discussion** – This discussion was convened to gather different perspectives on how the challenge of obesity should be tackled in order to build real traction for the future and see improvement in the nation's health. With a variety of key stakeholders in attendance (including academics, third sector, healthcare, public policy and industry) space was given for open dialogue and the exchange of ideas and opinions.

The research was supported by an external steering group of unpaid experts. 2020health discussed the emerging themes, findings and recommendations from the research with these experts.

2. The evolution of the western diet

2.1 Historical context

The western diet differs from the conditions under which human metabolic physiology evolved (Pontzer et al 2012). A hallmark of human evolution is the ability to find food in almost any environment and improve the efficiency with which it is extracted (Leonard 2014). Human husbandry, agriculture, urbanisation and globalisation have occurred within the last 10,000 years with increasing rapidity in the last 70. Human evolution now cannot keep up with its rapidly changing environment. We observe major clashes between human biology and modern society (Popkin et al 2011). The evolutionary collision of the human genome with the nutritional qualities of recently introduced foods and a society in which technology caters to our every need could account for the obesity epidemic and the lifestyle diseases of society (Cordain et al 2005).

Table 1 below depicts our integral biological preferences and the technological processes by which they are catered for.

Table 1

Biology	Technology
Sweet preference	Cheap calorific sweeteners
Unlinked thirst and hunger satiety mechanisms	Calorific beverage revolution
Fatty food preference	High yield oil seeds Edible oil revolution Inexpensive oil extraction
Desire to eliminate exertion	Technological processes in all stages of movement and exertion

(adapted from Popkin et al 2011)

Today we see a global food system producing more processed, affordable, effectively marketed and varied food than ever before (Swinburn et al, 2011). It is therefore understandable how human biology and its lack of adaption, coupled with our more sedentary lifestyles and an excessive and highly calorific food supply has resulted in obesity.

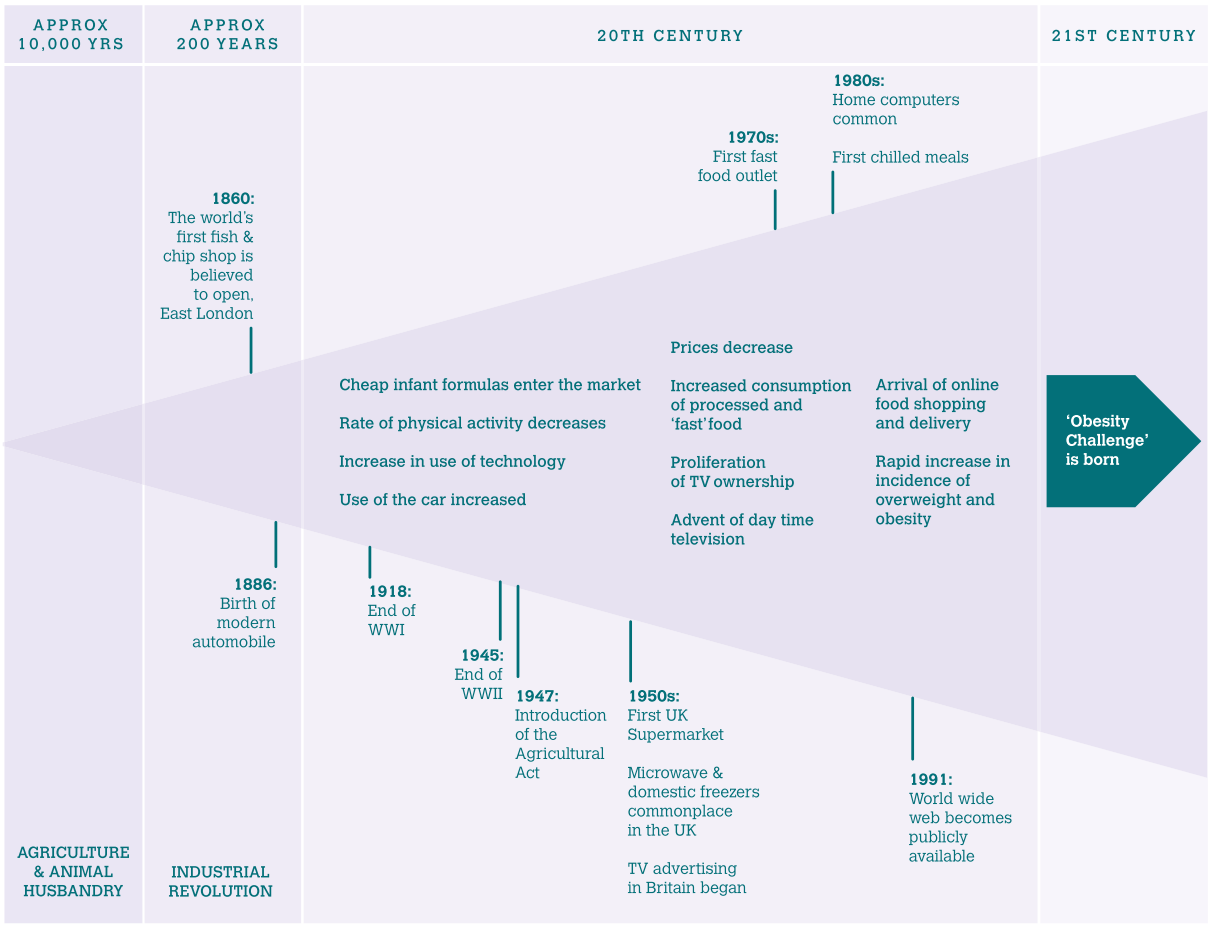
2.2 'Normalisation' of obesity

In recent years, Britain has become a nation in which overweight is the 'norm' (Government Office for Science 2007). 52 percent of males and 30 percent of females who are overweight believe that they are in fact of 'healthy' weight. Overweight and obesity are grossly underestimated by society (Gander 2014). The predicament posed by the 'normalisation of obesity' is that if 'everyone' is overweight or obese, people are less likely to see the need to make changes. Because knowledge and attitudes of the individual are key influences on food choice and physical activity (Fitzgerald & Spaccarotella 2009), people need to recognise themselves as overweight or obese

2. The evolution of the western diet

to be motivated to make change. People need to believe that change is important and that the benefits of doing so outweigh the cost (Roberts et al 2011).

Figure 1 - Key milestones



3. Barriers and drivers to healthy eating and physical activity

Analysing the drivers and obstacles to healthy eating and physical activity raises two questions:

- Where does information on diet and exercise come from?
- And, from whom should it come?

In order to answer these questions and facilitate effective provision of information and education, it is important to first understand to whom consumers and the public listen for advice on health and well-being. Even with access to the best evidence-based advice, society is faced with an obesogenic environment that directly contradicts good messages on healthy eating and being physically active (BBC News Magazine Monitor 2014). Education alone is not a good motivator for change. In order to manage appropriately the obesity epidemic, we must also understand key factors that moderate behaviour.

3.1 Barriers

The barriers to good nutrition are multifaceted. By using an ecological framework, it is possible to categorise and examine the key influences that impact healthy eating and physical activity levels of individuals and populations. The barriers exist at intrapersonal, interpersonal, community, institution and public policy levels (Fitzgerald & Spaccarotella 2009).

3.1.1. Intrapersonal

Intrapersonal barriers are an individual's knowledge, attitudes, beliefs, health literacy and personal preference (i.e. food and flavour). The WHO defines health literacy as "the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain health" (WHO 2009). In order for individuals to change their behaviours they have to believe that they need to change, that the change is possible and that the benefits of doing so outweigh the cost of not initiating new practices (Roberts et al 2011).

The most commonly cited barriers to change according to a publication by the National Obesity Observatory (2011) were:

- time constraints
- inadequate cooking skills
- belief that their diet was healthy and participation in physical activity adequate
- lack of will power
- cost
- confusion

3. Barriers and drivers to healthy eating and physical activity

Such confusion about health eating is the product of overwhelming exposure to information, much of which may appear to be contradictory. The Health Survey for England 2007 reported that 30 percent of men and 24 percent of women 'feel confused about what's healthy and what's not'. 71 percent of males and 72 percent of females said they had 'very healthy diets' despite average fruit and vegetable consumption being below the recommended 5-a-day for both men and women across all ages (Craig & Shelton 2007).

There is also research to suggest that personal beliefs surrounding the cause of obesity can impact BMI (Archer 2013). Food eaten is a far more significant determinant of weight than physical activity and moving around (BBC News Magazine Monitor 2014). A recent international study determined that people believe either poor diet OR lack of exercise are the main contributors to weight gain. Those who perceive diet to be the main contributor typically have a lower BMI (Archer 2013) whereas those who perceive physical activity to be more important to weight loss and obesity prevention were more likely to have a higher BMI. It is hypothesised that individuals who place onus on physical activity might consume excess calories post work out, or overestimate energy burned during exercise (Archer 2013).

3.1.2. Interpersonal

Interpersonal barriers involve primary social relationships i.e. those with friends, families and co-workers (Fitzgerald & Spaccarotella 2009). It has been said that obesity is 'contagious' (Christakis & Fowler 2007) and evidence of this is seen in families and social circles. Primary social relationships are also critical in shaping childhood health behaviours and reducing the obesity risk.

Many adult diseases have their origin in childhood, including obesity (St Onge et al 2003). This is a time when food preferences and habits and attitudes towards food are formed. Overweight and obese children are likely to stay obese into and throughout adulthood and develop lifestyle related diseases at a younger age (WHO 2014). Children raised in homes in which both parents are overweight or obese are significantly more likely to be so themselves (Health Protection Agency 2009). Families shape eating habits and food provision (Holsten et al 2012).

These behaviours are influenced even before a child is born, as the impact of poor maternal nutrition on the health of children is considerable (Health Protection Agency 2009). Excess maternal weight or excess weight gain during pregnancy is linked with increased risk of childhood obesity (Kmietowicz 2013). The recommended levels of weight gain are as follows:

- underweight women: 12.5-18kg
- normal weight women: 11.5-16kg
- overweight women: 7-11.5kg
- obese women: 5-9kg

Most women exceed these recommendations for gestational weight gain (GWG) (McDonald et al 2013).

3. Barriers and drivers to healthy eating and physical activity

The choice of mothers to breastfeed can also impact on childhood obesity rates. Breastfeeding is associated with decreased risk of future overweight and obesity. The opposite is true of formula feeding (Taveras et al 2004 & Koletzko et al 2009), which can remove an infant's ability to self-regulate, thus overriding the natural satiety mechanisms they are born with. This is associated with defective self-regulation of energy intake among children (Yin et al 2014). Three meta-analyses of observational studies have demonstrated that obesity risk of school-aged children is reduced by up to 25 per cent when babies are breast fed compared to being formula fed (Koletzko et al 2009).

Socialising with friends and contacts can be a barrier to good nutrition. People tend to emulate the amount of foods eaten by others at social occasions (Salvy et al 2007), causing individuals to overeat. Restaurants and fast food are often associated with friendship, pleasure and socialisation (Fitzgerald & Spaccarotella 2009) giving them intrinsic reward value. Restaurant meals can have up 65 per cent more energy than home cooked alternatives (Prentice & Jebb 2003). People who have a friend who is obese are 57 per cent more likely to become obese themselves (Christakis & Fowler 2007).

Isolation and living alone can also have a significant impact upon a person's health and wellbeing. Research data indicates that people over 50 who are single, widowed or divorced eat less healthily than those with partners. Men, people who live alone and those who are socially isolated are most likely to eat a diet with little variety (Conklin 2011; 2013).

3.1.3. Community/Institution

Changes in the global food system, including reduced time-cost of food, changes to local environments and increased automation of labour at home and in the workplace contribute to the obesogenic environment (Swinburn et al 2013). An obesogenic environment is an environment which encourages unhealthy eating and insufficient physical activity. Contributing factors are high density of fast food outlets, restaurants and vending machines, and environments that discourage movement, e.g. either by making walking difficult (encouraging car use) or buildings where lifts are prominent and stairs are hidden (BBC News Magazine Monitor 2014).

The link between 'fast food' consumption and weight gain is well known. The characteristics of the neighbourhoods in which people live can encourage weight gain (Pruncho et al, 2014). Increased density of fast food outlets in communities is associated with unhealthier lifestyles, poor psychosocial profiles and increased risk of obesity (Li et al, 2009). This tends to be true of low socio-economic areas, supporting the socio-economic paradigm of obesity as a 'poor person's disease'.

Time constraints are also associated with poor dietary choices. An example of this is the rise in the number of double income families in which the wife and or mother (historically the person responsible for preparing food) works outside the home (Peacock 2012). The food industry has responded with increased production of convenience and processed food (St Onge et al 2003).

Poor diet is associated with low income. The poorer people are, the lower their diet quality (Faculty of Public Health). Obesity incidence in England is associated with measures of socio-economic position as obesity incidence increases in deprived areas (Roberts et al 2013).

3. Barriers and drivers to healthy eating and physical activity

For many adults in the UK, the workplace is where a large part of their time is spent. Work places are important sites for promoting healthy behaviours (Lankford et al 2013). Conversely, they can also foster behaviours that encourage obesity. In industrial settings, economic, industrial and technological innovation has resulted in fewer people working in primary industry and sedentary workplaces are more prolific due to automated labour saving devices in production industries (Anderson et al 2009). Shift work is an independent risk factor in increasing BMI (Morgan et al 2011). There is huge scope for effective work place add to combat obesity?

There is also a growing trend among larger businesses and corporations to take into consideration the health and wellbeing of their employees, recognising the impact of lifestyle and stress-related problems on productivity. Multinationals such as Microsoft, Goldman Sachs and Deutsche Bank are among a rising number of corporates who are investing significantly in wellness interventions, such as onsite health camps, dental check-ups and body fat analysis tests for employees, placing increased value on the overall wellbeing of their employees as much as providing more curative interventions such as insurance cover and hospitalisation benefits (Bhattacharyya & Chaturvedi 2014). Organisational level interventions were also found to be more effective than individual level interventions (Cavill et al 2014).

Recommendation	Action taken by
Introduce tax incentives for larger businesses to make wellbeing provision (such as access to occupational health, nutritionist, gym facilities) available to smaller local businesses.	Treasury

Increasingly the built environment does not encourage or promote physical activity. While this is beginning to show signs of change, to date, design and planning have tended to encourage a reliance on the use of cars and have not prioritised large, open spaces or cycling and walking routes.

3.1.4. Public Policy

This ecological framework includes local, regional and national policies including those which impact on:

- access to healthy food choices;
- access to supermarkets;
- access to safe outdoor spaces;
- access to community support and medical services;
- fast food outlet density.

3. Barriers and drivers to healthy eating and physical activity

In neighbourhoods with a high density of of fast food outlets (Li et al 2009 & Pruchno et al 2014), there is a direct correlation with an increase in consumption of processed food (St Onge et al 2003). The location of fast food outlets close to schools and more deprived areas only compounds the problem.

Over recent years a renewed emphasis has been placed upon planning authorities to consider the impact of the built environment on health issues, including obesity. As part of the previous Government's Healthy Weight, Healthy Lives strategy local authorities were called upon to use their existing planning powers to control more carefully the number and location of fast-food outlets in their local areas. The subsequent Public Health White Paper published in 2010, Healthy Lives, Healthy People, continues this theme, recognising that "health considerations are an important part of planning policy". Nevertheless, many authorities do not appear to take this remit seriously enough. The Marmot Review (2010) identified a lack of attention to health issues in planning authorities.

In Tower Hamlets, one of the most deprived boroughs in England, it was found that one in five children (20 percent) were obese and a third overweight. Research carried out for the local council found that not surprisingly, 97 percent of Tower Hamlets residents live within ten minutes of a fast food outlet (NHS Tower Hamlets 2011). This prompted the council to commission the development of a management framework for managing the number and location of hot food takeaways.

In Birmingham, the city council has limited the number of fast food outlets to less than 10 percent of units in any shopping centre.

A licensing procedure should be introduced to control the location of fast food outlets in a local community. As part of this licensing procedure, a health impact and assessment should be made a core component of the development process for town planning. The assessment should include a) assessing the concentration of/proximity to fast food outlets in relation to proximity to schools, youth clubs and leisure facilities based on actual walking distance b) requirements for developers to create parks and open spaces for recreational programs.

Recommendation	Action taken by
Introduce licensing for fast food outlets to control the location and number of outlets in a local community.	Local government planning departments Health & Wellbeing Boards

3. Barriers and drivers to healthy eating and physical activity

3.1.5 The role of Health and Wellbeing Boards

This indicates the need to harness effectively the role of local Health and Wellbeing Boards (HWBs) as part of the local government apparatus. The role of HWBs is to bring together key leaders from the health and care systems to work together to improve the health and wellbeing of local populations and to reduce health inequalities. It is crucial that any strategies for tackling obesity which take place at the local level need to be aligned with the new NHS structure in England to ensure effective integration.

With their mandate to improve the health and wellbeing of their local population and to inform and shape decision making locally, HWBs will need to have the resources and skills (including mandatory nutritionists, public health experts or obesity specialists) and resources (including leadership) to drive change by implementing effective strategies to tackle local obesity and public health problems.

Recommendation	Action taken by
Mandatory for all Health and Wellbeing Boards to have professional representation of a nutritionist or obesity specialist. Boards to back up this broad level of representation by hard specifications in their Joint Strategic Needs Assessment (JSNA) that help form effective strategies to tackle obesity.	Local authorities Department for Communities and Local Government

3.2 Drivers

It is apparent that there are challenges to the drivers of healthy eating and physical activity and the aforementioned obstacles must be addressed. Part of the challenge lies in the fact that there are numerous people and organisations involved, as summarised in Table 2 (page 21).

3.2.1. Government and public policy

Interventions involving multiple strategies (capacity building, policy and workforce development) applied across multiple settings (early childcare, education, workplaces and other community settings) are most likely to be effective in preventing unhealthy weight gain in children and adults. Successful government and public policy requires a coherent cross-governmental approach and collaboration between all government departments.

The National Institute for Health and Care Excellence (NICE) is a non-departmental public body of the Department of Health in the United Kingdom. NICE endeavours to provide a national, cross-departmental approach to obesity management and prevention from a public health perspective. Their 2006 report 'Guidance on the prevention of overweight and obesity in adults and children' identifies the key responsibilities of the major players in driving improvements in healthy eating and physical activity.

3. Barriers and drivers to healthy eating and physical activity

Statistics suggest that 48 per cent of people make healthy lifestyle choices due to ill health, 37 per cent respond to medical advice and 38 per cent attribute change to personal motivation (National Obesity Observatory, 2011).

3.2.2 The role of public health

All populations and sub-populations are entitled to good standards of public health practice. The Faculty of Public Health (2010) defines public health as 'The science and art of promoting and protecting health and well-being, preventing ill health and prolonging life through the organised efforts of society'. The Faculty identify three domains of public health practice (health improvement, improving services and health protection). The role that public health plays in addressing the obesity epidemic specifically utilises the domains of health improvement and improving services.

Health improvement
This aims to ascertain the environmental, social and economic effectors on health to assist people to lead healthy lives. The key areas relevant to reducing the prevalence of obesity are:

- reducing heath inequality
- improving education and health literacy
- improving lifestyle behaviours

Improving services
These services aim to ensure that service providers and health services meet the health needs of populations and the solutions are appropriate, adequate, effective, accessible and affordable. The key areas relevant to reducing the prevalence of obesity are:

- improving clinical effectiveness
- improving efficiency of service provision
- improving service planning
- striving for health equity

Tackling obesity is complex and requires action at every level, from the individual to society, and across all sectors. Public health is in a prime position to help develop co-ordinated action to tackle obesity across its various departments, services and partner organisations.

3. Barriers and drivers to healthy eating and physical activity

Table 2

Sector	Responsibilities
NHS	• Managers and health professionals in all primary care settings should make obesity management and prevention a priority
Local authorities and partners	• Work with local partners (industry and volunteer organisations) to create/manage safe places for planned and incidental exercise
Nurseries and child care facilities	• Minimise sedentary behaviour • Implement healthy catering

Schools	• Teachers, chair, governors, parents & pupils collaborate to create:
	  • Healthy spaces
	  • Healthy catering
	  • Healthy school travel plans
	  • Health focussed curriculum (PE and nutrition education)

Workplaces	• Support access to healthy food • Support healthy food choices • Promote active travel policies for staff • Encourage physical activity • Provide recreational facilities • Provide adequate breaks
Clinical care	• Provide multi-component weight management plans • Promote increased physical activity and diet modification • Promote behaviour change strategies

4. The role of legislation and regulation

Greater levels of information and education implemented through effective initiatives may be one way to transform behaviour. However, only providing information will not be sufficient to bring about the necessary changes in the behaviour of UK and European citizens (Hyde 2008).

Current thinking points to a need for better understanding of what the goals should be in order to assess how best to use and deploy a mix of tools available to bring about effective change. Lisa Te Morenga, a researcher in human nutrition at the University of Otago in New Zealand, reviewed the research on the relationship between sugar and body weight. She concluded that it wasn't necessarily eating too much of a particular food (fat, sugar and so forth) that was making us fat, but eating too much of everything (O'Callaghan 2014).

The way governments use laws and regulation in helping to respond to the challenge of obesity has become highly contentious. The battle tends to centre on political and ideological arguments which pit individual autonomy and the freedom of markets against public health and the common good. Evidence of past initiatives and interventions indicates that where appropriately implemented, legal tools do have a part to play in addressing public health problems such as smoking and drinking. As there have been calls recently to ban or tax sugary drinks, it appears that now is the time to open reasoned debate about the consumption of these drinks and the role legislation has in tackling obesity.

4.1 Definition and roles

Definitions:

- Legislation, specifically laws, are enacted by the legislature (Parliament, Congress or state legislature) and set out what must be done.

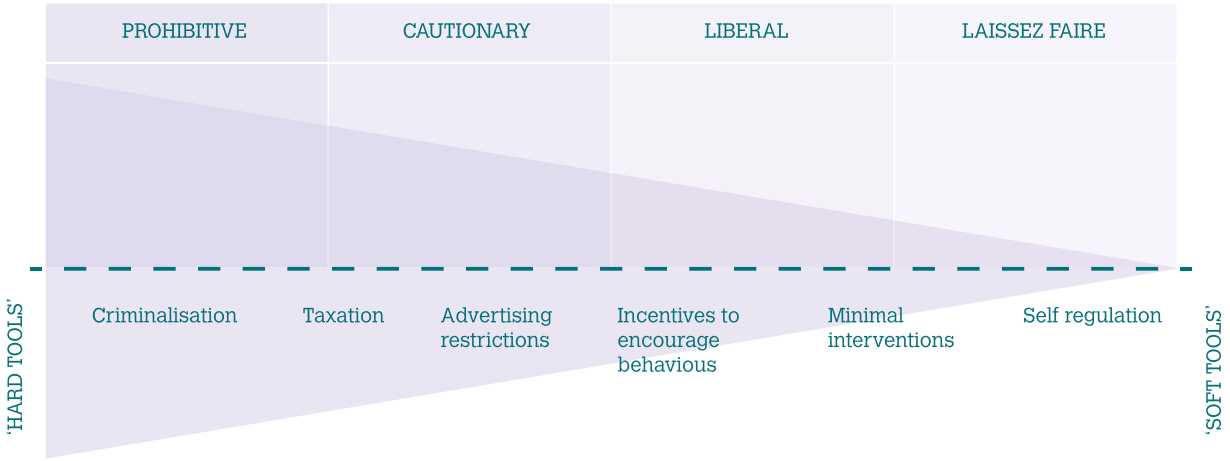
- Regulation carries out the intent of the laws. Regulations help to provide more detail and achieve the regulatory objectives set out in the legislation.

Laws have the ability to modify the social, economic and physical environment as well as influence and support behaviour change. Once the decision has been made to intervene legally, the key question for policy makers is what legal interventions are the most appropriate to achieve the desired goal (Bogart 2013:5).

There are many regulatory approaches ranging from 'hard tools' (eg prohibition by criminalising an activity) to 'soft tools' which constitute minimal intervention, eg the introduction of incentives to encourage or discourage certain behaviours, as shown in Figure 2.

4. The role of legislation and regulation

Figure 2



In seeking to achieve the best mix of regulatory approaches, it is important to remember that there are many forms of regulation in diverse settings. Legal regulation is one of many and is clearly an important one given the backing it carries with the power of the state (Bogart 2013: 6).

4.2 The voluntary approach

There is a general agreement that governments, industry and individuals need to work together to bring about lasting change.

The UK Food Standards Agency adopted the voluntary model when it introduced the salt reduction programme in 2003. It worked with the food industry to reformulate food products to contain lower levels of salt (NAO 2012) with the aim of reducing the population's salt intake to 6g a day. Generally the response to the voluntary programme was positive, with many commending it for its collaborative approach with industry. Calls have been made for a similar approach to sugar intake which could also be reduced slowly so people's taste receptors adjust to the taste of foods with less sugar.

In March 2011, salt reduction was set as a priority which formed one of the first pledges to be made under the coalition government's Public Health Responsibility Deal to which businesses were asked to sign up (NAO 2012: 19). A summary of key information concerning the Deal is given in Appendix 4. The Responsibility Deal reflected the coalition government's approach to working with industry and by the creation of voluntary agreements.

While the initiative had laudable aims and yielded some progress, e.g. salt reduction and calorie labelling in restaurants, the Responsibility Deal has been criticised for failing to tackle adequately the scale of the obesity challenge the country is facing. The pledge has been criticised as being too vague. This points to one of the perceived weaknesses of the project: despite drawing together

4. The role of legislation and regulation

the stakeholders, the reality of the deal meant that it focused on drafting only pledges that companies were willing to sign up to. Consequently, if there is a particular issue that the food and drink industry may wish to ignore it can easily do so. This has led some to comment that the Deal has not been handled well and industry has been given too much freedom to simply do as it pleases. The lack of an overarching and comprehensive strategy was not effective in tackling barriers to healthier eating.

Effective partnerships need to be built with the food industry to maximise the experience and insight the industry has in understanding the relationship between marketing and behavioural change. It is critical that the food industry is involved and not demonised. The Responsibility Deal has made a good start but this needs to be built upon and developed further into a clear legislative framework.

Recommendation	Action taken by
Recognising the positive response to the Responsibility Deal Government should require all companies to follow the excellent example of participants. The Responsibility Deal to turn into a legislative framework which is phased in over the next 5-10 years.	Department of Health

4.3 Assessing impact

The extent to which legal interventions are successful requires careful consideration. A recent report from the Institute of Medicine (IOM) in the United States stated that law and specifically public policy are "among the most powerful tools to improve population health". However, it is important to assess under what circumstances the law will have the most impact and attain the desired outcomes. Bogart suggests (2013: 8) thinking about impact as embracing three kinds of effects:

1. The extent to which it reflects some larger pattern of influence in society. The outcomes from legal interventions cannot be assessed purely in terms of the law's impact on society or vice versa, but rather about the way in which they interact with one another.

2. The extent to which there is compliance with the law. The most obvious way in which the law can be seen to have an impact is the extent to which it is complied with.

3. The extent to which a particular law, or set of laws, has on the underlying problem. It is this meaning of impact that most people refer to when they oppose or support implementation of a law.

It can be difficult to demonstrate that legal interventions alone are the reason for change occurring. There is undoubtedly a debate to be had on whether the law is the best way of dealing with the underlying problem. Different economic, social and political factors can also play a part in bringing about change, in addition to the law of unintended consequences.

4. The role of legislation and regulation

A recent World Cancer Research Fund report makes it clear that in order to be robust, the objectives of legislation and regulations should directly reflect the nature of the available evidence (2013:4). Based on that approach, public health and legal communities should then pursue collaboration using the best available evidence to help frame the objectives of the law and establish the legal basis for the action in question (World Cancer Research Fund International 2013: 4).

The IOM report proposes that "multiple, different and ongoing interventions are sometimes necessary to achieve a substantial and sustained effect on health outcomes and health behaviours" (IOM 2012). Likewise, the UK Government Office for Science's Foresight report concluded that tackling obesity effectively requires, cross-governmental action and long term commitment. Drawing parallels between the challenges of climate change and obesity, the report pointed to how measures to reduce traffic congestion, increase cycling or design sustainable communities could also benefit the obesity problem. There are also synergies with other policy goals such as increasing social inclusion and narrowing health inequalities, since the impact of obesity is greatest on the poorest (Government Office for Science 2007: 3).

A recent paper in The Lancet co-authored by the UK's Chief Medical Officer, furthered the debate about how a new wave of public health improvement might look. The premise of the paper was that population health improvement is conditional on a health-promoting societal context. Achievement of this ambition will require a positive, holistic, eclectic, and collaborative effort, involving three mechanisms for creating a culture in which healthy behaviours are the norm (Davies et al 2014):

1. maximise value of health and incentives for healthy behaviour

2. promote healthy choices as default

3. minimise factors that create a culture and environment which promote unhealthy behaviour

Clearly what is emerging is a belief that legal intervention does have a role to play in responding to the challenge of a rapidly obese population, but it is not the only option. The law does have the power to transform behaviour, but only when it is used appropriately.

5. Balancing education and personal responsibility with state intervention

One of the main barriers to dealing with the obesity is framing the problem as relevant to the individual (Mackay 2011: 898). People are obese as a consequence of poor choices, lack of self-restraint and in some cases, as a result of genetic factors. Consequently, the population is exhorted to exercise greater personal responsibility in their food choices. Individual liberty is championed and upheld. This approach denies the existence of 'good' and 'bad' foods and instead emphasises the importance of regular physical activity, and dietary moderation and balance.

Nevertheless, this response fails to give appropriate recognition to the role of the environment in influencing and constricting individual behaviour. This results in a conflict between preserving individual autonomy and upholding personal responsibility on the one hand, and protecting public health through government intervention on the other. What is certain is the need for careful negotiation between personal responsibility and state intervention.

Scholars describe the emergence of new governance which represents a shift in the paradigm of public programs, from a command and control approach that emphasises negotiation and persuasion (Bogart 2013; Salamon 2002). The tools themselves are not necessarily new but the ways in which they are being implemented are changing. Rather than the government commanding and controlling the regulatory regime, an openness to a variety of ways in which policy objectives are achieved is emerging which includes recognising and embracing the involvement of those subject to the regulation.

5.1 Importance of norms

One way in which to try to encourage this involvement has been to build upon the relationship between laws and norms. Talk of 'valuing social norms' and 'changing the social norm' seems to permeate conversation on matters of public health. But how do we perceive norms working in relation to legal intervention on consumption? Much is spoken about the relationship between the two but how can they really be used to positive and meaningful effect?

What is perceived to be 'normal' is closely associated with how people come to make decisions. There is a range of different factors which contribute to how people reach and arrive at a decision, particularly in terms of health-related behaviour. In modern societies, there is often a psychological conflict between what people want and their desire to be healthy (Government Office for Science 2007: 49). People continue to enjoy eating foods that are high in calories and find it difficult to exercise. Various factors, including habits, help to shape behaviour and decision-making, some of which are explored in Appendix 5.

People therefore have to be helped to train themselves to choose the more virtuous option. The 'Swap It Don't Stop It' campaign (run in the UK and Australia) builds on this kind of understanding. The campaign aims to empower the individual to make small, sustainable changes to diet and lifestyle that are easily implemented and remove feelings of deprivation. This positive approach underlying the phrase, 'you don't have to stop it, you just have to swap it' takes the 'can't' out of the equation.

5. Balancing education and personal responsibility with state intervention

Legal sanctions are perceived to have limited capacity in altering behaviour. Harnessing norms, existing or altered, to help achieve policy goals could help to establish more effective change. Consequently there is a case to be made for bringing law and prevailing norms together in a co-dependent relationship. Norms can help set the course for regulatory intervention. Strengthening norms can help pave the way to even more effective regulation and so the cycle continues. Getting this relationship right in relation to a specific policy goal can still prove challenging and complex. Some commentators point to the need to allow time for law and norms to interact first, to then see how co-dependency can be achieved (Bogart 2013: 24).

5.2 Giving a nudge

More understanding of how the relationship between laws and norms can be applied in various policy contexts has been the focus of recent work, giving rise to Thaler and Sunstein's 'nudge theory'. Their goal was to help people make better choices in a variety of areas without causing individuals to lose their right to choose. At the heart of their argument is that wiser choices are made when individuals are presented with a clear set of options that respond to various human idiosyncrasies" (Bogart 2013: 24). The wider context in which individuals make decisions is referred to as the 'choice architecture'. According to Thaler and Sunstein the 'nudge' is any aspect of that choice architecture that alters peoples' behaviour in a predictable way without forbidding any options or significantly changing their economic incentives (Thaler & Sunstein 2008).

There have been criticisms of Thaler and Sunstein's theory. Nevertheless, nudge theory makes a useful contribution to the ongoing process of improving understanding of how nuanced solutions are needed to respond to social problems.

Giving people a nudge in the right direction is a necessary part of a multifaceted strategy designed to elicit a specific response to a particular problem. There is a need to design policy with a twofold approach:

- understanding why people make bad choices
- normalise healthy choices so that they are easier to make

Rather than actually having a direct impact on personal choice, regulation frequently helps to change the culture in which decisions are made. Understanding the mechanism by which regulation works is therefore crucial in harnessing it effectively.

An example of this can be seen with smoking and the recent smoking ban in public places. Researchers estimated a 2.4 percent reduction in heart attack emergency admissions to hospital (or 1,200 fewer admissions) in the 12 months following the ban in 2007 (NHS Choices 2010). A review assessing the impact of the law five years on indicates benefits for health, along with changes in attitudes and behaviour. People are less likely to have stopped smoking for fear of prosecution than they are to have stopped because of the environmental and cultural change which the legislation introduced. Cultural attitudes shifted so that it became less publicly acceptable to smoke in public places.

5. Balancing education and personal responsibility with state intervention

The strategy of impulse marketing works on the basis of placing certain products in prominent locations within retail outlets, helping to increase sales up to five times, which leads to the consumption of foods high in sugar, fat, and salt and increases the risks of chronic diseases. Noting this chain of causation, Cohen argues that the prominent placement of foods associated with chronic diseases should be treated as a risk factor for those diseases (2012). Even when people are consciously trying to make healthy choices their ability to resist palatable foods in convenient locations wanes when they are distracted, are under stress, are tired, or have just made other decisions that deplete cognitive capacity (Cohen & Babey 2012).

Sufficient empirical research should be able to establish which marketing strategies are most hazardous to health and the magnitude of risk involved. Findings from this research should be used to inform and shape regulations on the design of supermarket retail environments.

Recommendation	Action taken by
Introduce guidelines for food retailers on creating a healthy supermarket environment. This to cover display of unhealthy and fresh foods within the store and the positioning of in-store promotions. Compliance should be on public display.	Public Health England Supermarkets

Whatever interventions are introduced, there remains a responsibility on individuals for their own health. ComRes polling demonstrated that parents and individuals see themselves as most responsible for ensuring that they are well informed about how to eat and drink more healthily. People may decide to eat more healthily and make changes for the better which can improve lifestyles. Legislation has a role to play in helping people to make those healthy choices.

6. International comparison

While there is no simple solution to tackling obesity, an effective strategy can be formulated from the experience and approach of other countries. For the purposes of this brief survey eight countries have been selected:

- Canada
- Denmark
- England
- France
- Mexico
- Japan
- Australia
- United States of America

The criteria for selection was based on ensuring a fair spread of countries from around the world with some distinctions in how they approach health, public health and education policy. Awareness of recent initiatives within these policy areas was also a factor considered in their selection. Table 3 provides a summary of these countries and their approaches to health, public health and education policy. This comparison table helps to provide a clearer understanding of the different approaches taken by each country whilst at the same time highlighting differences. There is a mix of private and public healthcare provision. In terms of public health provision, whilst there may be subtle differences all have some form of central control and regional administration hubs for local priorities.

Policy initiatives and targets, both past and present, aimed at addressing the obesity epidemic are the focus of the comparison table in Appendix 6. This comparison clearly indicates the range of interventions that can be applied to try and tackle this problem from population education, to taxation and advertising restrictions. Interestingly, it is noted that the UK is one of the few countries which who offer access to obesity drugs and surgery on the NHS.

For the remainder of this section, the following three general areas of interventions which the countries have adopted will be explored:

- healthy eating interventions
- advertising interventions
- fiscal interventions

The benefits and challenges associated with each of these three areas are summarised in the comparison table in Appendix 7. Brief case examples from across the eight countries are explored in relation to the three areas of interventions from which key learning is identified and conclusions drawn.

6. International comparison

Table 3

	HEALTH		
Country	Government role	Provider Ownership	
		Primary Care	Hospitals
Canada	Regionally administered universal public insurance program (Medicare)	Private	Mostly private not-for-profit or public; some private-for-profit
Denmark	National health service	Private	Almost all public

6. International comparison

Table 3 (continued)

Country	PUBLIC HEALTH	EDUCATION
Canada	Federal level, the Public Health Agency of Canada, established in 2004, is responsible for public health, emergency preparedness and response, and infectious and chronic disease control and prevention. Health Canada plays a role in promoting health, disease surveillance and control, food and drug safety, and the review of medical devices and technology. Provincial governments set province-wide priorities for population health, while health regions are responsible for establishing local priorities.	For the most part provided publicly, funded and overseen by federal, provincial, and local governments. Within provincial jurisdiction and the curriculum is overseen by the province. Divided into primary education, followed by secondary education and post-secondary. Under the ministry of education, there are district school boards administering the educational programs. Compulsory education up to the age of 16 in every province in Canada, except for Manitoba, Ontario and New Brunswick, where the compulsory age is 18, or as soon as a high school diploma has been achieved.
Denmark	Shared between the various levels of the health system. National authorities (the Danish Health and Medicines Authority and SSI Statens Serum Insitut) monitor the health status of the population, and the former is responsible for intervening if regions and municipalities do not deliver adequate services. These authorities also organise a system of health officers placed in the five regions with responsibility for monitoring and intervening when necessary.	Underpinned by concepts of self-governance lifelong learning. Pre-school, which is optional, is followed by nine years of compulsory education in primary and lower secondary school. There is an optional tenth form.

6. International comparison

Table 3 (continued)

	HEALTH		
Country	Government role	Provider Ownership	
		Primary Care	Hospitals
England	National Health Service	Mainly private (most GPs are self-employed or partners in privately owned practices)	Mostly public, some private
France	Statutory health insurance system, with all SHI insurers incorporated into single national exchange	Private	Mostly public or private not-for-profit, some private for-profit
Mexico	Secretariat of Health is the government department in charge of all social health services in Mexico	Mix of small private health insurance options and a universal health insurance programme	Mix of public and private hospitals

6. International comparison

Table 3 (continued)

Country	PUBLIC HEALTH	EDUCATION
England	NHS England is responsible for improving the health of the English population against a set of indicators. Main responsibility for population health rests with CCGs. They are accountable to NHS England. Public Health England (PHE) is an executive agency of the Department of Health. PHE exist to protect and improve the nation's health and wellbeing, and reduce health inequalities.	Overseen by the Department for Education and the Department for Business, Innovation and Skills. Local authorities (LAs) responsible for implementing policy for public education and state schools at a local level. System is divided into early years, primary secondary and tertiary education.
France	The responsibility for population health is shared by the state (Ministry of Health, General Directorate of Health) and the Regional Health Agencies. The Ministry of Health, with the help of advisory institutions, proposes the Public Health Acts to Parliament—the most recent act was passed in 2004. These set public health priorities, but are disconnected from funding decisions. Regional Health Agencies implement regional health policy.	Regulated by the Ministry of National Education 3 tiers to the system: a) Primary education b) Secondary education c) Higher education. Mandatory education as of age 6, the first year of primary school.
Mexico		Regulated by the Secretariat of Public Education Basic education is normally divided in three steps: primary school (primaria), comprising grades 1-6; junior high school (secundaria), comprising grades 7-9; and high school (preparatoria), comprising grades 10-12. All compulsory by law

6. International comparison

Table 3 (continued)

	HEALTH		
Country	Government role	Provider Ownership	
		Primary Care	Hospitals
Japan	Statutory health insurance system, with approx. 3,500 noncompeting public, quasi-public, and employer-based insurers	Mostly private	Private non-profit and public
USA	Medicare: age 65+, some disabled; Medicaid: some low-income (most under age 65 covered by private insurance; 16 per cent of population uninsured)	Private	Mix of non-profit, public and for-profit (~15 per cent)

6. International comparison

Table 3 (continued)

Country	PUBLIC HEALTH	EDUCATION
Japan	Ministry of Health, Labour, and Welfare is a cabinet level ministry of the Japanese government The Health Service Bureau within the Ministry, works to ensure good public health by making lives more healthy and hygienic through health promotion, prevention and treatment of various diseases, improvement of environmental health, and the provision of safe water supply systems etc.	The Ministry of Education closely supervises curriculum and maintains a uniform level of education throughout country. 6-3-3-4 system (6 years of elementary school, 3 years of junior high school, 3 years of senior high school and 4 years of University) with reference to the American system.
USA	The United States Public Health Service Commissioned Corps (PHSCC) delivers public health promotion and disease prevention programmes and advancing public health science. It aims to protect, promote, and advance the health and safety of the United States. It is a Federal body of the United States and the Department of Health and Human Services is its parental agency.	Public education is universally available, with control and funding coming from the state, local, and federal government Public school curricula, funding, teaching, employment, and other policies are set through locally elected school boards, who have jurisdiction over individual school districts. State governments set educational standards and mandate standardised tests for public school systems Mix of public and private schools. Education is compulsory over an age range starting between five and eight and ending somewhere between ages sixteen and eighteen, depending on the state.

6. International comparison

Table 3 (continued)

	HEALTH[#]		
Country	Government role	Provider Ownership	
		Primary Care	Hospitals
Australia	Regionally administered, joint (national & state) public hospital funding; universal public medical insurance program (Medicare)	Private	Public (~67 per cent of beds), private (~33 per cent)

6. International comparison

Table 3 (continued)

Country	PUBLIC HEALTH	EDUCATION
Australia	The Australian Institute of Health and Welfare (AIHW) is a major national agency set up by the Australian Government under the Australian Institute of Health and Welfare Act to provide reliable, regular and relevant information and statistics on Australia's health and welfare. An independent statutory authority established in 1987, governed by a management Board, and accountable to the Australian Parliament through the Health portfolio.	Primary responsibility rests with the states and territories. Each state or territory government provides funding and regulates the public and private schools within its governing area. System follows the three-tier model which includes primary, secondary and tertiary education.

(Health source: Thomson et al 2013)

6. International comparison

6.1 Healthy eating interventions

The premise behind many interventions associated with healthy eating is the need for education. If a population is provided with the right kind of information and knowledge they will understand how they need to respond and behave. Achieving this is challenging.

A summary of the kinds of interventions which can be applied in the area of healthy eating are given in Section A of the table in Appendix 7.

6.1.1 Improving nutritional understanding

HENRY, (Health, Exercise, Nutrition for the Really Young) was first introduced to address the targets stipulated by the UK's Department of Health's 2009 publication. Tackling child obesity through the "Healthy child programme: a framework for action" has the strongest evidence-base currently available for any UK early intervention to prevent childhood obesity. The initiative effectively collaborates with local partners, including health trusts, local authorities, public health departments, voluntary organisations and universities.

HENRY was based on the Family Partnership Model reflective practice and solution-focussed techniques to address the discontent of parents of obese children with the primary care they receive, and the self-reported lack of training and confidence in the management of childhood obesity among health visitors, childcare workers and health professionals.

Families involved in the HENRY programme made statistically significant improvements in parenting efficacy and family lifestyle (Willis et al 2013). The initiative also elicited improvements, not only in the professional lives of health professionals and community workers, but also their personal lives (Brown et al 2013).

The initiative addressed the research evidence base of risk and protective factors for childhood obesity, adopting a holistic approach; which unites the following key areas as training content:

Key Learning

- The programme was successful as a result of holistic approach, covering training in: parenting; family lifestyle habits; nutrition; activity; emotional well-being
- It actively addressed the needs in deprived areas, typically the hardest to reach and the most in need. It can be hypothesised that the intervention would be sufficient to meet the needs of those more advantaged and that the messages will not be lost in translation
- The HENRY programme educates the health professional, cares, parents and children. Children and parents are key demographics for long term and sustainable change

6. International comparison

From this example it can be concluded that a shortfall of the educational process in the UK is the involvement of an undefined and fractured plethora of key players. . There needs to be a common strategy which helps to form a holistic strategy for health and wellbeing in schools.

Recommendation	Action taken by
Requirement for all schools to have a meaningful holistic strategy for health and wellbeing with rigorous criteria for assessment	Department for Education

6.1.2 Educating communities

EPODE, originating in France, an acronym for 'together let's beat childhood obesity' is the largest national obesity network. It fosters a multi-stakeholder approach with public and private collaboration to maximise the scope of human and financial resources. Links are forged between civil society, the corporate sector, NGOs, academia and institutions.

The EPODE approach endeavours to deliver programmes that create everyday norms and settings for children to eat healthily and play safely and actively. The multi-stakeholder, whole community approach facilitates the development of healthy environments including mapped walking routes, playgrounds and cycle routes. Community involvement discourages opposition and provides individuals with a value in the local environment. Local government is closely involved and a local figurehead is appointed to pioneer projects and motivate the population. Children are taught about and cooking and reconnected to the food system through farm visits and growing their own food. At risk families are offered individual counselling and the programme is specifically designed for tailoring to the individual requirements of communities.

There is scope for benefit beyond simply reducing obesity in communities, for which this approach has been demonstrated to be successful. In one town practicing the EPODE implementation principles, childhood obesity dropped by 8.8 percent, this compared to a 17.8 percent increase in a neighbouring town (Boseley 2014: 266-8). Despite findings not being based on a rigid scientific trial, the opportunity for change is apparent not just in improving the health of our younger generation, but in building united, healthy communities. There has been some speculation by obesity specialists in the UK in relation the appropriateness of launching an EPODE-based programme in Britain, due to lacklustre community spirit and local engagement. It is possible that the use of the network framework, and nurturing a positive attitude towards effective change might reap health benefits in communities and bring about a reverse in the current trends of societal divide. This is precisely the thinking behind current Asset-Based Community Development (ABCD) initiatives which use the skills and capacities of local people (community 'assets') to build more sustainable communities.

There is a lot to be learned from this innovative, sustainable approach. It is an example of best public health practice, not only in its design but also in its target audience: children, parents and stakeholders. It is this ingenuity that could provide the sustainability that will offer the best chance of eradicating the obesity epidemic in the United Kingdom.

6. International comparison

Key Learning

- Foster healthy, united communities and builds community spirit
- Encourage effective public-private collaboration and whole community involvement
- Develop community specific strategies based on national recommendations and specifically target at risk groups in the community
- Reconnect children with the food system and food supply
- Target the most socially deprived in communities; they are often the least educated and most in need. If the message it suitable to these individuals it will be comprehendible to those more privileged

As there are no new sources of funding, health and local public services will need to come up with innovative ways of working with individuals and communities if inequalities in health and wellbeing are to be prevented from widening further. The EPODE programme is a useful model particularly in terms of harnessing collaborative community involvement and the role of schools and the education system.

It would be worth exploring this sort of assets-based approach to developing a cross-cutting community strategy to tackle obesity. The focus is on the positive capacity of individuals and communities rather than on their needs, deficits and problems (Glasgow Centre for Population Health 2011). Developing 'local champions' who promote healthy lifestyle management could be an effective way of providing peer support, help and advice for those seeking to change their behaviour (lose weight, quit smoking etc.) by those who have already been successful in making the change.

EPODE also demonstrated the value of reconnecting children with the food system and food supply, by helping to instil a better understanding of what it means to live healthily. It is never too early to provide the best information to children about the importance of making healthy decisions. Practical cookery skills and clear food education should form a statutory part of the Key Stage 3 Design & Technology curriculum, under Food Technology.

Recommendation	Action taken by
Practical cookery skills and clear food education to be a compulsory part of the school curriculum for pupils up to the end of key stage 3 (age 14).	Department for Education School Food Plan Children's Food Trust

6. International comparison

6.1.3 Caloric disclosure

One of the first places to experiment with caloric disclosure on menus was New York City in 2008. Coffee shops and chains with 15 or more outlets nationally were required to post caloric content of various items next to the items price on menus (Bogart 2013: 126). Subsequent revisions extended the regulation to menus, menu boards and food display tags.

Under the Patient Protection and Affordable Care Act (commonly known as 'Obamacare') by 2013 caloric content was required to be posted for vending machines and restaurants with twenty or more locations nationwide (2010).

Two studies were carried out to evaluate the success of this type of intervention (Elbel et al 2009; Dumanovsky et al 2011). The evidence appears to suggest that despite some behaviour change, caloric labelling has had limited impact and influence on people's decisions. Even in cases where the information was used to inform decisions, questions remain as to the lasting impact of such an intervention.

Key Learning

- On a menu is as important as making a selection based on the calorie information of each item being made available
- Implementing nudge theory in this context, the choice architecture needs to include a nudge towards easier access to low calorie section at the same time as making calorie information available more generally

Recent research indicates some positive influence on behavioural change. Early adopters of the move have been witnessed as part of the UK Responsibility Deal. Developing this further would involve enforcing the disclosure of calories per items on all restaurant menus. To date some of the larger chains and outlets have adopted this approach. Size of font and location of the information on menus varies. For small independent outlets it has not necessarily been a priority. Therefore a defined standard for disclosure of calorie per items on all restaurant menus needs to be introduced.

Recommendation	Action taken by
Clear disclosure of calories per items on restaurant and cafe menus which adheres to a defined standard for font size, formatting, contrast and layout of menus.	Department of Health

6. International comparison

6.1.4 Food labelling

Rates of obesity have increased rapidly over the past two decades in Australia. Despite ongoing calls for government intervention, the response from Australian governments has at best been limited to date. Action has largely focused on funding social marketing campaigns, new sport and recreation infrastructure, healthy eating and physical activity programmes in schools and workplaces (Mackay 2011).

The food industry has been left to pursue a model of self-regulation. This approach seems out of step with the findings of a recent national survey of the population, which reported very high levels of support for a number of possible government interventions to address obesity. These included stronger regulation of unhealthy food advertising to children and nutrition labelling (on food packaging and fast-food menus), regulation of the nutritional composition of products, and unhealthy food taxes (Mackay 2011).

In 2011, the Blewett Review (a comprehensive review of Australian and New Zealand food labelling law and policy) recommended a range of food labelling reforms to facilitate healthier food choices, in particular, the development of a 'multiple traffic light' (MTL) labelling scheme for the front of processed food packages and the introduction of national requirements for disclosure of nutrition information on fast food menus and vending machines (2011:7). This is similar to the one developed by the UK Food Standards Agency.

However, the Australian Food and Grocery Council (AFGC), which represents Australian food and beverage manufacturers, strongly resisted the MTL scheme, and launched a television advertising campaign to promote its 'Daily Intake Guide' (DIG) labelling scheme three days after the recommendations of the Blewett review were released. The scheme uses front-of-pack signposts to indicate the proportion of an average adult's daily nutrition requirements provided by a serving of the product (AFGC 2014). The AFGC favour their DIG scheme as superior the MTL which is perceived to be too simplistic and does not emphasise the importance of establishing a balanced and moderated diet.

Results from an Australian study published in 2009 found that consumers were five times more likely to identify healthier products using MTL labels than the DIG scheme (Kelly et al 2009). Similar findings have been found through research in the UK and New Zealand (Kelly et al 2009). Comparing variations of the MTL and European Guideline Daily Amount schemes found that labels with traffic light colours, as opposed to just monochrome daily intake information, helped consumers to identify healthier products more successfully.

Key Learning

- A clear, consistent colour coded system for food labelling is more successful in helping consumers selecting healthy foods

6. International comparison

Although the general health literacy of the UK is perceived to have improved, there is scope for improvement. A significant problem is understanding what knowledge individuals have and how they apply it when shopping for food.

ComRes polling undertaken for this project found that two thirds (67 percent) of British adults say that there is conflicting information about how to eat and drink healthily and more than three in five (62 percent) of the public do not understand the nutritional information on food packaging. It is essential that food labelling is reformed so that it is consistent and understandable. There needs to be clear leadership in this area with appropriate powers to enforce change. Recent attempts in Europe to reform food labelling by bringing in regulation requiring the amounts of six key nutrients to be disclosed on the fronts of all food packages are welcomed. However, given the scale of the challenge it is imperative that the UK continues to move forward on this issue, building on progress to date such as 'traffic-light' food labelling, regardless of EU discussions.

Food retailers could do more to make this easier to understand with a universal system being adopted for use both in store and online. The growth of online shopping in recent years offers further opportunity to improve individuals' awareness of healthy choices. The algorithms often used by websites to target promotions based on shoppers' purchasing history could be used to promote healthy options and promotions.

Recommendation	Action taken by
A mandatory universal system of food labelling which provide clear and consistent information on the nutritional content of food. This to be supported by a national media campaign.	Food Standards Agency Department of Health Department for Food, Environment and Rural Affairs

6. International comparison

6.2 Advertising interventions

The power of advertising is an undeniable influence in society today. Advertising linking consumption of food with recreational and entertainment activities such as large sport events, trips to the cinema and music festivals, has helped create a sense of consumption as a pastime.

Increased television viewing is linked with increased BMI, unhealthy diets, decreased physical activity and increased exposure to food advertising (National Obesity Observatory 2012).

In particular, research has found, children have become a common target for junk food advertisements during prime time TV slots (Molloy 2014). The British Heart Foundation reported that young people who watch family-orientated television shows are being bombarded with up to 11 unhealthy food advertisements every hour.

Another contributory factor is the rise of the internet and the many devices through which it can be accessed. Ofcom now estimates that – for the first time – those aged 12 to 15 spend more time online (17 hours a week) than they do watching TV (16.6 hours) (Wallop 2014). Of the total expenditure on youth marketing, 60 percent is spent on products that are high in calories and saturated fats such as carbonated beverages, fast food, candy and baked goods (Mello 2010).

A summary of the kinds of interventions which can be applied in the area of advertising are given in Section B of the table in Appendix 7.

6.2.1 The Quebec ban on advertising

Since 1980 Quebec has enforced a ban on advertising to children thirteen years of age and under (Consumer Protection Act, ch. P.40.1, articles 248-249; also 87-91). An advertisement is deemed to be directed towards children having been assessed and evaluated against certain criteria which include:

- nature and intended purpose of the good advertised. etc
- manner of the advertisement
- time and place of the advertisement

Where children comprise more than 15 percent of the audience, specifically targeting children is not permitted. However non-commercial messages are permitted when children make up 15 percent of the audience.

The initial response to the legislation was hostile and attacked as being an infringement on free speech (Bogart 2013: 138). Despite this response, the validity of the legislation was upheld by the Supreme Court of Canada in 1989. It is interesting to note that concerns over free speech are often a brake on interventions to regulate advertising. That the Supreme Court of Canada rebuffed some concerns and enabled the legislation is therefore all the more interesting (Bogart 2013: 138). Three studies have been conducted into the effectiveness of the prohibition (Kent et al 2011; Dhar

6. International comparison

& Baylis 2011; Bogart 2013). There is a degree of variance in the studies' findings, largely because they are measuring different effects. Nevertheless, overall it can be generally concluded that legislation has been effective in reducing the consumption of calorically dense foods in Quebec.

Key Learning

- A single intervention, such as advertising, does have some capacity to help contribute to changes in individual choices and behaviour

Current legislation bans junk food advertising during children's programmes, but for many youngsters their viewing peaks at around 8pm. This does not cover the internet. Online, brands can legitimately broadcast adverts to anyone who cares to watch them. The voluntary EU Pledge initiative by leading food and beverage companies commits them not to advertise products to children under 12 years of age (except for products which fulfil specific nutritional criteria). Advertising is defined as media audiences with a minimum of 50 percent of children under 12 years (EU Pledge 2014). This is an encouraging start, but there is room for improvement, particularly in terms of the ongoing work in defining nutrition criteria and the fact that the Pledge remains voluntary. The urgent need to respond to the challenge of obesity means there is no time to waste in implementing more robust measures.

Regulating online advertising is difficult to enforce and continues to prove challenging. The EU pledge covers third-party internet advertising as well as company-owned websites. Nevertheless, action must be taken in terms of TV advertising. The advertising of unhealthy foods aimed at children therefore needs to be urgently reviewed with defined limits put in place in terms of a watershed.

Recommendation	Action taken by
The ban on advertising of unhealthy foods aimed at children should be extended to daytime television, applied from 7am to 9pm.	OfCom

6. International comparison

6.3 Fiscal interventions

The development of fiscal policy interventions designed to address the obesity challenge has for some time been the focus of health policy makers. As obesity rates have risen, more interest has been paid to how taxes and spending power can be harnessed to help promote healthier eating and drinking. Highly calorific food is often cheaper and more readily available while fresh fruit and vegetables are considered to be more expensive. This acts as a strong financial disincentive to pursuing a healthy diet.

Although freedom of choice and consumer sovereignty should always be retained, serious consideration is now being given to taxing foods that cause disease and cost the NHS the most in terms of future resource consumption and medical need. Alongside these initiatives, ideas such as tax deductions for gym memberships, provision of exercise facilities and grants from government to help improve 'open spaces' and related facilities are also being considered to promote active lifestyle habits. The various innovations around fiscal interventions fall into the three main areas listed in the table in Appendix 7. (Discussion of particular international examples are then briefly discussed).

6.3.1 'Fat tax'

In October 2011, the Danish government took steps to put a surcharge on foods containing more than 2.3 percent fat in an attempt to limit the nation's intake of fatty foods. The measure added 16 kroner ($2.70; £1.50) per kg (2.2lb) of saturated fats in a product. In monetary terms the result was the price of a 250g pack of butter increased by 2.20 kroner (BBC News 2012).

However ,in November 2012 it was announced that the fat tax would be repealed. The government cited a harmful effect on businesses and consumer buying power as the main reasons for abandoning the tax. Retailers report that instead of no longer buying the selected foods because of the surcharge consumers simply travelled to Sweden and Germany, where prices are lower, to buy items such as butter. One study conducted found that 48 percent of Danes do some cross-border shopping. A report by the tax ministry put the 2012 value of these trips at DKr10.5 billion ($1.8 billion), a 10 percent rise on the previous year (The Economist 2012).

Another criticism of the tax was how it applied to meat as it was imposed per carcass not per cut, which meant higher prices for lean sirloin steak as well as for fatty burgers (The Economist 2012). Supporters of the tax considered the government gave in to pressure from the opposition too quickly. While it was recognised that the tax was a blunt instrument, the Danish Medical Association felt that it was too short a period of time to have assessed its impact and accused politicians of putting the economy before public health (The Economist 2012).

Despite being scrapped, the tax raised $216 million in new revenue for the Danish government. Although short lived, the Danish experience of experimenting with a food tax could potentially provide some useful data against which to assess the benefits of this economic tool. Given that there was a time that the tax was not enforced, then a period of a year when it was law and now a period when it is no longer in force, it could help to demonstrate any changes in food consumption and other health choices.

6. International comparison

ComRes polling found that making healthy foods cheaper and increasing taxes on other foods to cover the cost (31 percent) and placing a limit on the amount of certain ingredients that are allowed in food and drinks (27 percent) are the initiatives seen as most desirable by the British public.

In December 2011 France introduced a tax of 0.07 EUR (£0.06) per litre and also energy drinks at 0.50 EUR (£0.40) per litre. As a result of industry lobbying the tax was applied to all soft drinks and it did not differentiate between different sugar content levels.

Key Learning

- **Denmark:** Denmark's largest consumer goods retailer, FDB, reports that Danish shoppers purchased more lean and low fat meat between November 2011 and August 2012 as well as decreased sales of butter and mixed butter products. (Lentschner 2012)
- **France:** Evidence indicates that the rate of taxation may be too low to see much tangible effect on consumption. Nevertheless, results to date do indicate encouraging results. Supermarket sales of soft drinks declined for the first time in many years by 3.3 per cent in the first four months after the introduction of their tax (of approximately EUR 0.07 per litre and resulting in nearly a 5 per cent price increase) on sugar sweetened and artificially sweetened drinks. (Lavin & Timpson 2013: 8; Academy of Medical Royal Colleges 2013:29)

Mexico has also implemented a national strategy for the prevention of overweight and obesity. In line with the objectives of this strategy and its commitment to increase regulation and taxation, Mexico introduced a tax of one peso per litre on soft drinks in 2013. National Institute of Public Health estimates predict that this tax of approximately 10 percent could reduce consumption of sugar sweetened beverages by 141 L/year (approximately 15 percent) and could prevent 630,000 cases of diabetes by 2030. An 8 percent tax levy has also been placed on certain foods containing in excess of 275kcal per 100g (EASO 2014).

Mexico has taken a predominantly legislative approach to obesity reduction and prevention. Policies that encourage healthy eating, increased physical activity and creating healthy lifestyles are focused predominantly on school-aged children in the school setting. Whilst having an educational aspect, there is still a legislative aspect to these policies and strategies. Sugar-sweetened beverages are banned and unhealthy food is heavily regulated (EASO 2014).

Key Learning

- School aged children are a key section of the population to target early with good nutritional advice and education on healthy eating
- There is a role to play for both education and regulation

6. International comparison

There is an emerging strong research base which supports a tax on sugar-sweetened beverages (SSBs) (see for example: Academy of Medical Royal Colleges; Rayner et al 2012). Taxing a wide range of unhealthy foods or drinks (e.g. all sugar-sweetened beverages) is recommended to result in greater health benefits than simply taxing a small narrow range of goods (Sustain 2013). Evidence gathered from other modelling studies, experimental studies and research examining the effects of current tax levels on consumer behaviour, recommends that food/drink taxes need to be set at least 20 per cent to have a significant effect on obesity (Powell et al 2013; Sustain, 2013).

We think there is merit in evaluating the impact of 'soda' taxes in countries and states that have recently introduced them, as well as reviewing whether any of these taxes have actually been hypothecated to improve public health. Analogies have been drawn with tax on tobacco and minimum pricing of alcohol, but consideration also needs to be given to the global market in which goods are manufactured and distributed, and what behaviour change is sustainable in this context.

Recommendation	Action taken by
A review needs to be undertaken of the economic and societal impacts of a hypothecated tax on a range of food and drink contents at levels which are deemed harmful to health.	Treasury Department for Business, Innovation & Skills (BIS)

6.3.2 Voucher schemes

In order to make healthier food more affordable and available, certain economic tools can be employed. These includes targeted subsidies, price promotions and health-related food taxes.

An innovative solution, often part of the 'new governance' tool kit, is the use of voucher schemes. These schemes aim to act as a subsidy to those who qualify so that they have funds to purchase particular goods and services and to empower consumers to choose what they buy and from whom. Healthy Start is a UK national government scheme to improve the health of pregnant women and children living on a low income by providing a nutritional safety net through promoting healthy eating and breastfeeding and encouraging earlier contact with health professionals.

Under the scheme vouchers can be exchanged for free fresh or frozen fruit and vegetables, cows' milk or infant formula. The current voucher value is £3.10. Pregnant women and children aged one to three are eligible to receive one voucher per week, and children under one receive two vouchers per week.

Free vitamin supplement coupons are also sent out by post every eight weeks and may be exchanged for free Healthy Start vitamins at local venues such as children's centres and clinics. Healthy Start vitamin tablets for women contain vitamins C, D and folic acid, and vitamin drops for children contain vitamins A, C and D.

6. International comparison

Key Learning

- A recent evaluation found that Healthy Start is claimed by around 80 percent of people who are eligible for the scheme (McFadden et al 2014).
- Approximately 90 percent of the vouchers sent out are spent, but only 1 percent of vitamin supplements are claimed.
- It was found that the Healthy Start initiative was an important support for healthier eating, with most reporting that scheme influenced their shopping and eating habits.

The success of the Healthy Start voucher scheme indicates that it should be maintained and developed further to include those who stop smoking or walk a set number of steps each day. Health professionals need to have a better grasp of who is eligible for the scheme and be able to signpost eligible families onto the relevant contacts.

Recommendation	Action taken by
Increase awareness, coordination and reach of the Government's 'Healthy Start' Voucher scheme. Extend voucher scheme to incentivise those who become active partners in their health by quitting smoking, reducing weight, walking a set number of steps etc.	NHS England and HM Treasury

6.3.3 Fines

Under the terms of Japan's 'The Metabo Law', companies and local governments must measure the waistlines of Japanese people between the ages of 40 and 74 as part of their annual check-ups.

Those exceeding government limits will be given guidance on dieting and motivational support if they do not lose weight after three months. Those people who do not lose weight after six more months will be directed to further education and advice. There are no individual consequences for non-compliance but responsibility does fall to employers and local government. Financial penalties are imposed on companies and local government who fail to meet specific government targets.

The Japanese approach offers some interesting points to reflect and consider, not least in terms of non-compliance and increasing the role and responsibility of employers and other professionals in this. There is currently insufficient empirical research to indicate that such an approach produces significant gains and therefore that it is something worth considering implementing in the UK.

7. Moving forward

Whatever types of interventions are introduced, there remains a responsibility on the part of the individual for their own health. Engagement at personal, local and strategic levels will help to influence positively the affordability, availability and acceptability of food, which in turn will help shape healthy choices and behaviour. In this section the focus is on the following issues which contribute to this engagement:

- adopting a 'health in the round' mentality
- designing and implementing effective strategy
- more rigorous evaluation of past strategies
- identifying best practice
- educating health professionals

7.1 Adopting a 'health in the round' mentality

The focus needs to be on 'health in the round' and not solely about weight. Living a healthy lifestyle needs to become more of a priority, both individually and collectively. There needs to be greater acceptance that people come in different body shapes and sizes and the recognition that some people will struggle with their weight. It is crucial that any interventions used to tackle obesity focus on behavioural change together with appropriate outcome measures.

Help needs to be given to people to enable them to bemore active and enjoy physical activity, make healthy choices and act on what they already know. The advice on physical exercise needs to be clear. Individuals need to be educated so that they have a more coherent understanding of food, diet and portion size. The focus needs to shift from a particular diet to 'our diet' and an improved understanding of food and what it means to eat a nutritious healthy diet. Education should commence at the earliest possible opportunity, and should continue with age-appropriate learning throughout life.

Recommendation	Action taken by
Commission a health education and prevention strategy which covers all stages of life	Department of Health Public Health England

Expectant mothers, parents and children are the key demographic for change and should be a fundamental focus in the movement towards obesity prevention. Programmes such as HENRY should be drawn out on a larger scale to give young families the best start in life. Children need to be reconnected with the food system and home economics needs to be reintroduced into the curriculum.

7. Moving forward

7.2 Designing and implementing effective strategy

Policymakers play a crucial role in creating healthy environments, maximising access to care and addressing the obesity epidemic. A formal national, multi-departmental framework is imperative to ensure that obesity receives the necessary priority and sufficient funding.

Complementary policies, plans and programmes developed at sub-national levels also play a crucial role in responding to local needs and conditions.

Table 4 - Key players & actions for realising change

Central Government	Strong government prioritisation & leadership is integral to successful intersectoral cooperation and policy action to effect and control obesity. Health Ministers should pioneer the formation of partnerships and coordinate intergovernmental collaboration.
Building partnerships	External partnerships between health policy makers, non-governmental organisations, inter-governmental organisations, industry, community leaders, public health leaders, donors & corporate leaders is required to facilitate the development of sound, comprehensive policies to address obesity
Intersectoral Action	An efficacious, overarching policy on obesity will rely on the cooperation of decision makers in all sectors (health, education, urban planning, transport, agriculture and trade)
Comprehensive and integrated Public Health Action	Minimises overlap and increases cohesiveness in the health system
A Life Course Perspective	Obesity prevention must be introduced at an early stage. It needs to specifically address all key lifestyle stages and take into account the rapidly ageing population in the UK
Stepwise Implementation Based on Local Considerations and Needs	Regional and local governments have a responsibility to implement strategies that reflect and address the specific needs of their individual communities.

(WHO 2006)

7. Moving forward

The 'time bomb' of obesity poses a significant threat on several different fronts: individual and community health as well as financial implications of days lost in work, mounting health costs and impact on society as a whole.

Any changes in education and regulation require a coherent, well-communicated strategy. A government task force is necessary to respond to this to enable real and lasting change. Part of this response should include a multi-faceted, integrated strategy for tackling obesity which covers interventions at the local, regional and national level. Clear targets need to be set to help assess the impact of interventions and this needs to be done without discrimination and people 'bad' or 'failures' if they are overweight. The involvement of cross-departmental cooperation and expertise including the environment, business, science and technology, work and welfare, education and housing is imperative. All new policies across all departments should be reviewed and assessed against an 'obesity test' – how do these policies help to improve the nation's health? This will require coordination and leadership from government, involving the skills and insight of all partners and which focuses on actions to keep the nation healthy.

Recommendation	Action taken by
Establish a cross-departmental permanent government task force on obesity. This supports similar recommendations made by other health organisations (BBC News Online 2014).	Cabinet Office
All new policies to be reviewed and assessed against an 'obesity test'.	Central government Department of Health

7.3 More rigorous evaluation of past strategies

Few public health interventions centering on dietary behaviour change have been adequately evaluated and there is a need for more rigorous evaluation particularly at the level. It is difficult to appraise the impact of many of the current methods of evaluation as they are poorly designed and use inappropriate measures such as attendance and participation, instead of quantifying the extent to which the intervention achieved the intended outcomes.

Adequate evaluation will assist policy makers in identifying and rectifying the shortfalls associated with public health interventions and in improving future outcomes.

Successful interventions demand clearly defined objectives which determine the outcomes and measurement parameters as well as a logic model to evaluate the effectiveness and viability of a programme. This model should include the following steps:

- Inputs: the resources required: financial, materials, and organisations and individuals.
- Secondary outcomes: those of interest that may add to the evaluation but were not a direct objective.

7. Moving forward

- Primary outcomes: direct objectives of the intervention.

- Long-term outcomes: those which supersede the duration of the intervention.

7.4 Recognising the limitations of public health initiatives

Despite its importance for informed choice, health education is not regarded or demonstrated to be a good motivator for behaviour change. This assumption can be stigmatising, in that it places a considerable burden on individual responsibility and can result in the following two outcomes:

- individuals do not realise that they are overweight/obese and are unaware that their lifestyle behaviours cause their weight gain;

- overweight/obese individuals have not previously attempted weight loss and lifestyle change.

This is often not the case although it might not be unreasonable to hypothesise there is a risk of it occurring through the 'normalisation' of obesity. People do not want to be obese. Interestingly, the ComRes polling results identified parents and individuals seeing themselves as most responsible for ensuring they are well informed about what to eat and drink, although they also identified key roles for government and the food and beverage industry.

Despite feeling that there is insufficient clear information on how to eat well, British adults believe that healthy eating campaigns such as Change 4 Life are effective in providing easy steps on how to live healthy lives. It is apparent however, that these initiatives are failing in some way, given current obesity statistics in the UK. This demonstrates the need for more research to determine the factors that moderate behaviour change and the incorporation of these factors into future policies and interventions.

7.5 Identifying best practice

By evaluating past nutrition policy, it becomes clear that progress has been made since the 1980s when there was no public health policy for nutrition in the UK. However it is apparent that more needs to be done. The Foresight Report (Government Office for Science 2007) identifies clear evidence that policies aimed solely at individuals will be inadequate and that simply increasing the number of small-scale interventions will not be sufficient to reverse the obesity epidemic. The current epidemic has evolved over many years; counteracting it will take the same amount of time, requiring long-term commitment and effective interventions, population wide. Best practice in obesity management requires the development and implementation of public health programmes, initiatives and policies that have been evaluated, demonstrated to be successful and can be adapted and transformed by others working in the field, to address the specific needs of communities and minority groups.

We can draw from past experience and public health successes to emulate strategies to confront obesity.

7. Moving forward

7.5.1 Salt Reduction in the UK

Excess dietary salt intake has been shown to have a causal effect on increasing blood pressure and cardiovascular events (Collins et al 2014). Reducing salt consumption is recognised as an easy and cost effective way to decrease blood pressure, and thus reduce the incidence of stroke, coronary heart disease, cardiovascular disease and kidney disease (WHO 2013).

Since 2003-2004 the UK has undertaken a voluntary salt reduction programme initiated by Consensus Action on Salt and Health (CASH), in collaboration with the Food Standards Agency (FSA) and more recently the Department of Health. The programme has proved successful, raising awareness about the impact of salt on health, reducing salt consumption by 15 percent (from 9.5 g/day to 8.1g/day), and resulting in an overall reduction of 30 percent to salt added to food by industry (Anonymous 2013).

A report by He et al (2012) has identified the key areas to which the success of the salt reduction campaign can be attributed:

- establishment of an action group with strong leadership skills and scientific credibility;
- population salt intake was ascertained and major sources of dietary sodium identified;
- population salt intake targets were set and strategies to meet them designed;
- progressively lower salt targets were set for different food groups and products, with clear time frames in which they must be met;
- collaboration with industry to reformulate food with reduced salt content;
- implementation of labelling stipulating salt content;
- large scale consumer awareness campaign including: TV, posters in magazines and newspapers, coverage on domestic news, leaflets and a dedicated salt website;
- monitoring and evaluation.

In addition to the decrease in salt consumption, there has been a 40 percent decline in mortality connected to heart disease between 2003 and 2011 (Cooper 2014), up to 1/3 of consumers have actively reduced salt consumption, there has been a tenfold increase in awareness of the 6g/day message and the number of consumers trying to cut down on salt by paying attention to food labels has reportedly doubled (WHO 2013).

7. Moving forward

Key Learning

- Population education coupled with effective collaboration between key players can lead to the gradual reformulation of products by industry
- Gradual change is the key to success as the population adjusts to the changes to the product range. It has been speculated that a 30-40% reduction in the sugar content of food would reduce energy consumption by 100kcal/day per person, food for thought

It is possible to use the salt reduction scheme to draw on best practice for tackling the obesity epidemic; however the causes of obesity are a great deal more complex and cannot be pinned on a single nutrient.

7.5.2 Smoking

When using smoking as an example of best public health practice, it must be recognised that only certain aspects of this large scale, long term initiative are relevant to the obesity epidemic in terms of education and information. Anti-smoking initiatives have constantly evolved and been implemented over decades. A key focus is the prevention of taking up the habit in the key demographic of children. The first anti-smoking recommendations emerged in 1962 in a publication by The Royal College of Physicians (RCP) advising:

- restricting tobacco advertising;
- increasing taxation on cigarettes;
- discouraging smoking in certain public places;
- further restricting tobacco sales to children;
- increasing the provision of information on the tar and nicotine content of the product.

In the 52 years since these recommendations were made, considerable progress has been made, but more needs to be done. Table 5, adapted from ASH (2014) illustrates the percentage of the population who smoked between 1974 and 2012 and clearly demonstrates success.

7. Moving forward

Table 5

Year	1974	1978	1982	1986	1990	1994	1998	2002	2006	2010	2012
Men	51	45	38	35	31	28	28	27	23	21	22
Women	41	37	33	31	29	26	26	25	21	20	19
All	45	40	35	33	30	27	27	26	22	20	20

The legislation and regulation to discourage smoking in the UK have together been a very successful public health campaign. The association between smoking and ill health are widely understood. The role regulatory action has in this arena cannot be undervalued, and can perhaps be used as a strong argument in the context of this report and addressing the obesity epidemic; but what lessons can be learned from this and applied to the challenge of obesity? Smoking cessation is an example of a proactive effort by the NHS where there is a clear focus on prevention rather than cure. Investment has been made into support services to enable addicted individuals to 'QUIT'. 'Smoke Free' is an NHS initiative offering face-to-face support and NHS funded 'stop smoking' centres, it also offers online resources including case studies and success stories. Counselling is provided as well as resources and strategies to support the patient's endeavours.

Key Learning

- Use positive language and encouragement when speaking with obese individuals to encourage and empower
- Invest in technology and applications to assist with weight loss and lifestyle change. This provides autonomy for the patient
- Provide weight loss services 'Smoke-Free' with face-to-face counselling and support
- Take a proactive approach to obesity prevention. People are overweight before they become obese, address the needs of these people and prevent them from becoming obese
- Focus on children as a key demographic for change and acknowledge that long-term sustainable change requires long-term commitment to the cause

7. Moving forward

7.6 Educating health professionals

Part of improving the education process must also be to empower GPs and other professionals to actively engage with those who are struggling with being overweight and obese. At present there appears to be no incentive or requirement for GPs to initiate the important conversation with patients about weight during consultations which may not primarily be about weight but are nonetheless weight related. Potentially this is an invaluable opportunity to support, educate and inform patients.

Training healthcare professionals in this area is also very important. Professor Tony Leeds of Surrey University has highlighted the fact that specific training on obesity management does not feature in most GP training programmes (Leeds 2011). It appears that GPs are better equipped to deal with the consequences of obesity, such as heart disease, Type-2 diabetes, and osteoarthritis, than they are to actually deal with the crux of the problem: helping patients deal with the underlying weight gain. To respond to this need a greater focus on nutrition, health and associated preventive measures needs to form the basis of curriculum reviews of all healthcare professionals.

Better signposting to relevant resources and support throughout life needs to be available allowing individuals to have the appropriate input and assistance they require when needed. This requires the training and incentivisation of healthcare professionals to engage with patients who present with symptoms clearly related to obesity. New targets for screening, offering and directing patients to appropriate weight management advice and support could feature in this.

Recommendation	Action taken by
Improved screening and normalisation of discussion about diet and weight at medical appointments.	Department of Health Royal Colleges
Curriculum reviews of healthcare professionals in light of nutrition and health with a focus on prevention.	Royal Colleges Department of Health Department for Business, Innovation & Skills (BIS)

8. Conclusion

We consider the most single important public health issue affecting the UK is the obesity epidemic. Without effective interventions it is predicted that 60 per cent of adults in the UK will be obese by 2050. This report demonstrates that there is no single cause for the observed rise in obesity. The complexity of the situation arises from the interplay of many evolutionary, historical, scientific, environmental, social and individual factors.

The 'time bomb' of obesity poses a significant threat on several different fronts: individual and community health as well as to the economy through financial implications of days lost in work, mounting health costs and impact on society as a whole. Looking to the future, international learning needs to be addressed in more detail as do the interventions of healthcare professionals and changes to the 'obesogenic' environment through effective town planning, which together form an integral part of any long term strategy.

The goal must be a package of measures and determined government action.

From our research we have identified the following as key to addressing this goal:

- **Focus on 'health in the round', not solely about weight -** Thinking about how we go about living our lives, how active we are, what we eat and drink and how we look after our bodies needs to become more of a priority, individually and collectively as a society. There needs to be greater acceptance and recognition of the fact that people come in different body shapes and sizes, and the realisation that some people will struggle with their weight.

- **Understanding nutrition -** Our health needs change depending on where we are in the life cycle so understanding our dietary needs throughout life is paramount. The focus needs to shift from a particular diet to 'our diet' and an improved understanding of food and what it means to eat a nutritious healthy diet.

- **Making the healthy choices easier -** Simply reinforcing messages about poor choices is not sufficient. People need to be educated to understand what constitutes good choice so they can take steps to change their behaviour; switching is always easier than trying to stop.

- **Individual responsibility -** Government has an important role to play in shaping food choices and the environments in which we live so that healthy options are easier to make. It does however start with individuals taking responsibility for their health.

- **Understanding how regulation works -** Regulatory interventions should form part of tackling obesity. However, it needs to be recognised that regulation can often lead to unintended consequences; therefore the mechanisms of regulation and legislation need to be better understood by government so that interventions change culture and transform behaviour.

8. Conclusion

- **Local power -** Strategies for tackling obesity which take place at the local level need to be aligned with the new NHS structure in England to ensure effective integration. Health and Wellbeing Boards (HWB) will need to have mandatory representation from nutritionists, public health experts and obesity specialists to ensure the necessary skills and expertise to inform decision making at local level.

- **Power of advertising -** Children have become a common target for junk food advertisements during prime time TV slots. With data from Public Health England in 2007 indicating 17.5 per cent of children leaving primary school were obese (a sharp increase from a decade previously when it was about 12 per cent) there is the need to curb the power and influence of advertising, particularly that aimed at children.

- **Partnerships with industry -** Effective partnerships with the food industry need to be built to maximise the experience and insight the industry has in understanding the relationship between marketing and behavioural change. If positive healthy behavioural change is to be achieved it is essential that the food industry is involved and not demonised.

- **Financial incentives -** While the report does not recommend a hypothecated tax, it does warrant further consideration along with upholding freedom of choice and consumer sovereignty. Taxing our way out of public health problems is not the answer, but practical consideration should be given to funding and a philosophical imperative to change behaviour proportionately through the tax system.

The empirical evidence shows that simply 'pushing' and legislating has not worked particularly effectively to date. However it is essential that further action should be mandated in conjunction with "nudging" appropriately in a variety of ways.

There is the imperative of coordinating and integrating a national public health strategy rather than just having individual strategies for alcoholism, smoking cessation, obesity, vaccination.

Obesity is more than just a physical issue to be addressed by the latest recommended diet. It is much more complex because it underpins how we live our daily lives, the environment in which we live and work and how we feel about ourselves.

It is only when we take this bigger picture into consideration and harness the involvement of a wide range of organisations and individuals that we will really begin to address the obesity challenge.

Appendix 1
Steering group members

Chair: Dame Helena Shovelton DBE

Name	Position	Organisation
Gail Beer	Director of Operations	2020health
Stuart Carroll	Health Economist	2020health
Christine Emmett	Chair	Health & Wellbeing Board
Matt James	Research Fellow	2020health
Sarah Kershaw	Senior Researcher	2020health
Jim McManus	Director of Public Health	Hertfordshire County Council
Prof David Napier	Professor of Medical Anthropology	University College London
Dame Helena Shovelton	Chair	2020health
Dr Judy Swift	Associate Professor of Behavioural Nutrition	Nottingham University
Mark Wilson (observer)	EU Reform Director	AB Sugar

Appendix 2
List of interviewees

Name	Position	Organisation
Henry Ashworth	Chief Executive	Portman Group
Prof Nicholas Finer	National Centre for Cardiovascular Prevention and Outcomes	University College London
Prof Paul Gately	Professor of Exercise and Obesity	Leeds Metropolitan University
Prof David Haslam	Chair	National Obesity Forum
Terry Jones	Director General	Food & Drink Federation
Prof Susan Jebb	Professor of Diet and Population Health	Nuffield Department of Primary Care Health Science, University of Oxford

Appendix 2
List of interviewees

Name	Position	Organisation
Katharine Jenner (RNutr)	Campaign Director	Consensus Action on Salt and Health
Jim McManus	Director of Public Health	Hertfordshire County Council
Dr. Colin Michie	Chair of Nutrition Committee	Royal College of Paediatrics and Child Health (RCPCH)
Dr. Roberta Rae	Nutrition Research Manager	Leatherhead Food Research
Dr. Carrie Ruxton	Dietian, health writer and nutritionist	
Dr. Michelle Tempest	Clinical Specialist Advisor on Obesity	NHS England
Prof Richard Tiffin	Director, Centre for Food Security	University of Reading
Steve Wearne	Director of Policy	Food Standards Agency

Appendix 3
Roundtable discussion participants

Chair: Dame Helena Shovelton DBE
The discussion took place under the Chatham House Rule.

Name	Position	Organisation
Henry Ashworth	Chief Executive	Portman Group
Gail Beer	Director of Operations	2020health
Rachel Barrett (observer)	Senior Consultant	Fishburn
Helen Dickens	Policy Lead	Diabetes UK
Christine Emmett	Chair	Health & Wellbeing Board
Kate Halliwell	Nutrition and Health Manager	Food & Drink Federation
Matt James	Research Fellow	2020health
Sarah Kershaw	Senior Researcher	2020health

Continued overleaf

Appendix 3
Roundtable discussion participants

Name	Position	Organisation
Dr. Colin Michie	Chair of Nutrition Committee	Royal College of Paediatrics and Child Health (RCPCH)
Dr. Aseem Malhotra	Cardiologist and Consultant Clinical Associate	Academy of Medical Royal Colleges
The Lord McColl of Dulwich CBE		
Julia Manning	Chief Executive	2020health
Gabrielle Owtram	Head of Partnerships, Health and Wellbeing Directorate	Public Health England
Dr. Roberta Rae	Nutrition Research Manager	Leatherhead Food Research
Dame Helena Shovelton	Chair	2020health
Dr. Judy Swift	Associate Professor of Behavioural Nutrition	Nottingham University
Prof Richard Tiffin	Director, Centre for Food Security	University of Reading
Dr. Michelle Tempest	Clinical Specialist Advisor on Obesity	NHS England
Dr. Sarah Wollaston	MP for Totnes Chair, Health Select Committee	
Mark Wilson	EU Reform Director	AB Sugar

Appendix 4
Public Health Responsibility Deal

Public Health Responsibility Deal

What is it?

- A voluntary scheme that asks companies to sign up to pledges to support healthy choices.
- This includes reductions in the amount of salt, fat, sugar, alcohol unit and calories in the products they produce and sell, and taking action to improve health at work and promote physical activity.
- Brings together the government, industry, the voluntary sector, non-governmental organisations and local government to voluntarily agree the actions they can take to help people make healthier choices.
- Organisations who sign up commit to:
  a) voluntarily improving public health through their responsibilities as employers, as well as through their commercial actions and their community activities
  b) report annually on the action they have taken in response to pledges they sign up to.
- Collective pledges on alcohol, food, health at work and physical activity set out the specific actions that partners agree to take in support of the core commitments.

How did it evolve?

- Prior to 2010, the Food Standards Agency was responsible for nutrition policy.
- Working at arm's length from the government the FSA had a remit to put consumers first and agrees its approach in open Board meetings.
- Issues which the FSA were seeking to address at that time included work:
  - salt reduction
  - saturated fat reduction
  - calorie labelling in restaurants
  - front of pack traffic light labelling scheme.
- Following the formation of the coalition government in 2010, nutrition policy was transferred from the Food Standards Agency to the Department of Health.
- The government's Public Health Responsibility Deal with food manufacturers then became the main conduit for achieving change on the issues previously being addressed by the FSA.

Appendix 5
Factors affecting behaviour and possible responses

(Information adapted from Government Office for Science 2007: 50-51)

	Details	Possible response
Habits	Habits are behaviours that are repeated and sometimes difficult to control. Changes in attitudes and intentions have less of an impact when a habit is formed 'Tunnel vision' syndrome occurs – reduced motivation to change	Educating and informing people so they form new habits Encouraging people to 'switch' to something new as opposed to 'stopping' is often found to be easier.
Beliefs	Influence behaviour in the following ways: • Consequences, including perception of personal vulnerability • Expectations of others • What will help or hinder behaviour • Balancing out of positive and negative outcomes	Community wide education and awareness campaigns which address widely held beliefs Focus on health education as a lifelong process

Intention into action	Translating good intention into actual action can be difficult.
	
	• Factors include:
	
	  • Failing to start
	
	  • Failing later
	
	  • Perceived lack of time
	
	  • Forgetfulness
		Peer support networks which could mentor, support and hold individuals accountable.

Automatic attitudes vs self-reported attitudes	Attitudes that people are unable or unwilling to retrieve from memory	Ensuring education and awareness focuses on health in the round, not just about weight gain or loss.

Appendix 5
Factors affecting behaviour and possible responses

	Details	Possible response
Moral climate	Reflects a shared belief that something is either inherently 'right' or 'wrong' Predictive of behavioural intentions ahead of attitudes, subjective norms and perceived behavioural control	Use of regulatory tools and interventions to help make healthy choices the default and easier to make.
Organisational culture	Substantial but unconsidered role in shaping behaviour of individuals Work and social environments can subtly shape the decisions people make.	Promoting healthy forms of getting to work (cycling, walking) Long lunch breaks for employees to engage in physical activity Supporting employees in making their choices through provision of appropriate facilities (cycle storage, changing facilities, discounted gym membership)
Media	Communication of values and shaping of behaviour	Ensuring the focus is on health in the round, not just about weight gain or loss. Concerted effort to promote a greater acceptance and recognition of the fact that people come in different body shapes and sizes.

Appendix 6
International comparison re policy approaches

Country	Adult obesity prevalence (percent)	Policy	Targets
Canada	17.5	Pan-Canadian Healthy Living Strategy The primary Canadian focus is obesity prevention in children	Increase the proportion of the population who are normal weight Increase the number of Canadian's making healthy food choices.
Denmark	13.4	Healthy thoughtful life (2002-2010)-Tackling Non-communicable diseases National Action Plan for Obesity (2003)-Prevent Dane's with BMI>30 Keyhole Nordic Labelling	Stop the increase of obesity Increase the proportion of people eating a healthy diet Decrease obesity among adults by 30 per cent by 2021 Decrease childhood obesity by 50 per cent by 2021
England	24.8	Change4life-obesity prevention Healthy child programme Development of an obesity review group Access to obesity drugs and surgery on the NHS	Decrease excess weight in children by 2020 Decrease excess weight in adults by 2020 Public Health Responsibility Deal pledges to help cut 5 billion calories from the nation's daily diet (Department of Health 2012).
France	12.9	National programme to address food behaviour and physical activity (2001) Charter to promote healthy diet and physical activity through television programmes and advertisements (2009) French obesity plan (2010-2013)-obesity prevention, delivery of health care for the obese, tackling discrimination, increase research National nutrition health program (2011-15)-decrease overweight and obesity, increase physical activity, improve eating habits, decrease prevalence of nutrition-related health	Stabilise the prevalence of obese adults Decrease obesity prevalence by 10 per cent Stabilise obesity in women living in poverty Decrease morbid obesity by at least 15 per cent

Appendix 6
International comparison re policy approaches

Country	Example of interventions	Summary details
Canada	Government Act: Quebec: Consumer Protection Act	Ban on advertising to children under thirteen.
Denmark	Tax on saturated fat	A surcharge on foods containing more than 2.3 per cent fat in an attempt to limit the nation's intake of fatty foods.
England	Change for Life initiative First national social marketing campaign in the UK to tackle obesity launched by the Department of Health in 2009.	Aims to help our population, particularly our children, eat well, move more and live longer. Takes the approach that improving the health and wellbeing of children is a core driver for long-term sustainable change.
France	Public Health Act 2005, part of Programme national nutrition santé (National Nutrition and Health Program; PNNS).	Banned soft drinks-and-snack-selling vending machines from public schools. Banned misleading television and print food advertising Imposed a 1.5 per cent tax on the advertising budgets of food companies that did not encourage healthy eating.

Appendix 6
International comparison re policy approaches

Country	Adult obesity prevalence (percent)	Policy	Targets
Mexico	30	National agreement of nutritional health (2010)- decrease sugar consumption, decrease saturated and trans fat consumption, decrease portion size, increase physical activity at school and work through: information, education, communication, advocacy and regulation National strategy for prevention and control of overweight and obesity- promotion of healthy lifestyles, screening and timely care of at risk individuals, increase regulation and taxes	Decrease the prevalence of overweight and obesity in 2-5 year olds Stop growth of overweight and obesity in 5-19 year olds Slow the increase of overweight and obesity in adults
Japan	3.5	2006: 5-year “shokuiki” plan	Launched aimed at encouraging healthier food consumption, such as regularly eating breakfast, and cutting down on meat and dairy products.

Appendix 6
International comparison re policy approaches

Country	Example of interventions	Summary details
Mexico	Tax Reform Bill on junk food and sugary drinks	Law imposes a levy of 8 percent on junk food A tax of one peso ($0.07; £0.04) on every litre of soft or sugary drinks A 'seal of nutritional quality' awarded to products that meet standards for having lower calories or higher fibre
Japan	2008: The Standard Concerning Implementation Special Health Examinations and Special Public Health Guidance, Ministry of Health, Labour and Welfare Order 159 (more commonly known as 'The Metabo Law').	Companies and local governments must measure the waistlines of Japanese people between the ages of 40 and 74 as part of their annual check-ups. No individual consequences for non-compliance. Responsibility falls to employers and local government, financial penalties imposed on companies and local government who fail to meet specific government targets.

Appendix 6
International comparison re policy approaches

Country	Adult obesity prevalence (percent)	Policy	Targets
Australia	24.6	2009: National Preventative Health Taskforce 2008: Healthy Weight	Established to review economic tools, such as taxation, to encourage healthier eating and the phasing out (over 4 years) of marketing unhealthy foods to children Achieve healthier weight in children and young people through actions which first stop and then reverse the increasing rates of overweight and obesity.
USA	35.9	Pricing policy on healthy foods in Minnesota '1 percent or less'	Price reduction intervention strategies to increase the purchases of healthful foods Social marketing campaign that encourages adults and children over age two to drink milk with a fat content of one percent or less, instead of whole or two percent milk.

Appendix 6
International comparison re policy approaches

Country	Example of interventions	Summary details
Australia	Front of label packaging	To improve consumer understanding of the nutritional value of products and encourage healthier choices Calls for simplified nutritional information with interpretative guidance on the front-of-food packages
USA	New York City - Taxing sugar-sweetened beverages (SSBs)	Aim to create 'norm cascades' leading to a 'tipping point' in public opinion and norms, away from support of SSBs

(Sources: Public Health England 2014; Government of Canada 2013; BBC News Online 2013; Jayarajan 2011; Onishi 2008)

Appendix 7
Comparison table of types of interventions

A. HEALTHY EATING INTERVENTIONS			
Intervention	**Details**	**Benefits**	**Challenges**
Education programmes	Providing accessible and understandable information on how to eat healthily.	Less intrusive than many forms of law Comparatively inexpensive Empowers the individual to make wise decisions Helps to alter norms critical in changing behaviour	How to provide information which is truly accessible and understandable. The extent to which the food industry should be required to give information on their products warning of health issues Can behavioural change really result?
Caloric disclosures on menus	Requires the disclosure of calories on menu items.	When individuals are aware of how many calories their selection contains, they will select the one with lower amount.	The extent to which having the information available necessary lead to healthier choices being made
Front of package labelling	Clear, uniform information given to the consumer so they can make an informed decision on which foods are best to purchase.	Enable consumers to make more informed and healthier choices	Creating a universal system which can be rolled out across all food products

Appendix 7
Comparison table of types of interventions

B. ADVERTISING INTERVENTIONS			
Intervention	**Details**	**Benefits**	**Challenges**
Self-regulation	Those most directly affected by policy goals determine how they will meet those goals.	Embodies the 'new governance' sentiment. Costs are borne by those involved.	Potential for it to become a 'talk shop' which results in no evident change.
Tax deductions	Prohibit tax deduction for advertising and marketing	Reduces widespread advertising of certain types of food	Difficulty in defining the kind of advertising which is prohibited from tax deduction
Restricting advertising	Prohibiting advertising for a set target audience	Curbs the abuse of advertising design to take advantage of target audience	Will prohibition in this way result in total protection of the target audience from advertising?

C. FISCAL INTERVENTIONS			
TAXATION			
Intervention	**Details**	**Benefits**	**Challenges**
Taxing nutrients	Taxation to suppress consumption	Good example of 'permit but discourage'	Acceptability with consumers
Taxing snack foods	Premise is that some foods do not constitute basic needs Snack foods are often processed and energy dense (Franck et al 2013)	Perception that it is most legislatively feasible Majority of the increase in calorie intake since 1980s is thought to result from snack consumption Studies indicate that 20 percent tax on potato crisps would theoretically result in a non-significant 830-calorie reduction per capita, less than a quarter of a pound per year (Kuchler et al 2005)	On its own, might be ineffective in tackling obesity challenge Adverse effect on the less well off: taxes on some foods affect poorer people disproportionately because healthier foods are often more expensive and can be afforded by those on a limited budget.

Continued overleaf

Appendix 7
Comparison table of types of interventions

C. FISCAL INTERVENTIONS			
TAXATION			
Intervention	**Details**	**Benefits**	**Challenges**
Taxing sugar-sweetened beverages (SSBs)	In the past decade, per capita intake of calories derived from carbonated drinks and SSBs has increased by approx. 30 per cent Beverages thought to account for 10 per cent to 15 per cent of calorie intake for children and adolescents	Studies indicate decrease of just one quarter of the calories obtained from SSBs would lead to an estimated reduction of 8000 calories per capita (Franck et al 2013). A 20 per cent tax on sugary drinks would pare Britain's growing obesity rate by 1.3 percent, helping some 180,000 people to tread much lighter on their scales (Credit Suisse 2013) Recent European study showing adults who drank more than one can of sugary fizzy drinks a day had a 22 percent higher risk of developing Type 2 diabetes than those who drank less than a can a month.	Perception of the 'nanny state' restricting personal freedom and choice How can legislation be effectively implemented to cover all bases and not allow opportunity for legal loop holes to emerge?

Appendix 7
Comparison table of types of interventions

C. FISCAL INTERVENTIONS			
SUBSIDIES			
Intervention	**Details**	**Benefits**	**Challenges**
Healthy foods for those on low incomes	Incentivisation to change behaviour	Provides incentives for healthy foods and drinks to be purchased among individuals who may be prone to obesity but do not have the economic means to purchase healthy food and drink.	What is the actual impact on increasing nutritious consumption?
Rewards	Choice remains with the individual but certain choices, judged to be good, are promoted.	Provides incentives to follow through on healthy decisions.	Superficial choices may occur so as to simply receive the reward. No long term changes are realised.

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2020health is an independent, social enterprise think tank whose mission is to "Make Health Personal". Through research, evaluation, campaigning and relationships we aim to both improve individual health and create the conditions for a healthy society.

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Fit-for-school:
To create a holistic picture of wellbeing and what children need in order to thrive at school, and identify ways of enabling more children to flourish and break the cycle of failure.

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To continue looking at the importance of work for health and health for work, and ensure that those who experience illness receive timely and appropriate support, understanding that worklessness impacts on economies and society as a whole.

Fit-for-later life:
To look from active retirement, to increasing dependency and end-of-life care and consider new models of provision, raise the status of caring, embed respect for ageing and ensure inclusion.

Forgotten conditions:
To ensure that people with rare or unusual health conditions have their needs met by the NHS.

Integration:
To promote integrated care that uses technology to empower people and enable management of their healthcare and wellbeing.

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To ensure that we continue to share our knowledge of healthcare and learn from those countries that care for people better than we do.

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