Influencing Public Behaviour to Improve Health and Wellbeing

An independent report

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Contents

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Foreword

Persuading people to adopt healthier behaviours has become a central theme of modern public health policy. It underpins the goal of making the NHS more of a health service rather than a sickness service. Yet it is rarely easy. Most of us do things that damage our health. And most of us have habits that we would like to change.

The question I was asked to address in this report was what is known about what works in changing behaviour. To answer the question we looked at insights coming from the many fields concerned with behaviour – from commercial advertising to the latest academic insights from behavioural psychology. It was soon clear that this is as much an art or craft as it is a science. There are many promising ideas, and there are some success stories. However the evidence base is thin. Behaviours can change in fundamental ways – but usually through the interaction of incentives, information, peer pressures and changes to the environment, rather than because of any one set of measures.

Some of the lessons suggest the need to shift direction. For example, we are increasingly learning about the importance of networks in shaping how people behave (whether its obesity or smoking), and how behaviour can be changed. Who you know shapes how you act. This suggests the potential for much more targeted action rather than mass advertising. Other lessons are about the tone that communications should adopt. Sometimes very stark messages are unavoidable. But against a backdrop of huge volumes of communication, it's important to be economical, and often more can be achieved by positive messages, that emphasise personal wellbeing rather than just stoking fears.

Behaviour change also requires some changes of emphasis for the NHS. Because the hard evidence base is so thin, there is an urgent need for faster experiment, with robust evaluation and faster learning. We badly need better knowledge about what works, and at what cost. We also need better collaboration since the NHS can directly influence only a small proportion of public behaviour. Others need to be partnered with, including local authorities, the media and retailers.

This report is a snapshot of a field that is evolving rapidly. I'd like to thank the many experts who gave generously of their time and who are themselves advancing knowledge on so many fronts. I hope that this report does justice to their insights.

Executive Summary

We know that people care about their health. We also know that around half of all illness is linked to choices people make in their everyday lives – whether that is the choice to smoke, drink excessively or eat too much and exercise too little. For this reason, governments have increasingly focused on helping people to make different choices. But people don't smoke or drink too much because they are ignorant, stupid or perverse – rather, it is the combination of the enjoyment that they get from these things and wider social or other environmental factors that mean they find it hard to adopt healthier behaviours.[1] A key challenge for the Government, therefore, is how best to use scarce taxpayer resources to help people make the right choices for them.

The challenge I was set in writing this report was to build on current approaches, using the latest evidence from areas such as behavioural economics and psychology, to suggest ways in which the Government could become more effective in this area, to help people to make healthier choices where they wish to do so.

In support of this work, we carried out three main tasks:

- a literature review and initial discussions with some key practitioners and academics;
- two seminars with a wider group of experts in the field, drawn from academia, local and national government, business and the third sector; and
- qualitative research to investigate the public's views of their own experiences and the Government's role in behaviour change. Selection of participants was based on a segmentation model developed specifically by the Department of Health (DH Healthy Foundations Life-Stage Segmentation Model – see Annex A for more details).[2]

The key themes to emerge from this process are:

- the need, in our messages on public health, to put more emphasis on the positive, in particular how people can feel better by changing their behaviours;
- to speed up experiment, with faster learning, in order to develop as rapidly as possible the robust evidence base needed to underpin more effective behavioural interventions;
- linked to this, the necessity for the Department of Health to orchestrate its own knowledge to ensure that it remains on top of the rapidly evolving evidence base on behaviour change, segmentation and the design of environments;
- that the most powerful tools involve reshaping environments to encourage people to make healthier choices, while still leaving open the option of choosing differently;

1 Our interest here is in how public behaviours can be changed from the relatively damaging to health to health promoting. In most cases there is a broad distribution of behaviours. There are two overlapping goals for policy: to shift the average, and to reduce the extremes of harmful behaviour. guidance.nice.org.uk/PHG/Published

2 DH Healthy Foundations Life-Stage Segmentation Model: www.dh.gov.uk/en/PublicationsandStatistics/Publications/PublicationsPolicyandGuidance/DH_090348

- that only a small part of behaviour change is under the control of the Department of Health or the NHS, so it is vital to mobilise partners in the media, business, local authorities and across central government; and
- that leadership – including by ministers – is crucial. Messages which show key leaders walking the talk, together with honesty about the difficulties of changing behaviour, are a vital complement to other types of message.

Given these key themes and principles, my immediate recommendations are:

i. First, public campaigns will continue to play an important role, but will not have a uniformly strong impact across all groups in society. And to succeed against a backdrop of the huge volume of messages being sent to people, messages and tone that are perceived as paternalistic or patronising are likely to be less effective than those seen as more supportive; they should, in broad terms, put more emphasis on the positive than on the negative, and in particular on how people can feel better by changing their behaviour. Sometimes it will remain necessary to challenge and even shock people – and, at least in the case of smoking, negative messages can be more useful in relation to why to quit, with positive messages being more important in relation to how to quit. But messages of this kind need to be used sparingly.

ii. Second, while the current evidence base makes it difficult to make many immediate recommendations on specific programmes, one area where this is possible is to extend financial incentives for pregnant mothers to quit smoking, drawing on current successful pilots in Dundee and Birmingham.

iii. The fine grain detail of how environments are shaped is becoming increasingly important to health. An important challenge for the future will be to ensure more people involved in policy and service design have a feel not only for the evidence on behaviour change but also for the details of successful service and physical design.

iv. Fourth, in relation to mobilising partners, there are a number of positive examples of good practice which should provide ideas on similar approaches across health improvement work. For example, the Food Standards Agency and Department of Health are working with the food industry to:

   – pilot calorie labelling on menus and menu boards to help consumers at the point of choice;

   – push for agreement with manufacturers on smaller portion sizes (e.g. of chocolate bars and soft drinks); and

   – rebalance the advertising and marketing of food to children to reduce their exposure to promotion of food high in fat, salt and sugar and increase their exposure to promotion of healthier options.

   Other government departments also need to be mobilised – for example, as has happened with HM Revenue & Customs (HMRC) on tobacco smuggling, and in joint working with the Department for Children, Schools and Families (DCSF).

v. Fifth, the Olympics provide an ideal catalyst for a more ambitious approach to area-based projects – for example, challenging major towns and cities to compete to transform their fitness and overall health and wellbeing. Nowhere in the UK has yet attempted a comprehensive strategy to boost exercise levels, yet the time must be ripe to do this. There is also a key role for political leadership to encourage people to be aware of the conflicting messages coming to them, more of which tend to encourage overeating or drinking than the reverse. This may not be the place for regulation and law, but major businesses could be much more vigorously held to account for the messages they send, particularly to children.

vi. Sixth, although I recognise the range of competing priorities, ideally more health research would be focused on behaviour change. Despite some very strong evidence – collated by NICE among others[3] – on the effectiveness and cost-effectiveness of *some* behaviour change methods, the great majority have not been adequately studied or measured. Public and private investment in health research is overwhelmingly skewed towards clinical solutions rather than the ones described in this report (only around 2% of the health research budget goes to prevention).

3 guidance.nice.org.uk/PHG/Published

The Structure of this Report

This report starts by considering, in Section 1, some of the latest evidence from behavioural psychology and economics, before looking, in Section 2, at the range of tools available to government policy makers to influence behaviour change. I then use this in Section 3 to assess the efficacy of some past and present approaches, and set out in Section 4 some potential ways to build on successes, looking at the form and tone of public health messages, as well as the role of other organisations (both inside and outside government). In Section 5, I consider the views of both the public and front-line professionals – based on our Customer Insight research – before reaching some conclusions and setting out my recommendations in Section 6.

Introduction

Few of us find it easy to change long-standing habits even when we know that they are no good for us. Many people who smoke, drink or eat too much know that they shouldn't.[4] Many others do so despite their best intentions.

But all governments are under intense pressure to get better at influencing public behaviour – both to make it easier for us to make 'better' (including healthier) choices where we wish to do so, and to take action to prevent others making choices which impact negatively on our welfare. We have abundant evidence on the cost of bad behaviour for the taxpayer and society as a whole. And, when it comes to health issues, we know that the only way to arrest worsening obesity is through changes to habits of exercise and diet which many of us will find very challenging, even though they may only need to be relatively small.

Governments have extensive powers to influence behaviour – from law and education to regulation and taxation. But these are exercised within the context of emerging public views on what is legitimate. While government has an important role in shaping public perceptions, there is understandable nervousness about being too explicit, or too draconian. It took nearly 50 years for governments to gain the legitimacy to impose smoking bans. Many people view these types of behaviour as matters for private life, not public legislation. It could be argued that, in the past, government communication was sometimes paternalistic or even patronising, which in some cases backfired, encouraging those people to reinforce their behaviour as a way of asserting their independence and identity.

These anxieties have been compounded by the lack of hard evidence on what works. Despite some partial success stories, such as campaigns against drink driving or encouragement to eat more fruit and vegetables, the evidence base on behaviour change is thin and uneven. NICE has shown the effectiveness of, for example, smoking cessation programmes. But a report produced last year on the cost-effectiveness of public health interventions confirmed just how little is known about what works.[5] What we do know is that:

- Information and education are disappointingly ineffective tools for persuading people to change behaviours.
- Rational persuasion has relatively little impact on entrenched habits, particularly if they involve strong peer pressures or even addiction. This is why the lessons from commercial marketing are of only limited use – the great majority of advertising is aiming at marginal shifts in choices (e.g. between different washing powders) which aren't remotely comparable with trying to persuade someone to quit after 20 years as a smoker.
- There are some pointers to more effective interventions – e.g. engaging people on alcohol treatment when they are coming out of an incident at A&E. But we don't know yet what other tools will work best and in cost-effective ways.

4 Smokers and overeaters may be more aware of the harm they're doing than heavy drinkers, many of whom think their behaviour is normal.

5 Matrix Evidence/Bazian (Oct 2008), *Prioritising investments in public health*. www.healthengland.org/health_england_publications.htm

Section 1 What Can We Learn From Behavioural Psychology and Economics?

Key messages

- The fields of behavioural psychology and economics are still developing, but do provide many useful insights into behavioural change. Integrated theories of behaviour change, such as West's PRIME model, can be used, if not to design whole intervention programmes across a range of health behaviours, then to test policy ideas even before they are piloted.
- The most effective behaviour change interventions will address all, or most of, the points made above, through a variety of routes – it is not enough to design interventions which are aimed at one or even a few of these areas.

In recent years there has been a good deal of effort to learn more about why people do and don't change their behaviour. An earlier overview of the state of the field was undertaken by the Prime Minister's Strategy Unit in 2002. The award of the Nobel Prize for Economics to Daniel Kahneman significantly raised the profile of behavioural economics, and more recently Cass Sunstein and Richard Thaler's *Nudge* became a best seller.[6] At the same time, the Department of Health has drawn on various other theoretical models, such as Robert West's PRIME model of behaviour change,[7] to guide its work. The best research has drawn on observation of how people really do behave, rather than deducing conclusions from theories (such as economic theories of how people might respond to incentives).

6 Thaler RH and Sunstein CR (2008), *Nudge: Improving decisions about health, wealth and happiness*, Yale University Press.

7 See www.primetheory.com

There are several main insights from this body of work which are now widely accepted, even if the experts differ on the precise mechanisms (the range of views is described in more detail in Annex B). All of these show why traditional public information campaigns rarely succeed on their own.

i. The first is that people use **rules of thumb** ('heuristics') to help them make decisions, which are not strictly rational.

ii. People also tend to **overdiscount the future** – for example, putting too much weight on the pleasures of excessive drinking now, against the risk of the potential health problems that could result later in life (or even the risk of being injured in a fight or accident on the way home from the pub).

iii. In addition, **we tend to pay more attention to potential losses than gains**. As a result, for example, we are more likely to change a behaviour if told of the increased risk which would result if we fail to act, than if told of the reduction in risk that would result from change. As with rules of thumb and overdiscounting, it's very difficult to go against the grain of this natural tendency.

iv. People make decisions using both their rational conscious brain and their 'automatic processing system', the parts of the brain that **make decisions unconsciously or subconsciously**. The most powerful interventions address both.

v. How we behave is influenced by **contexts and by 'choice architectures'**. A teenager may know about contraception but push that knowledge to one side when drunk. When trying to change habits, such as smoking or excessive drinking, people often need personalised plans that help them think through how to deal with difficult situations, e.g. social occasions, where they are used to smoking or drinking excessively. Similarly, the precise context in which choices are made can be important – people can be 'nudged' towards better choices through everything from portion sizes in cafeterias to making particular kinds of pension the default option.

vi. Behaviours are bound up with **identities**. If being able to 'hold your drink' is part of someone's social identity, they will need an equally powerful identity, with which they can strongly identify, to replace it if they are to change their behaviour (e.g. perhaps as a responsible father).

vii. There is now strong evidence that phenomena such as obesity are heavily influenced by **networks and relationships**: who you know shapes how you behave. Behaviours can spread rather like viruses. Equally, we're more likely to change if we think it matters to someone who matters to us, or if there is a group to help us (like an Alcoholics Anonymous group for example).

viii. For all the above reasons, what works with one group won't with another. **Segmentation** and targeting are all-important. Methods for changing behaviour need to be aligned with cultures, cognitive styles, social contexts etc. In relation to alcohol, for example, some groups may be most influenced by messages about long-term harm, while others may be more influenced by self-image and the perceptions of others.

ix. Changing the **environment** in which people live and work is often the most powerful way of influencing their behaviours. For example, where the social norm is to smoke, it is harder to be a non-smoker. Banning smoking, however, obviously has a big impact.

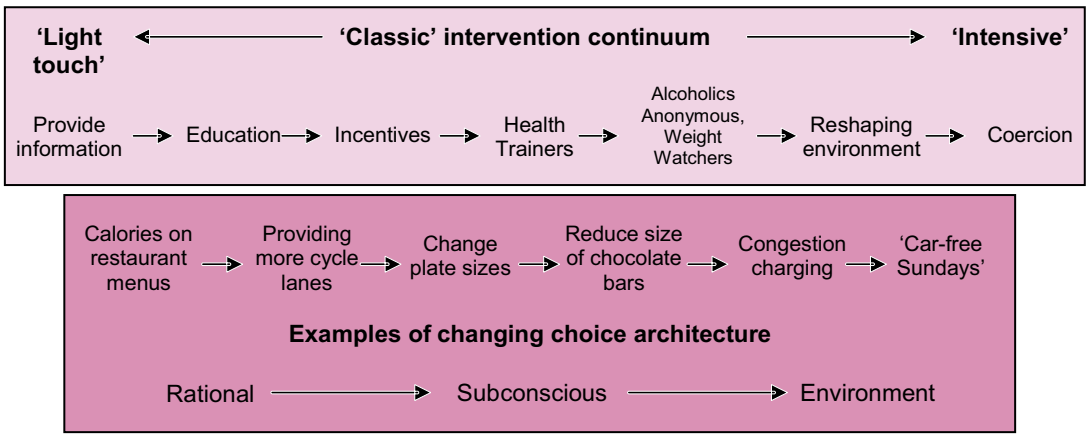
While innovative policies are building on some of these ideas, these insights have not yet been fully incorporated into policy – perhaps understandably because many of these insights are relatively recent. Some of the tools that are described in the next section remain underdeveloped. For example, segmentation methods, which divide up the population by lifestyle or culture, are not much more than 30 years old, but remain far from an established science. Nevertheless, we can map the different types of policy tool that can be used, and relate them in a rough and ready way to the state of knowledge.

Section 2 The Intervention 'Toolkit'

Key messages

- There is a wide range of interventions open to government to help people change 'unhealthy' behaviours, but its ability to move towards the more interventionist end of the spectrum is constrained by public perceptions of legitimacy.
- In between information provision – which tends to be insufficient on its own to deliver behaviour change – and more interventionist policies, there are some promising potential policy routes, including ensuring that information is delivered to people in a form that is salient to them, and changing the environment in which people make choices (e.g. portion sizes). Interventions built on one-to-one relationships – such as the Family Nurse Partnership (FNP) programme – also look like a promising route forward. But these will tend to be resource intensive and may, therefore, require careful targeting.
- Current evidence would not support the extensive use of financial incentives to support behaviour change. But emerging evidence from work to help expectant mothers stop smoking suggests that they may be useful in that, albeit limited, context.

The diagram below sets out the range of options available to policy makers in designing interventions aimed at supporting people to change their health-related behaviours. These are shown as forming a rough continuum. Lighter touch interventions are on the left and more 'intensive' or 'intrusive' interventions on the right. Interventions aimed at changing the 'choice architecture' or environment can also be arranged along a similar intervention spectrum.



Here I comment briefly on what is known of the efficacy of each set of tools.

Information provision

Information provision is seen as the most legitimate form of intervention by the state, since it leaves the maximum room for choice for the individual. However, experience has repeatedly shown that information and education, while necessary conditions for behaviour change (at least in terms of laying the groundwork for further action by government), are relatively ineffective at supporting behaviour change on their own.[8]

It has also been shown that the form in which the information is provided matters. One interesting example is the publication by the Australian Government of the table below, showing the risk of death resulting from different levels of daily alcohol consumption.

On its own, this information may allow some people to judge their preferred level of alcohol consumption. But one of the key messages from the Customer Insight work we commissioned was that people did not readily understand statistics – in this case, what might be seen as a reasonable risk? What the Australian Government has done is to base its recommended daily alcohol consumption at 2.5 UK units, using the comparable lifetime risk of dying in a road traffic accident as the comparator by which to judge this limit. This provides some salience to the limit chosen – it gives people a useful benchmark for assessing risks.

8 For example, see Gilmore I (2006), What lessons can be learned from alcohol control for combating the growing prevalence of obesity? *Obesity Reviews* (2007) 8 (Suppl. 1): 157–60, on the case of alcohol and drinking behaviours.

Lifetime risk of alcohol-related death, drinking a certain amount daily (men)[9]

Number of Australian units of alcohol consumed per day	Total risk of alcohol related death	Death from alcohol related disease	Death from injury
1 (= 1.25 UK units)	0.4%	0.2%	0.2%
2 (2.5 UK units)	0.9%	0.4%	0.5%
3 (3.75 UK units)	2.8%	1.3%	1.5%
4 (5 UK units)	4.2%	2.0%	2.2%
5 (6.25 UK units)	5.8%	2.7%	3.1%
6 (7.5 UK units)	9%	3.8%	5.3%
7 (8.75 UK units)	12.2%	4.7%	7.5%
8 (10 UK units)	14.8%	5.1%	9.7%

What might make this table more useful would be to provide similarly salient examples of equivalent risks for other levels of alcohol consumption, for example the risk associated with riding a motorbike, horse riding, or other everyday decisions with which people could easily identify. While this could be accompanied by a government recommendation – aimed at those audiences who want it – it would enable others to make a decision based on the level of risk they are normally prepared to take in other aspects of their lives, and therefore improve the effectiveness of information provision as an intervention.

This assumes, of course, an approach to decisions (in this case, about drinking) that probably doesn't reflect most people's actual approach (which is, for example, likely to be driven by such things as habit, social context and what friends are doing). But it is undoubtedly part of any more comprehensive strategy, and might particularly help those who have reached a point where they want to take more active decisions about their overall level of a particular behaviour.

9 Australian National Health & Medical Research Council (2009), *National Guidelines to reduce health risks from drinking alcohol*, 48. Interestingly, this is combined with advice recommending that Australians should consume no more than 5 UK units on any single occasion – again, this makes the advice more salient, as it reflects many people's usual drinking patterns, where they may have a few drinks socially on some days and drink little or nothing on other occasions.

Choice environment

Moving right along the intervention continuum, we come to ways of changing **people's choice environment**, making it easier to choose 'healthier' options without preventing people from making less healthy choices if that is what they want. Examples of this include the recent proposal by the Food Standards Agency (FSA), working with the confectionary industry, to reduce slightly the size of chocolate bars.[10] This will reduce the calorie intake of those who want a one-off treat, without impinging on the freedom of those who want more to buy another chocolate bar.[11] This builds on an important lesson from behavioural psychology/economics about portion size – that people will tend to eat what's put in front of them, so that reducing portion size can have an impact on calorie intake and, eventually, obesity. Other examples include much greater provision of safe bicycle lanes (as in many countries); restricting the numbers of fast food outlets; or preventing 'happy hour'-type alcohol promotions as a condition for licences.

Building relationships

The next set of tools involves relationships – either one-to-one methods or the mobilisation of peers. A good deal has been invested in health coaches and health trainers, with some promising early evidence (though as in so many cases, the assessment has been designed in ways that make it hard to judge cost-effectiveness). In the private market, spending on personal coaches and counsellors has grown massively in recent decades, providing pointers to where demand may be heading more generally. People often like to have an external pressure – challenging but sympathetic – to help them to do the things they want to do anyway.

At the other end of the social spectrum, the **Family Nurse Partnership** (FNP) programme is another example of such an approach, which relies very heavily on the development of one-to-one relationships between the nurses and the families with whom they work. **Significant resources have been targeted at a relatively small population, and the benefits run much wider than health**.

For other individuals, however, being part of a mutually reinforcing group may be the key to behaviour change – the **peer-to-peer** elements of WeightWatchers and Alcoholics Anonymous are clearly key components of those approaches. A good deal of work is underway on potential ways of linking people with long-term conditions into clubs which could encourage mutual support for condition management and healthier behaviours. Recent evidence shows that obesity is strongly influenced by social networks – you are more likely to be obese if someone you know is, and even if someone once removed is. One-to-one support is part of the toolkit for reversing these flows of influence, mobilising social networks in the other direction.

10 news.bbc.co.uk/1/hi/health/8173936.stm

11 It could be argued that consumers' utility will be reduced because there is unlikely to be a price cut corresponding to the reduced size of a chocolate bar. On the other hand, this is relatively trivial compared with the costs associated with other, more intrusive interventions.

Financial incentives

A stronger form of intervention is to provide **financial incentives** to encourage people to adopt healthier behaviours. The newly established Centre for the Study of Incentives in Health (CSI Health)[12] has launched a programme to assess the long-term impact of such incentives. However, as well as being unpopular among the public (who tend to argue that they unfairly reward people for 'bad' behaviours), current evidence suggests that the impact of such incentives may be limited to the short term (just as most performance-related pay schemes tend to diminish in effectiveness over time). While this could be simply a design issue (the level and nature of the incentives offered, as well as their timing, clearly matter), it is hard to argue for their widespread use on the basis of current evidence.[13]

A more positive example – and perhaps an exception to that general rule – comes from a successful experiment carried out in Dundee, where expectant mothers were paid relatively small sums – £12.50 in the form of a credit on an electronic card, which could be spent on groceries at the local supermarket (excluding alcohol and cigarettes) – if they stopped smoking. In a positive assessment of the pilot, researchers found that an important reason why the incentive worked was 'that using rewards gave mothers an excuse to opt out of the social norm of smoking within their peer group, but, crucially, did not isolate them from that group'.[14] A similar scheme has just started in Birmingham as a joint venture between the Young Foundation (of which the author is Chief Executive) and Birmingham East and North Primary Care Trust (PCT), giving people with long-term conditions a 'Nectar'-style card on which they will receive points for healthy behaviours. Again, pregnant mothers are a first target. In these cases, there is a significant benefit to a third party – the unborn children of mothers who would otherwise smoke. However, there is also, potentially, a risk of gaming, with non-smokers taking up smoking in order to access the incentive. And as with all financial incentives there is a risk of turning a non-economic behaviour into an economic one, ultimately with people expecting to be paid for actions which they should be doing voluntarily.

12 More details available at www.kcl.ac.uk/schools/biohealth/research/csincentiveshealth/

13 For a short but lucid discussion of current evidence on the use of incentives, see Marteau TM, Ashcroft RE and Oliver A (2009), Using financial incentives to achieve healthy behaviour, *BMJ*;338:b1415.

14 www.nsms.org.uk/public/CSView.aspx?casestudy=72#top

Bans and more intrusive interventions

At the more intrusive end of the intervention spectrum is the use of interventions such as **full or partial bans**. Smoking provides an interesting example here: as the evidence of harm has been accepted by the public, government intervention has grown from simple provision of information to, first, the provision of a wide range of support to stop smoking (helped by the development of new medicines and other aids) and then, more recently, the introduction of a ban on smoking in enclosed public spaces. Despite its intrusive nature, public support for this remains quite strong, in part because the public have been convinced of the harm to others as a result of passive smoking, in part because some smokers themselves felt that it would help them to quit, but also simply because many non-smokers find the smoky atmosphere that used to prevail in pubs and some restaurants to be unpleasant. This suggests that building support for interventions at the more intrusive end of the spectrum not only takes time, but may also depend on building coalitions of people with different perspectives.

Another example of an intervention that lies at the intrusive end of the spectrum is Singapore's approach to tackling childhood obesity. This involves compulsory exercise for overweight children, as well as careful monitoring of their diet – both of which involve some explicit segregation from others at school. While this has successfully reduced rates of obesity in children from 14% to 9% (at a time when obesity has been rising in neighbouring countries), it has been argued that this has come at the price of stigmatising overweight children (which may have been a prime influence in getting them to lose weight), and a growth in psychological problems, including eating disorders.[15]

As a rule, there is much more legitimacy for measures that focus on protecting children rather than adults. The parallel report written by Richard Reeves argues that adults should be free to harm themselves if they so wish (subject to providing information and shaping environments so that there is no bias towards harm). So, looking ahead, options such as banning smoking in cars when children are present, increasing tax on alcopops and regulating marketing of food to children will all be seen in a different light to measures aimed at the whole population.

15 PRI's The World. www.pri.org/theworld/?q=node/14022

Section 3 Assessment of Past and Current Approaches – What Has Worked and What Hasn't

Key messages

- The reduction in smoking prevalence in the UK over recent decades is an impressive public health achievement. The continued reductions in recent years owe much to the combination of a range of approaches.
- However, smoking may not provide a model for policy in other areas, such as drinking or diet – moderate consumption of fatty food, for example, does not have the same scale of negative health consequences as moderate smoking.
- The lessons from other areas of successful behaviour change are also quite limited. Most of those changes involved relatively marginal changes to behaviour which were not so closely bound up with identity and cultures, whereas challenges such as the UK's relatively high rate of teenage pregnancy are much more complex.

Over time, government has tried a range of approaches across the intervention spectrum outlined above. This section examines the reasons for successes and (relative) failures in different areas.

Arguably, the most impressive example of behaviour change in recent decades in health has been the reduction in smoking. This has been influenced by a combination of nearly all the tools described above, ranging from information, to financial incentives, to environmental shifts. Smoking cessation programmes provide a wide variety of support for people to stop smoking – including nicotine-replacement therapy, counselling services, etc – which has been shown to improve the chances of successfully quitting. It has an impressive track record – over the last year, the NHS helped 337,000 people stop smoking, as measured by quit rates at four weeks. This represents a slight fall from 2007/08, but that was helped by the introduction of the ban on smoking in enclosed

public spaces. At a cost of £219 per person (excluding pharmaceutical costs), the intervention looks very cost-effective when compared with NICE cost-effectiveness thresholds.[16]

Of course, the success in reducing smoking rates – now below the 2010 target of 21% – has taken over 40 years, starting with the dissemination of information on the harms caused by smoking and, perhaps, culminating with the ban on smoking in enclosed public spaces, a measure that was politically unthinkable only a few years previously. The personal harm involved in smoking is unambiguous, and the collateral harm to others is hard to ignore.

Smoking appears to provide a model for other fields, showing how over a period of decades more moderate actions can contribute to a climate of opinion in which more drastic changes become legitimate. However, this is by no means guaranteed. In other areas, successes have been more limited (e.g. the number of 'heavy' drinkers has increased slightly over recent years from 7% to 10%, although overall alcohol consumption appears to have peaked in 2004.[17]) Moreover, efforts to tackle smoking are different from those to reduce excessive alcohol consumption and encourage good diet and exercise, in that smoking is comprehensively bad for health and its impact is cumulative. None of the other key behaviours discussed here have the unambiguous characteristics of smoking – drinking undoubtedly causes significant collateral harm, but most drinking doesn't. Excessive eating creates costs but doesn't directly hurt others. As a result, it's wrong to assume that other policy areas can simply follow the example of smoking.

Looking more broadly, the types of intervention in other fields that look to have been most successful have generally involved relatively marginal changes to behaviour which were not so closely bound up with identity and cultures:

- increased road safety, including the reduction in drink-driving, and the use of seatbelts and motorbike helmets;
- more recently, the increased use of bicycle helmets (although this is not mandatory, unlike seatbelts and motorbike helmets);
- dog owners cleaning up after their pet in public spaces, such as parks and pavements;
- the fall in the number of cot deaths;
- the shift from full-cream milk to skimmed milk and from butter to low-fat spreads over the last 20 years;
- the increase in the use of sunscreen and higher factor sun creams over the last two decades;

16 NHS Information Centre, www.ic.nhs.uk/statistics-and-data-collections/health-and-lifestyles/nhs-stop-smoking-services/statistics-on-nhs-stop-smoking-services:-england-april-2008-to-march-2009. Clearly, there are weaknesses in measuring quit rates after only four weeks – not least because we know that it often takes a number of attempts before smokers successfully quit – but given the low costs of this intervention, it is still extremely cost-effective.

17 Institute of Alcohol Studies (2008), *Drinking in Great Britain*, http://209.85.229.132/search?q=cache:5o_qv8iKub0J:www.ias.org.uk/resources/factsheets/drinkinggb.pdf+UK+pure+alcohol+consumption+per+person&cd=2&hl=en&ct=clnk&gl=uk

- the 'Milife' programme developed by Unilever,[18] an example of a successful weight loss programme developed by the private sector, which looks to have achieved good results in early trials;[19]
- WeightWatchers and Alcoholics Anonymous, good examples of other successful health programmes led by non-government organisations; and
- the Family Nurse Partnership programme, developed over many years in the US and now adopted in the UK, with apparently strong outcomes potentially justifying its relatively high costs.

Most of these involved relatively simple actions, compared with some of the complex changes that might be needed to tackle obesity, drug and alcohol abuse, or teenage pregnancy, for example. They also provide some interesting contrasts:

- They do not all require government action: where there are potential markets, as in weight-loss programmes, drugs treatment or nicotine patches, the private sector may have an important role. Similarly, private responses to public concerns about saturated fat – partly driven by government campaigns – have helped drive the shift to lower-fat spreads and skimmed milk.
- Some changes have been led by coercive actions, particularly in road safety, but this has not been universal: the increase in the use of bicycle helmets has not required legislation backed by penalties.

There are also plenty of examples of relative failure. The UK does relatively badly in areas such as sexually transmitted infections, binge drinking, drug use and teenage pregnancy (which has seen some reductions in recent years with teenage births at their lowest level for 15 years, but still remains high relative to most other European countries). Experiments can sometimes make things worse. Some evaluations of drugs education suggested that it may increase usage rather than reducing it. One recent pilot, conducted separately from the teenage pregnancy strategy, may even have led to an increase in teenage pregnancy rates[20] (though, of course, part of the purpose of pilots is to test out alternatives). In all these cases the causes of failure were complex, but in every case part of the reason was that the counter pressures – from peers, from pleasure – were too strong.

18 www.milife.com/(S(x2oqvp45prgsazey1xa1kg45))/MiLifeHomePage.aspx

19 www.jmir.org/2008/4/e56

20 www.ioe.ac.uk/Study_Departments/YPDP_Final_Report.pdf

Section 4 So What More Could be Done?

Key messages

- Individual members of the public may feel 'bombarded' by a range of separate, uncoordinated public health messages from government (on top of stories in the media), with little sense of which to prioritise or where to start, which risks encouraging people to be sceptical about and 'switch-off' from all public health messages.
- There is an opportunity for the Department of Health and the local NHS to examine a more person-focused approach, supplemented by targeting based on lifestage and other transition points.
- Some of the Department of Health's current work is already moving in this direction – for example, *Change4Life*. This is a very positive step.
- Some members of the public may be turned off by what they perceive (fairly or unfairly) as a relentlessly negative stream of campaign messages – not just from government but also from charities, various experts and from the wider media.
- As is already being done by campaigns like *Change4Life*, there may be a case for shifting the balance of messages towards life and wellbeing rather than only health, and about feeling good now as much as avoidance of future conditions.
- Our behaviours are influenced by a whole host of organisations, from national departments to local authorities, media and business. So, to change behaviours, the Department of Health and local NHS organisations need to build coalitions and work collaboratively with those other organisations.

I've already suggested some of the types of policy that need to be pushed forward, including more systematic use of tools to shape choice architectures, incentives, one-to-one influence and so on. In every case, however, the details are all-important: dosage, calibration and timing are decisive. Too much use of financial incentives, for example, undermines their effectiveness (as people then start to expect to be paid for actions). Too much reliance on health coaches can easily become very expensive as caseloads shrink. Too assertive a redesign of choice architectures can quickly lead to resentful backlashes.

I would also argue for a change in how information campaigns (and the policies that underpin them) are considered. Interventions to improve health and wellbeing can tend to focus on the activity rather than the individual, e.g. separate interventions are planned for alcohol, tobacco, illegal drugs, exercise, etc. This allows staff to develop expertise in relation to a particular health issue, and can make sense in terms of designing universal policies such as bans or taxes. However, the downside to this approach is that **individual members of the public may feel 'bombarded' by a range of separate, uncoordinated public health messages from government (on top of stories in the media), with little sense of how best they can make a difference to their own lives. There is also a risk that too much information can encourage people to be sceptical about and 'switch-off' from all public health messages**.

Some of the current work on health inequalities (and *Change4Life*) is attempting to follow segmentation of the public, with more tailored messages linked to how people are and live rather than conditions. Messages and actions are also being targeted at **particular points in time**, when people are likely to be more receptive to interventions. This could be **lifestage** (e.g. the Financial Services Authority provide a booklet on the financial consequences of having children, which is used by midwives to help them answer the frequent questions on finances they found that they were receiving from families with young children); **situation** (e.g. radio adverts for a particular flu treatment were recently targeted at commuters travelling to or from work – when the adverts were most likely to be salient to those not wanting to miss work – and resulted in a 25% increase in sales); and **life transition** (e.g. hospital treatment or discharge; claiming unemployment benefit for the first time; starting a new school; GP check-up).

The **channel** for health messages is also extremely important. The temptation in some parts of government is often to opt for mass advertising, as that will hit the highest audience numbers. But the efficiency of this is open to question – it risks substituting the appearance of action for effectiveness. One of the paradoxes of a more media-intensive environment is that 'circles of trust' – family and close, trusted friends – have become more important in the key decisions we make. One key question for public health professionals, therefore, is how they might mobilise the parts of the NHS or other services which are closest to this in order to get important messages 'out there'. For example, those services which have face-to-face contacts, and build long-term relationships with members of the public, might be best-placed to deliver what can sometimes be difficult messages about the need for someone to lose weight or stop smoking, etc. These messages can be helped if there is a backdrop of public information and awareness raising – again reinforcing the point that it is the interaction of different tools that is decisive.

Given the evidence that behaviours are influenced by networks and relationships, there is clearly scope for much more efficient interventions that target particularly influential individuals, or individuals who link many different networks. If they can be persuaded to stop smoking, or to change their diet, they may influence many others. The tools for identifying these individuals, and working with them, remain much less developed than mass communications tools, but may turn out to be much more cost-effective in the long run.

Clearly, the role of **professionals** here is crucial, and in particular, choosing them on the basis of, and/or providing them with training in, the most effective **interpersonal skills**. This is noticeable in the Family Nurse Partnership (FNP) programme, for example – its success is heavily predicated on such skills, not least because it is often dealing with people who have previously been (or feel) let down by 'the system'. Non- and paraprofessional roles could become increasingly key in such one-to-one, relationship-based services, where the key requirements are often more about people skills – the ability to empathise and share a problem – rather than medical interventions (although this will vary between services).

Apart from the specific issues highlighted above, there are a number of broader areas where further shifts of approach may help deliver more effective behaviour change interventions. These include the form and tone of public health messages (which are at least as much about the underlying policy approach as the messages themselves), and how allies might be more effectively mobilised. The following sections address each of these in turn.

The form and tone of public health messages

Allied to the issues highlighted above about the delivery of public health messages is the issue of the **tone** of those messages. This was a particular issue highlighted in our research, which suggested that some members of the public may be turned off by what they perceive (fairly or unfairly) as a relentlessly negative stream of campaign messages – not just from government but also from charities, various experts and from the wider media. Sometimes scary messages are necessary to break through, as with the 1980s *Don't Die of Ignorance* campaign. But they have to be used sparingly.
The *Change4Life* and related campaigns are attempting more positive messages about the benefits of a healthier lifestyle. If, as early results suggest, this has had a very large take-up, e.g. of returns of cards requesting personalised advice on diet for families, it is worth asking whether adopting similarly positive approaches in some other areas might also lead to greater engagement with public health messages.

Wherever possible, messages should be about life and wellbeing rather than only 'health', which can be interpreted solely as the absence of illness rather than in a more holistic sense; about feeling good now as much as avoidance of future conditions; and with a recognition that people are balancing health concerns with others, including scarce time and wanting to have fun. Examples of such approaches might include messages along the lines of, 'If you only do one thing, here's five simple suggestions…', and 'try to be balanced, not perfect'.

Some countries have used humour and lightness in their public health campaigns – for example, in Australia campaigns against excessive driving speeds focused on the idea that speeders had small penises, playing directly on macho stereotypes but in a light way that was 'sticky' – i.e. easy to remember. Knowsley Primary Care Trust (PCT) has created a 'Haynes Manual', based on the car maintenance manuals, for 'Knowsley Man', aimed at engaging hard-to-reach male audiences.[21] An alternative but equally innovative example is Florida's *Truth* anti-tobacco campaign aimed at teenagers. Previous campaigns were thought to have been unsuccessful because they took the form of adults telling teenagers what to do, infringing their strong sense of autonomy. The *Truth* campaign, by contrast, emphasised how adult-run tobacco companies were manipulating teenagers into smoking.[22]

Mobilising allies

Our behaviours are influenced by a whole host of organisations, from national departments to local authorities, media and business. So, to change behaviours, the Department of Health and local NHS organisations need to build coalitions and work collaboratively with those other organisations.

Campaigns such as *Five a Day* and *Change4Life* have helped to turn some **businesses** from potential competitors into allies with, for example, many firms using the fact that their products 'count' towards the five-a-day target as a marketing tool. Similarly, working with train companies to improve access and facilities for cyclists could play a major role in increasing the take-up of cycling and the health benefits that this could bring.

Even where health and business interests are not aligned, there are some opportunities for quick wins, which should not involve over-onerous regulation, but can be achieved by shaping default decisions or providing information at the point someone makes a decision. For example, changing (or, rather, reverting) to a standard wine glass of 125ml or a standard single measure for spirits in pubs and restaurants – while still offering the option of a larger glass for those who want it – would be relatively straightforward, and copying New York's example of ensuring that calories are printed on restaurant menus would help to inform consumers and allow them to make decisions using that information, without impinging on their liberty. Ensuring that calorie content is provided on alcohol containers is a similar example – given that Customer Insight work suggests that aesthetic issues are more important to many people than health ones, this might be effective at reducing excessive drinking.[23]

21 209.209.85.229.132/search?q=cache:FU0FWR2ENJ0J:www.menshealthforum.org.uk/uploaded_files/MHFmag9.pdf+%22knowsley+man%22+%2B+%22haynes+manual%22&cd=2&hl=en&ct=clnk&gl=uk

22 www.tobaccofreedom.org/msa/articles/truth_review.html

23 This could risk leading to people choosing to drink rather than eat – clearly, any such approach would need to be carefully designed, targeted and piloted before it was fully rolled out.

There are also opportunities for less easy wins from working with business. The Government has already taken steps in this area such as banning all advertising of tobacco, and restricting advertising during children's programmes on television. **Further steps along this route might involve tackling what some have described as an environment of 'toxic advertising' in our towns and cities, where adverts to promote unhealthy food and drink outnumber more 'healthy' messages**. Clearly, there is a balance to be struck between restrictions to protect health and the right of companies to market their products, but given what we know about the impact of people's wider environment on the choices they make, it is questionable whether that balance is currently right.

Local government is perhaps the most important partner for the Department of Health and the NHS in delivering public health objectives. Importantly, many people working in local government are keen to play a bigger role in promoting public health, as is shown in the number of health targets chosen by local authorities themselves among their own objectives. Good examples include the partnership between Knowsley PCT and Knowsley Council,[24] as well as in health-related fields such as transport (e.g. **Smarter Travel Sutton**),[25] which provide concrete examples of the contribution to public health goals which local government can make. Of course, local authorities play a key role in education, and health partnerships at local level with both them and the schools for which they are responsible can deliver significant long-term health benefits.

Going forward, the Department of Health is working on **Health Impact Contracts**, where it might commission services directly from local authorities where they are best-placed to deliver health benefits, with funding linked to outcomes as well as activities. This would be an important development, helping to generate better ideas at local level, not least by providing competition to traditional sources of provision, and tapping into expertise that already exists. Another idea that might tap into local creativity and social entrepreneurship would be to build on the *Healthy Towns* initiative to get local authorities, local NHS organisations and other partners to work together to compete for funding and other support for comprehensive health plans.

Last, but far from least, **charities** can be key to delivering improved services locally and improving health. Their contribution comes in a range of forms, including para-professional roles and support groups. In past decades, the organisation I now run helped give birth to many organisations mobilising citizens – from the Open University to the University of the Third Age (U3A), where older people get involved in teaching and passing on their skills to their peers, the College of Health and the Patients Association. The time might be ripe for similar models to the U3A but focused on health – for example, supporting peer-led projects, or projects engaging the younger elderly, in preventing falls or reducing frequent readmissions to hospital.

24 See, for example, a brief summary at www.idea.gov.uk/idk/core/page.do?pageId=6462772

25 www.smartertravelsutton.org/home

Section 5 What do the Public Want?

Key messages

- Public views and perceptions are an important constraint on the range of tools which are open to government to influence behaviour change – and a large proportion of the public, across different social groups, is resistant to more intrusive interventions.
- While this is only one study, albeit with a robust methodology, it does suggest public concern about the perceived tone of health messages and the 'blanket' approach of some health interventions.
- Health professionals indicated a degree of scepticism about much of the public's willingness to change behaviours which carry health-related consequences. Those working in secondary care didn't feel particularly empowered to talk to patients about underlying causes of ill health, while primary care professionals emphasised the need to take a positive approach in order to successfully influence behaviour.

One of the factors that sometimes gets lost in debates on public health issues, many of which are dominated by particular lobbyists, charities, professionals and others with particular views and interests, is the wishes and views of the wider public. Having examined the evidence on how to change behaviours from fields such as behavioural economics and psychology in the earlier sections of this report, we now test these insights against the insights we obtained from members of the public and health professionals as part of this project.

Any actions to change public behaviour need to be seen as legitimate by the public. Most people are strong believers in personal choice and their own right to make unhealthy decisions. While the majority of people accept that the evidence on harm from smoking is strong enough to justify government intervention, this is not the case for alcohol, which tends to be regarded as a social disorder issue, rather than a health issue, other than for children.

> *"This is the freedom of choice thing… if kids are drinking beer from supermarkets then stop selling that to them… don't spoil it for the rest of us and ban it."*

The main barriers to healthier behaviours appear to be the busy nature of most people's lives (particularly for those with children), safety factors and the many temptations that surround us. However, it may well be that some barriers are merely excuses. Many people can and do change health-related behaviours, but the motivation to do so often relies on a particular experience (which makes the risk salient to them, e.g. illness – their own or that of a friend/family member). Exercise is generally seen positively, but is often used as a compensatory mechanism for 'bad' behaviours (e.g. eating a cake or getting drunk the night before).

> *"I did smoke for years… I was always feeling bad and short of breath and knew that it was bad for me. But then I ended up in hospital and everything changed."*

In terms of specific 'wants', four major themes arose:

- People tended to prefer positive, encouraging messages from government to those which cajoled them. This could be supported by practical support, such as free access to exercise facilities, but there was strong resistance to the use of financial incentives, which it was felt would reward 'bad' behaviours.
- Communications such as advertising campaigns should be based on 'real people', and should not use statistics or shock tactics. It was also important that there was real proof of harm – some messages (such as that on alcohol) were not believed.
- Campaigns should not 'nag' people, and interventions should be targeted, rather than being broad-brush (the latter was felt to unfairly 'punish' the innocent).
- There should be a particular focus on parents and children – it was felt that it was best to 'catch people while they are young' in order to develop healthy habits for life.

Naturally, there are tensions between these views and some other evidence about what works best,[26] and a wide range of views underlie these summaries. People tend to say that they want positive messages – even though frightening ones are often more effective in shifting behaviour. But even with this caveat there are important lessons about being sparing with negative messages.

26 Of course, one possible interpretation is that, even where an intervention is successful – a very successful campaign may be one which changes behaviours in less than 10% of the population – it may be so at the expense of 'turning off' a large proportion of the rest of the population.

The view from the front line

Our research also included focus groups with health professionals. Many believe that the public are not sufficiently motivated to change behaviour and things may be getting worse. They fear that people still expect the NHS to sort them out without taking personal responsibility – and again, that this is becoming more, not less pronounced.

> *"You see people in the clinic with diabetes and they treat it like your problem, that the diabetes is the NHS's to deal with, not theirs."*

Secondary care professionals, while recognising that underlying behaviours might contribute to patients' conditions, did not feel empowered to talk to their patients about this, instead focusing on treatments and cures, while professionals working in primary care tended to prefer a partnership-based approach to changing behaviour rather than a more directive one, arguing, for example, that, 'People don't like direct honesty, you have to be positive to even get them on board'.

> *"She said, 'Oh, I'll just get a gastric band… the NHS will pay for that'. No one wants to put any work into being healthy any more."*

Section 6 Conclusions and Recommendations

The prize from changes in health-related behaviours is potentially enormous, particularly in terms of increased healthy life expectancy: for example, while women aged 65 have an average life expectancy of 19.5 years, their average healthy life expectancy is only 11.1 years. There is a similar gap for men, whose life expectancy at 65 of 17.0 years translates into healthy life expectancy of only 10.3 years.[27]

However, behaviour change is not straightforward – for individuals themselves, let alone for governments. So making progress in this area will take time – just as it has with smoking – and will require consistent, long-term actions to shift cultures, to change the environment in ways that make healthy decisions easier, and to provide more targeted, individualised support to individuals and communities. The key lesson from both theory and practice is that behaviour change needs to be approached in mutually reinforcing ways that impact on decisions made both by our 'rational' minds and subconsciously, and reinforced by our environment. In the 19th century, behaviour-change issues dominated civil society – in everything from temperance to Sunday schools. Today, too, top-down measures need to be aligned with the bottom-up pressures of change that are closer to a social movement than a government programme, as public culture becomes more aware of health. The key themes to emerge are:

- the need, in our messages on public health, to put more emphasis on the positive, in particular how people can feel better by changing their behaviours;
- to speed up experiment, with faster learning, in order to develop as rapidly as possible the robust evidence base needed to underpin more effective behavioural interventions;
- linked to this, the necessity for the Department of Health to orchestrate its own knowledge to ensure that it remains on top of the rapidly evolving evidence base on behaviour change, segmentation and the design of environments;

27 European Commission (Nov 2008), *Healthy Life Years in the European Union: Facts and Figures 2005*. ec.europa.eu/health/horiz_publications_en.print.htm

- that the most powerful tools involve reshaping environments to encourage people to make healthier choices, while still leaving open the option of choosing differently. But there is broader scope to widen the mix of policy tools used to influence behaviour, ranging from personal trainers to financial incentives;
- that only a small part of behaviour change is under the control of the Department of Health or the NHS, so it is vital to mobilise partners in the media, business, local authorities and across central government; and
- that leadership – including by ministers – is crucial. Messages which show key leaders walking the talk, together with honesty about the difficulties of changing behaviour, are a vital complement to other types of message.

Given these key themes and principles, my immediate recommendations cover six broad areas:

i. First, public campaigns will continue to play an important role, even if their impact has, in the past, sometimes been exaggerated. But to succeed against a backdrop of the huge volume of messages being sent to people, the emphasis of policy and the tone may need to be less paternalistic (and occasionally patronising) and more supportive; to emphasise less the negative and more the positive, in particular how people can feel better by changing their behaviour. Sometimes it will remain necessary to challenge and even shock people – and, at least in the case of smoking, negative messages can be more useful in relation to why to quit, with positive messages being more important in relation to how to quit. But messages of this kind need to be used sparingly. The language of prevention, for example, can go against the grain.

   The *Change4Life* programme is a good step towards this kind of approach, though it will be important to use its assessment as an opportunity to reflect on the balance between mass media messages and more targeted interventions. It points towards an approach to health improvement which fits with people's own approach to behaviour change – i.e. one which will tend to be more about **balance** or 'doing one thing' to start with, rather than completely overhauling their lifestyle (which is the message that many people get from the multitude of communications about health from government and the media).

   Other messages that might support this change of emphasis would:

   - **tackle the perception that exercise is about going to the gym** (which, judging by our research, appears to be widespread);
   - emphasise the **wellbeing** aspects of exercising rather than just the health benefits (e.g. 'Do one thing and feel good'); and
   - **help people to fit exercise into their daily (and often busy) lives** (e.g. exercise that people can do while they go to work, listen to the radio, etc).

   The *Let's Get Moving* pilots currently being evaluated by the Department of Health may provide one way to approach this. There is also scope to get people to think about health in a more holistic way – people still tend to equate 'health' with 'hospitals', rather than the impact of their daily decisions.

One option which brings some of these points together would be to pilot **positive psychology and resilience** tools with at-risk groups. Several thousand primary school pupils are already benefiting from learning these skills. At the other end of the age spectrum there is considerable evidence that learned optimism has a strong impact on recovery from strokes and heart attacks, and life expectancy. Health trainers could be taught some of the techniques being used in schools to help children to be more resilient, with subsequent testing of both psychological and physical health effects (the US Army is embarking on a very widespread programme of this kind). A virtue of these methods is that they help to enhance self-efficacy, which is one of the preconditions for choosing and following healthier lifestyles.

ii. Second, while the current evidence base makes it difficult to make many immediate recommendations on specific programmes, one area where this is possible is to extend financial incentives for pregnant mothers to quit smoking, drawing on current successful pilots in Dundee and Birmingham. The main target should be communities where smoking remains very prevalent – and where modest incentives could have a significant impact.

iii. Linked to this last point, although I recognise the range of competing priorities, more health research would ideally be focused on behaviour change and, given the current level of pilots in this area, might not require very much additional funding. Despite some very strong evidence – collated by NICE among others[28] – on the effectiveness and cost-effectiveness of *some* behaviour change methods, the great majority have not been adequately studied or measured on a systematic basis. Public and private investment in health research is overwhelmingly skewed towards clinical solutions rather than the ones described in this report (only around 2% of the health research budget goes on prevention).

iv. The fine grain detail of how environments are shaped is becoming increasingly important to health. An important challenge for the future will be to ensure that more people involved in policy and service design have a feel not only for the evidence on behaviour change but also for the details of successful service and physical design. In the long term, the most important actions will **reshape environments**. This is where local government can play the greatest role, for example by reducing the prevalence of fast-food outlets on high streets, making it easier for people to walk or bicycle by making changes to street design, establishing new norms (such as preventing traffic close to primary schools at the beginning of the school day), and looking at the fine detail of how products are made available.

28 guidance.nice.org.uk/PHG/Published

v. Fifth, partnerships and closer working are also crucial. This might be about partnerships between government departments – from the wide range of child health issues which are jointly covered by the Departments of Health and Children, Schools and Families, to the former's partnership with HMRC to tackle tobacco smuggling. But it's also about collaboration with the media, business and local authorities. Some good examples are the work that the Food Standards Agency (FSA) and Department of Health are doing with the food industry through the Healthy Food Code of Good Practice to pilot calorie labelling on menus and menu boards to help consumers of point of choice, to continue to push for agreement with manufacturers on smaller portion sizes (e.g. of chocolate bars and soft drinks), and to rebalance the advertising and marketing of food to children to reduce their exposure to promotion of food high in fat, salt and sugar and increase their exposure to promotion of healthier options.

vi. Finally, the Olympics provide an ideal catalyst for a more ambitious approach to area-based projects – for example, challenging major towns and cities to compete to transform their fitness and overall health and wellbeing. Nowhere in the UK has yet attempted a comprehensive strategy to boost exercise levels – yet the time must be ripe to do this. Building on ideas such as ***Healthy Towns***,[29] **with an emphasis on across-the-board approaches supported by a range of local partners, and with incentives such as increased funding attached to the winners**, might galvanise local efforts to come up with innovative approaches to these health issues, as well as capturing the imagination of the public (as has happened with cities of culture, for example). Such initiatives could be funded both at institutional level (PCT and local authority partnerships) and at community level (e.g. helping to build social capital by supporting people from a housing estate to tackle a health-related issue).

   There is also a key role for political leadership to encourage people to be aware of the unhealthy choice environment which advertising brings – in particular, that advertising tends to encourage overeating or drinking rather than the reverse. This may not be the place for regulation and law – but major businesses could be much more vigorously held to account for the messages they send.

   Indeed, there is a good case for ministers to be more explicit about the competition there is to get messages through, highlighting the **'toxic messaging' that many would argue is pervasive in advertising messages in our cities, and represents a negative form of nudging by companies**. A walk or drive around any city in England will show that the balance of messages will be anti-health – this sends a strong subliminal message to people. Clearly, there is a balance to be struck here between legitimate commercial activity and the public interest, but at the moment there is a clear conflict between the producer interest in promoting addictive, damaging behaviours and the consumer interest. A live issue relating to this is whether product placement should be permitted for alcohol, tobacco or unhealthy foods.

29 www.nhs.uk/change4life/Pages/NewsHealthytowns.aspx

Organisation within the Department of Health

Some cultural and organisational changes might usefully support the recommendations and steps laid out above. For example:

- The Department of Health and the NHS, both locally and nationally, might want to put greater emphasis on tackling health issues via 'non-health' routes, such as creating safer environments in which people can exercise (perhaps through Health Impact Contracts).
- It would be worth rethinking the balance between different types of intervention (advertising campaigns, the provision of information, 'blanket' vs. targeted interventions, etc), both in terms of particular issues and overall.
- There is a case for organising health improvement policy around life-stages, target groups and/or the environments in which people live, rather than particular issues (e.g. alcohol or smoking), in order to help provide a more holistic, person-centred approach and reduce the risk of bombardment by competing health messages.[30]
- Underpinning all of these, there needs to be a clear locus of expertise in the increasingly important territory of behaviour change, which can be drawn upon for detailed policy and programme design.

Recommendation	Where fits on intervention spectrum	Timing
Change emphasis of public health messages from condition to the person, and to emphasise small steps rather than the need to change whole lifestyle.	All	Short term
Broaden the approach exemplified in work by the Department of Health and the FSA with business to other areas of primary prevention, in order to develop more policy options which are aimed at changing choice architecture.	Changing choice architecture	Medium term
Introduce Dundee-style financial incentives for expectant mothers who smoke, targeted initially at deprived areas.	Incentives	Medium term
Create more across-the-board *Healthy Towns Plus* initiatives with funds awarded to best bids from: a) institutions (joint bids from primary care trusts (PCTs), local authorities, etc); and b) local communities.	Incentives, Reshaping environment	Short term (link to Olympics?)

30 DH Healthy Foundations Life-Stage Segmentation Model: www.dh.gov.uk/en/PublicationsandStatistics/Publications/PublicationsPolicyandGuidance/DH_090348

Recommendation	Where fits on intervention spectrum	Timing
Department of Health to take a greater health leadership role in Whitehall, and look for opportunities for more effective delivery of its public health objectives through partnerships with other departments (e.g. as it has done on tobacco smuggling with HMRC).	All	Medium term
Tackle 'toxic messaging' in our towns and cities by working with advertising industry, on a voluntary basis if possible, to limit volume of advertising with negative health consequences.	Reshaping environment	Medium to long term

Annex A:
The Department of Health Healthy Foundations Life-Stage Segmentation Model

Background

The Healthy Foundations Life-Stage Segmentation Model provides the Department of Health (DH) with a detailed and consistent understanding of the nation by segmenting people into different groups based on their ability and likelihood to live healthily. This in turn provides a tool for the systematic adoption of consumer behavioural insight into policy development; programme planning and delivery at a national, regional and local level. The key message is that Healthy Foundations isn't only a tool for campaign planning, it's a way of ensuring evidence based policy making is more robust through the systematic use of consumer insight, alongside other sources of knowledge/data informing policy.

The project began in 2006 with the aim of building on existing research and knowledge within DH and academia to arrive at a segmentation of the population of England, looking at the drivers of behaviour across the six Public Service Agreement (PSA) areas: smoking, obesity, alcohol, substance misuse, sexual health and mental health. The research used epidemiology, social and consumer research and the health PSA targets to produce a model to target audiences.

The model is intended as a building block for a customer-focused approach to the development of health behaviour change interventions. The use of segmentation is not new to DH but there has not been one consistent approach to segmentation across the different PSA target areas. One of the objectives of this project was to develop a segmentation framework or model that can be applied across issues, thereby giving a '360 degree' picture of the population rather than a series of overlapping views of people taken from the perspective of each issue.

The research team reviewed more than 80 reports, mapping behavioural drivers and barriers to identify any commonalities across existing target audiences and health issues. The following factors were considered:

- behaviour/lifestyle
- attitudes towards health, decision-making priorities, aspirations (and other shared attitudes which may affect health behaviour), and
- knowledge, attitudes and beliefs forming the basis of current behaviours.

They then interviewed DH stakeholders with an expert understanding of the target audiences currently addressed in campaigns to find out whether the drivers identified matched the stakeholders' own understanding, prioritised them and identified further research. They also held review workshops with key members of DH, health professionals, academics and segmentation experts.

In this way the team identified three overarching 'dimensions' that had the greatest significance when identifying population segments most likely to adopt 'at-risk' health behaviours, and which work collectively to determine people's ability to live healthily and likelihood of doing so. These were:

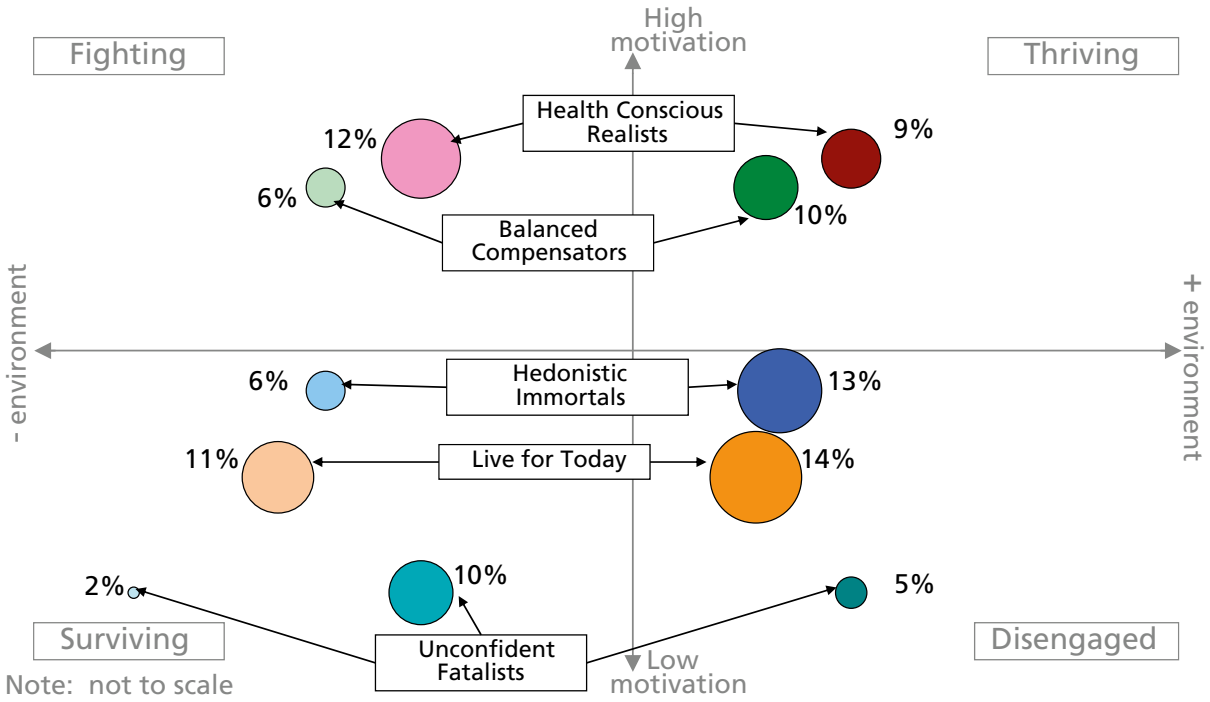
- age/life-stage
- circumstances/environments, and
- attitudes/beliefs towards health and health issues.

Pulling the three dimensions together, we are able to create a rich picture and model for a consistent approach across DH. It should be acknowledged that working with three dimensions rather than two is relatively unusual in health segmentation models. However, it is more frequently used in commercial approaches. It is clear from the research that the task of looking across the entire population on a range of motivations, environments and life stages requires this extra level of sophistication.

In summary, the segmentation model pulls together all three dimensions – age/life-stage, circumstances/environments, and attitudes/beliefs. The life-stage is the foundation, with each life-stage then segmented further by circumstances and attitudes into four categories that the team named 'fighters', 'thrivers', 'disengaged' and 'survivors'.

This segmentation results in the following cluster map:[31]

DH Healthy Foundations Life-Stage Segmentation: cluster map



31 www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_090348

Healthy Foundations Life-Stage Segmentation Model: initial findings

The Healthy Foundations team found significant differences in health behaviours within different life-stages. A new segment (Alone Again) has been created through Healthy Foundations and this life-stage has been recognised by other government departments as a key target audience due to their behaviours.[32]

The research also found significant differences in health behaviours within each of the five motivation segments, when these were combined with variations in environment (based on the Index of Multiple Deprivation, IMD) within each segment. Those in the most deprived areas tended to exhibit the least positive health behaviours, but this impact was not consistent:

- Environment had an impact on diet and smoking regardless of motivation;
- But for other health behaviours, environment had less of an impact on motivated segments, and a greater impact for less motivated segments.

Taken together, the evidence from Healthy Foundations raises a number of interesting issues and questions:

- It highlights the importance of environment, and its affect on people's ability to change.
- It highlights that a 'single health issues' approach to health improvement and protection may not be the most effective way of engaging with the population.
- But it also highlights the importance of intrinsic motivation as a potential way of mitigating the impact of environment. Some people living in poorer areas report positive health motivations and behaviours. Identifying and exploring how this 'resilience' was formed and sustained will be useful to policy makers in identifying effective interventions (which would probably apply across a range of areas, and not just health).
- It also suggests that the link between living in a poorer community and poor health may not be as straightforward as the headline figures for health inequalities – which show a big gap in life expectancy between different socioeconomic groups – suggest. In particular, it shows that different attitudes to health and healthy lifestyles cross social boundaries – although a greater proportion of those living in the poorest communities might be in the 'Unconfident fatalists' and 'Live for today' segments, others in deprived communities *do* manage to live healthier lives. Understanding the differences within communities might help us to tackle health inequalities more effectively.

32 Personal communication: Presentation to Cabinet Office Insight Working Group; Ewen MacGregor, DH Healthy Foundations 23 Nov 2009.

Annex B:
Psychological Models of Behaviour/Behaviour Change

Recently, behavioural psychologists have attempted to develop more holistic models of behaviour change which offer the potential to create a single model. We have looked at three such comprehensive models:

- Robert West's **PRIME theory**;[33]
- Strack and Deutsch's **Reflective-Impulsive model**;[34] and
- Vlaev and Dolan's **RAM model** and **SNAP framework**.[35]

The key insights from these models are:

- **The three different ways of influencing individuals' behaviours cannot easily be disentangled: many interventions will work via more than one route, or you may need a combination of interventions in order to achieve change**. For example, our Customer Insight work suggested that most people knew that they needed to exercise more (their 'rational brain' has been persuaded), but that this was often outweighed by the environment in which they lived (e.g. not enough cycle lanes), while their automatic/impulsive system would always choose alternative priorities in their busy lives.
- PRIME theory focuses on people's **wants and needs**, as opposed to intentions and beliefs, and seeks to support behaviour change by establishing personal 'rules' (a type of plan) as a source of new, stronger wants and needs that can help people change behaviour (e.g. outweighing learned cues to smoke,[36] such as having a cup of coffee). The 'rule' must also relate to an individual's 'deep identity' – the 'aspects of self-image to which the individual has strong attachment'.[37]
- Vlaev and Dolan's SNAP framework highlights some of the main ways in which interventions can trigger the automatic/impulsive system to help support behaviour change:
  - **salience** – we react/pay most attention to information that stands out relative to other stimuli (e.g. because it is new or more important);
  - **norms** – social norms regulate our actions, and our perceptions of peer norms provide a standard against which we measure our own behaviours;
  - **affect** – feelings play a strong role in our behaviour, and emotions are a key influence in decision making; and

33 See West R (2009a), *PRIME theory of motivation and its application to behaviour change*, presentation to UCL, slide 13. Slides available at: www.primetheory.com. This presentation also includes a useful wider discussion of the problems with individual models of behaviour change.

34 Strack F and Deutsch R (2004), Reflective and Impulsive Determinants of Social Behaviour, *Personality & Social Psychology Review*, Vol 8, No.3: 220–47.

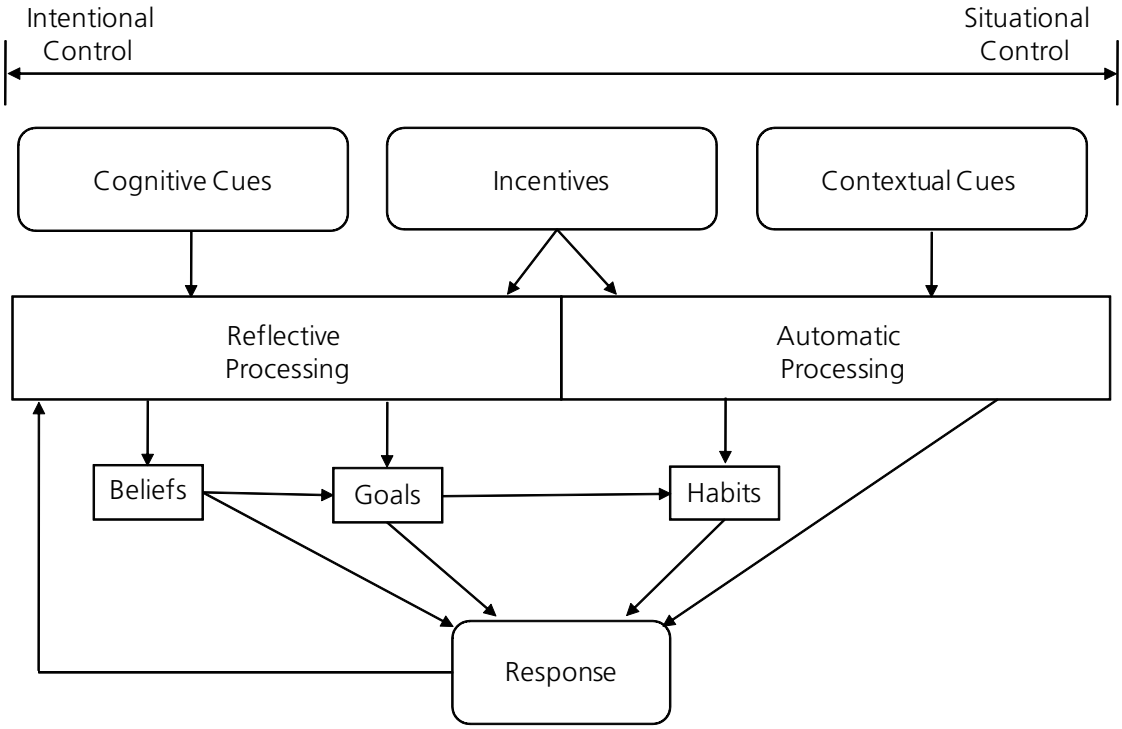
35 Vlaev I and Dolan P (2009), *From changing cognitions to changing the context: a dual-route model of behaviour change*, Imperial College Business School Discussion Paper, 4. www3.imperial.ac.uk/business-school/research/publications/discussion_papers/changing%20cognitions

36 West R (2009b), *The multiple facets of cigarette addiction and what they mean for encouraging and helping smokers to stop*, 1. www.primetheory.com

37 West R (2009a), op. cit., slide 23.

– **priming** – we respond subconsciously to cues in our wider environment, whether direct (e.g. when asked what they intend to do, people tend to act according to their response) or indirect (e.g. many experiments suggest that our actions can be influenced simply by placing particular items in our environment – for example, briefcases and boardroom tables tend to make people less cooperative).[38]

Vlaev and Dolan's Reflective-Automatic Model[39]



38 Vlaev and Dolan (2009), op. cit., 48.

39 Ibid, 96.