

COMMISSIONING AND BEHAVIOUR CHANGE

Kicking Bad Habits final report

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The King's Fund seeks to understand how the health system in England can be improved. Using that insight, we help to shape policy, transform services and bring about behaviour change. Our work includes research, analysis, leadership development and service improvement. We also offer a wide range of resources to help everyone working in health to share knowledge, learning and ideas.

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Abbreviations

A&E	Accident and emergency
APMS	Alternative Provider Medical Services
BME	Black and minority ethnic
BMI	Body mass index
BNI	Better Neighbourhoods Initiative
CASA	Centre for Advanced Spatial Analysis
COPD	Chronic obstructive pulmonary disease
GMS	General Medical Services
GP	General practitioner
HHIM	Household Health Improvement Managers
JSNA	Joint Strategic Needs Assessment
LAA	Local area agreement
LSP	Local strategic partnership
NHS	National Health Service
NICE	National Institute for Health and Clinical Excellence
PBC	Practice-based commissioning
PCT	Primary care trust
PMS	Primary Medical Services
QOF	Quality and Outcomes Framework
SHA	Strategic health authority
TSIP	Third Sector Investment Programme
WCC	World class commissioning

Executive summary

What we set out to do

The government has made it clear that it expects the NHS – and, in particular, primary care trusts (PCTs) – to take the lead on commissioning support that will encourage people to change their behaviour to adopt more healthy lifestyles. This report examines how the NHS can help people become healthier and, in particular, the role of commissioners in encouraging individuals to adopt healthy behaviours.

Drawing on a series of working papers and seminars held in the first half of 2008, this report assesses existing and innovative methods the health service can use to persuade people to live more healthy lifestyles, including providing information and personal support and offering financial incentives. This report aims to help those within the NHS and beyond who are tasked with finding cost-effective solutions to the problems caused by unhealthy lifestyles and behaviour. It examines four bad habits; smoking, alcohol misuse, poor diet and lack of exercise.

The current situation

Recent government policy has placed a greater emphasis on the role and responsibilities of individuals in adopting healthy behaviours and lifestyles. As commissioners, PCTs have been made responsible for taking the lead on encouraging people to change their behaviour to adopt more healthy lifestyles.

Unhealthy behaviours and the illnesses they cause represent a significant proportion of the disease burden facing the NHS. The financial cost to the NHS is huge and continues to grow. These unhealthy behaviours are estimated to cost the NHS in England more than £6 billion a year.

What we found

Helping people to kick bad habits such as smoking, alcohol misuse, poor diet and lack of exercise requires a long-term commitment to changing complex behaviours; it is an ambitious goal. Each type of behaviour has different characteristics, so it is unlikely that approaches that work for one behaviour will be easily transferable to another.

This will also require greater efforts by local health services to assess, target and monitor public health needs at a local level. Behaviour change interventions and strategies should be clear about the nature of the behaviour they are tackling, as well as who they are targeting. Geodemographics – the science of profiling people based on where they live – and social marketing – the use of commercial marketing techniques to promote socially desirable outcomes – can give commissioners insights into the needs and behaviours of different kinds of people. Investment should be made in developing these skills among PCT staff and in improving both the quality and the quantity of data on local public health needs that they use in their work. Understanding how to use social marketing tools and having reliable data on local needs are vital first steps to finding solutions.

Innovative interventions, such as financial and non-financial incentives and those designed to increase an individual's motivation and confidence, are increasingly viewed as effective ways to change behaviour. Currently, the Department of Health in England invests heavily in information-based programmes to promote healthy lifestyles and behaviours. In 2007/8, it spent more than £50 million on publicity and advertising. But providing information, on its own, has little effect on people's health behaviour. Health behaviour is complex, and is determined by more than just an individual's level of knowledge. Providing information has much greater impact when it is part of a wide range of activities that promote healthier choices. Similarly, the use of financial incentives is likely to be most effective when used as one element of a wider programme to promote long-term behaviour change. Commissioners need to be innovative and committed to developing programmes that draw on existing evidence as to what works. This will often mean implementing several different activities.

Commissioners' responsibility to collect and use evaluation data

There is little systematic evidence to help determine which interventions or combinations of interventions are most effective in changing particular behaviours in various population groups. To facilitate evidence-based commissioning, PCTs need good-quality evidence on the impact and cost-effectiveness of behaviour change interventions. There is a lack of good-quality evidence, and investment needs to be made in developing a stronger evidence base to evaluate the impact of behaviour change programmes. The National Institute for Health Research, the NHS Service Delivery and Organisation Research & Development Programme, the Medical Research Council and other research councils all have a role to play in investing in evaluations of behaviour change programmes. PCTs and providers might also consider establishing partnerships with local universities, who can help to develop evaluation tools.

What the NHS needs to do

For PCTs and strategic health authorities (SHAs) to deliver a true 'health service' rather than a 'sickness service', health promotion must be fully embedded in national policies, commissioning priorities, care pathways, standards and performance indicators, and staff and service contracts. The NHS needs to invest in interventions and programmes that provide effective support to help people change their behaviour, in the short term and the longer term. The case for change is clear. Not only are there personal costs in terms of ill health but significant and rising costs to the NHS and to society as a whole.

Encouraging healthier lifestyles is the job of all staff working within the health service, not just those working specifically on public health projects. All interactions between patients and health care professionals – including hospital staff, GPs and pharmacists – present opportunities to deliver messages about healthier lifestyles and behaviours. Primary care contracts should be used to further encourage health promotion activities. GPs have responded to Quality and Outcome Framework incentives before, and financial incentives should be added to encourage them to undertake health promotion in their everyday contact with patients.

World class commissioning (WCC) and practice-based commissioning (PBC) are also opportunities for PCTs to improve the way they commission behaviour change interventions. Local 'vital signs' indicators can be used to assess the impact of their behaviour change interventions. Local area agreements are another opportunity for PCTs, local government and other partners to identify local health priorities and build policies to tackle wider determinants of health into the agreement.

Finally, good practice needs to be shared. This report contains case studies from some individual projects from around the country. The NHS and SHAs need to take a lead in spreading information and best practice so that successful interventions for tackling smoking, alcohol misuse, poor diet and lack of exercise can be rolled out to as many people as possible as quickly and efficiently as possible.

Introduction

Since it was set up 60 years ago, the National Health Service (NHS) has predominantly focused on treating people when they are sick. This has prompted criticism that it is a ‘sickness service’ rather than a health service. Yet the current Secretary of State for Health, Alan Johnson, is keen to steer the NHS in a different direction, stating that ‘Promoting health and well-being is the *raison d’être* of the NHS’ (Johnson 2008). Furthermore, Lord Darzi’s *High Quality Care For All: NHS next stage review final report* (Department of Health 2008d) called for the NHS to focus as much on promoting good health as on treating illness and managing disease. Do these statements suggest a real shift in priority for the NHS? Or are they simply political rhetoric? Will the NHS continue with business as usual – that is, treating the consequences of unhealthy lifestyles and behaviour, but not tackling their causes?

Health policy - promoting personal responsibility for health

Since the Labour government came to power in 1997, it has introduced a number of policies that may help to reduce inequalities in health such as the minimum wage (to reduce inequalities in income); programmes such as SureStart, which aim to improve the life chances of children born into poor households and communities; and the ban on smoking in public places. These policies have focused on social, economic and environmental factors, all of which are important in delivering improvements in public health. But recent policy documents have signalled a greater emphasis on the role and responsibilities of individuals in adopting healthy behaviours and lifestyles.

The Wanless review of health care funding (2002) suggested that greater public engagement with health (and more ‘self-care’) could help to reduce overall health care costs. It presented three different scenarios, the most desirable being a ‘fully engaged’ population that is proactive in avoiding sickness and choosing healthier lifestyles.

Choosing Health: Making healthy choices easier (Department of Health 2004) continued this theme, emphasising the role and responsibilities of individuals in maintaining their own health. This White Paper set out recommendations to create a ‘health-promoting’ NHS, and suggested there was a role for retailers and advertisers to make healthy lifestyles ‘an easier option’ for people. *Our Health, Our Care, Our Say* (Department of Health 2006) stressed the need for health and social care services to support individuals to take more responsibility in managing their own health and health care.

So although it is important that the government continues to implement policies to address the wider determinants of health, there is also an important role for the NHS to play in addressing the personal factors that influence lifestyle and health.

Commissioning for health and well-being

The government has made it clear that it expects the NHS – and, in particular, primary care trusts (PCTs) – to take the lead on commissioning support that will encourage people to change their behaviour to adopt more healthy lifestyles. *The Commissioning Framework for Health and Well-being* (Department of Health 2007a) encouraged commissioners to incentivise the promotion of health, well-being, dignity and

independence for all and to commission for outcomes. However, the framework lacked detail about what commissioners were expected to do in practice. ‘Adding life to years and years to life’ is the tagline of world class commissioning (WCC) (Department of Health 2007c). Its statement of intent – ‘to deliver long-term improvements in the health and well-being of local communities’ – puts better preventive care at the heart of what it wants to achieve.

However, to date, it appears that PCTs have continued to focus on commissioning in the acute sector. If the vision of WCC is to become a reality, PCTs need to give equal priority to commissioning for health and well-being.

The requirement to keep people well, improve overall health and reduce inequalities was also included in the *2008/09 Operating Framework* (Department of Health 2008f). The Department of Health is providing more specific advice to commissioners and PCTs to tackle the problem of obesity. In November 2008, *Healthy Weight, Healthy Lives* was published, and was specifically aimed at helping to improve commissioning of weight management services (Department of Health 2008c).

‘Staying healthy’ is one of eight clinical pathways¹ that each strategic health authority (SHA) had to address as part of Lord Darzi’s *High Quality Care For All: NHS next stage review final report* (Department of Health 2008d).

Every primary care trust will commission comprehensive well-being and prevention services, in partnership with local authorities, with the services offered personalised to meet the specific needs of their local populations. Our efforts must be focused on six key goals: tackling obesity, reducing alcohol harm, treating drug addiction, reducing smoking rates, improving sexual health and improving mental health.

(Department of Health 2008d, p 9)

These policy documents all signal a greater emphasis on the promotion of health. To turn this policy into reality, the NHS has to play a significant role in finding and implementing cost-effective interventions to change habitual and deeply rooted behaviours such as smoking, alcohol misuse, poor diet and lack of exercise.

The Kicking Bad Habits programme

This report is based on the findings of a series of working papers and expert seminars held between February and July 2008 as part of the Kicking Bad Habits programme. The programme was launched by The King’s Fund in 2007 and focuses on four ‘bad habits’ in particular: smoking, alcohol misuse, poor diet and lack of exercise. It aims to find out how the NHS can help people become healthier – and, in particular, to identify effective interventions that encourage individuals to adopt healthy behaviour.

The working papers and seminars aimed to bring together leading public health practitioners and academic researchers, government officials, and representatives from the private sector and third sector organisations that are involved in innovative approaches to behaviour change (*see Appendix 1 for the full list of participants*).

We wanted to find out how existing approaches (such as educating and informing the public) can be made more effective – for instance, by tailoring information to individuals – and whether some approaches are more (or less) successful with certain target groups, such as people on low incomes. We also wanted to look at newer, more controversial approaches (such as financial incentives), and whether providing support to improve an individual’s motivation and self-confidence is more likely to bring results.

¹ The eight clinical pathways are: staying healthy, maternity and newborn, children, acute care, planned care, mental health, long-term conditions, and end of life.

This led us to focus on five key questions:

- to what extent do financial incentives help individuals change their behaviour? (Jochelson 2007)
- what behaviour change interventions are most effective for individuals in low-income groups? (Michie *et al* 2008)
- how effective are information-led strategies? (Robertson 2008)
- to what extent does increasing an individual's motivation and self-confidence help them change their behaviour? (Dixon 2008)
- how can behaviour change interventions best be targeted and tailored to secure the desired health outcomes?

The case studies featured in this report are based on presentations made at the seminars; others have been identified during the course of the programme. They provide examples of a range of behaviour change programmes, although many of them have not been formally evaluated, and their inclusion here should be read in this light. As well as being discussed at the expert seminars, each discussion paper was posted on The King's Fund website, where visitors to the site were invited to post comments and responses. Some of these comments and discussion from the seminars have been included, to illustrate the issues and debates raised.

Aims and structure of the report

This report aims to help those within the NHS and beyond who are tasked with finding solutions to the problems caused by unhealthy lifestyles and behaviour. It will be useful to PCTs and others seeking to commission services to promote healthy lifestyles and behaviour. It will also be useful to their partners in local government and the voluntary sector, providers of health and wellness services, NHS providers committed to supporting health improvement, and to policy-makers who are responsible for shaping the environment in which these organisations operate.

Section 1 describes the scale of the public health challenge for each of the four behaviours – smoking, alcohol misuse, poor diet and lack of exercise – and discusses the importance of understanding the full range of reasons why people choose unhealthy behaviour. Section 2 discusses a range of tools that can help commissioners identify and understand the target population, which is crucial for effective behaviour change interventions. Section 3 looks at a range of behaviour change interventions to find out 'what works'. It summarises the results of a number of interventions, including information, individual support and financial incentives. Section 4 discusses the difficulties of evaluating behaviour change interventions, and suggests ways to strengthen the evidence base in future. Section 5 examines the policy levers that are available, and the extent to which they can be used to support behaviour change interventions. Section 6 sets out recommendations for PCTs, commissioners, providers and policy-makers.

1 The scale of the public health challenge

In this chapter, we describe the scale of the challenge facing the NHS as a result of people choosing unhealthy behaviours (smoking, alcohol misuse, poor diet and lack of exercise). We also discuss the complexities of understanding the reasons why people choose to adopt unhealthy behaviours (aside from the simple fact that they are often pleasurable or even addictive).

Unhealthy behaviours and the illnesses they cause represent a significant proportion of the disease burden facing the NHS. Treating smokers costs the NHS in England £2.7 billion a year, compared with £1.7 billion a decade ago (Action on Smoking and Health (ASH) 2008). Alcohol misuse is thought to cost the NHS around £2.7 billion per year (National Audit Office 2008). Alcohol misuse also has wider costs for society, such as crime and disorder, social and family breakdown, and absenteeism. In total, alcohol-related ill health and crime and disorder is estimated to cost around £20 billion each year (Department of Health 2007b). The cost of treating obesity was approximately £47.5 million in 2002, a big increase from £9.5 million in 1998 (largely due to the increase in drug costs). The costs of treating diseases caused by obesity (such as coronary heart disease and type 2 diabetes) were estimated at between £945 and £1,075 million in 2002 (Information Centre for Health and Social Care 2008a). By 2007, the cost of prescriptions for all diabetes-related drugs had increased to more than £594 million, up 7 per cent on the previous year (Information Centre for Health and Social Care 2008c).

If action is not taken, the financial cost to the NHS will grow and, according to Sir Derek Wanless (2004), could make the NHS itself unsustainable. This is why investing in effective behaviour change interventions is more important than ever.

Smoking

Smoking is the biggest cause of preventable deaths in England. In 2007 there were 82,900 smoking-related deaths among adults aged over 35, 18 per cent of all deaths. In England in 2006 were smokers: 23 per cent of men and 21 per cent of women. The highest prevalence of smoking was among 20–24-year-olds (31 per cent) and the lowest among those aged 60 and over. Overall the trend is moving in the right direction; with prevalence down from 39 per cent in 1980, smoking rates in England are currently the lowest on record (Information Centre for Health and Social Care 2008b).

Who is more likely to smoke?

We've either got to motivate low-income people to try to stop more often than high-income people to even things out, or we've got to give them greater assistance to quit. And since people are already trying to stop at quite a high rate, then the first of these is not very likely.

(Seminar participant)

People on low incomes are more likely to smoke. People in social grade E (casual or lowest grade workers, pensioners and others who depend on the state for their income) are more than twice as likely to smoke as people in social grades AB (administrative or professional staff). Smoking remains one of the biggest causes of the substantial and

growing inequality in health between higher- and lower-income groups (Information Centre for Health and Social Care 2007). In 2006, 17 per cent of people in non-manual groups smoked, compared with 28 per cent in manual groups (Information Centre for Health and Social Care 2008d).

Smoking rates vary between ethnic groups. Among Bangladeshi, Irish, Pakistani and Black Caribbean men, the percentage of smokers is higher than the national average. The number of women from black and minority ethnic (BME) groups who smoke is lower than the national average, with the exception of Black Caribbean and Irish women (Information Centre for Health and Social Care 2006).

Smokeless tobacco is an additional problem in some BME populations, particularly those from South Asia. Among the UK Bangladeshi community, for example, 9 per cent of men and 16 per cent of women regularly chew tobacco (Information Centre for Health and Social Care 2006).

Statistics can reveal important trends, but they give only part of the picture. To change people's behaviour, we first need to understand why they smoke and what motivates them to give up smoking. Evidence suggests that people may want to give up, but have no plan for how they are going to do so. One study found that nearly three-quarters of smokers aged 16 and over said they wanted to give up, citing health as the main reason (Information Centre for Health and Social Care 2007). Another survey found that as many as 70 per cent of smokers had no serious intentions to give up in the next year (Wewers *et al* 2003). Socio-economic factors seem to have a bearing on who manages to give up smoking. People in social grade E are less than half as likely to succeed as people in social grades A and B. There is no difference in the number of smokers who have attempted to quit in the last year across social grades (R West 2008).

The government's strategy to tackle smoking

The Department of Health is currently consulting on a strategy to reduce the number of people who smoke (Department of Health 2008h). The strategy focuses on:

- supporting smokers to quit
- reducing exposure to second-hand smoke
- running effective communications and education campaigns
- reducing tobacco advertising, marketing and promotion
- effectively regulating tobacco products
- reducing the availability and supply of tobacco products.

The Department is looking to further restrict the availability of tobacco products by regulating supply, reducing tobacco advertising and promotion, and regulating labelling and packaging.

Alcohol misuse

Most adults in England – more than 90 per cent – drink alcohol, and the majority do so sensibly. However, around 10 million adults consume alcohol at 'hazardous' levels (that is, above the recommended limits). More than 8 million people in England (26 per cent of the population) have an alcohol use disorder, and around 1.1 million people are dependent on alcohol (3.6 per cent of adults are alcohol-dependent – 6 per cent of men and 2 per cent of women) (Drummond *et al* 2004).

Who is more likely to misuse alcohol?

People in routine and manual social classes drink less (11.6 units a week), on average, than those in other types of household. But they are more likely to engage in unhealthy patterns of alcohol consumption, drinking less often but drinking heavily when they do. Those in managerial and professional households drink the most (15.1 units a week), but tend to have healthier patterns of consumption, drinking more frequently but drinking less on each occasion (Office for National Statistics 2008). Prevalence of drinking among many BME groups is similar to the general population; however, there is less 'hazardous' drinking – about 14 per cent, compared with 23 per cent in the general population (Drummond *et al* 2004).

The government's strategy to tackle alcohol misuse

The government's current alcohol strategy, *Safe. Sensible. Social.*, commits all departments to work together to tackle alcohol-related problems (Department of Health 2007b). The strategy focuses on three groups: young people under 18 who drink alcohol, 18–24-year-old binge drinkers, and individuals of any age who drink more than the recommended limit on a regular basis. These groups are regarded as the minority of drinkers who cause the most harm to themselves, their communities and their families. The Department of Health is currently consulting on proposals to tighten up the alcohol retailing code, as well as introducing new labelling schemes to restrict purchasing, and increasing advice and treatment for those who want it (Department of Health 2008h).

Poor diet and lack of exercise

Poor diet and lack of exercise, resulting in unprecedented levels of obesity (among children in particular), have only recently been recognised as a serious public health problem. Across the Western world, rates of obesity in both adults and children are rising rapidly (for example, Butland *et al* 2007). In 2006, 24 per cent of adults in England were classed as obese (up from 15 per cent in 1993) and 16 per cent of children (up from 11 per cent in 1995) (Information Centre for Health and Social Care 2008a).

Poor diet and lack of exercise are two of the key factors that have contributed to the recent and rapid rise in levels of obesity. To get enough exercise, the Chief Medical Officer recommends that adults take at least 30 minutes of moderate intense activity at least five times a week. For children, the recommended level is 60 minutes or more of physical activity every day. In 2006, 40 per cent of men (and 70 per cent of boys), and 28 per cent of women (and 59 per cent of girls) took the recommended levels of activity (Information Centre for Health and Social Care 2008a).

To have a healthy diet, the government recommends that every person should consume five portions of fruit and vegetables a day. In 2006, only 28 per cent of men (19 per cent of boys) and 32 per cent of women (22 per cent of girls) consumed the recommended levels (Information Centre for Health and Social Care 2008a).

Who is more likely to be obese?

Obesity is strongly linked to social class and gender. People with low incomes eat less fruit and vegetables and take less exercise than those with higher incomes. Women in manual social classes are more likely to be obese (28 per cent) than those in non-manual social classes (19 per cent). The reverse is true for men, with those in the non-manual social classes more likely to be obese (Zaninotto *et al* 2006).

Where people live also seems to be a factor. In 2003, 18 per cent of men in London were classed as obese, compared with 25 per cent of men in Yorkshire and the Humber (Zaninotto *et al* 2006).

Levels of obesity vary by ethnic group and by gender within ethnic groups. The level of obesity is much lower in black African men, Indian men, Pakistani men, and particularly so in Bangladeshi and Chinese men, who are both approximately four times *less* likely to be obese than the general population in England. There is a high rate of obesity among black Caribbean, black African and Pakistani women, but a low rate among Chinese women, when compared to the general population in England (Information Centre for Health and Social Care 2004).

The government's strategy to tackle poor health and lack of exercise

In 2005, the government asked Foresight² to carry out a review of obesity, acknowledging the severity of the problem. Two years later, Foresight published its findings in *Tackling Obesities: Future choices*. It concluded that without clear action, almost nine out of ten adults and two-thirds of all children would be overweight or obese by 2050 (Butland *et al* 2007).

In response to the Foresight report, the government published its strategy to tackle obesity, *Healthy Weight, Healthy Lives: A cross-government strategy for England* (Department of Health 2008c). It is committed to taking a range of actions to reduce obesity, particularly among children. By 2020, it aims to have reduced the proportion of overweight and obese children to 2000 levels. In January 2009, the Department of Health will launch *Change4Life*, a programme that aims to tackle childhood obesity through the promotion of healthy lifestyles, diets and communicating the benefits of physical activity.

Understanding why people choose unhealthy behaviours

Finding effective ways to change people's behaviour is a challenging task in the absence of 'a properly developed theory as to why people engage in unhealthy behaviours, or do not undertake healthy ones' (Le Grand and Srivastava forthcoming). The reasons why people choose unhealthy rather than healthy behaviour are often complex. Foresight's *Tackling Obesities: Future choices* project, for example, identified nearly 100 factors as causes of obesity. Although some of these are factors that the NHS can influence, many relate to the wider social context within which people live, and require action from across government, for example:

- the level of availability of passive entertainments and recreational activities
- the degree to which obesity, food and physical activity is considered a social norm in a socio-cultural group
- the degree to which food intake is dictated by routine and habit
- whether and to what extent children control their own diet and the level of control exerted by parents on children's choices
- the amount of time spent watching television and computer-related activities
- the degree to which food is regarded as indulgence or compensation after stress or effort
- the dominance of motorised transport
- the level of exposure to food advertising (Butland *et al* 2007).

Influencing what people eat, how much they drink and how often, how much exercise they take and how often, and their smoking habits, requires a deeper understanding of

² Foresight is the UK government's science-based futures think tank, based in the Government Office for Science. The aim of the programme is to build on the scientific evidence base to provide challenging visions of the future to help inform government strategies, policies and priorities' (see: www.foresight.gov.uk/index.asp).

why people behave as they do. It is often about changing deep-rooted social habits that can become addictive, rather than just helping people make better choices as individuals.

Each type of behaviour has different characteristics, so it is unlikely that approaches that work for one behaviour will be easily transferable to another. People choose unhealthy behaviours for different reasons – for example, a teenage smoker may have a very different set of motivations for smoking from someone who has chronic obstructive pulmonary disease (COPD) and has been a smoker all their life.

The role of PCTs

As part of the strategic planning process, PCTs will need to use relevant data or commission new research to make the case for greater investment in health promotion. Using data produced by the public health intelligence function and regional public health observatories, PCTs can assess the size and nature of the problem they are dealing with locally, in terms of people's smoking, drinking, eating and exercise habits.

As well as strategies that address the wider social, economic and environmental determinants of people's behaviour, often developed in partnership with local authorities, PCTs will need to include behaviour change interventions as a key component of their strategic commissioning priorities. Where possible, these strategies should be informed by studies about the nature of people's unhealthy behaviours and why people choose to undertake them.

Commissioners and service providers need to ensure that, as well as being clear about the nature of the behaviour they are tackling, they are able to identify who to target with the intervention. We turn to this issue in the next section.

2 Identifying the target population

This section focuses on methods for identifying individuals and groups to target with appropriate interventions in order to change their behaviours. It discusses a range of tools, such as geodemographics and social marketing, that can help commissioners gain insights into the needs and behaviours of different population groups. It also suggests ways that primary care trusts (PCTs) can access the analytical and other skills necessary to use data to design effective behaviour change interventions for different target groups.

Segmentation and targeting

With any behaviour change problem, you start with where the person is, where the population is.

(Seminar participant)

The concept of targeting is based on the advertising principle of market segmentation, which seeks to find the right kinds of consumers for a particular product or service (Kreuter and Skinner 2000). Targeting can be an important element of strategies to change behaviour and reduce health inequalities. Interventions that are not targeted may, in some cases, actually exacerbate inequalities, and waste valuable resources.

Tackling inequalities is a complex task, and practical experience from PCTs demonstrates the importance of understanding your community in designing effective interventions.

(Email)

Segmenting the population into subgroups can help PCTs to better understand a particular behaviour or to target an intervention more effectively. These subgroups may be very small and quite specifically defined – for instance, women aged 50–65 from black and minority ethnic (BME) populations, living in a particular neighbourhood. Or, in the case of Liverpool PCT's 'Chill Out Log Cabin', young people on a night out drinking (see box below).

'Chill Out Log Cabin' - an example of targeting

From 2007–2008, over 19 nights, Liverpool PCT hosted a 'Chill Out Log Cabin', which toured the city centre at night, targeting young drinkers. The cabin gave young people the chance to take a break from drinking and instead pick up a range of information on sensible drinking, maintaining good health, personal safety and transport. There were also alternative therapies on offer, such as massage, as well as non-alcoholic drinks – 'mocktails' (non-alcoholic cocktails) and water. More than 3,000 young people 'chilled out' in the cabin.

For more information, see: www.psst.org.uk/

Targeting low-income groups

The second *Kicking Bad Habits* seminar and discussion paper (Michie *et al* 2008) explored ways of targeting people in low-income groups to encourage them to adopt healthier behaviour in relation to smoking, alcohol misuse, poor diet and lack of exercise. We were not able to draw firm conclusions as to which intervention (or combination of interventions) was most effective. However, some initiatives that are targeting low-income groups (especially those people most at risk of heart disease and cancer) with intensive support, appear to be achieving significant results (*see* box below).

Waltham Forest PCT Household Health Improvement Managers

Waltham Forest is an area characterised by high levels of socio-economic deprivation. The PCT's public health department, in partnership with the local authority's Better Neighbourhoods Initiative (BNI) (designed to improve quality of life in the most deprived areas), has set up a Household Health Improvement Service.

How does the service work?

It employs Household Health Improvement Managers (HHIMs) who provide individually tailored advice and support to individuals, couples or families on how to give up smoking, avoid alcohol misuse, eat a healthier diet and get more exercise. They target people who have been identified as most at risk of developing coronary heart disease or cancer. (HHIMs get most of their clients through general practitioner (GP) referrals, but they also work through youth clubs and voluntary organisations, and even go from door to door in certain areas.)

HHIMs begin their work with each client by carrying out a 'lifestyle review' – this covers a wide range of information, including whether the person is registered with a GP, whether they have taken up cancer screening services, their medical/medication history, etc. It also includes details on smoking and alcohol use, diet and physical activity. The review takes between one and two hours. Follow-up visits are made after three months and then again after a year (when the review is repeated, with updated information).

For more information, *see*: www.walthamforest.gov.uk/index/environment/bni.htm

Many PCTs rely on the knowledge of their public health professionals to help them identify target groups for certain interventions. However, a number of trusts are making greater use of computer-driven data analysis, called geodemographics.

Geodemographics

Geodemographics ensure you are targeting the right message to the right population, and that that message is communicated in the most effective way, and the tone of that message is appropriate to that local population.

(Seminar participant)

Geodemographics uses computer technology and mapping to classify *small geographic areas* according to the 'type' of people who live there, or to classify the *people* according to where they live. Classifications measure social, economic and demographic conditions, and can be given for postcode areas or for individual households.

Geodemographics provide detailed information on *where* problems exist and, if accompanied by qualitative research, information on *why* they exist. They can therefore

be a useful tool when combined with public health information, helping PCTs to target communities that are most in need of – or receptive to – certain interventions. Proper use of these data should also mean that interventions are more likely to be successful and cost effective.

Geodemographics creates maps and classification systems using a range of data: electoral rolls, census data, the Health Survey for England, the British Market Research Bureau Target Group Index survey, internet transactions, land registries, county court judgments, Driver and Vehicle Licensing Agency, director and shareholder registers, and anonymised credit activity. Classifications can be given for postcode areas or for individual households.

In the 1990s, we were targeting gay venues, we were targeting Afro-Caribbean churches, and so on. Barbers and hairdressers are an incredibly good place for getting information out. I think geodemographics are fantastic, and it gives us so much more depth to some of that geographical view. But I don't want to lose sight of that gut feeling that we had on how to get the messages we needed to the people within those settings. I think this could distract, and lose that sense of people who knew their business in health promotion, knowing how to get those messages out, in what form and where to go. I just think the two should work together.

(Email)

The key to using geodemographics to help target behaviour change interventions is acknowledging that mapping is *not* the solution in itself, but a first step to finding a solution.

As yet, there is very little peer-reviewed evidence about how effectively geodemographics are being used to target behaviour change interventions. None of the commercial systems has been subject to scrutiny by external or independent experts, and comparisons of the various systems are rare. However, Yorkshire and Humber Public Health Observatory is currently carrying out a comparative analysis of eight geodemographic systems. This should hopefully provide a useful guide for PCTs considering investing in these systems.

Geodemographics works, but don't think that it's going to be a panacea. Anyone who works in public health knows that there are no panaceas.

(Seminar participant)

Some public health professionals are using geodemographics in innovative ways to inform behaviour change interventions, as the box below shows.

Teenage pregnancy in Nottingham - using geodemographics to target interventions

Nottingham is a relatively deprived city and has a very high teenage pregnancy rate. Nottingham PCT's public health department used geodemographics to help it identify areas with the highest pregnancy rates.

Alongside the mapping exercise, a Health Equity Audit assessed how accessible the city's Connexions service for pregnant teenagers and young mothers is (it provides information and support to 13–19-year-olds on a range of issues, from sexual health, drugs, employment and housing, to finance, leisure and personal development).

The audit found that Connexions *was* serving its target group, but the mapping exercise identified a significant segment of the target population (17 per cent) who were not accessing the service. The research led to recommendations that the Connexions service focus on 'cold spot areas' it had not previously been reaching.

For more information, contact: jeanelle.degruchy@nottinghamcity-pct.nhs.uk

There are a number of cases where PCTs have developed their own mapping tools in partnership with universities or other institutions, rather than simply using ‘off-the-shelf’ commercial systems. The Southwark Atlas of Health is an excellent example of a tool that was created by a PCT and a local university working in partnership (see box below).

Southwark Atlas of Health and the London profiler

The Southwark Atlas of Health is a freeware programme developed by the Department of Public Health at Southwark PCT and the Centre for Advanced Spatial Analysis (CASA), University College of London. It covers an area of south-east London with a population of nearly 300,000. The programme links patient data with geodemographics, giving public health researchers an insight into the socio-economic profile of certain areas and health conditions.

The London profiler is another freeware programme that uses a range of datasets in combination with Google Maps. It enables the user to search and build up a picture of the geodemographics of certain areas of Greater London, including data on health, deprivation, levels of higher education, etc.

For more information, see: www.spatial-literacy.org/health/intro.html; www.londonprofiler.org/

Geodemographics can help commissioners and practitioners segment their local population according to need and prevalence of unhealthy behaviours. However, data should be used alongside knowledge gained from local health professionals and stakeholders.

Social marketing

What’s good about social marketing is it’s bringing some of the commercial marketing skills into the public debate... bringing social science together with marketing.

(Seminar participant)

Social marketing is a tool that can be used to achieve specific behavioural goals, improve health and reduce health inequalities. Research has shown that social marketing is effective in changing people’s behaviour (Stead *et al* 2007a). A number of studies we reviewed also found that social marketing is effective in changing behaviour over the long term (that is, having an effect that lasts longer than two years).

The Department of Health’s 2004 White Paper, *Choosing Health*, pointed to the ‘power of social marketing... used to build public awareness and change behaviour’ (Department of Health 2004). Indeed, the Department has shown renewed enthusiasm for social marketing, with its stated commitment to ‘work together with key leaders in the public health community to embed social marketing principles into health improvement programmes’ (Department of Health 2008a).

There are many definitions of social marketing but, in essence, it is based on four main elements (Stead *et al* 2007b):

- people voluntarily changing their behaviour
- the principle of exchange – recognising that the individual/customer must benefit if change is to occur
- the use of marketing techniques such as consumer research, segmentation and targeting

- an aim of improving the welfare of the individual and society and not to benefit the company undertaking the marketing – in this way social marketing is differentiated from private sector marketing techniques.

One of the critical components of social marketing is consumer research – finding out more about the people whose behaviour you want to change. These skills may be available within PCTs and health care organisations. Alternatively, other organisations – for example, voluntary and community groups – may be well placed to work with PCTs to gain access to a sample of the target group. Commercial companies also offer market research services, and some may also help to develop the intervention if required. Although health promotion is a core competency for every public health director, knowledge of social marketing is not. Public health practitioners and corporate communications staff may need specific training and follow-up support to develop effective social marketing campaigns.

The box below gives an example of how one PCT's public health department used social marketing to develop new stop smoking services with promising results.

'New Leaf' stop smoking service

Smoking prevalence is very high in Nottingham – 34 per cent, compared to 24 per cent nationally. The PCT wanted to reduce this figure to 29 per cent by 2011. The PCT's Public Health Department decided to target smokers from deprived communities and hard-to-reach groups. A local NHS team co-ordinated the campaign. The first step was to find out more about the target groups' smoking habits. The team used geodemographic profiling, and carried out a literature review and qualitative research in semi-structured sessions and street interviews. The result was the New Leaf programme.

How does the programme work?

It offers one-to-one, group and drop-in clinics with trained advisers at a variety of locations across the city, including GP practices, community centres and leisure centres. Clinics are held on different days and at different times to be as accessible as possible.

The New Leaf programme also provides training in brief intervention and intensive support to health and partner organisations to increase their stop smoking awareness, provision and capacity. A marketing agency developed a mix of interventions to encourage the target groups to take up the service, including billboards, bus and tram banners, posters and beer mats.

Is it reaching the target groups?

New Leaf conducts a health equity audit every six months to ensure that the service is reaching the intended target groups. The recent audit concluded that, on the whole, New Leaf is targeting areas and population groups where smoking prevalence is highest. The audit also enabled them to identify areas where there was low uptake of the service, and take action to address this.

For more information, contact: jeanelle.degruchy@nottinghamcity-pct.nhs.uk

Data analysis skills and capabilities

Targeting, geodemographics and social marketing all involve analysing a range of complex data. The world class commissioning (WCC) framework acknowledges the importance of this task, with one of the competencies being the ability to ‘manage knowledge and undertake robust and regular needs assessments that establish a full understanding of current and future local health needs and requirements’ (Department of Health 2007c).

During the course of the Kicking Bad Habits programme, concern was expressed that some NHS staff may be required to analyse data but lack the skills necessary to interpret it accurately and use it to develop or adapt behaviour change interventions.

What seems to be happening right now in a lot of PCTs is that they are spending the time and energy to identify groups, but the next step of actually doing something with that information isn't happening as much as it should.

(Seminar participant)

As well as drawing on local health professionals' knowledge (whether GPs, health visitors, or other primary and community care staff), PCTs should be making full use of available data on the local population from a wide range of sources. To do so they should ensure they have the necessary skills to interpret these data and to develop targeted interventions using the insights provided by the data.

This will require PCTs to make effective use of their local public health intelligence function, and enhance it where necessary. Staff across different departments may require training on the principles of social marketing, and the process of designing effective behaviour change interventions.

In developing capacity in this area PCTs can benefit from exchanging experiences of running successful behaviour change interventions – for example through the public health commissioning network for England (www.nks.nhs.uk/commissioningnet/).

Identifying target groups and using social marketing (in particular, consumer research) to understand attitudes and behaviours are important elements of a systematic approach to behaviour change. However, knowing which interventions to use with which groups will depend on information about their effectiveness in changing behaviours. This is the subject to which we turn in the next section.

3 Designing effective behaviour change interventions

Three of the five Kicking Bad Habits discussion papers and seminars reviewed specific behaviour change interventions in order to identify which types of intervention (or combination of interventions) are most effective. This section considers interventions based on financial and non-financial incentives, information, and improving individuals' motivation and confidence.

Using incentives to encourage behaviour change

There is considerable interest across different policy areas (social policy, education, finance and health) in the use of incentives to encourage behaviour change. The idea of 'nudging' the public to make healthier choices is gaining favour. The concept of 'nudging' acknowledges that we should all have freedom of choice, but purports that the government should encourage or 'nudge' the public to 'do the right thing' (Thaler and Sunstein 2008). 'Nudging' could be an effective way to encourage healthier behaviour, but the concept has yet to prove its effectiveness in sustaining behaviour change over long periods.

Financial incentives

The first discussion paper and seminar focused on financial incentives (Jochelson 2007). The attraction of financial incentives lies in their potential to reduce health care costs and improve quality of life (Greene 2007; Rudowitz and Schneider 2006; Silow-Carroll and Alteras 2007).

Financial incentives have been used by many organisations to change a range of behaviours. For example, private health insurers have offered reduced premiums to customers who participate in health-promoting activities (such as regularly attending a gym) or successfully manage their chronic conditions. Financial incentives have also been used successfully to increase savings in low-income households, reduce truancy and school absenteeism, promote educational achievement and deter crime (Jochelson 2007).

Financial incentives can be a strong motivator for behaviour change. As a public health doctor, it is reassuring to see that they are often directed towards the grand challenges of public health: [poor] diet, [lack of] exercise, smoking and even a couple of brave attempts to influence sex.

(Email)

Evidence suggests that financial incentives are more effective in changing certain types of behaviours. The most successful incentives schemes are those that target 'simple', one-off behaviours such as keeping appointments (Jochelson 2007).

The evidence also shows that financial incentives can help individuals achieve their personal behaviour change goals, but that people tend to fall back into former behaviour patterns when the incentive is removed.

I still don't feel satisfied that we know when financial incentives work and I think the only way that we can solve it is by funding a series of pilots where we're very careful about what it is we're trying to prove and evaluating them properly. I wouldn't want

us to throw everything at financial incentives but I wouldn't want us to throw them out either.

(Seminar participant)

Financial incentives may well be most successful if offered as *one element* of a wide-ranging behaviour change programme. This is because incentive schemes alone may not be sufficient to counteract the wider pulls of social context, personal habit or psychological dependency. NHS Tayside's 'Give it up for baby' programme (*see box below*) acknowledged this problem. It used financial incentives combined with individual support to help pregnant women give up smoking, addressing the social, as well as individual, component of behaviour change.

'Give It Up for Baby' - helping pregnant women give up smoking

NHS Tayside's public health department had been using conventional 'stop smoking' or specialist midwife services to encourage pregnant women to give up smoking. But these proved very costly; a one-year, £66,000 midwife project resulted in six pregnant women giving up smoking – £11,000 per patient.

A local public health consultant researched some alternatives, including financial incentives. He carried out a literature review, and talked to community groups to get their views on smoking in pregnancy. The result was 'Give It Up for Baby', a programme developed in partnership with Dundee City Council and ASDA, launched in April 2007.

How does the programme work?

Health professionals signpost pregnant women to their local community pharmacist, who provides one-to-one support, giving information and advice, and nicotine replacement therapy (if required) over a 12-week period. The woman also has a carbon monoxide breath test each week. If the breath test is clear, she gets a credit of £50 a month at the local ASDA store (which can be used to buy anything except tobacco and alcohol). The local authority also puts £12.50 a week on a 'local authority credit card' after each clear test. The one-to-one support is offered for three months, but the reward, based on a clear breath test each month, continues throughout pregnancy and for three months after birth.

What results has it achieved?

In its first nine months, 55 women registered with the scheme and more than 50 stopped smoking. In the first year, the scheme paid out £6,000 in incentives. This figure does not include other costs associated with the programme (such as pharmacists' time, meetings with partners). But it was still considerably more cost-effective than the previous programme and, as a result, is funded to run for a further three years.

The programme was evaluated as part of the Health Scotland report, *Smoking Cessation Support in Pregnancy in Scotland*, undertaken by the University of Stirling. The evaluation found that financial incentives were successful because they were offered in addition to other support (in this instance, nicotine replacement therapy and alternative social activities). Also, the women involved said that previous attempts to give up smoking had failed because it meant opting out of a social group. By taking part in the 'Give It Up for Baby' programme, they felt it gave them the opportunity to say they were doing something different.

For more information, see the Health Scotland report that evaluates smoking cessation support in pregnancy in Scotland: <http://www.healthscotland.com/documents/2665.aspx>

The dangling carrot of a 'prize' can assist with getting individuals to take part but, for a permanent change to take place, the individuals must have personal goals, education and personal reward.

(Seminar participant)

Financial incentives to encourage healthier behaviour and take-up of services need to be carefully designed and implemented. They may be most effective as *one element* of a multi-component programme that addresses the complexity of individual, social and economic factors that influence people's lifestyle choices.

Non-financial incentives

Non-financial incentives can also be an important element in encouraging people to adopt healthier behaviour, particularly children. The Food Dudes Healthy Eating Programme (*see box below*), developed in 1992, demonstrates that non-financial incentives, such as role models and rewards, are able to achieve behaviour change that is sustained in the long term.

The Food Dudes programme provides a useful blueprint for other innovative health interventions, combining a commitment to evaluate programme impact over the short and longer term, and adapting or developing new interventions based on the results.

Food Dudes Healthy Eating Programme

In 1992, psychologists at the Bangor Food and Activity Research Unit, Bangor University, developed Food Dudes – a learning programme that aimed to get children to eat more fruit and vegetables and to eat a wider range. It was developed on the basis of psychological principles that are known to influence children's food choices. It was designed for use by primary schools, across the full age range of pupils (ie, 4–11-year-olds), and has been tested in a diverse range of schools in England, Wales and Ireland.

How does the programme work?

Children are given fruit and vegetables at lunchtime and snacktime (just before morning break). The programme uses a combination of role models – four young superheroes (called the Food Dudes) who gain superpowers when they eat fruit and vegetables – and rewards, such as stickers, pencils, key rings or certificates. Every day, for 15–20 minutes, the children watch a Food Dudes DVD featuring episodes on how the Food Dudes save the 'life force' of the world and compete with a gang of baddies (the Junk Punks). There's also a Homepack that aims to get parents involved in helping their children eat more fruit and vegetables.

What results has it achieved?

There have been significant increases in pupils' fruit and vegetable consumption in every school that has implemented Food Dudes over the past 15-years. The trials

showed that children's consumption of fruit and vegetables increased by 100–200 per cent on average, ranging to several hundred per cent for the 'poorest eaters' (children who had eaten very little fruit and vegetables before taking part in the programme).

Food Dudes is currently being introduced into all primary schools in Ireland, after a successful pilot in 150 schools. The team at Bangor is also working with the School Food Trust to introduce Food Dudes in primary schools in England, with a trial starting in all primary schools in Wolverhampton in January 2009.

The Bangor team are now designing an intervention that aims to increase children's level of physical activity – the Fit'n'Fun Dudes programme. The long-term aim is combine both programmes to provide a two-pronged intervention to tackle obesity.

For more information, visit the Food Dudes website: www.fooddudes.co.uk

Providing information

The third Kicking Bad Habits discussion paper (Robertson 2008) and seminar examined how effective information-based programmes are in promoting healthy lifestyles and behaviours. The Department of Health in England invests heavily in this approach. In 2007–2008, it spent more than £50 million on publicity and advertising (*see* Table 1).

Table 1 Department of Health spending on publicity and advertising, 2007/8

	£ million
Tobacco control	19.0
Tobacco legislation	8.7
Sexual health ¹	6.9
Social work/care	3.1
Hepatitis C	2.1
Drug prevention ²	2.0
Flu immunisation	1.4
Alcohol ³	1.3
5 a Day	1.3
Maternal and infant nutrition	1.2
NHS Direct	1.0
Respiratory and hand hygiene	0.8
Antibiotics	0.6
Keep Warm, Keep Well ⁴	0.5
NHS Injury Benefits Scheme	0.4
Total	50.3

¹ Including the Department for Health's (DH) contribution to a joint campaign with the Department for Children, Schools and Families. ² The Department of Health's contribution to a joint campaign with the Home Office and the Department for Children, Schools and Families. ³ The Department of Health's contribution to a joint campaign with the Home Office.

⁴ The Department of Health's contribution to a cross-government campaign.

Source: Hansard (2008)

The discussion paper and seminar confirmed that providing information, on its own, has little effect on people's health behaviour (*see*, for example, Coulter and Ellins 2007). Health behaviour is complex, and is determined by more than just an individual's level of knowledge. For this reason, the role of information alone in effecting behaviour change is

limited (Robertson 2008). However, when information is used as part of a multi-component programme, the impact can be much greater, but so can the cost (Tones *et al* 1990).

Mass media campaigns can encourage people to change their smoking, diet and exercise habits, though providing information seems to have more impact in changing knowledge and beliefs, rather than behaviour. A systematic review conducted for the National Institute for Health and Clinical Excellence (NICE) found some good evidence that media campaigns, coupled with tobacco control programmes, reduced smoking prevalence (Cancer Care Research Centre *et al* 2006). However, media campaigns are most effective when they run alongside other interventions (NICE 2007, Flynn *et al* 1992).

The evidence shows that health promotion programmes based on providing information are most effective when they:

- capture the attention of their target group. Formative research is essential to understanding what messages will work with which groups.

In national smoking campaigns we found case studies of ex-smokers to use, because research demonstrates smokers will pay far more attention to someone who's been in their position and has now given up.

(Seminar participant)

- use a source, message and channel for transmission that suits the target audience. For example, some people respond better to ex-smokers telling them how they can give up rather than health professionals telling them.
- get high levels of exposure that lead to changes in people's way of thinking and behaving. Impact will be greatest where there are consistent messages coming from multiple sources.

Tailoring written information to the individual

The most effective interventions are those where you're teasing out from the individual how they might be able to change themselves... and therefore tailoring around that particular issue.

(Seminar participant)

Tailoring information involves collecting relevant information from individuals rather than populations, then using this information to design the most effective message or intervention (Stretcher and Velicer 2003). Examples include NHS LifeCheck, which provides personalised information and practical advice based on answers given in a health assessment questionnaire. LifeCheck helps people to set realistic personal goals and supports them with motivational tools. It aims to help people make small changes, which will eventually contribute to a big improvement in their health and well-being.

As tailoring information is a relatively new method, the evidence base is limited. A study of smokers in England found that tailored materials were useful in motivating those who did not want to quit or did not *think* they wanted to (Gilbert *et al* 2008, p 396).

The Cochrane review of self-help interventions for smoking cessation found 'some evidence for the effectiveness of tailored materials, although the effect sizes were quite small' (Lancaster and Stead 2005, p 675v). To increase the evidence base, national interventions and local initiatives should be evaluated and the results published.

Providing individual support

The fourth Kicking Bad Habits discussion paper (Dixon 2008) and seminar considered the effectiveness of interventions designed to increase an individual's motivation and

confidence. This approach is used in a wide range of behaviour change interventions, including the Health Trainers Initiative launched by the Department of Health in 2005 (see box on page 19). Examples of interventions based on individual support include:

- goal setting and action planning
- group support programmes
- buddying schemes
- coaching and counselling
- relaxation techniques
- stress management
- skills training
- motivational interviewing
- maintenance strategies to prevent relapse
- structured problem solving and cognitive rehearsal
- coping strategies.

These approaches are increasingly common, and particularly used to support people with chronic conditions. Birmingham OwnHealth® (see box below) is an example of such a programme. One drawback is that such approaches can be labour-intensive, and therefore may prove too costly. However, smart interactive technology offers the prospect that some of these techniques could be self-directed in future (see, for example, the development of online cognitive behavioural therapy).

Birmingham OwnHealth® - helping patients take control

Birmingham OwnHealth® is a partnership between Birmingham East and North PCT, Pfizer Health Solutions and NHS Direct. It was set up in 2006 to help people with diabetes, cardiovascular disease, heart failure or chronic obstructive pulmonary disease (COPD) better understand their condition and get the skills they need to stay fit and healthy.

How does the service work?

It provides telephone-based information, support and encouragement to people in the most deprived areas. The service is available in Urdu, Punjabi, Hindi and English, and is delivered by nurses experienced in managing long-term conditions and who have also been trained in motivational counselling techniques. They provide support and information to help patients increase their confidence to self-manage and set personal goals for change. By December 2007, the service was supporting more than 1,600 people, with one in ten people receiving the service in a language other than English.

What results has it achieved?

There is qualitative and quantitative evidence to suggest that people who used the service were:

- more confident in their ability to self-manage their condition
- more willing to make behaviour changes
- more likely to change their diet, exercise and smoking habits.

The programme has been subject to a time series evaluation, which compared symptoms, clinical measures and service use at the time when participants first took up the service, and at follow-up about nine months later. A satisfaction survey and focus group were conducted to gain feedback from service users, and a

focus group with care managers explored nurses' suggestions on how to improve the service.

Although the changes cannot be attributed solely to Birmingham OwnHealth®, the service is an important component of a wider range of activities supporting behaviour change locally.

For more information, visit: www.birminghamownhealth.co.uk/

The effectiveness of interventions using the range of personal support methods set out on page 17 has not been systematically reviewed. But we did find some evidence that some of these techniques are effective in changing people's behaviour.

In the Health Development Agency's review of interventions designed to increase smoking cessation, reduce smoking initiation and prevent further uptake of smoking, Naidoo *et al* (2004) found that a range of solutions worked. Contact with a clinician (both physician and non-physician) was effective in increasing abstinence rates, as were certain counselling and behavioural therapies (including problem solving, skills training, relapse prevention and stress management). The authors also found evidence that 'buddy systems' delivered in smokers' clinics, and proactive telephone counselling, helped smokers to quit. A review by the Cochrane Collaboration supported these findings, stating that both individual counselling and group therapy increased people's chances of quitting (Lancaster *et al* 2000).

Personalised support may be delivered by a range of professionals or indeed by trained lay workers. A common approach in the United States, although still in its infancy in the United Kingdom, is the use of telephone-based nurses trained as health coaches.

Health coaching

Health coaching is a patient-focused approach that helps individuals achieve their optimum level of health and well-being, and take greater control of their health. It focuses on each individual's unique needs, and promotes motivation and confidence, identifying actions to encourage self-reliance.

Health coaching is usually telephone-based. Health coaches (most of whom are nurses) stay in regular contact with the individual to help identify the behaviours they want to change, and how. They help them to stay on track, show sustained interest, and celebrate small successes, which further increases motivation. The frequency of contact is determined by the needs of the individual, but there tend to be intense periods early on, when plans are being made, and then quieter periods.

In the long term, trained lay workers and peers could act as health coaches, given the necessary support. There are, for instance, potential synergies with the Department of Health's 'Health Trainers initiative' (*see box opposite*), which is based on a similar approach.

Again, as health coaching is a relatively new approach, the evidence base is limited. There is a need to evaluate its effectiveness, particularly in relation to other interventions or no intervention at all. Also, given that there is wide variation in the skills and experience of practitioners, research should identify examples of good practice.

There are also issues around persuading other health professionals that some of the techniques used by health coaches (such as setting goals, action planning and problem solving) can be an important part of their routine patient care. It is often the case that health promotion work is not valued by health professionals (*see, for example, Kelley and Abraham 2007, who discuss this in relation to nurses*). One study found that patients

Health Trainers initiative

This programme was announced as part of the *Choosing Health* White Paper in 2004. There are now more than 1,200 Health Trainers working with 65,000 people across England.³ They operate from a range of sites, from religious buildings to GP surgeries to libraries, and even at school gates.

How does the programme work?

Health Trainers offer one-to-one advice, motivation and practical support, usually visiting clients for six one-hour sessions. They help people decide what they want to change, and teach them the skills to help them achieve their personal goals. The first meeting is used to set personal goals and plan how the individual will change their behaviour. Subsequent meetings review the client's 'behaviour change diary'. Health Trainers do not give direct advice, but instead they support behaviour change by encouraging the client to work out the advantages or disadvantages of a certain behaviour. They can also signpost people to a range of support services.

What results has it achieved?

The Health Trainers initiative is currently being evaluated by the Department of Public Health and Epidemiology at the University of Birmingham. The Department of Health has already increased funding for the initiative from £36 million in 2006/7 to £77 million in 2007/8, seeing Health Trainers as an effective way to reduce health inequalities.

For more information on the Health Trainers' initiative, visit: www.dh.gov.uk/en/Publichealth/Healthinequalities/HealthTrainersusefullinks/index.htm

were receptive to advice but that only 6 per cent of patients said they *received* advice (Duaso and Cheung 2002). NHS staff need to take advantage of opportunities to give patient's advice about their lifestyles and use behavioural techniques such as those used by Health Trainers when delivering advice.

Using a range of interventions

Many of the case studies in this report use more than one intervention to change people's behaviour, as this approach is proven to be more effective (Bero *et al* 1998; Davis and Taylor-Vaisey 1997; Grol and Grimshaw 2003). Our reviews found that providing information has much greater impact when it is part of a multi-component programme (Tones *et al* 1990), and interventions that combine information with goal setting are effective in promoting healthy eating and exercise for low-income groups (Michie *et al* 2008).

There is, however, little systematic evidence to help determine which interventions or combination of interventions are most effective in changing which behaviours, and with which population groups. This scarcity of evaluation data makes it difficult for commissioners to use evidence-based approaches to health improvement. The next section deals with this and other issues involved in evaluating behaviour change interventions.

³ In 2007-08 Health Trainers were introduced into non-spearhead PCTs.

4 Evaluating behaviour change interventions

To facilitate evidence-based commissioning, primary care trusts (PCTs) need good-quality evidence on the impact and cost-effectiveness of behaviour change interventions. In each of the areas covered by the Kicking Bad Habits discussion papers, it was difficult to find this good-quality evidence. This section sets out some of the challenges of evaluating behaviour change interventions, and suggests ways to strengthen the evidence base for the future.

The evidence base

The National Institute for Health and Clinical Excellence (NICE) has produced guidance on obesity (NICE 2006), smoking (preventing children and young people taking up smoking) (NICE 2008a), physical activity (NICE 2008b), and programmes for attitude and behaviour change (NICE 2007). Although some interventions have been fully evaluated (for example, Food Dudes, *see* pages 14–15), many have not been. And some evaluations were lacking in quality, so the results are not sufficiently robust to be included in reviews or used to inform guidance from NICE.

For instance, many studies did not include control groups as comparators. This makes it difficult to assess whether the observed impacts are attributable to the intervention or to other factors in the surrounding environment. In some areas, such as the use of financial incentives, much of the evidence came from the US and was not always transferable to the UK context. Some evaluations included ‘soft’ outcome measures such as the number of phone calls to a ‘quit smoking’ line, rather than ‘harder’ behavioural outcome measures such as the number of smokers who were still not smoking four weeks after quitting.

Many evaluations measured short-term impacts only, and did not consider whether behaviour change was sustained once the intervention or incentive finished. NICE (2007) makes a similar observation about the lack of reliable data on long-term interventions.

Another problem is that, as we have seen, the more effective behaviour change programmes generally include more than one component, but evaluation studies rarely assess the impact of the individual components so it is not possible to identify which combination of interventions are having an effect. Finally, many of the studies were not clear about how they recruited participants into their programmes. In many cases, participation was voluntary, thus making it difficult to generalise the results or to be clear about how to replicate the achievements.

Improving evaluation methods

In 2007, NICE called for greater investment in research to evaluate the impact of behaviour change interventions associated with factors such as social class, ethnicity and deprivation (NICE 2007). The second Kicking Bad Habits discussion paper on low-income groups (Michie *et al* 2008) found that very few studies compared the impact of the same intervention on different target groups.

Comparisons between different demographic groups are usually done post-hoc, which means they're not powered sufficiently to draw conclusions about differential effectiveness even when reported... There's not the literature there at the moment.

(Seminar participant)

Using methodologies such as randomised control trials might not be feasible for all types of intervention. For example, for an advertising campaign, it might prove difficult to find a 'true' comparator group that has not been exposed to the intervention. It is also difficult to get 'hard-to-reach' groups (such as people on low incomes) to sign up for such trials.

Some interventions, such as motivational interviewing or counselling, are based on a personal interaction, where successful delivery largely depends on the skills and abilities of the counsellor/motivational interviewer. In these cases, standardising the intervention and evaluating and comparing impact can be particularly difficult.

For the purposes of making investment decisions, evaluation studies based on 'before' and 'after' measurements or case-control studies may provide sufficient information for commissioners about the effectiveness of certain interventions. But in order to strengthen the evidence base, we suggest that future evaluations should:

- include behavioural outcome measures where possible
- assess impact over the longer term by finding out if the behaviour change was sustained after the intervention finished
- collect information on cost-effectiveness
- include a control group.

Evaluating cost-effectiveness

We're often not measuring cost-effectiveness in health.

(Seminar participant)

Cost-effectiveness is a key consideration for PCTs, yet there are very few studies that assess the cost-effectiveness of behaviour change interventions. Evaluation studies must also collect data to calculate the cost-effectiveness of an intervention. The human resources required to implement it, as well as other inputs, should be included in this analysis.

It has been suggested that the use of technologies such as the internet and mobile phones may offer the possibility of increasing the caseload of professionals and thereby delivering interventions more cost-effectively. Evidence of the relative cost-effectiveness of these new technologies is growing (*see, for example, Brownsell 2008; Barlow et al 2007*). Similarly, the use of technologies to tailor information can enable greater reach and reduce the unit costs of delivering the service. Even modest success rates 'could have a large effect on public health given its recruitment potential' (*Gilbert et al 2008; Velicer et al 2006*).

Many information programmes are very resource-intensive... Often we do things because we have a budget, but rarely do we step outside and think of using that money differently.

(Seminar participant)

Studies could also consider the short-term financial gains arising from certain interventions, as well as the longer-term gains in terms of improved public health. There are a number of ways in which behaviour change interventions can generate savings for PCTs – for example, reducing the number of visits to general practitioners (GPs) by providing access to other services run by professionals or lay people (such as Household Health Improvement Managers or Health Trainers). Evaluations should compare different modes of service delivery as well as services delivered by different types of people in order to fully measure cost-effectiveness.

Funding

To ensure a stronger evidence base in the UK in future, it is vital that funding is made available to evaluate the impact of behaviour change programmes.

The National Institute for Health Research, the NHS Service Delivery and Organisation Research & Development Programme, the Medical Research Council and other research councils, all have a role to play in investing in innovative research and committing funds to evaluate behaviour change programmes. PCTs and providers might also consider establishing partnerships with local universities, who can help develop evaluation tools.

There is also a need to share information, evaluations and best practice so that others can learn from the many local initiatives to change behaviours (such as those highlighted in this report). This could be facilitated via a web portal similar to that developed for wider public health interventions in Canada (*see* Public Health Agency of Canada 2008).

5 PCT commissioners and policy-makers leading the way

Helping the NHS to help people ‘kick bad habits’ and choose healthier behaviours will require concerted action from a range of players. Primary care trusts (PCTs) have a key role to play in leading this change. But if the NHS is to rise to the challenge and focus as much on promoting good health as on treating ill health, it is essential that the policy environment enable this shift. If the vision set out in the *NHS Next Stage Review* (Department of Health 2008e) is to be realised, all elements of health policy must work towards this goal. In this section, we discuss how a number of key policies help or hinder behaviour change interventions.

World class commissioning

The world class commissioning (WCC) competencies helpfully provide an opportunity for PCTs to improve the way they commission behaviour change interventions. For example, competency 3, to ‘proactively seek and build continuous and meaningful engagement with the public and patients, to shape services and improve health’, encourages them to engage local communities in developing behaviour change interventions that are appropriate and acceptable, and that help people stay healthy in the long term. Public involvement is particularly important, because many of the people who might benefit from these services may not come into contact with the NHS as patients.

A strategy for health and well-being needs to be supported not only by public health specialists but by an integrated commissioning plan that draws on the full range of skills available within PCTs. In addition, commissioners also need to make better use of the information generated by the Joint Strategic Needs Assessment (JSNA). The JSNA would benefit from being more focused in helping local authorities and PCTs to set realistic, long-term priorities. It would also be more valuable if it were linked more closely with the 11 WCC competencies, and if local authorities were to create specific objectives linked to the JSNA.

PCTs also need to see behaviour change interventions as integral to their full range of commissioning activities, including those in the acute sector. While most interactions between the public and the NHS take place in the primary care setting, the hospital setting may also offer opportunities for health professionals to engage people in behaviour change. Admission to hospital can be a critical moment, making patients much more receptive to advice on how to avoid ill health. PCTs should ensure that patients in the hospital setting, as well as those accessing primary care, receive appropriate advice and information on behaviour change. PCTs should use contracts and locally agreed care pathways to ensure that patients in the hospital setting are referred to appropriate local support services.

Practice-based commissioning

The *2008/09 NHS Operating Framework* describes practice-based commissioning (PBC) as a ‘crucial’ tool that can help PCTs to reduce health inequalities, as it provides a powerful link to local communities (Department of Health 2008f). PBC gives general practitioners (GPs) a notional budget for their practice population and some control over

commissioning decisions. GPs retain a percentage of any underspend, which they are required to reinvest in patient care.

Research by The King's Fund (Curry *et al* 2008) in four areas of England shows that PBC has been slow to take off. GP practices have commissioned only a few initiatives, and not many of them focus on preventive health. It could be argued that this finding is not surprising, since PBC creates a financial incentive for GPs to commission initiatives that they can provide themselves, in their own surgeries, rather than those provided by third parties who may be better placed to deliver those services. Also, the short-term financial benefits of behaviour change initiatives can be difficult to quantify, making them less attractive to GPs drawing up business plans that have to demonstrate a cost saving.

Commissioning effective behaviour change interventions requires undertaking research into local needs and choosing a provider who can tailor interventions accordingly. Most GPs do not have the time or skills to undertake these tasks, so unless there are incentives to do so, they are likely to remain low priority.

So, while PBC provides an opportunity for GPs to commission behaviour change initiatives for their practice populations, it does not provide incentives to do so. It is important that while GPs innovate locally, PCTs retain a population-level plan for promoting good health and behaviour change. To bridge this gap, PCTs could provide support to local GPs to help them commission services and implement behaviour change initiatives.

Regulation and performance management

The Healthcare Commission's annual health check assesses whether PCTs have behaviour change initiatives in place, and measures their performance against targets on childhood obesity and smoking cessation (Healthcare Commission 2008). It is encouraging that the Healthcare Commission also assesses the extent to which NHS acute trusts promote healthy behaviour through:

- providing services to help people stop smoking and have a smoke-free environment
- providing opportunities for healthy eating
- providing opportunities for physical activity
- encouraging sensible drinking
- improving mental health and well-being
- promoting sexual health.

From April 2009, a new organisation – the Care Quality Commission – will take over the roles of the three organisations that are currently responsible for regulating health care and social care in England (the Healthcare Commission, the Commission for Social Care Inspection and the Mental Health Act Commission). It will be important to ensure that standards relating to health promotion and behaviour change apply to all health care providers and are not lost in the transition. If such standards are not part of the registration requirements, then PCTs will need to ensure that they are explicitly included in service contracts.

Target setting

The Healthcare Commission has also had a role in assessing the performance of PCTs against national priorities. Some responsibility for target setting has now been devolved in order to give PCTs the flexibility to pursue their local priorities. PCTs work with their strategic health authority (SHA) to agree a set of local targets. These may come from the 'vital signs' list provided by the Department of Health (Department of Health 2008f), or they may be developed locally. At present, none of the local indicators detailed in

vital signs relates to health promotion activities. PCTs should develop local 'vital signs' indicators that can be used to assess the impact of their behaviour change interventions.

Partnership working

Local strategic partnerships (LSPs) extend the responsibility for local targets from the PCT to other partners. The development of local area agreements (LAAs) provides an opportunity for PCTs, local government and other partners to identify local health priorities and build policies to tackle wider determinants of health into the agreement. When drawing up three-year plans, LAA partners select targets from a list of national indicators. One section – 'adult health and well-being', specifically concerns health, although it is also included in other sections.

In 2008, LSPs could select up to 35 targets from 198 national indicators. The most common health-related target included in LAAs is indicator 56, 'Obesity among primary school age children in Year 6'. Ninety-nine of the 150 LAAs include this indicator (www.idea.gov.uk/idk/core/page.do?pageId=8399555). Many of them also include other indicators related to the 'bad habits' discussed in this report:

- the number of people aged 16 or over who stop smoking (89 LAAs)
- adult participation in sport and active recreation (80 LAAs)
- rate of hospital admission per 100,000 for alcohol-related harm (75 LAAs)
- access to services and facilities by public transport, walking and cycling (54 LAAs)
- obesity among primary school age children in Reception Year (26 LAAs)
- children and young people's participation in high-quality physical education (PE) and sport (26 LAAs).

However, some population groups or health issues are not adequately addressed by the LAA indicators. Obesity targets, for example, concern only children, whereas an integrated approach requires that there should also be targets for adults (who influence children's eating and exercise habits). Another significant omission concerns targets related to alcohol. Currently, the indicator measures the extent to which alcohol consumption is a *problem*. We would recommend targets that measure how effective local areas are in promoting responsible drinking.

As more joint commissioning arrangements are developed between PCTs and local authorities, there is greater potential for them to be used to promote good health rather than treat ill health. At present, the main focus is on ensuring more integrated commissioning of health and social care services. But when these arrangements become more established, they can be extended to other areas of joint activity.

Engaging with new service providers

There is a plethora of policies designed to increase the diversity of service providers within the health care system. In part, these policies aim to increase competition between NHS service providers and those in the private and voluntary sector. But they are also intended to drive innovation in models of service delivery, regardless of the provider.

With the *Next Stage Review* announcement that the Department of Health will be piloting new models of integrated care, and the expectation that PCTs will separate their provider and commissioner functions by 2009, there is likely to be a significant amount of reconfiguration in primary and community services. The development of polyclinics or similar community health centres and new, networked models of primary care also mean that general practices will have to become more integrated with other primary and community services.

In some areas, PBC consortia have already been driving these changes (*see above*). In other areas, PCTs have used Primary Medical Services (PMS) and Alternative Provider Medical Services (APMS) contracts to set up new practices, with clearer expectations that behaviour change interventions are a core element of what they should be providing.

These changes present real opportunities to refocus primary and community services, not only to manage chronic illness more effectively but also to integrate behaviour change interventions into their pathways of care. They also provide opportunities for greater integration with other community programmes, such as children's centres.

However, commissioners need to ensure that incentives to invest in healthier lifestyles and behaviour change interventions are built into contracts with new providers of primary and community services. Where short-term reductions in hospital utilisation can be delivered, there is little doubt that organisations with capitated budgets will seek to prevent behaviours that result in such deteriorations in health status. However, some of the impacts of behaviour change will not be evident (at least in monetary terms) as quickly, and therefore may require a different incentive structure.

There is an expectation that as commissioners develop a market for behaviour change interventions, new service providers will also be set up. Some commercial companies have expressed an interest in the health and well-being agenda – for example, Virgin Healthcare was planning to take over and run some GP practices and co-locate other health and well-being services. However, recent reports suggest they are shelving these plans due to the global economic downturn (D West 2008).

The third sector is also playing an increasingly important role in the NHS. *The Healthy Community Challenge Fund* (Department of Health 2008b) recommends that the NHS involves voluntary or community groups in work on obesity, and encourages partnership working. We would recommend that this be extended to work on smoking and alcohol misuse.

The Third Sector Investment Programme (TSIP) funds the voluntary sector, replacing the Section 64 General Scheme of Grants. Previous grants made in the Section 64 scheme have not yielded many projects that deal with the 'bad habits' that are the subject of this report: smoking, alcohol misuse, poor diet and lack of exercise. This may be because there is a dearth of organisations working on these key public health issues. Nonetheless, third sector organisations need to be encouraged (for example, through specific grant calls around improving diets or addressing alcohol misuse) to develop behaviour change interventions, and we recommend special calls for these topics in the TSIP.

NHS staff contracts

All interactions between patients and health care professionals present opportunities to deliver messages about healthier lifestyles and behaviours. Including health promotion as a role and responsibility in NHS employee contracts could be an important way of ensuring that staff fulfil this role. New attitudes and incentives are required to make sure that all staff engage in health promotion, rather than seeing it as 'someone else's job'.

General practitioners

Of all health professionals, GPs have the most frequent contact with patients, and every consultation provides an opportunity to promote healthier behaviour or refer patients to relevant support services. However, GPs are often reluctant to influence people's lifestyles in this way, feeling that they do not have the time or skills to be a health promoter (Johansson *et al* 2004). There is also little incentive within the Quality and

Outcomes Framework (QOF) to encourage GPs to incorporate health promotion. Most indicators included in the framework relate to clinical care, but could be adapted to go further and include health promotion. For example, one indicator asks GPs to measure the cholesterol level of patients with coronary heart disease, but there are no indicators regarding the promotion of healthier diets among these patients. The only indicator (linked to points) relating to health promotion is ‘offering smoking cessation advice to patients with coronary heart disease, stroke, diabetes, chronic obstructive pulmonary disease (COPD), and asthma’. Furthermore, this target rewards GPs for offering smoking cessation advice but is not linked to the number of patients who take up that advice or successfully act on it.

GPs have responded impressively to QOF targets and performance, proving that financial incentives can strongly influence their behaviour (Gosden *et al* 2000). However, this type of reward system runs the risk of focusing GP activity on those activities that are measured and rewarded at the expense of other important elements of care (Steel *et al* 2007). Some elements of health promotion (for example, reducing episodes of binge drinking) are not easy to quantify through a QOF-type target, so it is important that other incentives are in place to promote GPs’ role in helping people choose healthier behaviours.

Another problem with the QOF is that it does not account for variations in levels of deprivation across the country, and the impact these variations may have on GPs’ ability to achieve their targets. As unhealthy behaviours are more prevalent in low-income groups and GPs are rewarded for completing a task for a certain percentage of eligible patients on their register, the QOF, as currently designed, is unlikely to reduce health inequalities. For example, if a new indicator were introduced that at least 80 per cent of patients with a body mass index (BMI) above a certain threshold should be offered dietary advice, this would require more effort for a GP in a deprived area, where they are likely to have more overweight patients on their list. If the QOF is to be used as a tool to promote health and well-being, indicators need to be carefully designed to take these factors into account.

In order to motivate primary health care staff more widely, they may need training and support to improve their knowledge of policy and population trends, and of tools to support individual assessment and advice (Douglas *et al* 2006). Primary care contracts could be used to encourage health promotion activities, and local enhanced service payments could be used as incentives.

Pharmacists

The White Paper, *Pharmacy in England – Building on strengths – delivering the future* (Department of Health 2008g) and the *NHS Next Stage Review: Our vision for primary and community care* (Department of Health 2008e) regard pharmacists as having a commitment to health promotion and a key role to play in reducing health inequalities. They also present an opportunity for pharmacists to acquire new skills, training and funding, particularly to create ‘healthy living centres’, as recommended in the White Paper. It is envisaged that health promotion will take place alongside provision of treatment and care, making this a real opportunity to integrate health promotion into the NHS.

Each visit to the pharmacist can be an opportunity to provide the customer with preventative information on how to give up smoking, how to drink sensibly, eat a healthy diet and take enough physical exercise. In the current pharmacy contract, public health is an essential service; however, its impact is limited, as it only requires pharmacists to give ‘opportunistic’ advice. Department of Health research found evidence that pharmacists

are apprehensive and cautious regarding proactively raising issues such as smoking or weight loss with their customers (Anderson *et al* 2008).

The public needs to be informed of the changing role of pharmacists, and pharmacists' advice needs to be consistent at every visit (therefore no longer 'opportunistic'). The extent to which pharmacists successfully carry out their new role of promoting health needs to be carefully monitored and evaluated.

Patient choice and empowerment

The government has made it clear that in order for health services to become more responsive, individual patients need to be given greater choice and control over their health care. Policies such as those set out in *Our Health, Our Care, Our Say* (Department of Health 2006) to introduce individualised care plans, personal health budgets and care co-ordinators have been reiterated in the *Next Stage Review* (Department of Health 2008e). The challenge will be making these policies a reality for all patients with chronic illnesses.

While this report has focused on behaviour change among the general population, it is important to emphasise that those diagnosed with a chronic illness must be supported to change their behaviours where these have a direct impact on their condition. Behaviour change is an important component of self-management. For example, diabetics need to manage their diet and exercise to ensure that their blood sugar levels remain within safe levels; COPD sufferers need to give up smoking; and people with arthritis or joint pain need to exercise to maintain their mobility.

Policies such as individualised care plans have huge potential to effect behaviour change, as they embed self-management goals and activities within them, as well as commitments from providers about what support and services are available. Care co-ordinators could also be trained in techniques similar to those used by health coaches and health trainers, to enable them to support behaviour change as well as co-ordinate access to services. Finally, there is the possibility that patients themselves will find innovative solutions to help them change their behaviour. The rules governing personal budgets need to be sufficiently flexible to allow this.

There is currently a wide range of policies governing the behaviour of commissioners, providers, professionals and patients which, if utilised (and in some cases with some changes), could ensure that the drivers in the health care system are better aligned to deliver greater innovation and activity in supporting behaviour change interventions.

There are always going to be competing health priorities and, in the short term, treating ill health usually takes precedence over health promotion, which is often assumed to deliver longer-term benefits only. Effective behaviour change interventions can, and should, demonstrate short-term gains such as reductions in health service utilisation – for example, accident and emergency (A&E) attendances for alcohol-related incidences – as well as longer-term benefits, such as reduced incidence of diabetes. The opportunity is there to ensure that behaviour change interventions are more effectively embedded in the care given by all health care providers and all individual health care professionals. As WCC competencies develop, it must be expected that new investments need to be made in more ambitious health improvement strategies that encompass at least an element of activity focused on supporting individual behaviour change.

6 Conclusions

Helping people to kick bad habits such as smoking, alcohol misuse, poor diet and lack of exercise requires a long-term commitment to changing complex behaviours; it is an ambitious goal, but one that can be achieved.

The case for change is clear. Not only do unhealthy behaviours bring personal costs in terms of ill health but they also bring significant and rising costs to the NHS and to society as a whole. The NHS must now deliver by investing in interventions and programmes that provide effective support to help people change their behaviour, in the short term and the longer term.

In this report, we have summarised the main findings from the Kicking Bad Habits programme and highlighted the actions that need to be taken locally and nationally in order to make the shift to a health-promoting NHS. The government has already set out an ambitious agenda of how it will seek to tackle the problems of alcohol (Department of Health 2008h), obesity (Department of Health 2008c) and smoking (Department of Health 2008h). Many of the approaches highlighted in this report for supporting individual behaviour change are included as part of these strategies. If they are to be effectively implemented a number of issues will need to be addressed.

First, to deliver these changes, primary care trust (PCT) skills and capabilities will need to be strengthened. Skills in data analytics, social marketing and behavioural techniques are needed to understand who should be targeted with which interventions.

- Geodemographic data should be used by PCTs alongside knowledge gained from local health professionals and stakeholders.
- Market research will be needed to identify appropriate interventions for target groups. Social marketing skills and the ability to design effective behaviour change interventions should be developed in house across different departments.

Second, when designing interventions commissioners and providers should look across the full range of available behavioural techniques. Evidence suggests that effective behaviour change programmes will usually have multiple components. Consistent tailored messages from trusted sources should be accompanied by other interventions such as financial and non-financial incentives or individual support. Although financial incentives can effectively influence discrete behaviours such as attending an appointment, they must be coupled with other techniques if longstanding changes in complex behaviours are to be achieved. Where possible, new technologies should be exploited to ensure behaviour change interventions are cost effective. Interactive tools also offer the potential to tailor content to the user.

- Financial incentives to encourage healthier behaviours and take-up of services need to be carefully designed and implemented. They are likely to be more effective when they are used not on their own but as *one element* of a multi-component programme that addresses the individual, social and economic factors that influence people's lifestyle choices.

- Messages should capture the attention of their target group. They should be framed in a way that is appropriate to the behaviours, should come from a trusted source, and ultimately should aim to influence social norms.
- Personalised support can be effective in changing people's behaviours. NHS staff need to take advantage of opportunities to give patients advice about their lifestyles using behaviour change techniques such as those used by health trainers.

Third, a strong evidence base is still lacking about what works and for whom. If the NHS is to commission appropriate cost-effective behaviour change programmes in future more robust evaluations of programmes need to be carried out and reported. Future funding of behaviour change programmes should include a requirement to evaluate impact to address the current scarcity of good-quality evidence. Future evaluations should:

- include behavioural outcome measures where possible
- assess impact over the longer term by finding out if the behaviour change was sustained after the intervention finished
- collect information on cost-effectiveness
- include a control group.

The final issue to be addressed relates to the policy environment in which the NHS operates. For the NHS to truly change from a service treating illness to one promoting good health, all policy levers must be aligned and strengthened towards this goal. Health promotion needs to be fully embedded in national policies, commissioning priorities, care pathways, standards and performance indicators, and staff and service contracts.

- The NHS/SHAs should facilitate sharing information and best practice.
- PCTs should retain a population-level plan for promoting good health and behaviour change and should also provide support to local GPs to help them commission services and implement behaviour change initiatives.

The Kicking Bad Habits expert seminar programme

The Kicking Bad Habits programme organised five seminars from February to July 2008, bringing together a range of experts. Details of the speakers and presentations at each seminar are available at: www.kingsfund.org.uk/current_projects/kicking_bad_habits/index.html

Expert seminar 1

On 28 February 2008, we discussed the use of financial incentives to promote behaviour change.

Dr Karen Jochelson, former Research Fellow, The King's Fund, provided an overview of the research evidence.

Miranda Lewis, Co-Director, Advocacy Associates, discussed schemes that use financial incentives to encourage people on low incomes to save, and to encourage individuals to change their behaviour relating to carbon emissions, energy consumption and climate change.

Shaun Matisonn, Chief Executive, PruHealth, outlined learning from PruHealth's Vitality health insurance programme, which offers incentives to clients for healthy living.

Dr Steve Pilling, Director, Centre for Outcomes Research and Effectiveness, University College London, spoke about 'contingency management' – using incentives to tackle drug misuse.

Expert seminar 2

On 26 March 2008, we discussed ways of targeting low-income groups.

Prof Robert West, Cancer Research UK Health Behaviour Research Centre, discussed the smoking habits of people on low incomes.

Prof Susan Michie, Professor of Health Psychology, University College London, and **Dr Karen Jochelson**, Director of Research, Commission for Equality and Human Rights, reviewed the research evidence.

Dr Pui-Ling Li, Director of Public Health, Waltham Forest PCT, with **Brenda Scotland** and **Paul Foggitt**, Household Health Improvement Managers, London Borough of Waltham Forest Better Neighbourhoods Initiative, discussed the joint health improvement programme.

Harry Macmillan, Partnership Director, MEND (Mind, Exercise, Nutrition... Do it!) Programme, outlined its partnership programme aimed at preventing childhood obesity.

Expert seminar 3

On 16 April 2008, we discussed a range of initiatives that use information to promote healthy lifestyles and behaviour.

Ruth Robertson, The King's Fund, set the context.

Ron Finlay, Fishburn Hedges, presented evidence on what works in practice when it comes to using information to change young people's smoking habits.

Martin Machray, Dr Foster, outlined social marketing in practice.

Clive Blair-Stevens, Director of Strategy & Operations, National Social Marketing Centre, discussed customer-focused social marketing campaigns.

Expert seminar 4

On 30 June 2008, we discussed the role of personal motivation and confidence in changing lifestyle and behaviour.

Dr Anna Dixon, Director of Policy, The King's Fund, presented the findings of her discussion paper.

Dr Jim McCambridge, Senior Lecturer in Behaviour Change, London School of Hygiene & Tropical Medicine, discussed motivational interviewing.

Amy Bowen, Head of Health Coaching Services, Health Dialogue UK, outlined how its health coaching programme works.

Rachel Carse, National Programme Lead, Health Trainers Programme, Department of Health, outlined how the initiative works.

Expert seminar 5

On 24 July 2008, we discussed targeting and tailoring.

Dr Tammy Boyce, Research Fellow, Public Health, The King's Fund, outlined targeting and tailoring, explaining how they can be used to promote healthy behaviour.

Dr Chris Lovitt, Project Manager, NHS LifeCheck, discussed how the scheme targets and tailors information.

Dr Maurizio Gibin and **Dr Phil Atkinson**, Southwark PCT and Greenwich Council respectively, explained how Southwark's Atlas of Health targets obesity.

Emily Sparks, Experian, demonstrated how PCTs have used geodemographics to change people's behaviour.

References

- Action on Smoking and Health (ASH) (2008). *Beyond Smoking Kills: Protecting children, reducing inequalities*. Available at: www.ash.org.uk/ash_3xe9h0zo.htm (accessed on 2 November 2008).
- Anderson C, Blenkinsopp A, Armstrong M (2008). *The Contribution of Community Pharmacy to Improving the Public's Health: Literature review update 2004–7*. Available at: www.mmnetwork.nhs.uk/med-old-new-details.php?newsid=1615 (accessed on 8 July 2008).
- Barlow J, Bayer S, Curry R, Hendy J (2007). 'The costs of telecare: from pilots to mainstream implementation'. *Unit Costs of Health and Social Care 2007*, pp 9–13. Canterbury: Personal Social Services Research Unit (PSSRU). Available at: www.pssru.ac.uk/pdf/uc/uc2007/uc2007.pdf (accessed on 8 July 2008).
- Bero LA, Grilli R, Grimshaw JM, Harvey E, Oxman AD, Thomson MA (1998). 'Getting research findings into practice: closing the gap between research and practice: an overview of systematic reviews of interventions to promote the implementation of research findings'. *British Medical Journal*, vol 317, no 7156, pp 465–8.
- Brownsell S (2008). *Supporting Long-term Conditions and Disease Management through Telecare and Telehealth: Evidence and challenges*. London: Care Services Improvement Partnership. Available at: www.icn.csip.org.uk/_library/Resources/Telecare/Support_Materials/Briefing_-_Telehealth_SB_Final2.doc (accessed on 8 July 2008).
- Butland B, Jebb S, Kopelman P, McPherson K, Thomas S, Mardell J, Parry V (2007). *Foresight. Tackling obesity: Future Choices Project report*. London: Government Office for Science, Department of Innovation, Universities and Skills.
- Cancer Care Research Centre, University of Stirling and Alliance for Self Care, University of Abertay (2006). *A Review of the Effectiveness of Interventions, Approaches and Models at Individual, Community and Population Level that are Aimed at Changing Health Outcomes Through Changing Knowledge, Attitudes and Behaviour*. Available at: www.nice.org.uk/nicemedia/pdf/Behaviour_Change-Jepson_et_al_reivew_on_changing_knowledge_attitudes_and_behaviour.pdf (accessed on 8 April 2008).
- Coulter A, Ellins J (2007). 'Effectiveness of strategies for informing, educating and involving patients'. *British Medical Journal*, vol 335, no 7609, pp 24–7.
- Curry N, Goodwin N, Naylor C, Robertson R (2008). *Practice-based Commissioning: Reinvigorate, replace or abandon*. London: The King's Fund.
- Davis D, Taylor-Vaisey A (1997). 'Translating guidelines into practice: a systematic review of theoretic concepts, practical experience and research evidence in the adoption of clinical practice guidelines'. *Canadian Medical Association Journal*, vol 157, no 4, pp 408–16.
- Department of Health (2008a). *Ambitions for Health: A strategic framework for maximising the potential of social marketing and health-related behaviour*. London: Department of Health. Available at: www.dh.gov.uk/en/Publichealth/Choosinghealth/DH_086106 (accessed on 27 October 2008).

Department of Health (2008b). *The Healthy Community Challenge Fund. Invitation to local areas*. London: Department of Health. Available at: www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_085328 (accessed on 27 October 2008).

Department of Health (2008c). *Healthy Weight, Healthy Lives: A cross-government strategy for England*. London: Department of Health. Available at: www.dh.gov.uk/en/PublicHealth/Healthimprovement/Obesity/DH_082383 (accessed on 27 October 2008).

Department of Health (2008d). *High Quality Care For All: NHS next stage review final report*. Cm 7432. London: Department of Health. Available at: www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_085825 (accessed on 27 October 2008).

Department of Health (2008e). *NHS Next Stage Review: Our vision for primary and community care*. London: Department of Health. Available at: www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_085937 (accessed on 13 November 2008)

Department of Health (2008f). *Operational Plans 2008/09–2010/11. Implementing the 2008/09 Operating Framework. National planning guidance and 'vital signs'*. London: Department of Health. Available at: www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_082542 (accessed on 27 October 2008).

Department of Health (2008g). *Pharmacy in England: Building on strengths – delivering the future*. Cm7341. London: Department of Health. Available at: www.dh.gov.uk/en/publicationsandstatistics/publications/publicationspolicyandguidance/dh_083815 (accessed on 1 December 2008).

Department of Health (2008h). *Safe, Sensible, Social – consultation on further action*. London: Department of Health. Available at: www.dh.gov.uk/en/Consultations/Liveconsultations/DH_086412 (accessed on 8 September 2008).

Department of Health (2007a). *Commissioning Framework for Health and Well-being*. London: Department of Health. Available at: www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_072604 (accessed on 27 October 2008).

Department of Health (2007b). *Safe. Sensible. Social. The next steps in the National Alcohol Strategy*. London: Department of Health. Available at: www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_075218 (accessed on 27 October 2008).

Department of Health (2007c). *World Class Commissioning: Competencies*. London: Department of Health. Available at: www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_080958 (accessed on 8 July 2008).

Department of Health (2006). *Our Health, Our Care, Our Say: A new direction for community services*. Cm 6737. London: The Stationery Office. Available at: www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4127453 (accessed on 27 October 2008).

Department of Health (2004). *Choosing Health: Making healthy choices easier*. Cm 6374. London: The Stationery Office. Available at: www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4094550 (accessed on 27 October 2008).

- Dixon A (2008). *Motivation and Confidence: What does it take to change behaviour?* London: The King's Fund. Available at: www.kingsfund.org.uk/publications/other_work_by_our_staff/motivation.html (accessed on 8 July 2008).
- Douglas F, Torrance N, van Teijlingen E, Meloni S, Kerr A (2006). 'Primary care staff's views and experiences related to routinely advising patients about physical activity. A questionnaire survey'. *BMC Public Health*, vol 6, p 138.
- Drummond C, Oyefeso A, Phillips T, Cheeta S, Deluca P, Perryman K, Winfield H, Jenner J, Cobain K, Galea S, Saunders V, Fuller T, Pappalardo D, Baker O, Christoupoulos A (2004). *Alcohol Needs Assessment Research Project (ANARP): The 2004 national alcohol needs assessment for England*. London: Department of Health. Available at: www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4122341 (accessed on 4 November 2008).
- Duaso MJ, Cheung P (2002). 'Health promotion and lifestyle advice in a general practice: what do patients think?' *Journal of Advanced Nursing*, vol 39, no 5, pp 472–9.
- Flynn BS, Wordon JK, Secker-Walker RH, Badger GJ, Geller BM, Costanza MC (1992). 'Prevention of cigarette smoking through mass media intervention and school programmes'. *American Journal of Public Health*, vol 82, no 6, pp 827–34.
- Gilbert H, Nazareth I, Sutton S, Morris R, Godfrey C (2008). 'Effectiveness of computer-tailored smoking cessation advice primary care (ESCAPE): a randomised trial'. *Trials*, vol 9, no 23. Available at: <http://eprints.whiterose.ac.uk/4054/> (accessed on 8 July 2008).
- Gosden T, Forland F, Kristiansen IS, Sutton M, Leese B, Giuffrida A, Sergison M, Pedersen L (2000). 'Capitation, salary, fee-for-service and mixed systems of payment: effects on the behaviour of primary care physicians'. *Cochrane Database of Systematic Reviews*, Issue 3.
- Greene J (2007). *Medicaid Efforts to Incentivize Healthy Behaviors*. New Jersey: Center for Health Care Strategies.
- Grol R, Grimshaw J (2003). 'From best evidence to best practice: effective implementation of change in patients' care'. *The Lancet*, vol 362, no 9391, pp 1225–30.
- Hansard (House of Commons Debates)* (2008). 21 April 2008 col 1788W. Available at: www.publications.parliament.uk/pa/cm200708/cmhansrd/cm080421/text/80421w0101.htm#08042337000060 (accessed on 4 December 2008).
- Healthcare Commission (2008). *The Annual Health Check 2008/09: Assessing and rating the NHS*. London: Commission for Healthcare Audit and Inspection (CHAI). Available at: www.healthcarecommission.org.uk/guidanceforhealthcarestaff/nhsstaff/annualhealthcheck/annualhealthcheck2008/09.cfm (accessed on 9 November 2008).
- Information Centre for Health and Social Care (2008a). *Statistics on Obesity, Physical Activity and Diet: England*. Available at: www.ic.nhs.uk/pubs/opadjan08 (accessed on 8 July 2008).
- Information Centre for Health and Social Care (2008b). *Statistics on Smoking in England 2008*. Available at: www.ic.nhs.uk/webfiles/publications/Smoking%20bulletin/Smoking%202008/Statistics%20on%20Smoking%202008%20final%20format%20v9.pdf (accessed on 8 November 2008).
- Information Centre for Health and Social Care (2008c). *Prescriptions dispensed in the Community 1997 – 2007*. Available at: [www.ic.nhs.uk/statistics-and-data-collections/primary-care/prescriptions/prescriptions-dispensed-in-the-community-1997--2007-\[ns\]](http://www.ic.nhs.uk/statistics-and-data-collections/primary-care/prescriptions/prescriptions-dispensed-in-the-community-1997--2007-[ns]) (accessed on 8 July 2008).

- Information Centre for Health and Social Care (2007). *Statistics on Smoking: England*. Available at: [www.ic.nhs.uk/statistics-and-data-collections/health-and-lifestyles/smoking/statistics-on-smoking-england-2007-\[ns\]](http://www.ic.nhs.uk/statistics-and-data-collections/health-and-lifestyles/smoking/statistics-on-smoking-england-2007-[ns]) (accessed on 8 July 2008).
- Information Centre for Health and Social Care (2006). *Health Survey for England 2004: Health of minority ethnic groups*. Available at: www.ic.nhs.uk/pubs/hse04ethnic (accessed on 8 July 2008).
- Information Centre for Health and Social Care (2004). *Health Survey for England 2004: The health of minority ethnic groups – headline tables*. Available at: www.ic.nhs.uk/webfiles/publications/hlthsvyeng2004ethnic/HealthSurveyForEngland161205_PDF%20.pdf (accessed on 8 July 2008).
- Jochelson K (2007). *Paying the Patient: Improving health using financial incentives*. London: The King's Fund. Available at: www.kingsfund.org.uk/publications/other_work_by_our_staff/paying_the.html (accessed on 8 July 2008).
- Johansson K, Bendtsen P, Åkerlind I (2004). 'Advice to patients in Swedish primary care regarding alcohol and other lifestyle habits: how patients report the actions of GPs in relation to their own expectations and satisfaction with the consultation.' *European Journal of Public Health*, vol 15, no 6, pp 615–20.
- Johnson A (2008). *Speech by the Rt Hon Alan Johnson MP, Secretary of State for Health, 9 June 2008: Health Inequalities*. Available at: www.dh.gov.uk/en/News/Speeches/DH_085336 (accessed on 8 July 2008).
- Kelley K, Abraham C (2007). 'Health promotion for people aged over 65 years in hospitals: nurses' perceptions about their role.' *Journal of Clinical Nursing*, vol 16, no 3, pp 569–79.
- Kreuter MW, Skinner CS (2000). 'Tailoring: what's in a name?' *Health Education Research*, vol 15, no 1, pp 1–4.
- Lancaster T, Stead L (2005). 'Self-help interventions for smoking cessation.' *Cochrane Database Systems Review*, vol 3.
- Lancaster T, Stead L, Silagy C, Sowden A (2000). 'Effectiveness of interventions to help people stop smoking: findings from the Cochrane Library.' *British Medical Journal*, vol 321, no 7257, pp 355–358.
- Le Grand J, Srivastava D (forthcoming). *Prevention and Preventative Spending*. Health England Report No 2. Health England.
- Michie S, Jochelson K, Markham WA, Bridle C (2008). *Low-income Groups and Behaviour Change Interventions*. London: The King's Fund. Available at: www.kingsfund.org.uk/publications/other_work_by_our_staff/lowincome_groups.html (accessed on 8 July 2008).
- Naidoo B, Warm D, Quigley R, Taylor L (2004). *Smoking and Public Health: A review of reviews of interventions to increase smoking cessation, reduce smoking initiation and prevent further uptake of smoking*. London: Health Development Agency.
- National Audit Office (2008). *Reducing Alcohol Harm: Health services in England for alcohol misuse*. HC 1049 (2007–2008). London: The Stationery Office. Available at: www.nao.org.uk/publications/nao_reports/07-08/07081049.pdf (accessed on 2 November 2008).
- NICE (2008a). *Mass-Media and Point-of-Sales Measures to Prevent the Uptake of Smoking by Children and Young People*. NICE public health guidance 14. London: NICE. Available

- at: www.nice.org.uk/nicemedia/pdf/PH14fullguidance.pdf (accessed on 3 November 2008).
- NICE (2008b). *Promoting and Creating Built or Natural Environments that Encourage and Support Physical Activity*. NICE public health guidance 8. London: NICE. Available at: www.nice.org.uk/nicemedia/pdf/PH008Guidancev2.pdf (accessed on 3 November 2008).
- NICE (2007). *Behaviour Change at Population, Community and Individual Levels*. London: NICE. Available at: www.nice.org.uk/nicemedia/pdf/PH006guidance.pdf (accessed on 3 November 2008).
- NICE (2006). *Obesity: Guidance on the prevention, identification, assessment and management of overweight and obesity in adults and children*. NICE clinical guidance 43. London: NICE. Available at: www.nice.org.uk/nicemedia/pdf/CG43NICEGuideline.pdf (accessed on 4 November 2008).
- Office for National Statistics (2008). 'Men drink twice as much alcohol as women'. Available at: www.statistics.gov.uk/pdfdir/ghs0108.pdf (accessed on 8 July 2008).
- Public Health Agency of Canada (2008). *The Canadian Best Practices Portal for Health Promotion and Chronic Disease Prevention*. Available at: http://cbpp-pcpe.phac-aspc.gc.ca/index_e.cfm (accessed on 20 October 2008).
- Robertson R (2008). *Using Information to Promote Healthy Behaviours*. London: The King's Fund. Available at: www.kingsfund.org.uk/publications/other_work_by_our_staff/using_information.html (accessed on 8 July 2008).
- Rudowitz R, Schneider A (2006). *The Nuts and Bolts of Making Medicaid Policy Changes: An overview and a look at the Deficit Reduction Act*. Washington DC: The Henry J Kaiser Family Foundation, Kaiser Commission on Medicaid and the Uninsured.
- Silow-Carroll S, Alteras T (2007). 'Using incentives to promote healthy behaviour'. *States in Action: A Bimonthly Look at Innovations in Health Policy*, vol 11.
- Stead M, Gordon R, Angus K, McDermott L (2007a). 'A systematic review of social marketing effectiveness'. *Health Education*, vol 107, no 2, pp 126–191.
- Stead M, McDermott L, Hastings G, Lawther S, Angus K (2007b). *Research to Inform the Development of a Social Marketing Strategy for Health Improvement in Scotland*. Edinburgh: NHS Health Scotland. Available at: www.healthscotland.com/uploads/documents/3915-SMHI_FINAL_REPORT_19JAN07.pdf (accessed on 8 July 2008).
- Steel N, Maisey S, Clark A, Fleetcroft R, Howe A (2007). 'Quality of clinical primary care and targeted incentive payments: an observational study'. *British Journal of General Practice*, vol 57, no 539, pp 449–54.
- Stretcher VJ, Velicer WF (2003). 'Tailoring smoking cessation programs to the specific needs and interests of the patient'. *British Medical Journal*, vol 327, pp E57–8.
- Thaler R, Sunstein CR (2008). *Nudge*. London: Yale University Press.
- Tones K, Tilford S, Robinson Y (1990). *Health Education: Effectiveness and efficiency*. London: Chapman and Hall.
- Velicer WF, Prochaska JO, Redding CA (2006). 'Tailored communications for smoking cessation: past successes and future directions'. *Drug and Alcohol Review*, vol 25, pp 49–57.
- Wanless D (2004). *Securing Good Health for the Whole Population: Final report*. London: HM Treasury.

Wanless D (2002). *Securing Our Future Health: Taking a long-term view*. London: HM Treasury.

West D (2008). 'Virgin grounds proposals to run GP surgeries' *Health Service Journal*, 25 September. Available at: www.hsj.co.uk/news/2008/09/virgin_steps_back_from_running_surgeries.html (accessed on 3 October 2008).

West R (2008). *Key Performance Indicators: Findings from the smoking toolkit study*. Available at: www.smokinginengland.info/ (accessed on 8 July 2008).

Wewers ME, Sillman FA, Hartman AM, Shopland DR (2003). 'Distribution of daily smokers by stage of change: current population survey results' *Preventive Medicine*, vol 26, pp 710–20.

Zaninotto P, Wardle H, Stamatakis E, Mindell J, Head J (2006). *Forecasting Obesity to 2010*. London: Joint Health Surveys Unit, National Centre for Social Research.