# Contributing to public health policy and practice

**CHARLES ABRAHAM** *and* **SUSAN MICHIE** *on their work with the government's Division of Public Health.*

IN the last few years non-medical specialisms have been recognised within UK public health and, at the same time, UK health psychology has developed a clearer public health focus. In 2003 the British Psychological Society's Division of Health Psychology and the Department of Health (DoH) created a part-time consultancy post for a senior health psychologist to work in the DoH Division of Public Health. In this article we describe some of the work we have undertaken in job-sharing this post, including contributions made to policy development, expert advice on evidence regarding effective behaviour-change interventions, and to establishing a professional pathway for psychologists wishing to practise in public health.

## Policy context

As we outlined in our introduction (p.670), recent years have seen government and Department of Health agendas converge with the aims of health psychologists: to study the determinants of behaviour and to evaluate interventions designed to change health behaviours at individual, group and community levels. The common goal is what Sir Derek Wanless, in his 2002 report for the UK Treasury into the resources required to provide high-quality health services [see weblinks on p.670], termed the 'fully engaged' scenario. In this scenario, in addition to high rates of technology uptake, the health service would develop more successful disease-prevention strategies. There would be high levels of public engagement in health care and maintenance, as well as confidence in healthcare services. It would lead to a substantial reduction in smoking and obesity. If achieved, this would result in a dramatic improvement in the general health of the population and, because of greater health awareness, generate demand for higher-quality treatment and more preventive services. It would also release additional funds for healthcare services because of reduced sickness costs. For example, sick leave cost the economy £11.6 billion in 2002, an average of £476 per worker, with approximately 40 per cent of absence costs arising from long-term sickness (Department of Health, 2004).

A second Wanless report emphasised the need to tackle smoking, obesity and health inequalities, and to review the effectiveness of health-promoting interventions with particular target groups, including hard-to-reach sections of the population (Wanless, 2004). Moving towards a 'fully engaged' scenario will require an evidence base of interventions that promote effective self-regulation in relation to health care and maintenance using rigorous evaluations to establish what type of interventions work for which groups and with which behaviours.

As well as helping people to look after their own health, Wanless II discussed state regulatory strategies. These include regulating information provision (e.g. accurate and accessible food labelling), restricting or banning advertising (e.g. cigarettes), providing individual benefits (e.g. ensuring nutritious school meals), subsidising healthy products (e.g. vegetables), shaping social contexts (e.g. providing school playing fields), taxation (e.g. on alcohol) and restrictions on behaviour (e.g. banning smoking in public places). The report acknowledges that regulation is subject to public acceptability and needs to be preceded by campaigns designed to raise awareness of the need for intervention. It also recommends evaluating these regulatory strategies for their economic and health impact.

Wanless II recommended that a body should be identified to take responsibility for the educational role, previously played by the Health Education Authority, which

## KEY PUBLIC HEALTH RESEARCH QUESTIONS

What interventions are effective? For whom?

What are the active ingredients of effective interventions and what are the causal mechanisms accounting for change?

Can these be understood in terms of a model of behaviour change that could be applied across behaviours, social groups and change settings?

How much do such interventions cost?

*What psychological theories explain the processes by which people gain information (from any source) that subsequently influences their beliefs and attitudes?*

*What psychological processes are involved in preparing for behaviour change?*

*Do people respond better to individualised health information (such as a doctor discussing a problem in a one-on-one setting) than generic health information (such as national campaigns) – and, if so, why?*

*Which aspects of social context are crucial to enhancing self-efficacy – what psychological theories explain this?*

was closed in 2000. The report notes that at present 'there is no single easily accessible source of advice for interested or confused individuals' (p.185). Other European countries have national bodies (such as Germany's Bundeszentrale für Gesundheitliche Aufklärung) which are responsible for undertaking health promotion research and establishing evidence-based standards in relation to materials and practice. Provision of quality materials and practical health promotion advice is distinct from the collation of evidence and reviews that was undertaken by the Health Development Agency (now part of the National Institute for Clinical Excellence) in the UK. It is not enough to know which trials have been successful in changing a particular behaviour. It is important to create interventions and materials that draw upon research into modifiable antecedents of health behaviour (e.g. Bartholomew *et al*., 2001), previous analyses of the content of health education materials (e.g. Abraham *et al*., 2002) and evaluations investigating why some approaches are successful while others are not (e.g. Jemmott & Jemmott, 2000).

## Listening to psychologists

In our Division of Public Health consultancy capacity, our submission to Wanless II reviewed the effectiveness of theory-based interventions in relation to physical activity (PA). We selected this behaviour because of its potential to reduce deaths from coronary heart disease and cancer and for its links to obesity, diabetes and mental ill health (Michie *et al*., 2003). Research into PA also illustrates the importance of health inequalities, with deprived groups being twice as likely to be sedentary as the most affluent groups. We set out to answer key questions (see box), relevant to a range of health behaviours which, if changed across communities, would have a substantial impact on health and healthcare services demand. They are questions that psychological theory and research can be used to answer, and the answers are directly relevant to healthcare policy and NHS management at government and primary care trust levels.

Following our written submission, we were interviewed by Sir Derek Wanless and members of his team (see box, italics, for typical questions). The interest of the Wanless team and other government agencies in these questions and in models of effective behaviour change highlights the relevance of psychological theory and health psychology practice to the implementation of government policy. It also challenges researchers in this area to go beyond evaluations of one-off intervention packages and design studies that can reliably answer such questions.

## Increasing physical activity

Three sources of evidence informed the review we submitted to Wanless II; 10 reviews of PA interventions included in a synthesis compiled for the Health Development Agency (Hillsdon *et al*., 2004); a US systematic review (Kahn *et al.*, 2002); and 18 randomised controlled trials (RCTs) of interventions designed to increase PA.

The reviews in the HDA synthesis showed evidence that brief advice from a general practitioner, supported by written materials, is likely to be effective in producing a modest, short-term (6–12 weeks) effect on PA but there was little evidence of maintenance. There was some evidence suggesting that promoting

**Physical activity interventions with older adults can produce lasting effects**

walking or jogging from home (rather than at a gym or another facility) was likely to be effective, with effects lasting up to two years. Follow-up telephone calls (e.g. once a week) reminding people of their PA targets were associated with effectiveness and maintenance, and one review found that PA interventions for older (50+) adults were likely to be effective in producing mid- to long-term changes in PA. Somewhat disappointingly, however, a review of worksite interventions found little evidence of effectiveness. It should also be noted that many of the studies included in this review used volunteers, suggesting that effectiveness depends upon established motivation to change.

The US systematic review (Kahn *et al*., 2002) concluded that there was strong evidence of the effectiveness for community-based interventions such as community-wide PA campaigns, social support interventions and enhancement of access to PA facilities combined with informational outreach. This review also found strong evidence for the effectiveness of modifying school physical education classes. However, the inclusion criteria used and key aspects of the review methodology were not clearly articulated.

Our review highlighted methodological challenges for researchers in this area. Methodological rigour, including random allocation and intention-to-treat-analysis (i.e. once participants are allocated, they remain in the analysis even if they drop out of the study), is vital if we are to build an informative evidence base. Yet large-scale community interventions including health promotion, environmental change and regulatory interventions, which have the potential to reach a wide constituency, are difficult and expensive to evaluate using RCTs. As always, funding is vital.

The 18 RCTs of PA interventions selected by Hillsdon *et al.* (2004) used genuine comparison groups receiving no (or minimal) intervention and a minimum period of six months follow-up between baseline and outcome measurement. Ten were found to be effective while eight were not. We were interested in identifying techniques characterising the effective interventions. Ideally, techniques used in interventions would be added incrementally in experimental tests to identify which techniques are critical to, and boost, successful intervention (Michie & Abraham, 2004). In practice, however, multi-component interventions are usually evaluated as packages. Moreover, the 18 RCTs varied considerably in baseline activity level, recruitment method, follow-up and demographic characteristics. Nonetheless, examination of the techniques included in effective and ineffective interventions provided guidance on approaches most likely to generate population-level behaviour change.

Effective interventions were not characterised by use of formal exercise sessions, rewards and incentives, use of relapse-prevention strategies, motivational videos or stage-matched interventions. The

lack of evidence for these approaches does not necessarily mean that they are ineffective; there may just be fewer, or fewer methodologically rigorous, evaluations of these approaches. Components identified in the majority of effective interventions were self-monitoring, PA advice or exercise prescription, a graded approach to task mastery (i.e. involving learning preparatory skills in sequence), use of educational materials, PA assessment, goal setting and use of group sessions. In addition, providing or prompting action plans, individually tailored exercise sessions, use of feedback and social support were used in around half of the effective interventions. Thus evidence from these methodologically rigorous intervention evaluations suggests that approaches consistent with self-regulation models of behaviour change are more likely to result in increased PA. This implies that psychologists should design and test techniques that encourage people to commit themselves to behaviour change and to stick with it.

## Cost effectiveness and inequality

Inactivity may cost the UK up to £8.1 billion annually, in losses from the NHS, work absence and premature mortality. Yet what we really need to know about are the additional costs that one intervention imposes over another, compared with the additional benefits it delivers. Without this information it is difficult to judge whether investment in a successful intervention is warranted. For example, in relation to expenditure on anti-smoking interventions, Wanless II concluded:

> *The evidence base has not kept pace with the effort and there are weaknesses in the monitoring of performance, the understanding of how much can justifiably be spent, where it should be directed, what workforce is needed to achieve the best possible results and how all the efforts should be co-ordinated.* (p.7)

Future intervention evaluations should include detailed cost-effectiveness analyses, which should, where possible, be conducted separately for different sectors of the population. For example, Stevens *et al*. (1998) demonstrated the high cost of achieving recommended activity levels amongst sedentary older people (e.g. 45–74 years) and the low cost of improving the activity amongst people who are intermediately active. These analyses estimated indirect primary care costs of £2498 to make one sedentary person active, and £327 to facilitate a person who is already active to adopt a higher level of PA. It is much less expensive to encourage active people to become more active, but greater investment in this group is likely to exacerbate health inequalities. Nonetheless, as Wanless II noted, 'individual programmes might worsen inequalities but still be very beneficial at the whole population level' (p.4).

**Are anti-smoking campaigns cost-effective?**

To achieve a fully engaged scenario, it may, in some instances, be prudent initially to target those with motivation to change. Success with this group may create social environments, models and social pressure that could facilitate change amongst the less motivated and hard-to-reach groups. This could potentially reduce the cost of interventions for otherwise sedentary individuals. However, any such action should be accompanied by campaigns targeting disadvantaged groups who may not be helped by the planned interventions.

Our review of the PA intervention evaluations identified gaps in the evidence base that also exist for other health behaviours. There is a need for more analyses of cost-effectiveness, and more studies of interventions aimed at disadvantaged groups, including people from ethnic minorities and lower socio-economic groups (see Taylor *et al*., 1998). Such research will need to be sufficiently powered to investigate the effectiveness of interventions amongst those hardest to engage in changing their health behaviours.

In commenting on this problem, Wanless II acknowledged that such research can be technically difficult and that there is a need to develop expertise and increase funding of public health interventions research. This was echoed in the recent White Paper, which emphasises the need for research into interventions that will support *and sustain* behaviour change.

## Implementing the White Paper

We also contributed to policy development during the drafting of the White Paper, by providing literature reviews and briefing papers on what approaches to behaviour change appear to have most potential in public health contexts and on the role of health psychologists in promoting public health. The White Paper emphasises the need for the public to be centrally involved in managing their health and, although it applies only to England, there are similar developments in Scotland and Wales.

The White Paper expresses a commitment to use psychological expertise within the NHS, promising to 'equip all frontline staff to recognise the opportunities for health promotion and improvement, and use skills in health psychology to help people change their lifestyles' (p.124). One illustration of how health psychology skills will be required in the NHS of the future is the recruitment and training of a the new group of NHS-accredited 'health trainers', who will work with people to assess their health and health needs, identify relevant behaviours to change and teach them the skills and techniques to do this. By 2006, health trainers will be working in the 20 per cent of PCTs with the worst health and deprivation indicators, and this will be extended across England from 2007. Health trainers will be appointed from, and representative of, their local communities, and will contribute to NHS capacity building.

The work of health trainers will involve 'providing information and persuasive messages that can increase people's

## DISCUSS AND DEBATE

Should the government ensure that more is spent on school meals, as suggested by Jamie Oliver?

Should employers have more responsibility for monitoring and facilitating employees' health behaviour (e.g. smoking, drinking, exercise?)

Should doctors' waiting rooms be used to show health-promotion videos?

Can health trainers become effective behaviour change experts with only minimal training?

Is UK health promotion evidence-based?

*Have your say on these or other issues this article raises. Send letters to psychologist@bps.org.uk or post on our forum at www.thepsychologist.org.uk.*

knowledge of health risks and what action to take to deal with them' (p.107). The White Paper notes that there is good evidence that a range of approaches grounded in psychological science can help people in changing habits and behaviours and that, in particular, people can:

- learn to identify things around them that can trigger or reinforce the behaviour they want to change;
- set goals and plan how to achieve them;
- build confidence to make the changes that they want to.

The training of health trainers will need to be carefully developed, in order to ensure that those without prior experience of using behaviour-change techniques can do so effectively in public health settings. Health psychologists working in the Department of Health are helping to define the role, competencies and training needs of these health trainers, drawing upon psychological theory and research and a range of existing behaviour-change programmes such as NHS Stop Smoking services and PCT-based projects that have been successful with 'hard-to-reach' groups.

## New professional pathways

The UK Voluntary Register for Public Health Specialists has acknowledged that a number of professional groups contribute to excellence in public health practice, and it has specified a range of competencies that are required. These are grouped into 10 key areas:

1. Surveillance and assessment of the population's health and well-being;
2. Promoting and protecting the population's health and well-being;
3. Developing quality and risk management within an evaluative culture;
4. Collaborative working for health;
5. Developing health programmes and services, and reducing inequalities;
6. Policy and strategy development and implementation;
7. Working with and for communities;
8. Strategic leadership for health;
9. Research and development;
10. Ethically managing self, people and resources.

A number of professional groups have undertaken a preliminary mapping of their own competencies onto these public health competencies and, while these groups do not meet all the specified competencies, they meet a substantial proportion and are simultaneously 'super competent' in others (Griffiths & Sugarman, 2004). For example, health psychologists can claim to be 'super competent' in key areas 1, 3 and 9. These groups are working towards the production of profession-specific sets of competencies that define how they contribute to public health. These profession-specific sets, or 'profiles', will help non-medical professionals identify the profession-specific skills that they bring to public health and enable them to be registered as a 'defined group' public health specialist (e.g. a health psychologist, public health specialist).

All chartered health psychologists must demonstrate competence in 19 core units of competence and two of eight optional units of competence defined by the British Psychological Society (BPS), Stage 2 Qualification in Health Psychology (Michie *et al*., 2004; see *www.health-psychology.org.uk*), having first acquired knowledge of health psychology and basic research skills at MSc level. Consequently, health psychologists are competent to:

- conduct research to develop theory and methods relevant to health-related behaviour;
- understand, describe and explain psychological and behavioural processes at individual, group and organisation levels;
- generate changes in psychological and behavioural processes that result in improved health care and health outcomes;
- train health professionals, i.e. impart knowledge of psychological theories and assessment and intervention skills;
- consult; for example, advise healthcare service managers on the implementation of psychological and behaviour interventions.

We have led a group of health psychologists who have been comparing health psychology competencies with specified public health competencies. We are drawing up a profile of psychological competencies in preparation for the establishment of a 'defined group' of public health (health psychology) specialists.

## A growth area

The competencies of health psychologists make them well placed to contribute to the development of public health policy and practice in the UK. Understanding how health behaviour can be shaped and changed at a community level is critical to the success of healthcare policies, worldwide and in particular cultural contexts. Health psychologists can explain the theoretical basis of interventions designed to change such behaviour, use rigorous evaluations to answer key questions about what approach works for whom, and present evidence-based recommendations for changes in the skills mix of NHS staff and in policy development. We expect this to be a growth area for UK psychological practice in future years.

■ *Charles Abraham is Professor of Psychology at the University of Sussex. E-mail: S.C.S.Abraham@sussex.ac.uk.*

■ *Susan Michie is a Reader in Clinical Health Psychology at the Centre for Outcomes Research and Effectiveness, University College London. E-mail: s.michie@ucl.ac.uk.*

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