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By any means necessary?

Reflecting on how HIV prevention interventions work and the changes they bring about

Chris Bonell

Social Science Research Unit, Institute of Education, University of London

Ford Hickson

Sigma Research, Faculty of Humanities & Social Sciences, University of Portsmouth

Mike Hartley

Sigma Research, Faculty of Humanities & Social Sciences, University of Portsmouth

Peter Keogh

Sigma Research, Faculty of Humanities & Social Sciences, University of Portsmouth

Peter Weatherburn

Sigma Research, Faculty of Humanities & Social Sciences, University of Portsmouth

Briefing Paper

Preface

This briefing paper is part of an on-going series that form one strand of the research and development programme supporting CHAPS. It is intended to further explore and explain *Making It Count* (Hickson *et al.*, 2000) which is the CHAPS health promotion framework to reduce HIV infection occurring as a consequence of sex between men. The intended audience for the paper include HIV prevention practitioners, policy makers, health service commissioners & researchers, especially those concerned with sex between men.

Making It Count proposes a way of working which, despite maintaining a focus on preventing HIV, does not preclude or contradict other activity focussing on more general or positive aspects of the health of homosexually active men. It sets out a linear way of approaching HIV intervention aims, starting with an overall goal of reducing HIV incidence. It identifies HIV sero-discordant unprotected anal intercourse (sdUAI) as the behaviour driving incidence, and explores theories of, and approaches to influencing, sdUAI. Of course, in the real world, decisions are rarely made in this way (Weiss, 1980).

The aim of the paper is to explore ways in which HIV prevention can be considered to 'work', and the changes it can hope to bring about which contribute to fewer new HIV infections. After reading the paper, we hope those engaged in HIV prevention will have a clearer idea of what they are trying to achieve and why. Naidoo and Wills (1994) suggest that "it is only when we can contemplate different ways of promoting health that we can make judgements as to what is possible and what is preferable." We hope that those involved in HIV prevention will use the paper to reflect on and consolidate their current activity.

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Peter Weatherburn
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Faculty of Humanities & Social Sciences
University of Portsmouth
Unit 64, Eurolink Business Centre
London SW2 1BZ
020 7737 6223
www.sigma-r.demon.co.uk

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The Terrence Higgins Trust, London 52-54 Grays Inn Road London WC1X 8JU 020 7831 0330 www.tht.org.uk

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Contents

1.	Influencing health and illness	1
1.1	Public health	1
1.2	Health education	1
1.3	Health promotion	2
1.4	AIDS: public health, health education or health promotion?	2
1.5	Current 'approaches' to health promotion	3
2.	Thinking about influencing the impact of HIV upon gay men	5
2.1	HIV incidence among gay men	<u>.</u>
2.2	Reducing HIV incidence or increasing the sexual health of gay men?	5
2.3	Understanding continuing HIV incidence	6
2.3.1	Observations about individuals	7
2.3.2	Observations about individuals in a network	8
2.3.3	Observations about patterns across whole populations	10
3.	Influencing sdUAI	11
3.1	Articulating approaches to influencing sdUAI	11
3.2	Choosing between 'we decide' and 'you decide' approaches	12
3.2.1	Using ethics to adopt approaches	12
3.2.2	Using evidence to adopt approaches	13
3.3	The approach of Making It Count	14
4.	Conclusion	16
	References	17

1 Influencing health and illness

In this section, we give a brief introduction to the history and theory of health promotion in order to highlight some tensions which arise when we apply the principles of health promotion to HIV prevention with gay men.

1.1 PUBLIC HEALTH

Health promotion as we know it today is an offshoot of traditional public health. The emergence of public health can be traced to the activities of 19th century philanthropists and social reformers. These reformers were, for the most part businessmen and clerics who were concerned that the poor living conditions of the new urban industrial classes would lead both to moral degradation and social dissent. Eager both to quash political and social unrest amongst the urban poor and to maximise the productivity of the workforce, they advocated both moral regulation and the improvement of living and working conditions. (Bristow, 1977). It was not until later in the 19th century that this movement became 'medicalised' (Rose, 1998). This served two purposes. Firstly, it transformed what was essentially a political and moral crusade into a more neutral medical 'discipline'. Second, by aligning itself with an influential profession (medicine), the social reform and hygiene movements could increase their ability to influence both public policy and legislation. By the early 20th century, this movement had been largely responsible for creating the legislative, policy and cultural climate within which the National Health Service and most current Social Services evolved (Rose, 1998).

One of the effects of the 'medicalisation' of these social reform movements in the 19th century was a concentration on the improvement of living conditions in order to bring about reductions in occurrences of infectious diseases (such as cholera). With the development of both cures and vaccinations, the social reform element of public health became largely redundant. Public health came to be about preventing and curing disease through bio-medical interventions (for example, mass vaccine programmes) and by the second quarter of the 20th century, the connections between poor living conditions, poverty and ill health had been largely forgotten.

1.2 HEALTH EDUCATION

The success of bio-medical interventions coupled with improvements in diet and living conditions led to reductions in infectious diseases. As a consequence, since the Second World War at least, infectious diseases have been replaced by degenerative diseases (such as cancer and heart disease) as the major causes of ill health and mortality (Leichter, 1991). The connection between lifestyle factors (such as smoking, diet, exercise etc.) and degenerative diseases (such as cancer and heart disease) was only belatedly recognised. The response to this was the development of a new branch of public health: health education. Health education sought to educate individuals on healthy lifestyle choices. It was however, based on individual and pedagogical models of reducing ill health. It assumed that, given the correct information, the individual had the power and capacity to make the right health related choices. It did not take into account larger social factors influencing the health choices of the individual (such as poverty and poor living conditions, Lalonde, 1974), nor did it question what the 'right' health related choices might be for any individual. Therefore, over the course of a century public health moved from attempting to improve the health of social groups through large scale social and political reform to an overriding concern with decreasing disease by educating and influencing the individual (Tesh, 1988).

1.3 HEALTH PROMOTION

The 1970's and 1980's saw radical developments in public health and health education. There was mounting evidence of the socio-economic patterns of morbidity and mortality (Townsend & Davidson, 1982), and the correlation between material inequality and health. The tendency of health education to emphasise individual responsibility in maintaining health without accounting for environmental factors beyond individual control was dubbed 'victim blaming' (Crawford, 1977). There were also questions raised about who should define 'health' and a new interest in looking at 'lay' people's definition rather than only those of medical professionals (Tuckett, 1976). These challenges were accompanied by a new emphasis on positive well-being rather than just the absence of disease (Antonovsky, 1987). The involvement of those populations intended to benefit from the service or activity became a new focus in their planning and delivery (WHO, 1978). The adoption by the World Health Organisation (WHO) of the term health promotion in the 1980s (Parish, 1995) was intended to emphasise a re-orientation away from traditional health education, influenced by these critiques. Their Ottawa Charter (WHO, 1986) defined health promotion as "the process of enabling people to increase control over and to improve their health." This definition affirmed the multi-dimensional nature of health promotion since it included: building healthy public policy; creating supportive environments; strengthening community action; developing personal skills; and reorienting health services towards primary care.

However, these developments had little influence on policy in the UK (Whitehead, 1989) where there has been a continuing individualism until very recently. The Health of the Nation (Department of Health, 1992) was criticised for its lack of recognition of the effect of social inequality on health (Davison & Davey Smith, 1995). Indeed, the relationship between social inequality and health has been famously resisted and disputed by successive Conservative governments in Britain between 1979 and 1997 (Beattie, 1991).

1.4 AIDS: PUBLIC HEALTH, HEALTH EDUCATION OR HEALTH PROMOTION?

The emergence of AIDS in the early 1980's presented a unique public health challenge. It was an infectious disease emerging in an era when public health, health education and health promotion (such as it was) were geared towards dealing with degenerative diseases. Moreover, it emerged at a time when individualist and educational approaches to health predominated in the UK. It is not surprising therefore that the initial and prolonged response to 'preventing AIDS' was seen to lie in education to bring about behavioural change rather then considering the social conditions which might also influence transmission. Early HIV prevention was characterised by such 'victim blaming', a stark example of which was the Health Education Authority's slogan 'you know the risks, the choice is yours', broadcast on national television in 1986/7. The slogan assumes that knowledge and understanding are the only requirements for control in sexual interactions. It also implicitly proposes that information-giving is the only activity required of those with responsibility for the HIV prevention needs of the population.

Yet, early in the epidemic, studies were showing little correlation between knowledge and behaviour. It became clear that interpersonal factors were important (sex involves two people) as were the social contexts within which individuals led their sexual lives. However, unlike the infectious diseases of the 19th century, the relationship between social conditions and incidence of transmission are not so easily apparent and not directly causal. It was relatively straightforward for bio-medical research to demonstrate that overcrowding, bad sanitation and poor diet increases individual susceptibility to cholera. It is not so clear how poverty, lack of political power and social capital (social exclusion) or lack of education might increase an individual's susceptibility to contracting HIV. Moreover, the groups most affected by HIV and AIDS (gay men, people from sub Saharan Africa, injecting drug users, haemophiliacs) had little in common and are clearly made vulnerable to the disease in different and very complex ways. It is clear that in order to show these

connections, we need better analyses based in socio-medical as opposed to bio-medical research (Gabe *et al.*, 1991). We also need global analyses of patterns of poverty instead of local ones and new definitions of impoverishment and inequality. It is only comparatively recently that these needs have been acknowledged. Moreover, while there have been changes in awareness of the possible activities that may impact on health, we would argue that this awareness has yet to be translated into fundamentally different approaches to infectious diseases.

1.5 CURRENT 'APPROACHES' TO HEALTH PROMOTION

With this background in mind, we end this chapter with a brief consideration of health promotion approaches. The word 'approaches' is used to convey a wide variety of meanings. A large number of different health promotion approaches are assumed to be available and currently in use. A popular categorisation (or typology) of approaches is provided by Ewles & Simnet (1992) who distinguish the following:

- medical (the provision of clinical services);
- client-centred (the understanding and meeting of client needs);
- educational (the provision of information) and
- societal (the removal of barriers to healthy living).

Given the dissent and political differences surrounding disease prevention and health promotion, it is not surprising that authors (either explicitly or implicitly) display political and ethical biases when discussing health promotion approaches. One health promotion text which has been particularly influential in the UK (Naidoo and Wills, 1994) differentiates five approaches, which are similar (but not identical) to those listed above.

- Medical or preventative
- Behaviour change
- Educational
- Empowerment
- Social change

Although the authors say the types are 'primarily descriptive', it is clear that they disapprove of 'medical' and 'behaviour change' approaches, and approve of 'educational', 'social change' and 'empowerment' approaches. We are told that the medical approach "does not seek to promote positive health and can be criticised for ignoring the social and environmental dimensions of health" (p.84), but not that the empowerment approach does not seek to reduce infectious disease and can be criticised for ignoring the physical dimensions of health. The behaviour change approach "reinforces the divide between the expert who knows how to improve health and the general public who need education and advice" (p.86), but no mention is made of the social change approach reinforcing the divide between the expert interveners, who know about policy and the people in organisations who need lobbying and negotiating with, and the general public. The targets for behaviour change are "individuals", whilst those of education become "persons".

In this putative political axis, the intervener goes from a top-down, authoritarian expert, to a bottom-up facilitator with "different skills". Those working within the medical approach are portrayed as predominantly concerned with control, those engaged in empowerment as self-less individuals who have achieved the "difficult and uncomfortable" task of "relinquishing the expert role" (p.90).

Naidoo and Wills' (1994) text is one amongst several classifications of approaches currently in circulation. The differences between the classifications are informed by a number of factors. First, the

'categories' are actually conflations of a number of different levels at which all health promotion activities operate. That is, they are artificial separations of generally seamless practice. It is, of course, possible to have client-centred education, community action to get access to vaccination, or to aim to change the physical or social environment to limit choice. The aims of interventions within each 'category' are not independent but levels within a hierarchy. What distinguishes the approaches above is the 'level' of health and illness determinants they focus on. Second, the focus that authors have is generally dependent on his or her political, ethical and professional beliefs. Generally speaking, more community oriented health promoters will value empowerment and social change whereas those from medical backgrounds will advocate medical or behavioural interventions.

Currently, any programme to reduce the incidence of HIV must grapple with all of these approaches. This is because HIV is an infectious disease which disproportionately affects clearly defined social and ethnic groups. Yet, the advent of new treatments means that bio-medical interventions are becoming increasingly important. If we are to use health promotion well, it is incumbent on us to take account of all approaches whilst clearly articulating our ethical or political position. That is, we must say what we believe is both possible and appropriate. The remainder of this report outlines how health promotion might be mobilised in this way when we strive to reduce the number of new HIV infections that occur as a consequence of sex between men.

2 Thinking about influencing the impact of HIV upon gay men

2.1 HIV INCIDENCE AMONG GAY MEN

HIV incidence is the rate at which people are becoming infected with HIV and refers to the proportion of people in a population that become infected over a period of time (usually one year or 100 years). We think the current incidence of HIV infection among gay men in England is about 1,500 new infections among 180,000 (uninfected) men each year (Hickson *et al.*, 1997 for population size; PHLS, 2000 for number of infections data). This is an incidence of 0.008 per year, or 0.8 per hundred person years.

The net reproductive rate of an infection in a population is the average number of other people each person with the infection passes it on to. It is concerned only with the dynamics of the infection, and not the size of the population it is moving through. If each person who becomes infected passes it on to only one other person the net reproductive rate is one. In this case, for every person who is cured (or dies), one more person becomes infected and the number of people with the infection remains the same. Because the number of new infections has remained constant at about 1,500 since the early 1990's we think the net reproductive rate of HIV infection among gay men in England was one. However, we now think that this rate may be changing.

Factors other than HIV prevention impact on HIV incidence, especially the use of anti-HIV therapies. New therapies improve health and life expectancy among people with HIV (Hammer *et al.*, 1998) so there are increasing numbers of HIV-infected men in the sexually-active population. Conversely, anti-HIV therapies suppress viral load and almost certainly decrease the transmission probability when exposure occurs (Bartos *et al.*, 1998). At a population level the net effect of these conflicting pressures is difficult to assess. However, this uncertainty should remind us that HIV incidence does not depend solely on the volume or quality of HIV prevention activities. The success of HIV prevention cannot be judged solely on the basis of future incidence.

2.2 REDUCING HIV INCIDENCE OR INCREASING THE SEXUAL HEALTH OF GAY MEN?

It is a continuing debate within health promotion whether programmes should be planned around populations, or around diseases. Whilst specific ring-fenced HIV prevention funding ensures that much 'work' with gay men is organised around HIV infection, many working with these resources are concerned with increasing the general health of gay and other homosexually active men. That is, it is often a commitment to the population, and not the disease, that motivates and informs their work. Conversely, lack of wider social regard for gay men, can result in them being ignored or marginalised, even when it is clear that HIV incidence is relatively high among them. This debate about whether health promotion programmes are planned around populations or diseases reflects a broader debate concerning public interventions to improve health: should interventions be seeking to impact on the population and its positive well-being, or on individuals and the prevention of disease?

HIV is a virus that increases susceptibility to disease and the funds available to those involved in HIV prevention with gay men are planned around the disease not the population. As such, both CHAPS and *Making It Count* (Hickson *et al.*, 2000) are concerned with reducing the incidence of HIV infection

among homosexually active men. The organising principle is an infection (albeit within a specific population). However, few of the agencies utilising *Making It Count* would necessarily be comfortable if the health of homosexually active men was reduced to just whether or not they are infected with HIV.

A programme of activity whose central concern was increasing the health of gay men, might be expected to contain aims regarding HIV infection. However, HIV would be one health concern among many. The contribution the programme made to addressing other health concerns would be valid, irrespective of their relationship to HIV. If, however, the programme's central concern was HIV infection, as is the case in *Making It Count*, the validity of all the aims of the programme must be judged on the contribution they make to reducing HIV incidence. This is not to say aims unrelated to HIV are not valid for health promotion with gay men. It is to recognise that when the goal of a programme is to reduce the incidence of HIV in a group, then the aims of that programme are either related to that goal or they are not, no matter how valid they are when considering the general health and well being of gay men.

2.3 UNDERSTANDING CONTINUING HIV INCIDENCE

Making It Count starts by assuming a reduction in sexual exposure is necessary in order to reduce HIV incidence among homosexually active men, and that the majority of exposures are due to non-condom use rather than condom use and failure. Whilst vaccination and other medical interventions remain on the horizon, reducing HIV sero-discordant unprotected anal intercourse (sdUAI) remains the central target in reducing HIV incidence.

In planning prevention activities to influence prospective HIV exposures, it is necessary to start by thinking about what theory and approach we are employing. In order to do this, we need an understanding of why exposures occur, and to consider which factors contributing to them we are willing and able to impact on. This process generates the aims of our interventions. *Making It Count* stresses the roles of theory, values and ethics as well as evidence in making decisions about approaches and intervention aims.

Since we are attempting to reduce sdUAI, we start by considering why it occurs. Why do HIV infected and HIV uninfected men have unprotected anal intercourse with each other? This is a somewhat radical approach, as most commentators start with why UAI occurs and assume that UAI is what is to be reduced. Either the assumption is that selective reduction in sdUAI is not possible, or that UAI is undesirable in and of itself. There have been striking differences in these assumptions when the target has been UAI between men, and when it has been unprotected vaginal intercourse between men and women.

In this section, we summarise a number of 'theories' current in HIV prevention, with the intention of illustrating how they sit in relation to one another, and what they say about why sdUAI happens. Theories describe the relationship between factors in an attempt to account for why something occurs. They say which factors are relevant, and what their relevance is in relation to other factors. Theories are implicit in all HIV prevention activity although the extent to which they arise from, or are supported by empirical evidence varies.

HIV prevention is about influencing human action and human action is ultimately a matter of agency. Hence, it is not subject to rigid prediction in the manner that some phenomena are, such as the behaviour of molecules. Good theories about humans take account of this, and are useful in that they make assumptions explicit and therefore open to scrutiny. Use of theory in health promotion is the bedrock of its evaluation (Zaslow & Takanishi, 1993).

2.3.1 Observations about individuals

The health belief model (HBM – Becker, 1974) is a common-sense framework for accounting for health 'behaviours'. It was developed to understand patients' compliance with medical check-ups, and has been widely used to study individual behaviours leading to degenerative diseases (for example, smoking, diet, exercise).

The HBM suggests that the likelihood of an individual undertaking an action is a function of: their understanding of the relationship between that action and an illness (in this case between sdUAI and HIV infection); their perception of their susceptibility to that illness (the probability that the UAI will be sero-discordant, and the probability of transmission if it is); their perception of the severity of HIV disease; *and* their perception of the other costs and benefits of engaging in the action (how much they want to have AI with that partner at that moment, how much difference a condom would make to them, *etc.*). The model suggests the decision taken is determined by the combination of these factors with no one factor being dominant overall. The theory assumes there are no barriers or obstacles to action.

This theory suggests that sdUAI occurs because: men do not know they are HIV sero-discordant with a specific partner; they do not understand the relationship between sdUAI and HIV infection; they believe that they are immune to HIV; they believe HIV is not a serious infection; that their boyfriend will leave them if they use a condom, for example. Importantly, it also suggests that the quality and salience of the factors differ for HIV-positive men and HIV-negative men when they engage in sdUAI.

Nutbeam & Harris (1998) suggest the HBM's applicability is low in cases of on-going opportunities for complex behaviours. It has been widely used in attempts to account for condom use *per se* (that is, irrespective of the HIV status' of the men having sex), which makes more sense as this can be viewed as a 'health behaviour' (although men can use condoms for other reasons). In this context, the HBM is being used to understand compliance to an edict ('always use a condom'). For example, Dawson *et al.* (1992), in a longitudinal study of gay men's sexual risk-taking, found little relationship between the social-psychological factors central to the health belief model and UAI. The HBM is not a model of obedience to authority and most attempts to model decision making about UAI irrespective of the context of HIV have had little success. This does not automatically mean it is of no use in understanding sex but it is probably of limited use, in accounting for sdUAI, an interactive sexual behaviour with health implications.

The theory of reasoned action (TRA, Ajzen & Fishbein 1980) suggests that behaviour is rational in that it is mediated by an intention. This in turn is influenced by: an individual's attitude towards a behaviour (regard for sdUAl); their perceived behavioural control (confidence, skills and experience in initiating something else sexually); and their perception of social norms regarding the behaviour (beliefs about what that their partner and other gay men will think if they have sdUAl). The term 'norm' refers to what is regarded as acceptable conduct or belief within a community. An individual's perception of a social norm can be affected by the association of a message with individuals for whom they have respect.

With regard to sdUAI, the theory of reasoned action suggests that: most of the time, most men will avoid sdUAI if it does them more harm than good; to avoid sdUAI, men need to know about and have the ability to do something else sexually (for example, have sex other than anal intercourse); and that they are more likely to not have sdUAI if they believe or suspect their peers disapprove of it. Conversely, according to this theory, sdUAI occurs because men do not know their UAI is sero-discordant; they do not know about, or are unable to instigate, other sexual options; and because they believe it is acceptable within their peer group. Again, no one factor is determining, each occasion of sdUAI will be balanced differently, and the balance will differ for the uninfected and

infected partners. It would also suggest that the balance of factors differ strongly when men know their UAI is sero-discordant, and when they do not (or only one partner knows).

The social learning theory (Bandura, 1977), suggests a dynamic relation between individual behaviour and the social norms of the community or society, and is thus related to the *theory of reasoned action*. The theory states that the effect of norms on the individual are mediated by three cognitive factors: (1) observational learning on the part of the individual (what are other people doing?); (2) the individual's anticipation of the outcomes of behaviour (which would itself be mediated by knowledge); and (3) the individual's self efficacy (their perception of their own control over what happens). The theory suggests there is a reciprocal and dynamic relationship between these three factors. It recognises that an individual's actions have a range of consequences of varying immediacy, salience and importance. The theory suggests that sdUAl occurs because it is culturally desirable.

Prochaska & Diclemente (1984) described a number of general *stages of change* which they call a *trans-theoretical model*. The model is not a theory of why actions (such as sdUAI) occur, but purports to describe what happens when people stop certain behaviours. The model describes change itself as an 'action' (something people do rather than a pattern of things they do). The action of change is broken down into a series of stages: pre-contemplation; contemplation; readiness for action; and 'maintenance'. The stages are portrayed on a wheel where a maintained activity becomes something that is no longer contemplated. Any single act of change may not contain all these stages.

The model proposes that the changes by which people move from one stage to another vary according to which stage people start at. Movement from pre-contemplation to contemplation requires awareness-raising; movement from contemplation to readiness for action requires the recognition of benefits; from readiness for action to action requires the identification of barriers; from action to maintenance requires reflection on the process; and staying in maintenance requires 'follow-up'. Although the model is a description of what happens when people change, it places the intervener at the centre of the process.

The theory suggests that needs (and hence aims of interventions) will vary from person to person. Therefore, any intervention is unlikely to influence everyone. This would be equally true irrespective of the method used. It also suggests that the aims of interventions be matched to individuals' psychological states, rather than their behavioural profile.

2.3.2 Observations about individuals in a network

Obviously, sdUAI cannot solely be a function of an individual because it requires two people to do it. Here we consider what use some common theories about the functioning of networks may be for understanding the contribution of network characteristics to sdUAI.

Social diffusion theory (SDT, Rogers, 1983) is a theory of change, like the stages of change theory, but it considers what happens in interactions between individuals. It suggests that innovative ideas and actions enter a community when they are taken up first by 'early innovators', who are usually high status individuals who may not be typical of the community as a whole. The idea or action is subsequently adopted by a more conservative group, who are more typical of the community, and are crucial because of their centrality to its wider adoption. The new element is finally taken up much more slowly by a group of late adopters who are similarly not typical of the community as a whole. SDT is theory of how change occurs in communities. Although it can be used to account for the original uptake of 'safer sex' among gay men, it does not, in and of itself, suggest an intervention to facilitate this.

Adoption of change is viewed as a rational process (like the HBM and TRA) that is more likely if face-to-face contact occurs with someone who resembles the potential adopter. The theory suggests that the rate at which changes in behaviour move through a network is a function of where in the network influence starts. It also suggests that people are more likely to be influenced by their peers than by interveners outside their network.

This theory also considers personal or individual characteristics that are important to adoption of a new idea (similar to those theories which only consider individuals). In considering adoption of a new idea or action, the potential adopter weighs its benefits and costs, together with its compatibility with their existing values. Adoption is affected by: the visibility of benefits accruing to other adopters (an idea shared with social learning theory); the complexity of the new idea or action; and potential adopters' ability to test the new idea or action before its adoption.

The theory assumes that the product is a standard one, which remains unchanged in the process of diffusion. This has not been the case with 'safe/r sex', whose meaning is variable. The model may be useful in describing the uptake of condoms, but not the avoidance of anal intercourse, or partner selection in response to HIV.

Social diffusion is a description of how changes move through a network and provides support for the idea of healthy communities, since community members are viewed as affecting each others' adoption of health maintaining behaviour. However, simply encouraging community members to influence each other does not constitute community empowerment. For this to be so, the influences they exert must be genuinely empowering, rather than simply directive (Puska *et al.*, 1983). Furthermore, different individuals play different roles in the network, and would hence benefit from different individual changes.

Community empowerment theory (Minkler & Cox, 1980) suggests that the power in a community (and hence its uptake of innovations and the extent of its collective response to a threat) is a function of: competence in problem-solving skills and leadership; active and widespread participation; shared concerns; and critical consciousness of problems, whereby members can reflect on the broader factors which affect their social situation. The theory provides the justification for a community empowerment approach to reducing sdUAI. This would involve critical consciousness raising, fostering shared concerns, involving many and varied members of the network and skills training. Of course critical consciousness raising on its own is not community empowerment. In fact, Tones & Tilford (1994, p. 36) suggest:

"... we might legitimately argue that consciousness raising without providing the appropriate educational skills and competencies may be self-indulgent posturing and as unethical as true victim blaming!"

Social marketing theory (Lefebvre, 1992) is an application of a product marketing strategy to influencing non-purchasing behaviour. The theory suggests that with sufficiently 'aggressive' advertising, anything can be sold to enough people to make a profit. Attention is directed to the form of the product, its price, promotion and placement. Social marketing suggests that for a health message 'product' to have impact, the 'price' must be right. In other words, the benefits must be marketed and the cost (monetary and otherwise) must be minimized.

Social marketeers state that promotion has most impact when: it involves a message which is acceptable and relevant; is from a credible source (ideally someone respected, resembling the target audience in key characteristics, or perhaps regarded as an expert); suggests tangible and realistic short-term action; is clear and unambiguous (unlike 'safe/r sex'); and arouses emotional involvement. Social marketing also directs our attention to 'placement', that is, to promotion being accompanied

by a tangible product reinforcing the message. It suggests the value of mixing promotion via interpersonal communication and media with the 'placement' of accompanying materials, such as condoms and lubrication. The idea is to insist that something is indispensable to your life-style.

This understanding of health as something to be *consumed* is on a par with the current commodification of good health that leads new health technologies – such as some plastic surgery, dietary supplements etc. – to be sold as lifestyle necessities. Health is no longer just a resource to aid production nor even something that is to be strived for via sacrifice and hard work. Social marketing implies good health is available to all, at a price and it is the role of health promoters to ensure the cost is acceptable given the benefits.

However, as Naidoo & Wills (1998) point out health 'products' differ from most products in that: health messages can be more difficult to define than a commercial product (so it is useful in selling messages such as 'use a condom every time' but limited in educating men in the complexities of HIV exposure); the key target audience for the health 'product' are often those least interested in it; the benefits from adopting a health message are long-term compared to the instant gratification from acquiring other products; health messages often involve giving up something pleasurable (which sdUAI is); and the decision to adopt a health message is complex and ongoing compared to any decision to purchase a product.

2.3.3 Observations about patterns across whole populations

According to Thorogood (1992) social stratification as a theory suggests that both health outcomes and health-related behaviours are distributed unequally within society, with individuals from lower social classes generally experiencing poorer health and engaging in more 'unhealthy' behaviours. Material and lifestyle explanations are offered for this distribution – it is argued that individuals possessing fewer economic resources will be more subject to factors harming their health and will find it more difficult to engage in healthier lifestyles. A great deal of empirical support exists, both for the existence of the inequalities (Townsend & Davidson, 1982; Whitehead, 1987) and for the material basis of these (Blaxter & Patterson, 1982; Cornwell, 1984). Thorogood (1992) also reports that health can be stratified according to gender and ethnicity, being the result of a combination of material, discriminatory and other cultural factors.

Social stratification of HIV amongst gay men in the UK has been observed. Both HIV infection (Hickson *et al.*, 1998) and potential sdUAI (Hope & MacArthur, 1998; Hickson *et al.*, 1999; Weatherburn *et al.*, 1999; Weatherburn *et al.*, 2000) are more common among men in 'lower' education and occupational groups than among men in 'higher' groups.

Social stratification suggests the importance of addressing inequalities patterned according to social class (Hope & MacArthur, 1998; Weatherburn *et al.*, 1999) and ethnicity (Fenton *et al.*, 1999) in health promotion. Inequalities can only be addressed by considering collective action at the community and societal levels.

3 Influencing sdUAI

3.1 ARTICULATING APPROACHES TO INFLUENCING SDUAL

Reducing the amount of unprotected anal intercourse between HIV infected and uninfected men (sdUAI) requires influencing what men do. Whilst there are numerous 'theories' to account for sdUAI, none provide a comprehensive picture that can be used to guide the development and implementation of interventions to reduce it. Therefore the approach chosen to influence men's involvement in sdUAI, and the basis on which that approach is understood to work, will draw on many theories. Logic, ethics and evidence also play a part in making intervention choices. That there are many classifications of health promotion is a reflection of how central these factors are to the process of defining approaches and taking action. In *Making It Count* (Hickson *et al.*, 2000) approaches to influencing what people do are thought of as sitting somewhere on a 'We Decide'/ 'You Decide' axis.

The 'We Decide' in You Decide' axis concerns who decides what people do – the people doing the influencing or the people they are attempting to influence. You can imagine the axis starting with 'you will do what we say' through 'well, you should do this really,' to 'do what you think best'. This chapter focuses on the approach chosen in *Making It Count* and the arguments for and against it.

The term 'approaches' is used here to refer in broad terms to the way we attempt to reduce the probability HIV exposure occurs during sex. 'Approaches' describe the overall principles embodied. In contrast, 'interventions' describe the specific activities carried out. Unfortunately, the majority of debate about gay men's HIV prevention does not distinguish between approaches and interventions (both also variously get called 'methods').

Preferences for different approaches are not solely based on evidence of their effectiveness, nor should they be. They are also political and therefore ethical decisions. They are political because they are about people and power. Indeed, the very business of politics is 'who decides who does what'. Outlined below are ten approaches to influencing what men do sexually. They are grounded in the theories about people and their behaviour already discussed. All of them have at some point been advocated as approaches to influencing the sexual behaviour of gay men.

physical intervention removing barriers
misinformation educations
limit opportunity awareness raising
instruction giving skills development
banning empowerment

'We Decide' 'You Decide'

What approaches we adopt, dictate what aims and objectives we set for our HIV health promotion activity. The following table gives examples of the aims we might adopt for the ten approaches highlighted above. For example, if the approach adopted was empowerment, then our aims would be phrased in terms of men having the knowledge and resources to make decisions in their own interests. Alternatively, if our approach was banning, our aim would be legislation on the statute books and its rigorous policing. Such a situation, would, within that approach, be a success.

Approach	Examples of likely aims of an intervention
• removing barriers	men encounter fewer obstacles to avoiding sdUAI.
• education	men are knowledgeable about HIV and sdUAI.
• awareness raising	men are aware their partner does or may have a different HIV status to themselves.
• skills development	men have the interpersonal skills to avoid sdUAI.
• empowerment	men feel able to avoid sdUAI and that others support their choices not to have sdUAI.
• physically intervention	men are interrupted during sdUAI, and discouraged from continuing.
• misinformation	men believe HIV is highly contagious and that all UAI is equally likely to result in infection.
• limit opportunity	men cannot meet other men, or have no place to have sex.
• instruction giving	men are told to use a condom or not to have Al.
• banning	Anal intercourse (or UAI or sdUAI) between men is illegal, and the law is enforced.

3.2 CHOOSING BETWEEN 'WE DECIDE' AND 'YOU DECIDE' APPROACHES

Our preferences for some approaches over others are informed by who we are, and what we consider our own and others' responsibilities to be. Because approaches say what we think should be the case, they must be informed by our ethics, and not simply our evidence of what is the case. Exactly what has been decided depends on who is making the decision; it depends on who We are.

3.2.1 Using ethics to adopt approaches

Ethics provides a basis for decisions about the acceptability of different approaches. Whether an activity is ethical or not can be decided according to its ends or its means. Some argue that ends justify means, so if an activity brings about a certain amount of good for the majority, then it is ethically acceptable, regardless both of the means by which these ends are realised, and of the suffering of the minority. An alternative to this view is the notion that actions should be judged on their means as well as their ends. The best test of this view of whether an activity is ethically acceptable is whether we would ourselves be happy being subjected to it if we did not know whether we were in the majority or not. We assert that the latter view is a more appropriate yardstick with which to judge health promotion approaches, particularly since little is known about the outcomes of most health promotion.

Beauchamp & Childress (1989) list a number of factors which decisions about ethics might address:

- autonomy whether an action promotes freedom of thought or action;
- beneficence whether an action brings about good;
- non-maleficence whether an action does not itself bring harm;
- justice whether an action promotes fairness.

What follows is an ethical justification for the major decisions made in *Making It Count*, in relation to above four factors.

As a prevention-focussed approach to HIV health promotion *Making It Count* employs a simple (and perhaps negative) notion of health which is viewed as the absence of HIV infection, rather than any broader or more holistic notion. This approach is taken because HIV is considered a matter of particular gravity for the health of homosexually active men, requiring specific action. Adopting this approach does not mean, however, that we completely ignore that health can be viewed in more positive ways. If adopting a prevention-focussed approach to defining health meant precluding or contradicting other health promotion which adopted a more positive general notion men's health, then this could be judged as being *non-maleficent*. However, it is argued that the HIV prevention focus of *Making It Count* does not impede these other approaches, and so is ethical.

The notion that an ethical approach to health promotion should promote *autonomy*, gave rise to *Making It Count* adopting an empowering rather than directive approach. In order to acknowledge and foster people's *autonomy*, the degree to which they are directed is minimised. In some other areas of health promotion, we could employ methods based on a directive, rather than empowering approach, but the removal of autonomy in the area of sex and sexuality would be serious and unacceptable (as well as being unrealistic and unenforceable).

Ethical consideration might encompass consideration of what approaches are most politically acceptable. Caplan (1993) suggests that interventions which address individual behaviour in effect embody social regulation, where problems are viewed as belonging to the misguided individual rather than the unjust society. Such an approach could be viewed as contradicting the need for health promotion to be *beneficent* and truly to promote *autonomy*. Caplan argues that interventions which instead address societal context have the more radical approach of challenging economic and political injustice.

HIV prevention can include activity at the individual, community and societal levels. Tesh (1988) suggests that much health promotion is multi-factorial in rhetoric but individualist in action. *Making It Count* stresses the importance of not neglecting societal approaches, as most HIV prevention programmes undoubtedly do. Societal approaches include activity intended to promote social *justice* and equality among all groups facing substantial discrimination.

3.2.2 Using evidence to adopt approaches

Research evidence is increasingly accepted as providing the soundest basis for decision-making regarding HIV health promotion with gay men and other homosexually active men. However, not many of the thousands of academic articles that could contribute to this debate are designed to aid judgements regarding values, ethics or approaches. That is, all are more or less subjective in that the interpretation invariably placed on the data arises from the authors' own values, ethics and approaches. Hence much academic research requires 'decoding' before health promoters and other readers can assess its contribution to their own work.

Much academic debate also usually focusses on the minutiae of the sexual practice or the psychosocial characteristics of the participants. If one holds that 'unsafe sex' is always the result of some defect of intellect (low self-efficacy, for example) or some contextual factor that renders men incapable of resisting their own base instincts (such as backrooms or drugs) then this literature has something substantial to offer. Morever, if you accept that medical and other broadly 'We Decide' approaches are appropriate then there is an almost limitless supply of evidence with which to aid the planning and implementation of work.

Of course, no intervention or programme of work is wholly evidence-driven. All information or data, in the very process of becoming evidence, must be utilised within a theory, which in turn is tested by practice. Decisions cannot be based solely on data. If we advocate 'You Decide' approaches then it is much more likely that we aspire to reduce barriers to choice; raise awareness; inform and educate; aid with skills development; and increase access to resources and services. When these are our targets, large parts of the literature on gay men will offer no assistance in the planning of interventions or programmes of work. Of course there are substantial exceptions, most notably some Australian and European work, which has demonstrated that 'safer sex' is associated with community attachment (Kippax et al., 1993) and with supportive social norms (Prieur, 1990).

However, the bulk of this evidence does not tell us what will be most acceptable, appropriate, effective or efficient in the here and now. First, because it arises from social and political contexts that may be substantially different from the United Kingdom, and second because with the passage of time findings usually become less and less useful.

There is also the problem of a general absence from the published literature of the sort of evidence which allows judgements on the acceptability, appropriateness, effectiveness or efficiency of particular methods or interventions. In a global search for published evaluations of gay men's work very few articles are found. As an example of what is encountered we consider Valdiserri *et al.* (1989) who report a comparison of two forms of small group work, one a lecture focussing on knowledge, and the other a workshop featuring negotiation skills training. A greater increase in condom use was reported among the second group, though the effect of the intervention on need is not reported, so it is not known why one was more successful. In addition, to the obvious problem that this work occurred in the USA twelve years ago, Oakley *et al.* (1996) suggest that the intervention's high attrition rate undermines its conclusions. More to the point perhaps, Oakley *et al.* in their 1996 review of primary prevention evaluations can find only six papers on which to pass judgement, albeit using exceedingly strict entry criteria for their comparison.

Of course, there are countless 'grey literature' reports that represent evaluations of gay men's primary prevention. In addition to being hard to keep abreast of (given no obvious way of searching for them), these often report the substance of the intervention so sparsely that it is hard to assess what is being evaluated. Some are also undertaken for financial purposes, either to establish new, or protect existing funded interventions. They are also of very variable quality.

3.3 THE APPROACH OF MAKING IT COUNT

Making It Count clearly advocates 'You Decide' approaches, as do an increasing proportion of health promotion agencies in the UK. Adoption of 'You Decide' approaches is a political and ethical decision that reflects the values of interveners. While such a choice is politically motivated it is also fundamentally pragmatic – it is based on a belief that educating and empowering men about sex and HIV, and increasing the control they have over their own lives, is a more effective approach to sexual health promotion than making choices for them, telling them what to do or influencing their behaviour by the removal of options. HIV prevention approaches which directly influence behaviour by removing or reducing people's control may, in the short-term, be effective at changing behaviour, but will undermine the basis on which a long-term HIV health promotion strategy will be successful. Within this framework, an intervention that works would be one which educates, raises awareness, empowers or equips men or which increases their access to information and services.

We assert that, in the vast majority of cases of sdUAI, the authority of 'We Decide' approaches is entirely false. The people who decide whether or not men have sex with each other, and what kind

of sex they have when they do, are the men themselves. Saying 'you cannot do that' does not alter the fact most men can, and saying 'you should not do that' does not alter the fact that some men do, and will, no matter how many times we say it.

Making It Count also recognises that even if all their HIV prevention needs are met, some men may decide to engage in sexual HIV exposure. Since men make their own sexual choices, and have the right to do so, this must necessarily be the case. It is not a means of controlling men's sexual behaviour. This is deemed both unfeasible (given the interventions available for control and the numbers of men involved) and undesirable (given the values of those developing the strategy). Making It Count recognises that health promoters are not responsible for men's sexual behaviour, and cannot be. That must remain the responsibility of men themselves. It does not assume that avoiding involvement in HIV exposure is the single most important concern in mens' lives, nor does it attempt to make it so.

4 Conclusion

We have stressed the importance of intervention and programme planning based on consideration of theory and approaches to influencing men's behaviour, informed by values, ethics and evidence.

This paper should encourage an awareness and contemplation of all the alternatives in HIV health promotion. It should facilitate the combining of complementary interventions into programmes which address aims comprehensively. This is a better approach than simply picking a method and a setting, and then thinking what aims these might be used to address, although these are obviously limiting factors. The limitations of method-led work is that it may often only half address an aim, at best.

This paper should bring other benefits. Development of a shared vocabulary would make communication between providers, commissioners and researchers easier. Providers and commissioners can agree how specific contracts and projects fit into programmes of work. Evaluators can understand what providers are aiming to achieve with an intervention, so they can evaluate it. An understanding of how various interventions fit into the overall framework may also help avoid the 'flavour of the month' tendency which is so common, wherein new interventions are viewed as panaceas, before a perception of their limitations inevitably leads again to widespread despondency. We hope that this paper encourages a view of health promotion wherein programmes involve a coherent array of interventions each with limited aims but which are theoretically compatible and which might together contribute to preventing exposure to HIV during sex between men in a population.

We acknowledge that rigorous evidence from research and evaluations is one of the soundest basis for decisions. However, we have argued that useful evidence is generally lacking, and, when available, it might not tell us what will be most acceptable, appropriate, effective or efficient in the here and now. Thus, the basis for decisions about HIV health promotion is presently rarely perfect. Of course, this paper will not, per se, change this situation. What it should do, however, is to draw our attention to what we are using as a basis for decisions. Its use should ensure that, where assumptions or leaps of faith are made, these are transparent. This transparency ensures that these assumptions can then be examined further. This should help future health promoters carry on the task of aiming to reduce HIV exposure during sex between men with an increasingly sound knowledge base.

References

Ajzen I & Fishbein M (1980) *Understanding* attitudes and predicting behaviour. Englewood Cliffs NJ, Prentice Hall.

Antonovsky A (1987) *Unravelling the mystery of health: how people manage health and stay well.* New York, Wiley.

Bartos M, Ezzy D, McDonald K, O'Donnell D, de Visser R (1998). Treatments, intimacy and disclosure in the sexual practice of HIV-infected adults in Australia. Oral Presentation, *XII International Conference on AIDS*, Geneva, ab 23402.

Bandura A (1977) *Social learning theory.* Englewood Cliffs NJ, Prentice Hall.

Beattie A (1991) Knowledge and control in health promotion: a test case for social policy and social theory. In Gabe J, Calnan M, & Bury M (eds) *The sociology of the health service*. London & New York, Routledge.

Becker MH (1974) The health belief model and personal health behaviour. *Health Education Monographs*, 2: 324-508.

Beauchamp TL & Childress JF (1989) *Principles of biomedical ethics*. Oxford, Oxford University Press.

Blaxter M & Patterson E (1982) *Mothers and daughters: a three generation study of health attitudes and behaviour.* London, Heinemann.

Bristow, E.J. (1977) *Vice and vigilance: purity movements in britain since 1700*. Totowa, NJ: Rowman and Littlefield.

Caplan R (1993) The importance of social theory for health promotion: from description to reflexivity. *Health Promotion International*, *8*(2): 147-57.

Cornwell J (1984) *Hard earned lives.* London, Tavistock.

Crawford R (1977) You are dangerous to your health: the ideology and politics of victim-blaming. *Journal of Health Services, 7:* 663-80.

Davison C & Davey-Smith G (1995) The baby and the bath water: examining socio-cultural and free market critiques of health promotion. In Bunton R, Nettleton S, Burrows R (eds) *The sociology of health promotion*. London, Routledge.

Dawson J, Fitzpatrick R, Boulton M, McLean J & Hart G (1992) Predictors of high risk sexual behaviour in gay and bisexual men. *Social & Preventive Medicine*, *37*: 79-84.

Department of Health (1992) *Health of the Nation*. London, HMSO.

Ewles L & Simnet E (1992) *Promoting health: a practical guide.* London, Scutari.

Fenton K, White B, Weatherburn P, Cadette M (1999) What are you like? Assessing the sexual health needs of Black gay and bisexual men. London, Big Up (020-7501 9264).

Gabe J, Calnan M, & Bury M (eds) (1991) *The sociology of the health service* (Introduction). London & New York, Routledge.

Hammer SM, Katzenstein DA, Hughes MD, Glendacker H, Schooley RT, Hanbrich RH (1996) A trial comparing nucleoside monotherapy with combination therapy in HIV-infected adults with CD4 counts from 200 to 500 per cubic millimetre. *New England Journal of Medicine*, 335: 1081-90.

Hickson F, Davies PM, Weatherburn P (1997) Community HIV/AIDS prevention strategy: research & development review. London, Terrence Higgins Trust (020-7831 0330).

Hickson F, Reid D, Weatherburn P, Henderson L, Stephens M (1998) *Making data count: findings from the National Gay Men's Sex Survey 1997*. London, Terrence Higgins Trust (020-7831 0330).

Hickson F, Weatherburn P, Reid D, Henderson L, Stephens M (1999) Evidence for change: findings from the National Gay Men's Sex Survey 1998. London, Sigma Research (020-7737 6223).

Hickson F, Nutland W, Doyle T, Burbidge N, Burnell C, Cadette M, Henderson L, Ward M, Wools, C, Weatherburn P. (2000) *Making it count: a collaborative planning framework to reduce the incidence of HIV infection during sex between men.* 2nd Edition, London, Sigma Research (020-7737 6223).

Hope VD & MacArthur C, (1998) Safer sex and social class: findings from a study of men using the 'gay scene' in the West Midlands region of the UK. *AIDS Care*, 10(1): 81-88.

Kippax S, Crawford J, Davis M, Rodden P & Dowsett G (1993) Sustaining safer sex: A longitudinal study of a sample of homosexual men. *AIDS*, 7: 257-63.

Lalonde M (1974) A new perspective on the health of Canadians. Ottawa, Information Canada.

Lefebvre C (1992) Social marketing and health promotion. In Bunton R & MacDonald G (eds) *Health promotion disciplines and diversity.* London, Routledge.

Leichter HM (1991) Free to be foolish: politics and health promotion in the United States and Great Britain. New Jersey, Princeton University Press.

Minkler M & Cox K (1980) Creating critical consciousness in health: application of Friere's philosophy and methods to the health care setting. *International Journal of Health Services*, 10: 311-22.

Naidoo J & Wills J (1994) *Health promotion: foundations for practice.* London, Balliere Tindall.

Naidoo J & Wills J (1998) *Practising health promotion: dilemmas & challenges*. London, Balliere Tindall.

Nutbeam D & Harris E (1998) Theory in a nutshell: a practitioner's guide to commonly used theories and models in health promotion. Sydney, National Centre for Health Promotion.

Oakley A, Oliver S, Peersman G, Mauthner M (1996) Review of effectiveness of health promotion interventions for men who have sex with men. London, EPI Centre.

Parish R (1995) Health promotion: rhetoric and reality. In Bunton R, Nettleton S, Burrows R (eds) *The sociology of health promotion*. London, Routledge.

Public Health Laboratory Service and Scottish Centre for Infection & Environmental Health (2000) AIDS/HIV quarterly surveillance tables number 47:00/2. UK data to end June 2000. London, PHLS.

Prieur A (1990) Norwegian gay men: reasons for continued practice of unsafe sex. *AIDS Education & Prevention*, *2*(2): 109-15.

Prochaska JO & Diclemente CC (1984) *The transtheoretical approach: crossing traditional foundations of change.* Homewood IL, Don Jones/ Irwin.

Puska P, Salonen J, Nissinen A & Tuomilehto J (1983) Change in risk factors for coronary heart disease during ten years of community intervention programme (North Karelia Project). *British Medical Journal*, 287: 1840.

Rogers E (1983) *The diffusion of innovations*. New York, Free Press.

Rose, N. (1999) Governing the soul: the shaping of the private self. London: Free Association Press.

Tesh SN (1988) *Hidden arguments: political ideology and disease prevention policy.*New Brunswick, Rutgers University Press.

Thorogood N (1992) The relevance of sociology. In Bunton R & MacDonald G (eds) *Health promotion disciplines and diversity.* London, Routledge.

Tones K & Tilford S (1994) *Health education: effectiveness, efficiency and equity.* London, Chapman Hall.

Townsend P & Davidson N (1982) *Inequalities in health: the Black Report*. London, Penguin.

Tuckett D (1976) *An introduction to medical sociology*. London, Tavistock.

Valdiserri RO, Lyter DW, Leviton LC, Callahan CM, Kingsley LA, Rinaldo CR (1989) AIDS prevention in homosexual and bisexual men: Results of a randomised controlled trial evaluating two risk reduction interventions. *AIDS*, *3*: 21-6.

Weatherburn P, Davies P, Hickson F & Hartley M (1999) A class apart: the social stratification of HIV infection among homosexually active men. London, Sigma Research (020-7737 6223).

Weatherburn P, Stephens M, Reid D, Hickson F, Henderson L, Brown D (2000) *Vital statistics: findings from the National Gay Men's Sex Survey* 1999. London, Sigma Research (020-7737 6223).

Weiss CH (1980) Social science research and decision making. New York, Columbia University Press.

Whitehead MS (1987) *The health divide:* inequalities in health in the 80s. London, Health Education Authority.

Whitehead MS (1989) *Swimming upstream*. London, King's Fund Institute.

WHO (1978) *Alma Ata 1977: Primary health care.* Geneva, World Health Organisation.

WHO (1986) *Ottawa Charter*. Geneva, World Health Organisation.

Zaslow MJ & Takanishi R (1993) Priorities for research on adolescent development. *American Psychologist, 48*: 185-92.