

## GLOSSARY

## A typology of actions to tackle social inequalities in health

Margaret Whitehead

*J Epidemiol Community Health* 2007;61:473–478. doi: 10.1136/jech.2005.037242

“If your only tool is a hammer, all your problems will be nails.” Mark Twain.

There is a growing acknowledgement that many countries face serious social inequalities in health, identified as one of the greatest challenges to public health today.<sup>1</sup> “Social inequalities in health” in this article are defined as systematic differences in health between different socioeconomic groups within a society. As they are socially produced, they are potentially avoidable and are widely considered unacceptable in a civilised society.<sup>2</sup> This paper uses the British convention of referring to “inequalities in health”, which commonly has the same meaning in the UK as the term “inequities in health”. That is, “inequalities” in the British context—and increasingly also across Europe—carries the same connotations of unfairness and injustice as the term “inequities”.

Previous articles in this series have dealt with how to measure health inequalities<sup>3,4</sup> and socioeconomic position,<sup>5,6</sup> together with the associated concepts.<sup>7,8</sup> The central question remains: what can be done about these social inequalities in health? A growing number of countries are wrestling with this question and devising policies and interventions in attempts to tackle the challenge.<sup>9–11</sup> This article organises some of the most prominent types of actions that have been devised in this field into a typology. The aim is to help broaden the understanding of the range of different interventions available and their potential effectiveness for the task in hand, and to avoid the tendency to focus on one type of intervention neglecting the others. As Mark Twain cautioned: “If your only tool is a hammer, all your problems will be nails”.

#### IDENTIFYING THE THEORY UNDERLYING INTERVENTIONS

Over the past two decades, theory-based approaches to the assessment of public policy and interventions have been elaborated in the general evaluation literature.<sup>12–14</sup> The idea, as originally proposed by Wholey, is to analyse, for the purposes of evaluation, the logical reasoning that connects intervention programme inputs to intended outcomes, and assess whether there is any reasonable likelihood that programme goals could be achieved.<sup>14</sup> This literature acknowledges that all intervention programmes are based on theories, whether implicit or explicit, of how the measures proposed in a programme are expected to have their impact. These programme theories are sometimes referred to as “professional logic”. Making these programme theories explicit helps in the design of an evaluation, but also draws attention to the existing literature on the probable

effectiveness of the proposed mechanisms for change.

Such theory-based approaches have been used in particular to evaluate the effectiveness of health promotion and risk prevention interventions,<sup>15,16</sup> and latterly have been adopted for the evaluation of complex community interventions in the UK, such as the English Health Action Zones.<sup>17</sup> Their value lies in assessing the effectiveness of the various components of existing interventions, and also in the design of future initiatives, by generating plausible programme theories and designing programmes to test them under real-life conditions.<sup>14</sup> Can these approaches help in the assessment of the various endeavours to tackle health inequalities?

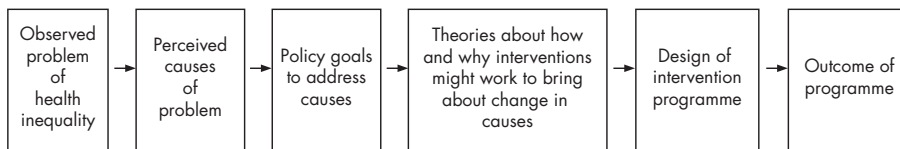
#### APPLYING THEORY-BASED APPROACHES TO HEALTH INEQUALITIES INTERVENTIONS

Figure 1 illustrates schematically the logic—whether explicit or implicit—in the formulation of interventions in this field. Every proposed intervention to tackle social inequalities in health starts with recognition of the existence of a problem. Take for example the observed poor nutritional status in children living in poor families, which has been an acknowledged problem in the UK for many years.<sup>18</sup> When the decision is taken that “something must be done” about the problem, the nature of the proposed action will depend on the prevailing notions of what is causing that problem. More precisely, the question is “what is causing the problem to be more severe with decreasing socioeconomic status?” In the case of poorer nutrition in poorer children, for example, it is not the cause of inadequate nutrition in children in general that is the focus of interest, but the causes of the gradient in nutritional status which result in an increasing problem as one goes further down the social scale. In the nutritional example, notions about why poor children have poor nutrition may range from lower knowledge or skills in the parents about healthy diet or food preparation, to differences in cultural attitudes between groups, to relative lack of income for nutritious food, to greater difficulty in gaining access to, and affordability of, appropriate food supplies and so on. These notions of the causes of this problem will in turn govern the choice of interventions to tackle the causes.

The interventions proposed are based on theories of how and why they will bring about a change in the identified cause. To follow through with the nutrition example, if the cause is seen as weaker nutritional knowledge in poorer groups, then educational programmes may be devised targeted at low-income parents to improve their

Correspondence to:  
Professor M Whitehead,  
Division of Public Health,  
University of Liverpool,  
Liverpool L69 3GB, UK;  
mmw@liverpool.ac.uk

Accepted 3 November 2005



**Figure 1** The logic of health inequalities interventions.

knowledge. If lack of income to buy nutritious food is the dominant cause, then interventions to increase social security benefits for low-income families with young children, or controls on the price of essential foodstuffs may be the proposed solution. Assumptions about causes and solutions may be uncovered during this process, which may turn out to be too simplistic or just plain wrong, when the empirical evidence is assessed. Ideally, this should lead to re-consideration of proposed action.

A crucial task in relation to tackling health inequalities, therefore, is to discern what the theories are about how and why the proposed interventions might work, and what their expected effectiveness could be. When such questions are applied to past and current activity in this field, distinct types of intervention can be discerned, which form the basis of the typology below.

## A TYPOLOGY OF ACTIONS TO REDUCE HEALTH INEQUALITIES

This typology of policies and interventions to tackle health inequalities is based on the underlying programme theory of how the action is expected to bring about the desired change.<sup>19, 20</sup> It asks: what is the underlying theory about the cause of the problem? What is the reasoning about how the proposed intervention will work to bring about change/improvement? On this basis, the common interventions tend to fall into one of four main categories. Each category has a distinct aim, ranging from strengthening individuals, to strengthening communities, to improving living and working conditions and associated access to essential services, and finally to promoting healthy macro-policies.

### Category 1: strengthening individuals

These interventions are aimed at strengthening individuals in disadvantaged circumstances, and using person-based strategies. The cause being addressed by these types of initiative is essentially a perceived personal deficit in some respect, whether that is a deficiency in an individual's knowledge, beliefs, self-esteem, practical competence in life skills or powerlessness. Such interventions theorise the problem mainly in terms of an individual's personal characteristics, and the solution in terms of personal education and development to make up for these deficiencies. Examples include health information campaigns, life skill groups and one-to-one counselling/support. The vehicles for this education may be varied—for example, in relation to anti-smoking education, delivery may be through mass media campaigns, school curriculum programmes or smoking session clinics run by health professionals in disadvantaged areas—but the underlying purpose of these interventions is education of individuals.

Some aim to build up self-confidence and skills in people who are in danger of being swamped by the disadvantaged circumstances in which they live, so that they stand a better chance of maintaining their health and well-being, whatever external health hazards they encounter. Others address the relative powerlessness of the worst-off in society, with strategies to “empower” individuals to gain their rights and to gain better access to the essential facilities and services which could help them improve their health. Recently, there

has been a move away from deficit models, towards recognition of the assets and capabilities that individuals with adversity possess (ESRC Human Capability and Resilience Priority Network at <http://www.ucl.ac.uk/capabilityandresilience>). The logic in this case is that interventions that acknowledged these positive strengths and removed barriers to their realisation would release capacity to act in ways that improved health and quality of life among the worst-off in society.

### Category 2: strengthening communities

This category covers a wide spectrum of interventions aimed at strengthening communities through building social cohesion and mutual support. The underlying cause of the observed inequalities in this respect is related to greater social exclusion/isolation and powerlessness in hard-pressed communities. In this context, the theory is that some of the most health-damaging effects of social inequality are those that exclude people from taking part in society, denying them dignity and self-respect.<sup>21, 22</sup>

The interventions at this level fall into two groups: horizontal and vertical. First, there are those that aim to foster horizontal social interactions between members of the same community or group to allow community dynamics to work. These range from community development initiatives that enable people to work collectively on their identified priorities for health, to building up the infrastructure in neighbourhoods—creating relaxing meeting places and facilities for instance—to make it easier for social interaction to take place. How might these initiatives influence inequalities in health? In theory, if people in marginalised communities were working well collectively, they could influence their local environment in small but constructive ways to create healthier conditions in their neighbourhood. These could include, for example, attracting resources to the area to improve community safety, or working together to tackle neighbourhood crime or to limit substance abuse or any other of their chosen priorities. These could lead to improvements in both physical and mental health in specific areas in the long run.<sup>23</sup>

Second, there are initiatives that foster vertical social interactions on a societal-wide basis. These are aimed at creating vertical bonds between different groups from the top to the bottom of the social scale, to build inclusiveness and full economic and political participation.<sup>24</sup> Examples include building inclusive social welfare systems and initiatives to strengthen the democratic process and make it easier for the disenfranchised to participate in it. The underlying theory behind the vertical initiatives is that fostering solidarity throughout society produces a less divided society, one with smaller social inequalities and hence more equitable access to the resources for health.<sup>25</sup>

### Category 3: improving living and working conditions

The initiatives at this level identify the critical cause of observed health inequalities to be greater exposure to health-damaging environments, both at home and at work, with declining social position. This is coupled with poorer access to essential goods and services such as safe food supplies, education and healthcare. Historically, improvements in the day-to-day living and working conditions and access to services have been shown to be important in improving the health of populations.

Initiatives in this category include some of the classic public health measures to improve access to adequate housing, sanitation, uncontaminated food supplies, safer workplaces, and better access to health and social care. A crucial point as far as addressing inequalities in health is concerned is that such public health measures are perceived as having the potential to benefit the health of the population in general, but especially that of the people living in the worst conditions, bringing about a reduction in the gradient in health.

The new agenda currently at this level is concerned not only with improving conditions in the physical environment, but also tackling the psychosocial health hazards encountered in the present day environment.

#### Category 4: promoting healthy macro-policies

These locate the causes of health inequalities in the overarching macroeconomic, cultural and environmental conditions prevailing in a country, which influence the standard of living achieved by different sections of the population, the prevailing level of income inequality, unemployment, job security and so on. The resulting interventions, therefore, are aimed at altering the macroeconomic or cultural environment to reduce poverty and the wider adverse effects of inequality on society. These include measures to ensure legal and human rights, “healthier” macroeconomic and labour market policies, the encouragement of cultural values promoting equal opportunities and environmental hazard control on a national and international scale (including upholding international obligations and treaties in this field). What these policies have in common is that they tend to span several sectors and work across the population as a whole, unlike some of the ones in categories 1 and 2, which focus on disadvantaged groups and areas, or in category 3, which tend to deal with specific sectors. However, they may have a differential impact on the standard of living, employment and opportunities open to different groups in the population, and as such have the potential to influence inequalities.

The potential for the differential impact of universal programmes is well illustrated by Korpi and Palme, who studied industrialised countries with different types of welfare state programmes, ranging from those targeted at the poor only, to corporatist, basic security and finally to encompassing (ie, universal programmes covering all citizens and giving them basic security combined with generous earnings-related benefits).<sup>26</sup> They found that it was the encompassing systems, covering all citizens, that produced smaller income inequalities, lower rates of poverty and greater redistribution across society. This illustrates that these universalistic policies were more efficient at reducing poverty than the flat-rate or targeted programmes, and that they also tackled the socioeconomic gradient across society, by reducing income inequalities, not solely focusing on the circumstances of those at the bottom of the social scale.

Influencing health inequalities is rarely the sole, or even the main, motivation for the interventions included in category 4. Their potential influence, both positive and negative, however, is profound, and should be assessed explicitly to inform future policy development.<sup>27</sup>

#### Case study A: applying the typology to work environment interventions

Karasek<sup>28</sup> has differentiated similar categories of interventions specifically in relation to reducing stressful psychosocial working conditions. Working conditions are potentially important in relation to social inequalities in health because there is a marked social gradient, with poorer conditions with decreasing occupational position. It has been postulated that part of the association between social position and the risk of cardiovascular

illness may be due to differences in psychosocial working conditions.<sup>29</sup>

Karasek<sup>28</sup> has suggested that theoretically there are four main points of intervention in the prevention of stress related to working conditions, and these roughly correspond to the four intervention categories discussed in the typology above. Firstly, there are person-based approaches, offering counselling and education to increase an individual’s skill and capacity to cope with the stress produced by the work set-up (strengthening individuals). These interventions treat the symptoms rather than the cause of the problem. Secondly, there are improvements in communication patterns and human relations, providing more opportunities for making decisions, joint problem solving with workmates and constructive feedback on how the job is going (strengthening mutual support in the work environment). Thirdly, there are changes in large-scale organisational issues in a company or organisation—re-designing production processes and management strategies which influence the tasks individual workers are asked to do (changes in facilities and improvements to the physical environment). Fourthly, there are entry points for interventions to influence the outside pressures imposed on workplace organisations. Market conditions and rules about competition, national labour relations programmes which influence employment rates, job security, wages, national levels of unemployment, etc, potentially have a huge impact on the psychosocial stress experienced in individual workplaces, even though these macropolicies are outside one organisation’s control (promoting healthy macropolicies).

This example illustrates the diversity of possible intervention points for a single problem of higher workplace psychosocial stress levels for lower occupational classes, depending on theories about the cause of the problem and feasibility of different actions by different actors.

#### Case study B: applying the typology to smoking interventions for inequalities

Cigarette smoking has become the focus of interventions to tackle health inequalities because in many (northern) European countries there is such a stark social gradient, both in smoking prevalence and in cessation rates. In 2001, in Britain, for instance, smoking rates ranged in a stepwise gradient from 15% for higher professional and managerial occupational groups to 35% for people in routine occupations.<sup>30</sup> Furthermore, nicotine dependence is higher in people experiencing disadvantage, and they find it more difficult to quit once they have become addicted.<sup>31</sup> The strong social gradient in cardiovascular diseases and lung cancer reflect to a certain extent the social patterning of smoking.

Interventions to tackle the problem are apparent in all four categories, although category 1 is the most popular by far. Activities under the heading of “strengthening individuals” include mass media information campaigns targeting disadvantaged areas, anti-smoking education programmes in schools in disadvantaged catchment areas, and smoking cessation clinics and individual counselling by health professionals, targeting poorer patients or areas. Pregnant women with low income are often singled out for intensive help and support of this nature.

Interventions under strengthening communities are less common, but those aimed at enhancing development horizontal social interactions have included community development initiatives among low-income women to encourage greater community participation, build confidence and stimulate mutual support. Some of these may not address smoking directly—their aim is to boost mutual support and participation, and, through that, to generate more conducive circumstances for participants to quit smoking.<sup>32</sup>

Category 3 includes interventions to create supportive environments for becoming smoke-free, ranging from regulations and laws to control smoking in public places and ban the supply of cigarettes to children, to curbing the promotional activities of the tobacco industry through restrictions on paid advertisements and brand sponsorship. Given that the environments in disadvantaged areas are often the most polluted by tobacco smoke, coupled with the tactic of some tobacco promotions of targeting poorer areas specifically, these interventions, although universal, have the potential for a greater impact in poorer groups and areas. Another intervention in this category is to increase access to goods and services to help quitting, such as providing free nicotine replacement treatment to smokers for whom cost is a barrier.<sup>18</sup>

Category 4 interventions include macroeconomic policies, such as those encapsulated in the WHO Framework Convention on Tobacco Control (<http://www.who.int/tobacco/framework>) that regulate supply and demand by legal or fiscal measures. Examples include control of the price of tobacco products through taxation; the use of litigation (primarily in the USA) as a means of controlling product use and distribution; Common Agricultural Policy changes that would reduce EU subsidies to farmers for growing tobacco and prevent the “dumping” of unwanted high-tar tobacco onto low-income countries at low prices; and closing the legal loopholes for smuggling.<sup>33</sup>

Pricing policy in this context provides another example of the important concept of differential impact. Although the policy is universal in that the pricing changes are applied across the board to cigarettes bought by any member of the public, the effect on the purchase of cigarettes is not uniform. Young people and lower-income groups show a greater response to price by reducing consumption as the price goes up.<sup>34</sup> Increasing the real price of tobacco, however, is controversial in the context of inequalities, as it would have a disproportionate effect on the living standards of the poorest households. Such households in Britain, for example, spend a larger proportion of their disposable income on tobacco, but find it more difficult to give up than more affluent groups, both because of greater nicotine addiction and because living in severe hardship itself is a big deterrent to quitting.<sup>35</sup> That is why the Acheson Inquiry advocated concomitant efforts to ameliorate the financial and social hardship and isolation experienced by low-income families if pricing policy was being contemplated.<sup>18</sup>

### Case study C: applying the typology to life course interventions

Recent initiatives in Britain have acknowledged the important body of work on the life course processes involved in the generation of health inequalities.<sup>36</sup> It is increasingly recognised that these processes are dynamic, with socially patterned exposures to health-damaging factors accumulating across the life course, leading to inequalities in lifetime risks. This work implies that interventions will have cohort, age and period effects, and that there may be critical phases or transitions in the life course when the potential impact may be particularly far-reaching. A poor start in life, for example, severely limits children’s opportunities to achieve their full health potential throughout life.<sup>37</sup>

Current British initiatives, such as Sure Start, have taken a life course-oriented approach, which can be seen to combine interventions from various levels of the typology. Sure Start is designed to intervene in a critical period in early childhood to improve the health and life chances of children from poor backgrounds. The schemes vary somewhat from area to area, but commonly combine personal education and advice on parenting (category 1: strengthening individuals); promotion of mutual support among parents (category 2: strengthening communities); and the provision of high-quality day care and

pre-school education for young children (level 3: improving access to life-enhancing services). This last one, in particular, if it leads to more favourable long-term educational trajectories for the children at the lower end of the social scale, has the potential in theory to improve their socioeconomic position in adulthood. In the most optimistic scenario, the improvement in socioeconomic position for such groups of children would eventually contribute to a reduction in the distance between socioeconomic positions in society—smaller social inequalities—with a knock-on effect on health inequalities.

More realistically, however, there is a limit to the expected effect such an initiative could have on the more ambitious aim of reducing social inequalities across society, as it has so far been restricted to the most disadvantaged areas only, and without the full support of wider macrosocial policies (category 4) that are the predominant influences on socioeconomic position.<sup>38</sup> Interventions such as Sure Start are embedded in existing services and policies, some of which may work against the positive impact of the new initiatives, and need to be monitored for their effect.<sup>37</sup>

### WHAT IS THE LIKELY EFFECTIVENESS OF THE DIFFERENT INTERVENTION CATEGORIES?

To date, most of the interventions to protect and promote health have not been evaluated for their differential impact on different socioeconomic groups, only for average impact across the population as a whole (the same comment could be made about curative healthcare interventions, so this is not a criticism solely of preventive and promotional activities). This makes it absolutely imperative to adopt a theory-based approach to guide the development and implementation of actions aimed at tackling social inequalities in health. We must make the best use of (a) the literature on causes of specific inequalities in health, (b) knowledge about the different contexts in which different socioeconomic groups live and (c) intervention programme theories, to come up with plausible mechanisms for bringing about the desired change.

All interventions in the future, whether preventive or curative, should ideally be assessed for differential impact by socioeconomic status. In addition, gender-specific and ethnicity-specific analyses need to be carried out when assessing differential impact by socioeconomic status. This is of critical importance because both the magnitude and causes of observed social inequalities in health may be very different for men and for women, and for different ethnic groups.

Even without this ideal situation, however, some conclusions can be drawn about the likely effectiveness. The evidence concerning category 1 interventions, for example, indicates that educational programmes to strengthen individuals rarely work in isolation, particularly for disadvantaged populations and areas. When combined with initiatives to create enabling environments that take account of structural barriers to healthier lifestyles, however, there is evidence of effectiveness at meeting educational goals.<sup>18 39 40</sup>

In addition, interventions in categories 1 and 2—strengthening individuals and communities—have been focused predominantly on deprived groups only, and have not involved wider sections of the population. They have also tended to treat the symptoms rather than the underlying cause of the problem, which may be located in the socioeconomic environment. There is only so much that these types of interventions can achieve if stronger influences, out of local control, are operating on inequalities.

By contrast, interventions in categories 3 and 4 involve every section of the population, although the crucial point in relation to tackling health inequalities is that they can have a differential impact, for better or worse. Some of the historical

improvements to living conditions and access to services, for example, can be seen to have benefited everyone, but most especially those subject to the worst conditions. The major public health works started in the industrial revolution to provide clean water and sanitation, the measures taken to provide universal education and healthcare, and to develop a comprehensive welfare system have played an important part in improving the overall health status. But, crucially for this discussion, they have been of greatest benefit to those who faced financial barriers to access before, and those in the most unsanitary, hazardous conditions. In other words, they operate on the unequal distribution of these important health determinants, and thereby directly tackle some of the causes of the social gradient in health.

Experience with interventions in category 4, to promote healthier macro-policies, also reinforces the importance of looking at the distribution of the effects of policies, rather than relying on overall figures. It is essential to monitor where the human costs and benefits of policies fall across the population. Where this has been done, evidence suggests, for example, that there can be healthy and unhealthy economic policies, which, moreover, have a differential impact on rich and poor people.<sup>27</sup> Economic policies that have protected or improved the standard of living of the poor, for example, have shown beneficial health effects, large enough sometimes to be reflected in health statistics for the population as a whole. Conversely, there are severely health-damaging macro-policies that need to be addressed.<sup>18 27</sup>

Finally, it is clear that the causes of social inequalities in health are multiple and inter-related. The action to tackle these causes also probably needs to be interconnected, across sectors and across intervention levels. Effectiveness may be hampered by isolated efforts at any of the policy entry points. At a recent consultation on health inequalities action, policy advisors were calling for evidence on “best buys”, asking: which combination of interventions in a policy system would be most cost-effective at reducing health inequalities?<sup>41</sup> The science in this field is far from answering that question and, indeed, an equity lens needs to be applied to the definition of cost-effective. Costs to whom? Benefits for whom? If the costs fall on the worse-off sections of the population and the benefits accrue largely to the government in the form of lower expenditure, then social justice will hardly be served.

Yet, the search for effective actions to tackle social inequalities in health highlights more than anything the need for a

### What this paper adds

- Many countries are wrestling with the question of what can be done to address the serious social inequalities in health that they face.
- This article introduces the literature on theory-based approaches to the assessment of interventions and applies the logic to actions to tackle social inequalities in health.
- By doing so, it presents a typology which differentiates health inequality interventions by their underlying theories of how and why the measures proposed are expected to have their impact.
- It is designed to stimulate debate and understanding among practitioners and policy-makers about the range of different interventions available and their potential effectiveness for the task in hand.

### Policy implications

- To date, most of the interventions to protect and promote health have not been evaluated for their differential impact on different socioeconomic groups, only for the average impact across the population as a whole.
- This makes it absolutely imperative to adopt a theory-based approach to guide the development and implementation of actions aimed at tackling social inequalities in health.
- We must make the best use of (a) the literature on causes of specific inequalities in health, (b) knowledge about the different contexts in which different socioeconomic groups live and (c) intervention programme theories, to come up with plausible mechanisms for bringing about the desired change.

new kind of evidence synthesis, one that casts its net wide over a broad social science literature base, interprets it against plausible theory and pieces the jigsaw together in a policy-relevant way.<sup>42</sup> Serious efforts to tackle social inequalities in health need such approaches more than ever.

Competing interests: None.

### REFERENCES

- 1 Horton R. Health inequality: the UK's biggest issue. *Lancet* 1997;**349**:1185.
- 2 Whitehead M, Dahlgren G. *Levelling Up, Part 1: Concepts and principles for tackling social inequalities in health*. Copenhagen: World Health Organization, 2006.
- 3 Regidor E. Measures of health inequalities: part 1. *J Epidemiol Community Health* 2004;**58**:858–61.
- 4 Regidor E. Measures of health inequalities: part 2. *J Epidemiol Community Health* 2004;**58**:900–3.
- 5 Galobardes B, Shaw M, Lawlor D, et al. Indicators of socioeconomic position: part I. *J Epidemiol Community Health* 2006;**60**:7–12.
- 6 Galobardes B, Shaw M, Lawlor D, et al. Indicators of socioeconomic position: part II. *J Epidemiol Community Health* 2006;**60**:95–101.
- 7 Kawachi I, Subramanian S, Almeida-Filho N. A glossary of health inequalities. *J Epidemiol Community Health* 2002;**56**:647–52.
- 8 Bartley M, Ferrie J. Glossary: unemployment, job insecurity, and health. *J Epidemiol Community Health* 2001;**55**:776–81.
- 9 Whitehead M. Diffusion of ideas on social inequalities in health: a European perspective. *Milbank Q* 1998;**76**:469–92.
- 10 Evans T, Whitehead M, Diderichsen F, Bhuiya A, Wirth M, eds. *Challenging health inequities: from ethics to action*. New York: Oxford University Press, 2001.
- 11 Mackenbach J, Bakker M, eds. *Reducing inequalities in health: a European perspective*. London: Routledge, 2002.
- 12 Wholey J. *Evaluation and effective public management*. Boston: Little, Brown, 1983.
- 13 Chen H-T. *Theory-driven evaluation: a comprehensive perspective*. Newbury Park, CA: Sage, 1990.
- 14 Weiss C. Theory-based evaluation: past, present and future. In: Rog D, Fournier D, eds. *Progress and future directions in evaluation: perspectives on theory, practice, and methods*. San Jose, CA: Jossey-Bass, 1997:41–56.
- 15 Goodman R, Wandersman A, Chinman M, et al. An ecological assessment of community-based interventions for prevention and health promotion: approaches to measuring community coalitions. *Am J Community Psychol* 1996;**24**:33–61.
- 16 Rush B, Ogborne A. Program logic models: expanding their role and structure for program planning and evaluation. *Can J Program Eval* 1991;**6**:95–106.
- 17 Bauld I, Judge K. *Learning from health action zones*. Chichester: Aeneas Press, 2002.
- 18 Acheson D, Barker D, Chambers J, et al. *Independent inquiry into inequalities in health report*. London: The Stationery Office, 1998.
- 19 Dahlgren G, Whitehead M. *Interventions to tackle social inequalities in health: what can we learn from what has been tried?* Technical input paper for King's Fund International Seminar on Tackling Inequalities in Health. Oxford: Ditchley Park, September, 1993.
- 20 Whitehead M. Tackling inequalities: a review of policy initiatives. In: Judge K, Benzeval M, Whitehead M, eds. *Tackling inequalities in health: an agenda for action*. London, King's Fund Institute, 1995.
- 21 Wilkinson R. *Unhealthy societies: the afflictions of inequality*. London: Routledge, 1996.
- 22 Sen A. *Development as freedom*. Oxford: Oxford University Press, 1999.

- 23 **Wallace R.** Social disintegration and the spread of AIDS—II: meltdown of socio-geographic structure in urban minority neighbourhoods. *Soc Sci Med* 1993;**37**:887–96.
- 24 **Lynch J, Due P, Muntaner C, et al.** Social capital—is it a good investment strategy for public health? *J Epidemiol Community Health* 2000;**54**:404–8.
- 25 **Navarro V.** *The political economic of social inequalities—consequences for health and quality of life.* New York: Baywood Publishing Company, 2001.
- 26 **Korpi W, Palme J.** The paradox of redistribution and strategies of equality: welfare state institutions, inequality and poverty in western countries. *Am Sociol Rev* 1998;**63**:661–87.
- 27 **Whitehead M, Dahlgren G, Gilson L.** Developing the policy response to inequities in health: a global perspective. In: Evans T, Whitehead M, Diderichsen F, Bhuiya A, Wirth M, eds. *Challenging health inequities: from ethics to action.* New York: Oxford University Press, 2001.
- 28 **Karasek R.** Stress prevention through work re-organisation: a summary of 19 case studies. In: International Labour Office, ed. *Preventing stress at work: conditions of work digest.* Geneva: International Labour Office, 1992.
- 29 **Marmot M, Bosma H, Hemingway H, et al.** Contribution of job control and other risk factors to social variations in CHD incidence. *Lancet* 1997;**350**:235–9.
- 30 **Office for National Statistics.** *Living in Britain: General Household Survey, 2001.* London: TSO, 2003.
- 31 **Jarvis M.** Patterns and predictors of smoking cessation in the general population. In: Bolliger C, Fagerstrom K, eds. *Progress in respiratory research: the tobacco epidemic.* Basel: Karger, 1997.
- 32 **Barlow J, Gaunt-Richardson P, Amos A, et al.** Addressing smoking and health among women living on low income. II. TAPS Tیره: a dance and drama group for rural community development. *Health Educ J* 1999;**58**:321–8.
- 33 **Joosens L, Raw M.** The health impact of the tobacco regime. In: Dahlgren G, Nordgren P, Whitehead M, eds. *The health impact of the EU Common Agricultural Policy.* Policy report from the National Institute of Public Health 1997: 3, Stockholm: Swedish National Institute of Public Health, 1997.
- 34 **Townsend J, Roderick P, Cooper J.** Cigarette smoking by socioeconomic group, sex and age: effects of price, income, and health publicity. *BMJ* 1994;**309**:923–7.
- 35 **Dorsett R, Marsh A.** *The health trap: poverty, smoking and lone parenthood.* London: Policy Studies Institute, 1998.
- 36 **Kuh D, Ben-Shlomo Y, eds.** *A lifecourse approach to chronic disease epidemiology.* Oxford: Oxford University Press, 2003.
- 37 **Graham H, Power C.** Childhood disadvantage and health inequalities: a framework for policy based on lifecourse research. *Child Care Health Dev* 2004;**30**:671–8.
- 38 **Graham H.** Social determinants and their unequal distribution: clarifying policy understandings. *Milbank Q* 2004;**82**:101–24.
- 39 **Gepkens A, Gunning-Schepers L.** *Interventions for addressing socio-economic inequalities in health.* Amsterdam: Institute of Social Medicine, University of Amsterdam, 1993.
- 40 **Arblaster L, Entwistle V, Fullerton D, et al.** *A review of the effectiveness of health promotion interventions aimed at reducing inequalities in health.* York: NHS Centre for Reviews and Dissemination, 1998.
- 41 **Petticrew M, Whitehead M, Macintyre S, et al.** Evidence for public health policy on inequalities. Paper I: the reality according to policymakers. *J Epidemiol Community Health* 2004;**58**:811–16.
- 42 **Whitehead M, Petticrew M, Graham H, et al.** Evidence for public health policy on inequalities. Paper II: assembling the evidence jigsaw. *J Epidemiol Community Health* 2004;**58**:817–21.

### bmjupdates+

bmjupdates+ is a unique and free alerting service, designed to keep you up to date with the medical literature that is truly important to your practice. bmjupdates+ will alert you to important new research and will provide you with the best new evidence concerning important advances in health care, tailored to your medical interests and time demands.

#### Where does the information come from?

bmjupdates+ applies an expert critical appraisal filter to over 100 top medical journals. A panel of over 2000 physicians find the few 'must read' studies for each area of clinical interest.

Sign up to receive your tailored email alerts, searching access and more...

[www.bmjupdates.com](http://www.bmjupdates.com)