Chapter 3

Policy process and practice

Policy process and practice

Introduction

3.1 At first sight, achieving an ethical public health policy seems straightforward: data on a particular public health problem need to be assessed, and an evidence-based strategy that can be justified in ethical terms needs to be adopted. However, while an evidence-based approach should be central to public health strategies, it is only part of what is required. Several other factors are important for successfully identifying, planning and implementing public health policies.

3.2 In the first part of this chapter we outline the main elements that need to be considered in any public health policy. We will comment on: the nature of evidence; the perception of risk; and the notion of a precautionary approach. All of these are often, if not invariably, invoked in discussions of state intervention in relation to public health. We then explore the objectives of public health policy and set out the processes of policy development. The objectives of policy have several dimensions, in theory and in practice. We highlight issues of individual choice, preservation of autonomy, reduction of inequalities, protection of vulnerable groups and targeting of at-risk groups. The challenge for public health measures at the population level is to achieve the right balance when several of these goals have simultaneously to be met. We also comment on factors that influence the acceptability of different types of policy and offer a model for comparison of different types of intervention, which we call the 'intervention ladder' (see paragraphs 3.37–3.38).

Evidence

3.3 According to one definition, evidence-based healthcare is:

> "the conscientious use of current best evidence in making decisions about the care of individual patients or the delivery of health services. Current best evidence is up-to-date information from relevant, valid research about the effects of different forms of health care, the potential for harm from exposure to particular agents, the accuracy of diagnostic tests, and the predictive power of prognostic factors."[1]

3.4 In the context of public health, there are two areas where consideration of relevant research findings is especially important: first, evidence about causes of ill health; and secondly, evidence about the efficacy and effectiveness of interventions.

- Evidence about causes: Sufficiently robust evidence is required to establish a causal link between a suggested risk factor and an illness or otherwise undesirable health outcome, for example between smoking and lung cancer. For some diseases, many factors may contribute and, for various reasons, the strength of the causal link between a risk factor and the harm is impossible to estimate accurately. For example, how much domestic violence is directly 'caused by' alcohol, and how much obesity is 'caused by' advertising of processed foods? It is often a question of using the most robust data available to aim for the best possible decision in the face of residual uncertainty.
- Evidence about effective interventions: In seeking to bring about a change in health policy, evidence is required about the potential of different paths of action to promote health or reduce harm, for example to determine the effect of pricing on tobacco consumption. This has also been called the *'Can it work?'* question.[2] Because many interventions bring

[1] First Annual Nordic Workshop on how to critically appraise and use evidence in decisions about healthcare, National Institute of Public Health, Oslo, Norway, 1996, see: http://www.shef.ac.uk/scharr/ir/def.html.

[2] Haynes B (1999) Can it work? Does it work? Is it worth it? *Br Med J* **319**: 652–3.

potential harms as well as benefits, and the potential for both benefits and harms may be unevenly distributed in the population, this question must be answered by assessing the overall balance between risks and benefits, and how these are distributed among different members of the population. A further question is whether an intervention that is efficacious in a research setting will have a similar degree of effectiveness in a particular real-world context. This has been called the *'Does it work?'* question.[3]

3.5 Public health interventions such as education and behaviour change programmes are not invasive and might be viewed as unlikely to cause any harm. However, there is evidence that some may do so. For example, training children in bicycle safety has been shown in some instances to have increased accident rates among children who cycle (probably because they or their parents became more confident after the training and they were then exposed to more risks). The 'Bike ed'[4] programme in Australia, designed to reduce cycle injuries, actually increased the risk of injury overall, doubling it in boys. Furthermore, the most adverse effects were observed among younger children, children from families with lower parental education, and children who lacked other family members who cycled, hence increasing socio-economic and gender inequalities which are particularly marked in any case for childhood injuries.[5] The implications of this observation are that well-intentioned and plausible interventions, even of a non-invasive kind involving only education, can do unanticipated harm.[6] This suggests that there is a duty on those introducing such measures to monitor their actual impact over appropriate timeframes, rather than simply assuming they are beneficial.

3.6 Moreover, the design of such interventions, where the exact weight and role of different factors may not be clear-cut from the outset, often requires a different kind of approach to evidence gathering. The assessment of both evidence about causes and evidence of effective interventions needs to be sensitive to the specific issues raised in that particular area of public health.

3.7 The adoption of an evidence-based approach brings with it certain assumptions as to what constitutes good evidence, and it is important to scrutinise carefully any source of evidence. For example, media stories often turn out to be based on anecdotes, unpublished reports or preliminary results, or they overstate, misrepresent or misunderstand the claims of the researcher.[7] The minimum hurdle for evidence to be reported (or to be considered in public health policy more generally) is that it should be published in the peer-reviewed literature, or have been subject to an equivalent scrutiny by expert peers. This hurdle by no means guarantees that the evidence is irrefutable as, for example, the quality of papers accepted varies greatly between scientific journals. However, peer review suggests a certain robustness as findings are scrutinised by experts in the field and research is open to repeat investigation.[8]

3.8 One further important aspect of evidence gathering is the selective use of evidence. Perhaps only some of the literature will be cited, or explanations rely on a particular strand of scientific evidence, ignoring or excluding other evidence. All groups, politicians, the media, single

[3] *Ibid*.

[4] A school-based education programme for developing cycle safety skills and knowledge; see: www.bikeed.com.au.

[5] Carlin J, Taylor P and Nolan P (1998) School based bicycle safety education and bicycle injuries in children: a case control study *Injury Prevention* **4**: 22–7.

[6] Macintyre S and Petticrew M (2000) Good intentions and received wisdom are not enough *J Epidemiol Community Health* **54**: 802–3.

[7] The Bad Science column of the *Guardian* newspaper provides many telling examples, see http://www.badscience.net; as does the National Library for Health's 'Hitting the Headlines' resource, see http://www.library.nhs.uk/rss/newsAndRssArchive.aspx?storyCategory=0.

[8] Science Media Centre (2003) *Peer Review in a Nutshell*, available at: http://www.sciencemediacentre.org/downloads/peer_review_in_a_nutshell.pdf; Sense About Science (2005) *"I Don't Know What to Believe …" Making Sense of Science Stories*, available at: http://www.senseaboutscience.org.uk/index.php/site/project/30.

interest groups and scientists are capable of this. An example that we cover in a later chapter concerns inadequate presentations of the evidence on fluoridation (see paragraphs 7.42–7.47). We also note that the UK House of Commons Science and Technology Committee's Report *Scientific Advice, Risk and Evidence Based Policy Making* describes cases where research has been commissioned or interpreted to support existing or planned policies. The authors coin the term 'policy-based evidence' for using evidence in this way.[9]

3.9 A related issue is the status of views that are not considered to be 'mainstream' or typical of the scientific community. Such heterodox views sometimes turn out to be correct, so it is important that they are not ignored. At the same time, they need to be seen in context. Science progresses by challenging and testing current ideas and explanations of whatever phenomenon is under scrutiny. Therefore when scientists 'disagree with one another', this merely reflects the normal process of scientific enquiry. Often, there is a 'centre of gravity' of scientific opinion, with a distribution of views around it. Sometimes this polarises into competing hypotheses or interpretations of data. These kinds of disagreement, however, are rather different from the case where only one or a few individuals hold an unrepresentative view against the overwhelming body of current scientific evidence. The best approach to the issue of scientific disagreement, as recommended in the Chief Scientific Advisor's Guidelines in 2000,[10] is to acknowledge openly where there is disagreement and take into account a wide range of views.

3.10 A further challenge for an evidence-based approach is dealing with the question of proving a negative finding. The statement 'there is no evidence that *x* is harmful to human health' prompts the question 'is absence of evidence of harm the same as evidence of absence?' It is generally accepted that it is difficult or impossible to prove a negative, because further investigation may eventually reveal a positive instance. Therefore, the 'no evidence' proposition should always be accompanied by both a summary of what has been done to look for a risk and the qualification that there can be no absolute certainty.

3.11 As we will see below (paragraphs 3.14, 3.39–3.44) and in the case studies in the following chapters, even where every reasonable step has been taken to ensure that evidence is robust, in practice it is often incomplete or ambiguous, and usually will be contested. Thus scientific evidence does not necessarily lead to a clear policy that is likely to be the most effective. Choices between competing policy options often need to be made under extreme time pressure, allowing little time for reassessment of evidence or more information gathering. Although scientific experts may sometimes be tempted, or pressured, in these circumstances into offering precise answers to policy makers, the honest answer will often be "we don't know" or "we can only estimate the risk to within certain, sometimes wide, limits". It follows that claims of absolute safety or certainty should be treated with great caution.

3.12 While an evidence-based approach to public health policy can be fraught with difficulty, it is worth emphasising that in the UK and in many other countries (as well as at European Union (EU) level) there are established structures of independent scientific advisory committees. These committees seek to thoroughly and impartially assess the available evidence underpinning public health and other policies.[11] Increasingly these committees meet in public, so that their work is transparent and open to challenge.

[9] House of Commons Science and Technology Committee (2006) *Scientific Advice, Risk and Evidence Based Policy Making*, available at: http://www.publications.parliament.uk/pa/cm200506/cmselect/cmsctech/900/900-i.pdf.

[10] See May R (2000) *Guidelines 2000: Scientific Advice and Policy Making*, available at http://www.berr.gov.uk/science/page15432.html; see also: HM Government (2000) *Guidelines on scientific analysis in policy making*, available at: http://www.berr.gov.uk/files/file9767.pdf.

[11] These include the following: Advisory Committee on Novel Foods and Processes, Committee on the Medical Effects of Air Pollutants, Advisory Committee on Dangerous Pathogens and European Commission Scientific Committee for Food.

Risk

3.13 Part of the answer to the question of whether or not the state should intervene to protect and promote health depends on the nature and extent of the risk involved, including the degree to which it is potentially under the control of the individual. However, there is disagreement on how risk should be defined. For example:[12]

- According to what might be termed the statistical view, health risk is defined primarily in terms of the probability of an event occurring in relation to the severity of the impact of the event.[13] The focus is therefore mainly on estimating the magnitude of the risk by means of scientific and technical assessment. This is the usual basis of risk assessment for policy formulation. Sometimes health risks, assessed by scientific evidence, are expressed in terms of frequency of deaths. For instance the risk from smoking could be expressed as premature deaths per thousand people. One development of this idea is to present scales of relative risk with which to compare different health factors, for example one disease causing a higher morbidity rate than another.[14]
- Some commentators reject views such as the statistical one, and in particular those approaches that are presented as 'absolute', 'objective' or 'pure' measures of risk, arguing that perceptions of risk always vary with people's value judgements. In what might be termed the social construct view, risk is framed both by inbuilt personal biases that result in certain kinds of risks being more relevant than others, and by what is accepted in particular social groups, or society as a whole. Some factors that influence the way that people perceive risks are summarised in Box 3.1.

Box 3.1: Factors that may influence people's perception of risk

Familiarity with risk: Some risks (such as lung cancer from smoking) are often viewed as more acceptable than others (such as damage from a vaccine), even when the actual likelihood of harm is in the other direction. Where hazards are familiar; are perceived as being under the individual's control; are natural rather than man-made; or the consequences are only seen much later, they are often considered to be more acceptable.[15] Two particularly important factors are the possible scale of harm, for example where consequences are perceived as 'catastrophic', and 'unknowable risks', where people feel insufficiently qualified to judge the likelihood of the occurrence of a bad event.

The base-rate fallacy: Risks are often misinterpreted when presented as percentages or probabilities. One such error is the so-called base-rate fallacy. For instance: if a cancer-screening programme is reported to reduce the risk of dying from breast cancer by 25%, how many lives are saved? Is it 25 out of every 100 women? It is not; the correct answer depends on the overall frequency of deaths from breast cancer in the female population (the base rate). If, for example, the overall mortality rate is four in 1,000, the 25% reduction in risk from screening is from four to three per 1,000 women, or 0.1%.[16]

Focus on benefits or harms: A glass can be described as either 'half empty' or 'half full': the problem is the same but it is framed differently. This can have a direct and powerful impact on decisions of lay people and professionals alike.[17] A specific instance is 'prospect theory' according to which losses loom larger than gains to most people making risk assessments.[18]

[12] See The Royal Society (1992) *Risk: Analysis, Perception and Management, Report of a Royal Society Study Group* (London: The Royal Society); The Royal Society (1997) *Science, Policy and Risk* (London: The Royal Society).

[13] See: Hansson SO (2007) Risk, in *Stanford Encyclopedia of Philosophy*, available at: http://plato.stanford.edu/archives/sum2007/entries/risk/.

[14] Calman K and Royston GHD (1997) Risk language and dialects *Br Med J* **315**: 939–42; Calman K (1996) Cancer: science and society and the communication of risk *Br Med J* **313**: 799–802; House of Commons Science and Technology Committee (2006) *Scientific Advice, Risk and Evidence Based Policy Making*, available at: http://www.publications.parliament.uk/pa/cm200506/cmselect/cmsctech/900/900-i.pdf.

[15] House of Commons Science and Technology Committee (2006) *Scientific Advice, Risk and Evidence Based Policy Making*, available at: http://www.publications.parliament.uk/pa/cm200506/cmselect/cmsctech/900/900-i.pdf, p.95; Hampson SE, Severson HH, Burns WJ, Slovic P and Fisher KJ (2001) Risk perception, personality factors and alcohol use among adolescents *Personality and Individual Differences* **30**: 167–81.

[16] Gigerenzer G (2002) *Reckoning with Risk* (London: Penguin Books), pp.59–60.

[17] Tversky A and Kahneman D (1981) The framing of decisions and the psychology of choice *Science* **211**: 453–8; McNeil BJ, Pauker SG, Sox HC and Tversky A (1982) On the elicitation of preferences for alternative therapies *New Engl J Med* **306**: 1259–62.

[18] Kahneman D and Tversky A (1979) Prospect theory: an analysis of decision under risk *Econometrica* **47**: 263–91.

3.14 We take the view that the assessment of health risks in the development of policy should be based on what we have termed the 'statistical approach'. In other words, policy should be based on the best available scientific evidence, using generally accepted criteria for evaluating the quality and implications of the evidence. We recognise that people's perceptions of risk are shaped by many factors (see Box 3.1), as well as by the way in which the media presents the 'facts', and may not coincide with the scientific evaluation. So in drawing on a statistical or scientific evaluation of risk, it is important to spell out the assumptions and uncertainties so that people are as fully aware as possible of what lies behind the assessment. Policy makers might nevertheless include in their decision making not only the scientific assessment of risk, but also people's perceptions, which influence the acceptability of a particular risk. For instance, rail travel is safer than road travel, but it would be politically difficult to regulate road safety (for instance by lower speed limits and stricter enforcement) to a level equivalent to rail, because most people are willing to accept a higher risk in a car than in a train. Travelling by train may be safer in the statistical sense, but the factors that make risk less acceptable, such as lack of individual control and the potential catastrophic nature of an accident, mean that the acceptable level of risk for rail travel is lower than that for road travel.

Precaution and proportion

3.15 The 'precautionary principle' is often invoked in discussions about public health. It is regarded by many as the key to responsible risk management where there is some evidence of a serious threat to health, safety, or the environment. The principle exists in several different forms, one of which is set out in Principle 15 of the *Rio Declaration on Environment and Development*. This states that:

> "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."[19]

The precise meaning of the principle has been the subject of intense debates, and we make no attempt to repeat the discussion here.[20] However, in applying the precautionary principle it is important to recognise that it is not a single inflexible rule, but a way of applying a set of interacting criteria to a given situation. For this reason we prefer the term precautionary *approach*, rather than precautionary *principle*.

3.16 The central feature of the precautionary approach is that it is *dynamic*. Drawing on a Communication by the European Commission,[21] five main elements can be distinguished: (a) scientific assessment of risk, acknowledging uncertainties and updated in light of new evidence; (b) fairness and consistency; (c) consideration of costs and benefits of actions; (d) transparency; and (e) proportionality. Stated this way, the approach seems so sound as to be unexceptionable, but of course the challenge arises in making judgements when applying it. To justify precautionary action, the nature or degree of acceptable uncertainty needs to be

[19] Rio Declaration on Environment and Development (1992) *The United Nations Conference on Environment and Development*, Rio de Janeiro, 3–14 June 1992; available at: http://habitat.igc.org/agenda21/rio-dec.htm.

[20] For a summary see House of Commons Science and Technology Committee (2006) *Scientific Advice, Risk and Evidence Based Policy Making*, available at: http://www.publications.parliament.uk/pa/cm200506/cmselect/cmsctech/900/900-i.pdf; and Nuffield Council on Bioethics (2003) *The Use of Genetically Modified Crops in Developing Countries* (London: NCOB), pp.57–9.

[21] European Commission (2000) *Communication from the Commission on the Precautionary Principle*, available at: http://ec.europa.eu/dgs/health_consumer/library/pub/pub07_en.pdf. Note that the Communication uses the term 'precautionary principle' rather than 'precautionary approach', used by us. In one sense it may be unimportant which term is used; however, we think that the term 'approach' conveys more immediately that there is not just one, but several principles or considerations that need to be considered.

assessed on a case-by-case basis, as do the risks of 'doing nothing', and the risks of other alternatives.[22]

3.17 In any policy decision, it is furthermore important to consider the seriousness of the problem and the urgency with which it should be addressed. Policy makers have limited time and resources, and issues that pose severe and urgent threats to the health of many people are rightly prioritised over those that are only 'possible threats', affect health in a relatively minor way or involve fewer people. The need for a public health intervention may be dictated by urgency, most obviously with the emergence of an epidemic of a serious infectious disease (see paragraphs 4.47–4.55, 4.57–4.72). However, a problem may be severe without being 'urgent', as in the case of chronic behaviour-related conditions such as obesity, which affect large numbers of people and put increasing pressure on the healthcare budget (see paragraphs 5.40–5.42).[23] In practice, an estimate of 'severity' and 'level of urgency' may be difficult to make and potentially contestable, for the kinds of reasons discussed above (paragraphs 3.3–3.12).

3.18 As this discussion illustrates, one of the most difficult decisions that policy makers need to take relates to identifying which policy response is appropriate in each particular case. A central criterion for judging appropriateness is highlighted in the European Commission's Communication on the precautionary approach: that of proportionality. There are several different aspects to the concept. First, in the form of a *balancing* test, it enjoins us to assess whether the aims of public health goals are sufficiently important to permit consideration of particular means, such as laws, policies or specific interventions. Secondly, a *suitability* test concerns an assessment of the degree to which a certain means will achieve the desired end. Thirdly, a *necessity* test requires that if a particular objective can be achieved by more than one means, then the means should be chosen that causes the least intrusion in the lives of the individuals or communities concerned while still achieving adequate effectiveness. We illustrate these different dimensions further in paragraphs 3.37–3.38.

3.19 In summary, application of the precautionary approach and of proportionality comes down, not simply to applying a formula, but to a judgement that takes into account the particular circumstances of the problem to be addressed. The different dimensions we have highlighted above help guide our scrutiny of justifications given for particular polices or interventions.

Choice

3.20 We concluded in Chapter 2 that liberal societies respect individuals' autonomy by enabling them to make responsible choices for themselves. Current UK Government policy in relation to public health has a clear focus on this approach, as expressed, for example, in the 2004 White Paper *Choosing Health*.[24] However, choice and autonomy are not straightforward concepts in relation to public health (see also paragraph 1.4). First, many apparent choices are not actually available to certain sectors of society. This may be because of constraints of affordability, accessibility, information, education and social or cultural background, or, as for

[22] See also: Better Regulation Task Force (2003) *Five Principles of Good Regulation*, available at: http://www.brc.gov.uk/upload/assets/www.brc.gov.uk/principlesleaflet.pdf. The five principles are proportionality, accountability, transparency, consistency and targeting. A proportionate approach requires that any action to protect public health must be judged not only in relation to the risks to the public, but also in relation to the costs, both economic and social to those who might be affected by a specific action. The Better Regulation Task Force was set up by the UK Government in 1997, and is now the Better Regulation Commission.

[23] Wanless D (2002) *Securing our Future Health: Taking a long-term view*, available at: http://www.hm-treasury.gov.uk/consultations_and_legislation/wanless/consult_wanless_final.cfm.

[24] Department of Health (2004) *Choosing Health: Making Healthy Choices Easier*, available at: http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4094550.

children, because choices are made for them by others. Secondly, many activities that appear to be voluntary choices are often an expression of rather unreflective habitual behaviour, such as the types of food we buy, what we eat for breakfast or how we spend our leisure time. These deeply engrained habits are often difficult to change. Thirdly, choices are frequently predetermined to some extent by the industries that manufacture the products people buy, the planners who design their built and work environments, and the advertisers who promote certain options over others. In this context the government has an important facilitatory role, for example through regulations on the types of product that may be marketed, to whom, and in which form (see paragraphs 2.41–2.44, 2.47–2.50). Fourthly, even for those with the means and knowledge to make choices, the abundance of options available means that making an optimal choice is difficult.[25] In many of these situations, people often adopt the 'coping strategy' of making a choice that is satisfactory rather than the best possible.

3.21 From an ethical and practical standpoint, an important dimension of public health policy is therefore to balance the liberal emphasis on choice and autonomy, with the imperative to support those who do not have the opportunities to choose, because of, for instance, poverty or dependency (see paragraphs 2.27–2.32). So strategies could aim either to change external circumstances, so that healthy choices are easier to make, or, to leave those circumstances unchanged, but improve people's capacities, so that they are better able to make healthy choices.

Vulnerable groups, health inequalities and targeted interventions

3.22 Few people would disagree that societies should put in place measures to protect vulnerable individuals and groups. However, what is less clear is who counts as vulnerable and the extent to which particular freedoms may be curtailed to ensure their protection. A child whose parents feed her a diet of biscuits and chips is 'vulnerable' but does society have the right to interfere with parents' choices and the 'sanctity' of the home? Clearly both 'vulnerability' and 'protection' require careful assessment in the context of any particular decision. At the same time there are legally established notions of abuse that constitute unacceptable forms of behaviour towards the vulnerable (see paragraphs 5.39, 6.14, 6.32–6.33).[26]

Social inequalities in health

3.23 There is great variation between social groups in health risks, health-related behaviours, physical and mental health, and life expectancy.[27] Variation often depends on socio-economic status, gender, race or ethnicity, migration history, degree of urbanisation, and religion or caste. Influences on social inequalities in health include: genetics; prenatal and postnatal environments; personal and family dispositions, resources and habits; local environments; and political and economic forces.

3.24 There is clear evidence to link low socio-economic status (usually measured by occupation, education, income or ownership of assets such as homes or cars) to poorer health (see Boxes 5.5, 6.2, 6.4).[28] It is especially striking that the link appears to be one with relative poverty rather

[25] Schwartz B (2004) *The Paradox of Choice* (New York: Harper Collins).

[26] For example, the Children Act 1989 (section 31) establishes the threshold for intervention in terms of (a) risk of significant harm to the child, (b) this harm being attributable to parenting failures and (c) intervention being to the child's benefit.

[27] Acheson D (1998) *Independent Inquiry into Inequalities in Health* (Norwich: The Stationery Office), available at: http://www.archive.official-documents.co.uk/document/doh/ih/ih.htm.

[28] Health and health behaviours usually display a gradient by socio-economic status, so that successively more advantaged groups show longer life expectancy, better health and more health-promoting behaviours. For example, in 1997–1999 in England and Wales, life expectancy at birth was 78.5, 77.5, 76.2, 74.7, 72.7 and 71.1 years, respectively, among men in the six occupational classes ranked from the most to the least socially advantaged. See: Donkin A, Goldblatt P and Lynch K (2002) Inequalities in life expectancy by social class, 1972–1999 *Health Statistics Quarterly* **15**: 5–15. There is a steady gradient all the way up the social scale, rather than a threshold between the low-income groups and the rest of society. This means it is difficult to define one segment of the population as 'deprived' or 'disadvantaged', and other segments as 'non-deprived' or 'advantaged'.

than the absolute level of income.[29] Absolute levels of income rose considerably throughout the 20th Century, and life expectancy for both the lowest and highest socio-economic groups has increased.[30] However, the association between poor health (and less healthy behaviours) and belonging to the lowest socio-economic group in one's society has remained almost constant, although the forms of ill health have changed. For example, higher rates of heart disease, smoking and obesity are more common among poorer sections of society in developed countries.

3.25 Gender differences in health and life expectancy are partly biological and partly the result of different social roles, exposures and expectations.[31] These differences vary in different countries and regions, and are influenced by social, cultural, employment and economic factors, but often result in health inequalities between men and women within a population.

3.26 Many diseases and behaviours are patterned by ethnic group, but ethnic minority groups do not always have poorer health, and there is considerable variation among ethnic groups. For example, relative to the general population, the prevalence of hypertensive-related diseases is high in African-origin populations but that of coronary heart disease is low.[32] Whereas the prevalence of diabetes tends to be consistently higher among ethnic minorities than the general population, this is not the case for obesity.[33] With the exception of those from Black Caribbean, Black African and Irish backgrounds, men from minority ethnic groups have markedly lower obesity prevalence rates than those in the general population (see Box 5.6). For almost all minority ethnic groups it has been shown that individuals are more likely than those in the general population to be non-drinkers, and less likely to be 'binge-drinkers' (see Box 6.2).[34]

3.27 The reduction of health inequalities is a crucial element of public health policy, and was chosen by the UK Government as a major topic for its presidency of the EU in 2005. Reducing health inequalities was, in 2006/7, included for the first time by the Department of Health for England as one of the top six priorities for the NHS, and since April 2007 it has been a mandatory target for local authorities through local area agreements.[35] In 2002 the

[29] Wilkinson RG (1997) Socioeconomic determinants of health: health inequalities: relative or absolute material standards *Br Med J* **314**: 591. There are several competing theories about the major factors that determine ill health and life expectancy. For example, according to some authorities inequalities per se can be source of ill health, see Marmot MG, Shipley MG and Rose G (1984) Inequalities in death: specific explanations of a general pattern *Lancet* **i**: 1003–6; Marmot MG, Davey Smith G, Stansfeld S *et al*. (1991) Health inequalities among British civil servants: the Whitehall II Study *Lancet* **337**: 1387–93.

[30] Although, generally, life expectancy, health and health-related behaviours have shown a steady improvement over the past 50 years, those in more advantaged social groups have often seen a faster improvement. Where this occurs, for example particularly for men, this means that the gap between those at the bottom and top of the social scale has been widening (although there are some indications that very recent years have seen a narrowing trend). For example, the difference in mortality between professional and unskilled manual men since the 1930s has increased more than twofold. In more recent years the difference in life expectancy between men in social group I and social group V has increased from 5.4 years in 1972–6 to 8.4 years in 1997–2001. For women, the difference has decreased from 5.3 to 4.5 years over the same period. Department of Health (2005) *Tackling Health Inequalities: Status report on the Programme for Action* (London: Department of Health), p.15.

[31] Macintyre S and Hunt K (1997) Socio-economic position, gender and health *J Health Psychol* **2**: 315–34; Macintyre S, Hunt K and Sweeting H (1996) Gender differences in health: are things really as simple as they seem? *Soc Sci Med* **42**: 617–24; Gender and Health Group at the Liverpool School of Tropical Medicine *Guidelines for the Analysis of Gender and Health*, available at: http://www.liv.ac.uk/lstm/hsr/GG-1.html.

[32] Becker E, Boreham R, Chaudhury M *et al*. (2006) *Health Survey for England 2004: The health of ethnic minorities* (Leeds: The Information Centre), available at: http://www.ic.nhs.uk/pubs/hlthsvyeng2004ethnic; Nazroo J (1997) *The Health of Britain's Minorities* (London: Policy Studies Institute); Harding S and Maxwell S (1998) Differences in mortality of migrants, in *Health Inequalties. ONS Decennial Supplement Series DS No 15*, Whitehead and Drever (Editors) (London: The Stationery Office); Harding S (2000) Examining the contribution of social class to high cardiovascular mortality among Indian, Pakistani and Bangladeshi male migrants living in England and Wales *Health Statistics Quarterly* **5**: 26–8, available at: http://www.statistics.gov.uk/articles/hsq/HSQ5migrant.pdf.

[33] Becker E, Boreham R, Chaudhury M *et al*. (2006) *Health Survey for England 2004: The health of ethnic minorities* (Leeds: The Information Centre), available at: http://www.ic.nhs.uk/pubs/hlthsvyeng2004ethnic.

[34] *Ibid*.

[35] Caroline Flint MP, *Hansard*, 5 December 2006, column 173.

Department of Health set a target for reducing inequalities in infant mortality and life expectancy at birth by 10% by 2010.[36] In 2004 further targets to reduce health inequalities were added, including: reducing adult smoking rates, with a particular emphasis on those among 'routine and manual groups'; halting the rise in obesity among children; and reducing the under-18 conception rate, all by 2010.[37] However, data for 2003–5 on infant mortality showed that the gap between the 'routine and manual groups' and the population as a whole had widened since the 1997–9 average. Additionally, data for 2003–5 show that nationally life expectancy had continued to increase although more slowly in areas with poorer health indicators.[38] For smoking, data for 2005 showed that the number of adults overall who smoked had fallen since 2001 from 27% to 24%, while for 'routine and manual groups' the figure reduced from 33% to 31%.[39]

3.28 Generally, we can distinguish between three policy approaches that play a significant role in avoiding health inequalities: those targeted at a particular disadvantaged group, those targeted at a particular at-risk group, and those offered universally, although in practice the distinctions can become somewhat unclear. Some people may benefit from all three, and many people who might benefit from strategies aimed at disadvantaged groups might also benefit from those aimed at at-risk groups. The following advantages and disadvantages of these three approaches are especially noteworthy.

Targeting disadvantaged groups

3.29 Targeted interventions typically aim to improve health outcomes or opportunities in a particular disadvantaged group (see paragraphs 2.27–2.32). Examples include free nicotine replacement for individuals on income support or the provision of additional resources for specific deprived areas (for example Health Action Zones or New Deal for Communities). Such interventions may be beneficial in reducing inequalities in health, although individuals in socially disadvantaged groups can find it difficult to change their behaviour because of lack of resources, lack of education, or co-existing social or health problems.[40] Where this is the case, such behaviour change programmes may produce relatively little aggregate health gain at comparatively high cost. However, targeted interventions should not be dismissed simply because of their comparatively higher costs. It has been observed we are "paying dearly – in higher crime rates, diverging mortality rates and widening levels of education achievement – for the soaring inequalities that began in the early 1980s."[41]

3.30 Several practical issues also need to be considered in targeted approaches. For example, interventions may fail to reach the intended recipients because of uncertainties about eligibility; and they may stigmatise already marginalised groups, or disadvantage those who fall just outside the eligibility criteria. Area-based targeting can raise questions of whether

[36] Department of Health, *Spending Review 2002 Public Service Agreement*, available at: http://www.dh.gov.uk/en/Aboutus/HowDHworks/Servicestandardsandcommitments/DHPublicServiceAgreement/DH_074514.

[37] Department of Health, *Spending Review 2004 Public Service Agreement*, available at: http://www.dh.gov.uk/en/Aboutus/HowDHworks/Servicestandardsandcommitments/DHPublicServiceAgreement/DH_4106188.

[38] Department of Health (2006) *Tackling health inequalities: 2003–05 data update for the national 2010 PSA target*, available at: http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsStatistics/DH_063689. A three-year average for 2003–5 showed a slight narrowing of the gap between the 'routine and manual groups' and the population as a whole compared with the previous year.

[39] Department of Health (2006) *Autumn Performance Report 2006*, available at: http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_062807.

[40] For example, smoking cessation services are least successful among those of lower socio-economic status, those smoking more than 31 cigarettes per day, those with health problems, and those with other smokers in the household. Judge K, Bauld L, Chesterman J and Ferguson J (2005) The English smoking treatment services; short term outcomes *Addiction* **100**: 46–58; Ferguson J, Bauld L, Chesterman J and Judge K (2005) The English smoking treatment services; one year outcomes *Addiction* **100**: 59–69.

[41] Lansley S (2006) *Rich Britain: The rise and rise of the new super-wealthy* (London: Politico's Publishing), p.202.

extra services are actually going to the areas where people have the lowest socio-economic status, or only to areas where local politicians or councillors have been highly influential or effective. Area-based approaches are often a combination of targeted and universal services, because although they select deprived areas, all local residents are eligible. As noted above, there is a continuous gradient of socio-economic and health disadvantage. Some targeted approaches seem to have most benefited the slightly better off among the target group, while even harming those lower down the scale. For example, Sure Start, an area-based programme aimed at tackling child poverty and social exclusion, is a universal area-based intervention for all families living in designated areas. The initial evaluation shows few significant differences between intervention and comparison areas, but some indication of adverse effects among the most deprived (those who were teenagers when their child was born, lone parents and workless households).[42]

Targeting at-risk groups

3.31 Although many strategies that target the disadvantaged face the problem of stigmatisation, this may matter less where interventions seek to help those who are at specific risk because of their general behaviour patterns. For example, where there are clear cause–effect relationships in relation to harm, the offer of an intervention may be more acceptable, such as when HIV screening is offered to groups who frequently engage in unprotected sex. However, there may still be a risk of stigmatisation, especially where those so targeted are also among the most socially marginalised, such as illicit drug users, prostitutes and homosexual men.

Universal provision

3.32 The universal provision of public health interventions might appear to be more neutral than the two alternative options of targeting, as it avoids stigmatisation, and simply relies on people taking up available opportunities. For example, there is evidence that structural changes such as Clean Air Acts, or banning smoking in public places, have positive effects on reducing health inequalities.[43] However, in the case of other interventions, especially those that are information based (such as nutrition labelling, anti-smoking adverts or drink-driving campaigns), strategies may actually increase social inequalities as more advantaged groups in society are more likely to avail themselves of health promotion advice.[44]

3.33 Therefore, although universal measures may not *aim* to target particular groups, they often have the *consequence* that some groups benefit more than others, and hence these groups might be targeted *indirectly*. For example, an intervention to provide better food labelling relies on people reading the labels, understanding the information and using the knowledge gained to buy appropriate healthy foods. In reality, the target population may be motivated

[42] Belsky J, Melhuish E, Barnes J, Leyland AH and Romaniuk H (2006) Effects of Sure Start local programmes on children and families: early findings from a quasi-experimental, cross sectional study *Br Med J* **332**: 1476–82; available at: http://www.nao.org.uk/pn/06-07/0607104.htm.

[43] The prevalence of smoking and exposure to passive smoking is highest in communities with the lowest socio-economic indicators. Therefore, a reduction in exposure to environmental smoke as a result of a ban in smoking in public places is expected to reduce health inequalities. Royal College of Physicians (2000) *Nicotine Addiction in Britain: A report of the Tobacco Advisory Group of the Royal College of Physicians* (London: RCP), available at: http://www.rcplondon.ac.uk/pubs/books/nicotine/.

[44] This appears to have happened in the case of some health education campaigns directed at the whole population, for example anti-smoking programmes or dietary advice. More socio-economically advantaged social groups have reduced smoking rates and moved towards dietary recommendations more quickly than their less-advantaged peers. Acheson D (1998) *Independent Inquiry into Inequalities in Health: Report* (London: The Stationery Office); Gepkens A and Gunning-Schepers LJ (1996) Interventions to reduce socioeconomic health differences: a review of the international literature *Eur J Public Health* **6**: 218–26. There is also evidence that they make more use of preventive services such as immunisation, dental check-ups and cervical screening.

by factors other than 'healthy' eating, such as convenience, palatability, price and availability or custom. They may hold an outdated model of 'healthy eating' that differs from that of policy makers, or they may simply be unable to read or understand the labels. This can lead to the argument that supports targeted approaches. If some groups are more likely than others to benefit from particular measures (by being targeted indirectly), it would be preferable for policy makers to consider from the outset who should benefit primarily.

3.34 Thus the two public health goals of improving population health and reducing health inequalities may sometimes be in conflict. Targeting the already advantaged may produce aggregate health gain at relatively little cost, whereas targeting the disadvantaged may produce less aggregate health gain and at greater cost. Providing universal services in order to avoid stigmatisation, or to provide equal access to improved services, may actually increase social inequalities in outcome. It is ultimately a political decision as to how the goals of improving aggregate health or reducing inequalities should be weighted, and monitoring that provides evidence about the effectiveness of particular strategies is of crucial importance in this context.

Behaviour change

3.35 Personal behaviours can have a significant effect on health, and therefore a common theme in public health policy is behaviour change. There are several different strategies aimed at individuals or communities, driven by numerous overlapping models of behaviour and behaviour change.[45] The types of measure that might be involved include regulation, taxes, subsidies and incentives, and provision of services and information. Such measures can be effective in bringing about behaviour change; however, again, these policies may actually increase health inequalities (see paragraphs 3.32–3.33).[46] They can also face difficulties such as cultural sensitivity and public acceptability.

3.36 One increasingly prominent approach is social marketing, which the National Social Marketing Centre defines as "the systematic application of marketing techniques and approaches to achieve specific behavioural goals, to improve health and reduce health inequalities".[47] Thus, social marketing uses many of the methods used by commercial companies to influence consumer behaviour including strategies such as consumer orientation, strategic planning, relationship building and stakeholder marketing. Social marketing has been used, for instance, in campaigns to persuade people not to smoke, not to drink excessively, especially when driving, to use condoms and to eat more healthily. Commentators have observed that there is a burgeoning evidence base to support the effectiveness of social marketing approaches.[48]

The intervention ladder

3.37 To assist in thinking about the acceptability and justification of different policy initiatives to improve public health we have devised what we call the 'intervention ladder' (Box 3.2). The first and least-intrusive step on the ladder is to do nothing, or at most monitor the situation. The most intrusive is to legislate in such a way as to restrict freedoms significantly, either for

[45] Halpern D, Bates C, Beales G and Heathfield A (2004) *Personal Responsibility and Changing Behaviour: The state of knowledge and its implications for public policy* (London: Prime Minister's Strategy Unit).

[46] *Ibid*.

[47] French J and Blair Stevens C (2005) *Social Marketing Pocket Guide*, 1st Edition (London: National Social Marketing Centre for Excellence).

[48] Gordon R, McDermott L, Stead M and Angus K (2006) The effectiveness of social marketing interventions for health improvement: what's the evidence? *Public Health* **120**: 1133–9.

some groups of the population or the population as a whole, in order to achieve gains in population health.[49] The higher the rung on the ladder at which the policy maker intervenes, the stronger the justification has to be. A more intrusive policy initiative is likely to be publicly acceptable only if it is clear that it will produce the desired effect and that this can be weighed against the loss of liberty that will result (see also Box 3.3).

Box 3.2: The intervention ladder

The range of options available to government and policy makers can be thought of as a ladder of interventions, with progressive steps from individual freedom and responsibility towards state intervention as one moves up the ladder. In considering which 'rung' is appropriate for a particular public health goal, the benefits to individuals and society should be weighed against the erosion of individual freedom. Economic costs and benefits would need be taken into account alongside health and societal benefits. The ladder of possible policy action is as follows:

Eliminate choice. Regulate in such a way as to entirely eliminate choice, for example through compulsory isolation of patients with infectious diseases.

Restrict choice. Regulate in such a way as to restrict the options available to people with the aim of protecting them, for example removing unhealthy ingredients from foods, or unhealthy foods from shops or restaurants.

Guide choice through disincentives. Fiscal and other disincentives can be put in place to influence people not to pursue certain activities, for example through taxes on cigarettes, or by discouraging the use of cars in inner cities through charging schemes or limitations of parking spaces.

Guide choices through incentives. Regulations can be offered that guide choices by fiscal and other incentives, for example offering tax-breaks for the purchase of bicycles that are used as a means of travelling to work.

Guide choices through changing the default policy. For example, in a restaurant, instead of providing chips as a standard side dish (with healthier options available), menus could be changed to provide a more healthy option as standard (with chips as an option available).

Enable choice. Enable individuals to change their behaviours, for example by offering participation in an NHS 'stop smoking' programme, building cycle lanes, or providing free fruit in schools.

Provide information. Inform and educate the public, for example as part of campaigns to encourage people to walk more or eat five portions of fruit and vegetables per day.

Do nothing or simply monitor the current situation.

3.38 The implications of the intervention ladder will be considered in more detail in the following chapters. For now we clarify that it is not the case that the option of 'doing nothing' requires no justification, as deciding to 'do nothing' is itself a value judgement and may have adverse consequences for some. For example, not regulating vehicle speed limits or blood-alcohol limits might result in deaths or injuries (see also paragraphs 3.15–3.19).[50] Primarily, the function of the ladder is to compare alternative approaches in terms of their intrusiveness and likely acceptability, and not a means of allowing judgements in absolute terms. The intervention ladder is, therefore, not a formulaic device, but, further to our observations on proportionality, a tool for bringing into sharper focus the issues at stake (see paragraph 3.18).

[49] And these benefits, again, might affect some groups of the population, or the population as a whole.

[50] In fact, the option of 'doing nothing' may require strong justification, for example in relation to rising levels of sexually transmitted infections.

Box 3.3: Coercive measures in place in the UK

There is a variety of coercive measures that the population in the UK is already familiar with, ranging from legislative measures to civil agreements. For example:

- legal restrictions on owning a gun;
- tenancy agreements that restrict the level of noise that can be made;
- legislation that restricts the level of noise that companies can produce;
- health and safety legislation on the wearing of protective clothing;
- speed restrictions on roads;
- pedestrianisation of some city centres;
- restrictions on eating and drinking in public places (such as on buses or in 'alcohol control areas'); and
- planning regulations and building standards.

Stakeholders and policy making

3.39 The success of public health interventions often depends on more than the cooperation of members of the population. Many different stakeholder groups, including health professionals, the corporate sector, non-governmental organisations (NGOs), institutions of civil society and the media, can have a crucial role to play.

3.40 Healthcare professionals may be the front line of giving advice to the public. At the same time they may have competing priorities, including providing treatment or engaging in research.

3.41 Commercial organisations have an important role in the case of obesity, alcohol and smoking (see Chapters 5 and 6), and we commented in paragraphs 2.47–2.50 on the emergence of the concept of 'corporate social responsibility'. In policy and practice, most industry-led initiatives aim to enable people to have a choice of more healthy, or less unhealthy, products. However, the fundamental tension for most industries is that their primary interest is in maximising profits, which is often in conflict with public health interests. This is perhaps most clear in the case of the tobacco industry (see also paragraphs 6.18–6.27). From a public health point of view, companies that take seriously the pursuit of 'harm reduction strategies', which feature prominently in most corporate responsibility approaches, should simply cease to offer their products. However, this is not a realistic option if they are to remain in business. One of the questions is thus to what extent it is necessary or appropriate for industries to be regulated by laws imposed by a stewardship-guided state (see also paragraphs 2.41–2.44, 2.50).

3.42 Other important stakeholders are the voluntary sector and NGOs. Many of these groups represent otherwise disadvantaged people whose interests might not ordinarily be heard in policy debates. For example, the Afiya Trust seeks to promote equality in health and social care for groups disadvantaged on ethnic grounds. Others include Action on Smoking and Health (ASH), which campaigns to reduce smoking, and Diabetes UK and Cancer Research UK, which combine research, advice and other support for individuals, with campaigning about particular health problems. By contributing to the policy process through responses to government consultations or more direct contact with officials, a wide range of groups challenge ongoing policy projects and aim to ensure that the interests of their constituencies are presented in an appropriate way to decision makers. Some of the campaigning organisations, such as Vaccination Awareness Network UK (VAN UK), are 'grass roots' groups that have been founded by an individual or group of individuals in relation to a particular cause or concern. Regardless of whether NGOs are 'grass roots' or established national or multinational organisations, they can have a valuable role to play in policy development.

3.43 Although NGOs are often perceived as acting 'for the good of the public' and therefore as more trustworthy than officialdom,[51] it should be borne in mind that NGOs may have a vested interest, a commercial imperative and a 'product' in a way that it not dissimilar to a business. Some may be sponsored by a commercial company with an interest or agenda in this area. An organisation that campaigns on behalf of a sector of the public with a particular kind of worry may even rely for its support on that worry being amplified and even distorted.

3.44 Views expressed through television, radio and print media, and increasingly the largely unrestricted information available on the Internet, have considerable influence on people's opinions. Concerning public health, two especially important areas relate to the concepts of 'risk' and 'evidence' (see paragraphs 3.3–3.14). Health and science programmes and features can assist people in forming their views about public health matters. At the same time, the media can also provoke or amplify public concerns by inaccurate, biased or unhelpful portrayal of risks and evidence. For example, it has been suggested that the media "did much to stoke fear and panic about MMR",[52] following the suggestion in a study published in the *Lancet* of a link between MMR vaccination, and Crohn's disease and autism.[53] The study was generally considered to be weak and considerable other evidence did not support its findings,[54] but it was widely reported in the media, causing misperceptions of the strength of the evidence.[55] We comment further on this case in Chapter 4 (see paragraphs 4.33–4.35, also paragraphs 8.20–8.24). There are also examples in which media stories dwell on disagreements among scientific experts, and there can be a tendency to champion the minority view, justified as 'representing a balance of different points of view'.[56] While we see it as a crucial part of scientific progress to ensure that dominant views are challenged, media stories are often driven by the notion of 'heroes and villains', with the lone scientist as the plucky outsider standing up to the establishment. Such formats can do far more harm than good in helping people to think through the issues for themselves, especially when the issues are complex.

3.45 The interpretation of all the various strands of opinion and its translation into policy is a matter that politicians and their advisors must consider. As representatives of the people, in the context of public health, politicians are expected to enact laws and implement policies that enable people to live healthy lives. At the same time, politicians can have personal or professional conflicts of interest, for example where an industry is a major employer in a Member of Parliament's constituency, or if he or she personally gains financially from a

[51] MORI (2003) *Trust in the Government Low*, available at: http://www.mori.com/polls/2002/uea.shtml.

[52] *Guardian* (16 June 2006) *The Media's MMR shame*, available at: http://commentisfree.guardian.co.uk/brendan_oneill/2006/06/when_journalism_kills.html.

[53] Wakefield AJ, Murch SH, Anthony A *et al*. (1998) Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children *Lancet* **351**: 637–41.

[54] The journal that published the paper has since stated that the study was flawed and that it should never have published it. In 2004, six years after its publication, ten of the 13 authors of the paper issued a retraction. Further studies, in particular a Cochrane systematic review published in 2005, have found insufficient evidence for the claimed link between the MMR vaccine and either autism or inflammatory bowel disease. Dunne R (2004) Inside the world of medical journals *BBC News Online* 23 February, available at: http://news.bbc.co.uk/1/hi/health/3513791.stm; Murch SH, Anthony A, Casson DH *et al.* (2004) Retraction of an interpretation *Lancet* **363**: 750; Cochrane Library (2005) *The Cochrane Library publishes the most thorough survey of MMR vaccination data which strongly supports its use*, available at: http://www.cochrane.org/press/MMR_final.pdf.

[55] Hargreaves I, Lewis J and Speers T (2003) *Towards a Better Map: Science, the public and the media* (London: Economic and Social Research Council).

[56] For example Dr Arpad Pusztai's views on the dangers of genetically modified foods (discussed in Nuffield Council on Bioethics (1999) *Genetically Modified Crops: The ethical and social issues* (London: NCOB), Appendix 1) and the Hooper theory on AIDS (see WHO (2000) *Statement on the Hypothesis that an Experimental Polio Vaccine was Origin of HIV*, available at: http://www.who.int/inf-pr-2000/en/state2000-04.html).

business.[57] More generally, governments are under pressure from industries that emphasise the value they bring to a country in terms of employment opportunities and tax revenues. This may discourage politicians from taking action to protect health if it comes at an economic cost.

3.46 Political interests can also have significant impact on public health matters when politicians are motivated by the need to be seen to be 'doing something'. They may have to choose between an intervention that would be popular straight away but ineffective, and another having less immediate appeal but more likely to be successful in public health terms. For example, discussions about banning 'junk food' appear to have enjoyed some popularity with the electorate. Yet, although important issues are raised by the quality of food available in schools and other places, it is important not to oversimplify a complex problem, diverting attention from other more promising strategies.

Economics

3.47 Economic considerations affect policy making in numerous ways. We have already alluded to possible tradeoffs between employment and health. The economic arguments for supporting different types of intervention vary with different ethical frameworks and assumptions about health behaviour.

3.48 In the UK the healthcare system is financed from general taxation. Any healthcare intervention that affects individual choices and health outcomes will have a potential impact therefore, albeit indirect and financial, on others through its cost to the system. The Wanless Report drew sharp conclusions about the lack of affordability of treatment by the NHS if the population remained reluctant to engage more actively in improving its own health. The report concluded that if the public were 'fully engaged' with improving their own health, the NHS would be spending £154 billion a year by 2022–3.[58] In the worst-case scenario – that of a slow uptake – the figure would be £184 billion. The report argued that improving healthy behaviours will have benefits in reducing the potential burden on the NHS as well as improving health.

3.49 Another potential impact of poor health is on the productivity of the workforce. The implication is that healthy populations will have fewer absences for sickness, a higher proportion of the population able to work and no loss of skills through premature deaths. Conversely, actions that impact adversely on public health can lead to loss in productivity.

3.50 Taxing unhealthy behaviours would be one method of reducing harm to others and ensuring that the 'polluter pays'.[59] The aim of such policy interventions is to ensure economic efficiency and that we make the best use of scarce resources. There are, however, issues of fairness or equality attached to different interventions. The tax burden on individuals will be uneven if the same tax is applied to all, as there is variation in disposable income and in health behaviour. Using a purely economic criterion of fairness, it might be argued that smokers do not impose particular strain on the healthcare system, as they contribute much in taxes (see Box 6.7).

---

[57] For example, the Rt Hon Kenneth Clarke MP has been involved with, and latterly the Deputy Chairman of, British American Tobacco for much of his time in parliament, where he has held positions including Secretary of State for Health and Chancellor of the Exchequer. See British American Tobacco *Who we are*, available at: http://www.bat.com/oneweb/sites/uk__3mnfen.nsf/0/09586a20b7eede4980256bf400019873?OpenDocument. See also Daube M (2005) Why Ken Clarke is unfit to be Tory leader *Br Med J* **331**: 912.

[58] Wanless D (2002) *Securing our Future Health: Taking a long-term view*, available at: http://www.hm-treasury.gov.uk/consultations_and_legislation/wanless/consult_wanless_final.cfm.

[59] According to the 'polluter pays' principle, more generally used in relation to the environment, where environmental damage occurs it is the polluter that pays the costs of the damage.

3.51 We have already recognised that some health-related behaviours may not be regarded as 'free choices' (see paragraphs 1.4, 3.20–3.21) because they are affected, for example, by addiction, or by economic and social environments. This may lead to public support for government interventions that support restrictions of individual choice. Other public health interventions may need to be made at a population level to be successful, for example the design of environments that encourage people to walk rather than take transport. Such policies can have economic consequences in terms of jobs or changes in government revenue patterns. From an economic perspective the question is whether there is an overall gain in benefits from a programme in cost terms compared with not having this intervention. However, in policy terms any costs might be outweighed by the value of individuals being able to make choices.

3.52 Other values might also be considered when examining the potential cost-effectiveness of different policy options, such as quality and quantity of life, public good and altruistic aspects of improving public health and reducing health inequalities.

The policy-making debate

3.53 The policy-making process is an exercise in collective judgement. It requires debate on the evidence about particular risks, and about what these mean in a particular context. Debate is required not merely about ethical principles, but about how those principles should be applied in context and how to resolve possible conflicts between principles. The policies debate can also turn on how one particular issue impacts on other policy – for example, the creation (or reduction) of employment, the diversion of limited resources from other deserving causes, and so on – and the relative importance and urgency of this issue compared with competing issues.

3.54 The example of smoking (see Chapter 6) illustrates some of these challenges. Few people contest that passive smoking can cause harm, and few people object to the principle that, broadly speaking, air in public places should be smoke-free. However, the question of whether this principle is relative or absolute, and the question of how far the state should interfere to enforce it, is a matter for debate. Some people would argue that smoking is acceptable 'between consenting adults' and that the policy maker's role is to ensure that a proportion of pubs, restaurants and workplaces are smoke-free so that non-smokers can 'choose' to avoid contaminated air. Others might contest that the sale of cigarettes should be made illegal and those who 'deal' these addictive and dangerous drugs should be penalised. These two 'framings' of the policy debate on smoking – and the many additional framings in between – each represent a different way of conceptualising the issue and a different combination of values and priorities. In practice, conflicts about substantive differences help to focus attention on the procedural arrangements that are put in place to resolve those conflicts (see paragraph 2.25).

Summary

3.55 We emphasised in this chapter that policy decisions are not made mechanically when a set of evidence is added to a set of ethical principles and economic considerations. We have described several criteria that can ensure that evidence has some degree of robustness (peer review, not using research findings selectively or overstating them, acknowledging openly where there is disagreement). However, we recognise that, in practice, information about evidence and risks is often incomplete, ambiguous and contested, and may not lead by itself to a clear indication of which policy is likely to be the most effective.

3.56 We noted that reducing health inequalities is a crucial part of health policy in the UK, and we considered a range of issues arising from different strategies used for this end (targeting the disadvantaged, targeting at-risk groups and universal approaches). We also noted that some plausible and well-intentioned public health measures may actually do more harm than good, and some may even increase, rather than decrease, inequalities. We suggest therefore, that all approaches require careful design and monitoring to ensure population health can be improved overall, while health inequalities are reduced.

3.57 In presenting the intervention ladder, we offered a tool for thinking about the acceptability and justification of different policy initiatives, focusing on the degree of invasiveness in relation to a particular goal. We also gave examples of a range of liberty-reducing legislative or regulatory measures that have been introduced by the state, for example in the form of health and safety regulation. In the last section we commented on the role of other parties, such as journalists or commercial companies, underlining the notion that public health engages the collective efforts of society (see paragraph 1.6). In the next four chapters we illustrate in more detail how these considerations relate to issues of infectious disease, obesity, smoking and alcohol, and fluoridation of water.