# WHY CARE ABOUT HEALTH INEQUALITY?

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**Acknowledgements**
Health inequalities research is undertaken within most social science and medical disciplines and provokes almost as many opinions as there are researchers. Therefore, in order to keep the text focussed and of reasonable length I have concentrated on the opinions that some health economists hold about some of the issues in the health inequalities debate. I am very grateful to Gwyn Bevan, Martin Buxton, Tony Culyer, Peter Zweifel and, in particular, Hugh Gravelle for useful comments and suggestions on previous drafts, and for editorial advice provided by Jon Sussex and Adrian Towse. That said, the choice of issues raised, and any mistakes in the text, are my sole responsibility.

**About the author**
Adam Oliver is a health economist at the Office of Health Economics and is Chair of the UK Health Equity Network.

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# 1 INTRODUCTION



Public policy in the UK is placing increasing emphasis on health inequalities. The first signal of this renewed commitment came soon after the Labour government was elected. In 1997 it commissioned an independent review of health inequalities with a view to identifying priority areas for future policy development. The review was published as the Acheson Report (Department of Health, 1998a). In addition, the government released a consultation paper, *Our Healthier Nation*, which expressed the following key objectives (Department of Health, 1998b):

(i) to improve the health of the population as a whole by increasing the length of people's lives and the number of years people spend free from illness;

(ii) to improve the health of the worst off in society and to narrow the health gap.

The government's plans to establish Health Action Zones in order to target health inequalities in England were detailed in *Our Healthier Nation*. A description of the Health Action Zones, as detailed in *Our Healthier Nation*, is given in Box 1. Health Action Zones bring together all those who contribute towards health in a local area, including health and social care agencies, with the objective of developing and implementing locally-defined strategies for improving health.

The government's interest in reducing health inequalities has also led it to review the capitation formulae that are used to allocate Department of Health funds to the approximately one hundred health authorities in England. The current formulae are based on the principle of equal access to health care for equal need. However, it is well documented that health inequalities may actually widen under this equity principle (e.g., Culyer, 1995a; Culyer and Wagstaff, 1992): for example, relatively well informed and educated people may be more adept than their less well educated counterparts at taking advantage of the opportunities to access health care. The government is currently consult-

ing about the possibility of introducing new allocation formulae that better contribute to reducing avoidable health inequalities.

This monograph looks at health inequalities in the UK from a health economics perspective. Chapter 2 contains some evidence on health inequalities in the UK, and Chapter 3 briefly outlines the main arguments that have been put forward to explain the differences in health across social class. A normative justification for reducing health inequality is given in Chapter 4. Chapter 5 takes a closer look at whether inequalities in health across all types of groups are inequitable, and Chapter 6 discusses definitions of equity in health. Chapter 7 gives a critical appraisal of the Acheson Report. Chapter 8 looks at one way in which health economists may contribute towards taking the health inequalities debate forward. Chapter 9 concludes.

### Box 1 **Health Action Zones**

Health Action Zones (HAZs) bring together a partnership of health organisations, including primary care, with Local Authorities, community groups, the voluntary sector and local businesses (Department of Health, 1998b). They are supposed to deliver measurable and sustainable improvements in the health of the public and in the outcomes and quality of services by achieving better integrated treatment and care.

They try to harness the energy and innovativeness of local people and organisations by creating alliances to achieve change. Local partners are encouraged to provide specific ideas and mechanisms. Organisations and groups are expected to work in partnership with HAZs delivering support and 'investment' against agreed milestones.

HAZ status is long term, spanning a period of five to seven years, and should provide added impetus to the task of tackling ill health and reducing inequalities in health.

# 2 EVIDENCE OF HEALTH INEQUALITIES IN THE UK



The creation of the UK National Health Service (NHS) in 1948 was an attempt to give everyone access to reasonable minimum standards of health care regardless of their ability to pay. In the decades that followed, it became increasingly apparent that although the health status of the relatively poor had improved over time, health differentials across the social classes had remained significant. Indeed, there is now abundant evidence of health-related inequalities across various different groups, defined by gender, race, geographical location, lifestyle, income or social class. Much of this evidence was reviewed in the Acheson Report (Department of Health, 1998a) and the earlier Black Report (Department of Health and Social Security, 1980) and will not be repeated wholesale here.

Health inequalities defined by social class have formed the main focus of attention in the literature. The Acheson Report confirmed that although there has been a general health improvement for people within all social classes since the 1970s, there is evidence to suggest that health inequalities, particularly between social classes I and V, are significant and have generally been increasing. The social classes are defined as:

I: Professional
II: Managerial and technical
III(N): Skilled (non-manual)
III(M): Skilled (manual)
IV: Partly skilled
V: Unskilled

It is important to note the changes in the percentage of the population in each social class over time. For example, between 1931 and 1971 there was a 178% increase in the number of males aged 15-64 in social class I in England and Wales, and a 35% decrease in the number of males aged 15-64 in social class V (Illsley and Le Grand, 1987). Therefore a simple comparison of health indicators between people in social classes I and V

Table 1 **Percentage of the population in each social class, 1975 and 1995, Great Britain**

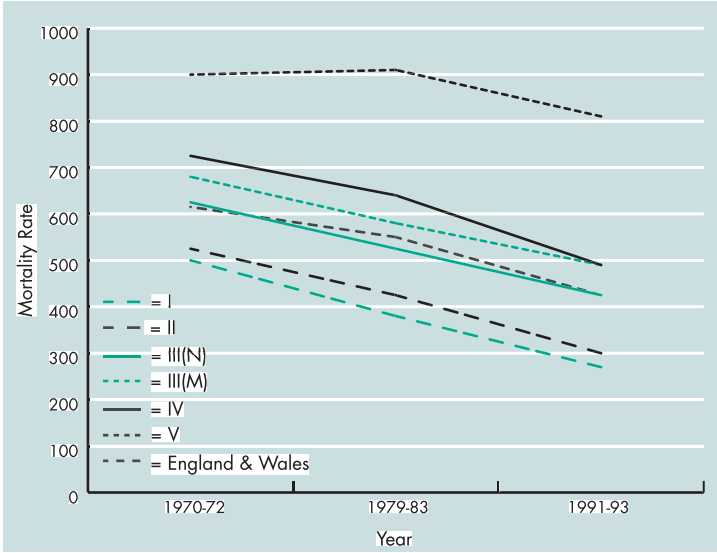
| Social class | 1975 | 1995 |
|---|---|---|
| I | 3 | 4 |
| II | 9 | 15 |
| III(N) | 32 | 34 |
| III(M) | 24 | 21 |
| IV | 24 | 19 |
| V | 7 | 6 |

*Source:* Office for National Statistics (1997a).

between 1931 and 1971 would fail to take account of the higher proportion of the population experiencing the best health and the lower proportion of the population suffering the worst health. How significant in terms of population size were social classes I and V in the 1990s compared to the 1970s? Table 1 suggests that in Great Britain between 1975 and 1995, the changes in the percentage of the population in social classes I and V were not great.

In this monograph, health is thought of in terms of a person's whole lifetime health experience: for example, life expectancy or quality-adjusted life expectancy (QALE). Consider two individuals, one a 75 year old woman in poor health and the other a 45 year old woman in better but less than perfect health. When comparing their health now it might seem appropriate to direct more attention towards the 75 year old, as she has the worse health. However, it may be the case that the 75 year old has had a full and healthy life whereas the 45 year old may have been dogged by illness since birth. It is thus appropriate to compare the lifetime health experiences of the two individuals before reaching a conclusion as to who is more deserving of attention in relation to their health.

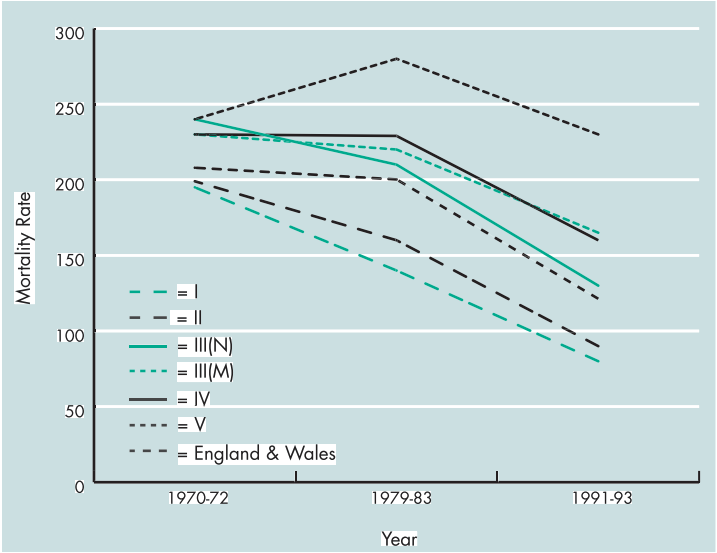
Figure 1 **Males aged 20-64; all cause mortality rate per 100,000, England and Wales**




*Data source:* Drever and Bunting (1997).

That said, Figures 1 to 3, which show the extent to which general health improvement has coincided with still significant absolute levels of health inequality, define health in terms of mortality rates. Though mortality rates do not measure lifetime health, they are likely to be negatively correlated with life expectancy and QALE. Figure 1 illustrates the absolute change in all cause mortality per 100,000 population for class-defined males aged 20-64 between 1970-72 and 1991-93 and shows that there was for all social classes a fall in the absolute mortality rate. Figures 2 and 3 illustrate the corresponding trends specifically for coronary heart disease and lung cancer. Whereas Figures 1 and 2 show that the absolute health inequalities between the highest and lowest social classes widened over the 1970-72 to 1991-93

Figure 2 **Males aged 20-64; coronary heart disease mortality rate per 100,000, England and Wales**



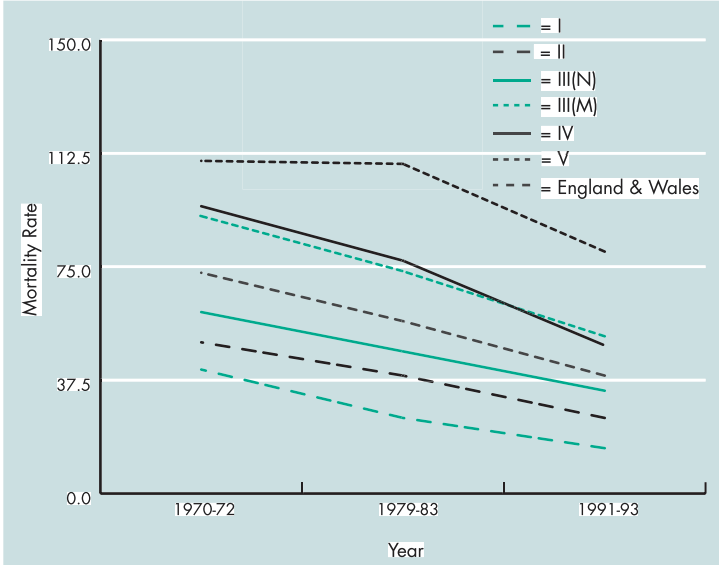

*Data source:* Drever and Bunting (1997).

period, Figure 3 shows that the absolute difference in male lung cancer mortality did not significantly change over the period. However, the overall trend appears to show a widening absolute difference in the mortality rates between social classes I and V.

A measure of health inequality known as the range provides a vivid picture of how the all cause mortality rates (used to construct Figure 1) widened between social classes I and V over the 1970s-1990s period. The range is usually presented as a ratio of health between social classes, which, in terms of the mortality rate in social class I in relation to that in social class V, measured:

1 : 1.794 in 1970-72,
1 : 2.440 in 1979-83,
1 : 2.879 in 1991-93.

Figure 3 **Males aged 20-64; lung cancer mortality rate per 100,000, England and Wales**




*Data source:* Drever and Bunting (1997).

These statistics indicate that the absolute mortality rate was approximately 1.8 times higher in social class V than in social class I in the early 1970s (males aged 20-64); by the early 1990s, the mortality rate was approximately 2.9 times higher in social class V compared to social class I.

The range measure of health inequality has been criticised for two main reasons (Wagstaff et al., 1991):

(i) It does not reflect the experience of the entire population; it only reflects the experience of, for example, social classes I and V.

(ii) It is not sensitive to changes in the distribution of the population across socio-economic groups.

Figure 1 suggests that social class V is something of an out-

lier, at least in terms of absolute mortality rates for men aged 20-64.[1] If the health experiences of men aged 20-64 are generalised to the entire population, then a case can be put forward that the many millions of people who comprise the lowest social class are experiencing disproportionately poor health. Therefore it seems reasonable to concentrate on the relative position of those in social class V rather than on the health inequalities that exist throughout the social strata. If we concentrate on the relative levels of health status between social classes I and V, then, as stated earlier, we do not have to worry too much about the changes in the distribution of the population in these two social classes since the distribution changed little between the 1970s and 1990s (Table 1).

Whilst the range is a suspect measure for comparing trends in health inequality over long time periods – e.g. between the 1920s and 1970s (Illsley and Le Grand, 1987) – and in those circumstances alternative measures of health inequality are more appropriate (Wagstaff et al., 1991), over relatively short periods of time it can provide a quite powerful indicator of health

1 Illsley and Le Grand (1987) have questioned the suitability of generalising the health status of men of working age to the entire population. By concentrating on this sub-section of the population they argue that important health trends, and potentially diminished and diminishing health inequalities, are overlooked. For example, the narrowing rates of infant mortality across the social classes between the early 1920s and the early 1970s are not captured by concentrating on men aged 20-64. However, when focussing on the 1970s-1990s period rather than the much longer period between the 1920s and 1970s (the early part of which saw the virtual eradication of infectious disease), many of the social class-defined health trends, including the trends in infant mortality rates, may not deviate so significantly from the mortality rates of men aged 20-64. Illsley and Le Grand also question the use of mortality rates as an indicator of health, and argue that mortality does not distinguish between the cause and age of death. However, as stated in the text, it is assumed here that a person's lifetime health experience is the relevant indicator of health, which is in turn assumed to be negatively correlated with mortality.

inequality. Between the 1970s and 1990s the range in all cause mortality appears to indicate that health inequalities between those worst off and best off in society have widened.

# 3 CAUSES OF HEALTH INEQUALITY ACROSS SOCIAL CLASS



The causes of health inequalities across social class are multitudinous, complex and inter-related. They are associated with lifestyles, life chances, deprivation, psychological factors, such as stress and envy, and much more. In many circumstances the causes are poorly understood. For example, is it social class that determines health or health that determines social class? Or does the relationship between social class and health run both ways and if so, which direction predominates, if either? The answers to these questions are disputed and yet may have important policy implications.

Rather than attempting to fully address this highly controversial area, I will for now concentrate on the income implications of social class on health, and will summarise a debate that has been very evident in the literature over the past decade; that between the proponents of the absolute and relative income hypotheses.

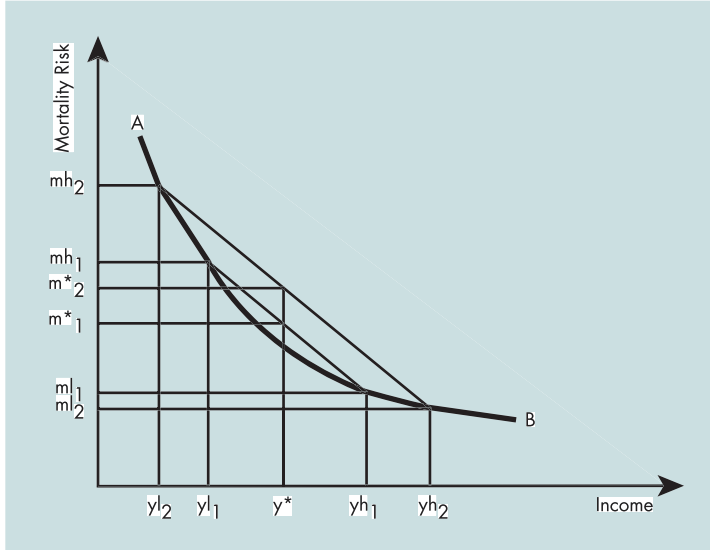
## 3.1 The absolute income hypothesis

The absolute income hypothesis is that the higher an individual's income the better their health, *ceteris paribus*. Thus, greater income inequality will automatically generate greater health inequality. The absolute income hypothesis is diagrammatically depicted in Figure 4, taken from Gravelle (1998).

The curve AB in Figure 4 simply shows that as income increases, the risk of mortality decreases at a decreasing rate. Mortality risk depends only on a person's absolute income level. Subscripts 1 and 2 refer to countries 1 and 2. In Figure 4, income inequalities $yl_1yh_1$ and $yl_2yh_2$ respectively lead to health inequalities $ml_1mh_1$ and $ml_2mh_2$ in countries 1 and 2.

However, the hypothesis that health and inequality in health are not only affected by absolute income levels but also by income inequality in itself has been the subject of much debate.

Figure 4 **The relationship between income inequality and health**




*Source:* Gravelle (1998).

## 3.2 The relative income hypothesis

The relative income hypothesis has been principally associated with Richard Wilkinson (e.g. Wilkinson, 1996). Wilkinson does not deny that absolute income levels affect health. However, he argues that once the gross domestic product per head of a population exceeds some threshold level of income, the distribution of income has an increasing and possibly predominant importance on health and health inequality.

The relative income hypothesis predicts that in developed countries, people's perceptions of the level of income inequality within their society or reference group can generate stress, shame, envy and distrust among those with lower income,

which can be ultimately detrimental to their health and wellbeing. Moreover, inequalities in income and power can motivate adverse external impulses by the worst off, such as antisocial behaviour and a refusal to engage in civic activities. Since it is argued by Wilkinson and others that these adverse external impulses will mostly be concentrated in the areas where those in the lower social classes live, the levels of health in the areas where health levels are already relatively low will be further reduced.

There has been much evidence published in support of the relative income hypothesis (e.g. Ben-Shlomo et al., 1996; Kaplan et al., 1996; Kennedy et al., 1996; Wilkinson, 1994; Wilkinson, 1995; Wilkinson, 1997). Much of the evidence has used aggregated population data and has found a negative correlation between income inequality and health that persists even when the average income of the population is taken into account. However, it has been argued that population data may not be appropriate for supporting hypotheses directed at the level of the individual (Gravelle, 1998). Consider again Figure 4.

Countries 1 and 2 have the same average income, $y^*$, but country 1 has a narrower distribution of income, $yl_1yh_1$, than country 2, $yl_2yh_2$. In country 1 assume half the population have low income, $yl_1$, with high mortality risk, $mh_1$, and half have high income, $yh_1$, with low mortality risk, $ml_1$. Average mortality risk is thus $m^*_1$ in country 1. With a similar set of assumptions for the income distribution in country 2, average mortality risk is $m^*_2$. Therefore, there is a greater average risk of mortality in the country with the wider income distribution, even though the average income in both countries is the same.

There is a higher risk of mortality in the country with the more unequal income distribution because there is a decreasing marginal impact of income on health, indicated by the shape of the downward sloping curve AB. That is, the beneficial impact on mortality risk following a unit increase in income is greater

at lower income levels than at higher income levels. People with the highest income in country 2 have a mortality risk that is $ml_1ml_2$ lower than the people with the highest income in country 1. People with the lowest income in country 2 have a mortality risk that is $mh_1mh_2$ higher than the people with the lowest income in country 1. Since mortality risk is more sensitive to income at lower income levels, the mortality risk difference measured by the distance $mh_1mh_2$ is considerably larger than that measured by $ml_1ml_2$. Thus, with a decreasing marginal impact of income of health, a wider income distribution will decrease average population health, even when each individual's health depends entirely upon their own income and not on the distribution of income. Gravelle maintains that much of the evidence given in support of the relative income hypothesis may to some extent be explained by the decreasing marginal impact of income effect.

Gravelle does not deny the possibility that income inequality can directly affect the health of the individual, but he argues that this hypothesis has yet to be appropriately tested. Wilkinson does not deny that absolute income levels affect health, but also argues that income differentials in themselves have an important, perhaps overriding, influence on health and inequalities in health in developed countries. Too much has perhaps been made of the differences in opinion of the proponents of the various hypotheses. Most researchers would not entirely negate the arguments of others. Indeed, it is easy to imagine on an intuitive level that both absolute and relative income levels influence health and inequalities in health, though attempts at measuring scientifically the relative importance of each hypothesis are likely to continue (Lynch et al., 2000). Importantly, supporters of both the absolute and relative income hypotheses would maintain that narrowing the income differentials in society would ultimately reduce the health differentials.

# 4 WHY REDUCE HEALTH INEQUALITY?



Since average health status in all social classes is improving, should the widening health inequality be a cause of concern? Many theories of justice can be used to prescribe a just distribution of health (Williams and Cookson, 1999). One normative justification is based on Rawls' contract theory (Rawls, 1972), with some input from Sen's capability theory (Sen, 1992). Rawls' theory is presented in some detail below, but his basic argument is that if we are placed behind a 'veil of ignorance' and hence do not know who we are going to become – i.e. we could become a millionaire or a homeless person – then, *a priori*, we would wish to make the position of the worst off in our society as good as possible. Following this line of reasoning, wide and/or increasing health inequalities are unjust. Those not wishing to involve themselves too heavily with Rawls' theory can now skip to Chapter 5.

Rawlsian theory has its roots in theories of social contract, which basically argue that societies exist because individuals enter contracts whereby they relinquish certain liberties in exchange for certain securities. For example, we give up the liberty to take things from others without their permission in exchange for security against having our things taken without our permission. The social contract regulates the basic structure of the institutional arrangements within society. The contract can justify regulation of the market to ensure that goods are distributed in accordance with social justice.[2]

2 This is an optimistic view of the contract, or what the contract should do, and is consistent with the ethical notion that everyone should have access to reasonable minimum standards of health care regardless of their ability to pay. Rousseau developed his *Social Contract* in accordance with what he felt the contract should do, i.e. to facilitate the fusion of liberty and law. A less optimistic view of the contract, on how the contract *has* been used rather than on how it *should* be used, is that it perpetuates and reinforces the privileges enjoyed by the rich and powerful, and therefore serves to institutionalise inequality (Rousseau, 1755).

Rawls maintains that individuals are rational and self-interested, and demonstrates a coherence between rational self-interest and considered moral judgements. He developed a thought experiment in which people negotiate the economic and social rules that govern society, and calls this the 'original position'.

Rawls argues that the original position is the appropriate initial place in which to ensure that people reach agreement on a fair organisation of society. The original position is used to generate principles of justice that a rational individual would adopt in a contractual arrangement. Hence, the Rawlsian theory of justice is tied to the theory of rational choice. In Rawls' own words, '[t]he aim is to rule out those principles that it would be rational to propose for acceptance [as principles of justice], however little chance of success, only if one knew certain things that are irrelevant from the standpoint of justice. For example, if a man knew that he was wealthy, he might find it rational to advance the principle that various taxes for welfare measures are unjust' (Rawls, 1972, p.18-19). In the original position, the knowledge that allows people to be guided by their prejudices is removed, and it is thus assumed that the contracting individuals do not know their future positions, tastes, skills or talents.[3] They are essentially placed behind a 'veil of ignorance'.

Behind the veil of ignorance people are unaware of their actual and potential differences, and everyone is assumed to be equally rational and similarly situated. In these circumstances, it is assumed

3 'It is assumed, then, that the parties do not know certain kinds of particular facts. First of all, no one knows his place in society, his class position or social status; nor does he know his fortune in the distribution of natural assets and abilities, his intelligence and strength, and the like. Nor, again, does anyone know his conception of the good, the particulars of his rational plan of life, or even the special features of his psychology such as his aversion to risk or liability to optimism or pessimism. More than this, I assume that the parties do not know the particular circumstances of their own society…[and] have no information as to which generation they belong' (Rawls, 1972, p.137).

that everyone will be convinced by the same arguments, and that choice in the original position can be viewed from the standpoint of one person selected at random (Rawls, 1972, p.139).

Rawls identifies two basic principles of justice that, he argues, most people would support if placed in the original position, behind the veil of ignorance. These principles are lexicographic, meaning that the satisfaction of the first should take priority over the satisfaction of the second. They are (Rawls, 1972, p.60):

'First: each person is to have an equal right to the most extensive basic liberty compatible with a similar liberty for others.

Second: social and economic inequalities are to be arranged so that they are both (a) reasonably expected to be to everyone's advantage, and (b) attached to positions and offices open to all.'

Rawls based his theory of justice on the distribution of primary goods, which he defined as rights and liberties, powers and opportunities, income and wealth. Sen criticises Rawls for adopting these primary goods as the focus of attention for his theory of distributive justice (Sen, 1992). Sen argues that justice should instead be framed in terms of the freedom that people enjoy to live the life they would ideally choose to live. Two people who possess identical bundles of primary goods may have highly unequal health. Consequently, the levels of freedom they enjoy to live fulfilling lives may be highly divergent. Sen argues that freedom can be measured in terms of 'capabilities'. Health can be judged as one such capability. A capability contract theory can be derived by substituting Sen's notion of capability for Rawls' primary goods, an idea that Rawls himself touched upon in a later paper where he proposes that capabilities can be used to complement primary goods (Rawls, 1982, p.168, f.8). In this monograph, I use the Rawlsian framework as my ethical justification for narrowing health inequalities, but shall implicitly accept Sen's capabilities as the appropriate focus of attention.

To understand the motivation for Rawls' theory, consider

Figure 5 **The health possibility frontier** 

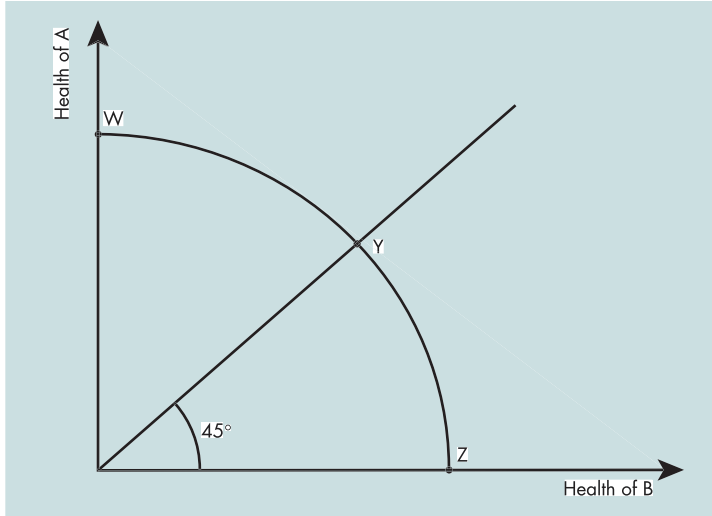



Figure 5. The curve WZ represents the health possibility frontier for the distribution of health between the two individuals, A and B. The frontier shows the maximum level of one person's health which is achievable given the other person's health, by use of a given amount of resources available to improve health. The frontier is concave because it is assumed that health interventions have a positive but declining marginal impact on health.

Points outside the frontier, given the society's health resources, are unattainable. Pareto efficiency underpins classical welfare economics. Any point that lies on the frontier is Pareto efficient: it is impossible to increase the health of A or B without reducing the health of the other person. Points within the frontier are Pareto inefficient: it is possible to improve the health of both individuals. Purely from a Pareto efficiency perspective, any single point on the health possibility frontier is as good as any other. In Pareto terms, there is nothing to distinguish between the distribution at which individual A receives all of

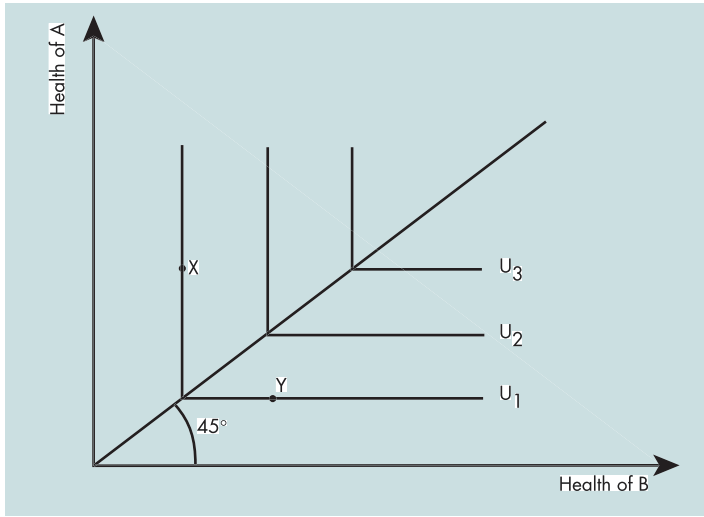
the available health resources (point W), and the distribution at which A and B have the same health (the point on the 45° line at Y). Rawls holds the view that a theory of social justice should remove this indeterminateness. Whilst efficiency is still upheld as important in Rawlsian theory, it is a condition subordinate to the 'difference principle'.

The difference principle requires that '[t]he higher expectations of those better situated are just if and only if they work as part of a scheme which improves the expectations of the least advantaged members of society' (Rawls, 1972, p.75). The difference principle is implied by part (a) of Rawls' second lexicographic principle, given above. He claims that rational, self-interested people will agree to the difference principle because, in the original position, behind the veil of ignorance, people will want to make the worst possible position as good as possible. Thus, they will want to maximise the minimum, a concept that is known as maximin. Though this conservative assumption implies a high degree of risk aversion, it does not depend on any particular individual's attitude towards risk. Indeed, behind the veil of ignorance, it is assumed that people do not know their risk attitude. Rather, the difference principle depends upon a rational acceptance of risk that is unaffected by individual risk preferences. Rawls gives three key inter-related reasons as to why people would choose to maximise the minimum when placed behind the veil of ignorance (Rawls, 1972, p.154-156):

(i) people have only the vaguest knowledge of the likelihood of ending up in various circumstances. Thus, we should be sceptical about probabilistic calculations. Moreover, people know little about the possible outcomes. With such vague knowledge about the end-state circumstances and their associated probabilities of occurring, Rawls argues that it would be rational for people to want the worst outcome to be as good as possible;

(ii) it is not worthwhile for a person to take a chance for further

Figure 6 **The difference principle indifference loci** 



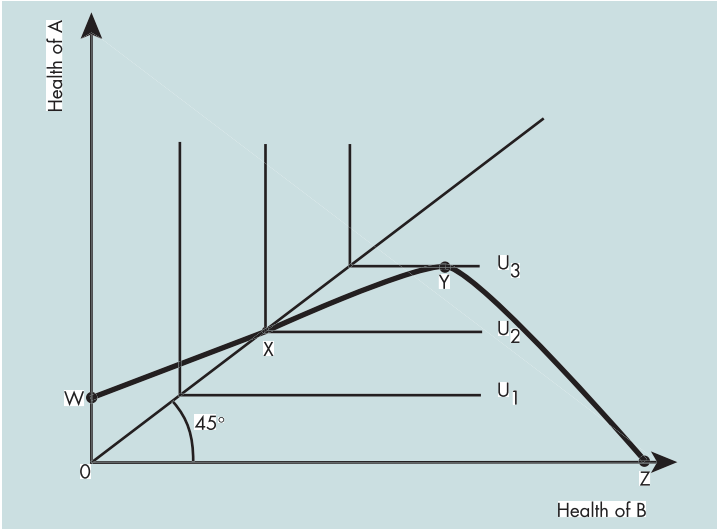

advantage, as it may arise that they lose much of what is important to them. For example, concentrating efforts towards producing better health for the better off leads to a sacrifice of an individual's health status if they were to end up as one of the worst off;

(iii) people would want to reject alternatives that have potential outcomes that are intolerable. For example, when placed behind the veil of ignorance, Rawls implies that we would choose to concentrate our efforts on improving the circumstances of those with the worst health, as we will often perceive their health status to be intolerable.

For a diagrammatic exposition of the difference principle, consider Figure 6.

In Figure 6, an indifference locus such as $u_1$, $u_2$ or $u_3$ plots the distributions of health between individuals A and B for which a person in the original position is indifferent. For example, on $u_1$, a person complying with the difference principle is

Figure 7 **Perfect satisfaction of the difference principle**

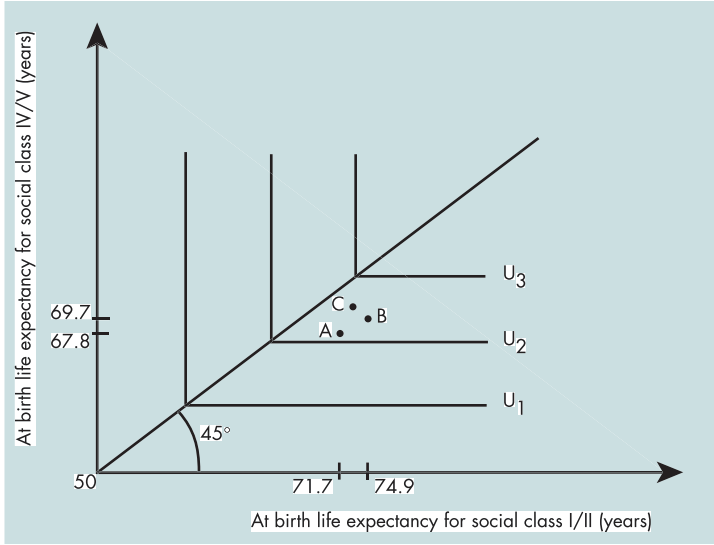



indifferent between the distribution of health at X and the distribution at Y. North-east movements give more preferred distributions. For example, the distributions on $u_2$ are preferred to those on $u_1$. The indifference loci in Figure 6 imply that social welfare does not improve following an increase in the health of the relatively advantaged person unless the health of the relatively disadvantaged person also increases.

In Figure 7, WXYZ is the health possibility frontier, and A and B have equal health at X. From X to Y both A and B continue to benefit, though B benefits to a relatively greater degree.[4] Beyond point Y further gains for B lead to less health

4 A situation in which benefits for A are consequent on those for B may occur for a variety of reasons. For example, the health improvement for B may lead B to utilise less health care and take less time off work, which may result in an increase and improvement of the health care facilities available for A. Alternatively, B may experience improved health through greater immunity against an infectious disease, which will also mean that B will be less likely to infect A with that disease.

Figure 8 **A Rawlsian illustration of historical injustice**




*Data source:* Office for National Statistics (1997b).

for A who already has worse health than B. Point Y is therefore the point at which the difference principle is perfectly satisfied.

It was mentioned in Chapter 2 that all social classes in the UK have experienced an average absolute improvement in health over the past 20 years. However, the improvement for the higher social classes seems to have been more marked than for the lower social classes. It is unlikely that the health status of, say, people in social class V can only be increased, and has only been increasing, because of the increase in the health status of people in social class I. An alternative possibility is that the improvements in health status experienced by lower social classes were not conditional on improvements for the higher social classes. A just society, in Rawlsian terms, would have distributed the health gain more equally. Figure 8 illustrates.

Figure 8 reflects the actual at birth life expectancies for males

in social classes I/II combined and IV/V combined in selected years. A similar story could be told for females. Point A illustrates that men in social classes I/II had a life expectancy of 71.7 years in 1972-76, whereas men in social classes IV/V had a life expectancy of 67.8 years. By 1987-91, these figures were 74.9 and 69.7 years, respectively (point B). Thus, although life expectancy for both those at the top and those at the bottom of the social scale had increased, the difference between them had widened even further. If Rawlsian principles had been followed and greater efforts had been made to improve the health status of the worst off in society, the health distribution across the social classes may have become more equal: for example, closer to point C, assuming that C lies within the health possibility frontier. From a Rawlsian perspective, C lies on a higher indifference locus than B, and would have generated greater social welfare.

In Rawls' own words, '[a] scheme is unjust when the higher expectations … are excessive. If these expectations were decreased, the situation of the least favored would be improved' (Rawls, 1972, p.79). Rawls provides a strong normative basis to argue that the wide and possibly increasing health inequalities across the social classes in the UK are inequitable, and that policies aimed at reducing them should be pursued.

# 5 ARE ALL INEQUALITIES IN HEALTH INEQUITABLE?



Should we be concerned with inequalities in health regardless of where or to whom they occur, i.e. across races, geographical locations, gender etc., as well as social class and income groups? Concern for inequalities in health that exist between social classes and income groups is fuelled by the correlation between the distribution of income and the distribution of health. Health inequalities observed across many other groups – defined by, for example, educational achievement, housing conditions, race or geography – are also likely to be to some extent a function of income inequality. There is a clear intuitive link between social injustice, defined in material terms, and the health inequalities that occur in and across these groups. Based on the arguments given in Chapter 4, if the health differentials are significant then they should be addressed. Some of the health inequalities that are associated with education, housing, race and geography would be addressed by tackling the inequalities that exist across social classes/income groups. However, it is unlikely that tackling income or social class-related health inequality would render totally insignificant the health inequalities that are associated with these alternative groups.[5]

Health inequalities across different races, for example, are unlikely to be entirely income-related, and a thorough understanding of why some ethnic groups perennially suffer relatively poor health is necessary. It may be that health in some ethnic

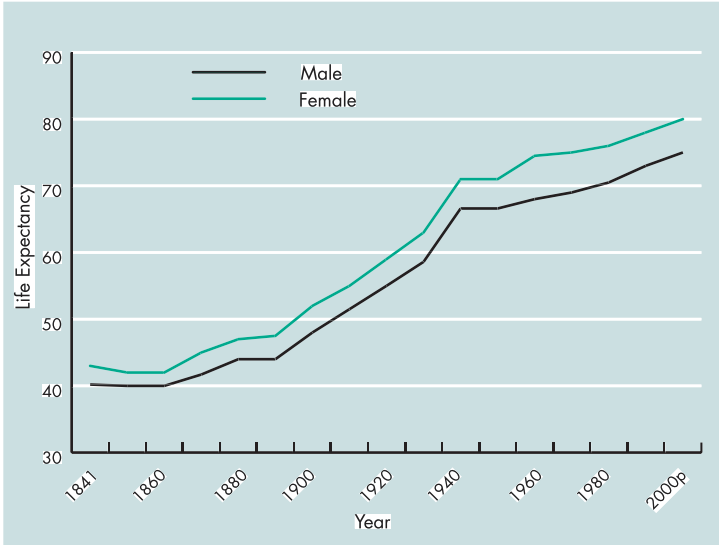
5 Feinstein (1993) identified the materialistic socio-economic causes of health as housing, overcrowding, sanitation etc., and the behavioural factors as diet, smoking, exercise, risk taking, alcohol consumption and substance abuse. Feinstein suggests that the effects of an uneven distribution of the materialistic factors can be more plausibly alleviated by income redistribution than the effects associated with the behavioural factors, as behavioural change requires re-education policies. Based on the literature available to him, Feinstein concluded that it is not possible to determine the relative importance of each of the socio-economic determinants of health. Ettner (1996) has suggested that econometric analysis has an important role to play in determining the relative contribution of (and inter-relation between) each of the determinants.

groups is a function of discrimination, the influence of which could persist irrespective of the extent to which income is redistributed. Moreover, in certain geographical areas, the extent to which individuals feel isolated or alienated in the communities in which they live as well as low income may explain localised ill health. Examples include the mining towns, large percentages of whose populations lost their jobs in a short space of time, the collective influence of which may have destroyed hope and identity, and fostered alienation.

Williams (1999) has drawn attention to the fact that in the UK women have much longer life expectancy and QALE than men. Unlike inequalities across income groups/social classes and the related groupings defined by education, housing conditions, race and geography, it is difficult to pinpoint the cause of health inequality across men and women. As indicated in Figure 9, the inequality in life expectancy at birth has gradually increased in absolute terms since 1840, from two years to approximately six years today, though there has been a slight narrowing of the difference in recent years.

Without an obvious causal link between social injustice linked to material factors and health inequality across gender, should these health inequalities be tackled? A person placed behind the veil of ignorance and asked to decide upon the distribution of health between men and women might prefer that the distribution be reasonably equal, because they may take the view that people, regardless of their sex, should have a reasonably equal opportunity to lead fulfilling lives. This view is strengthened by the fact that we do not know the extent to which gender inequalities in health are biological, and that these health inequalities are likely to be to some degree indicative of the prevailing culture and organisation of society. Thus, a Rawlsian may well prescribe policies to improve male health even if the health of the female population deteriorated as a consequence. The implication is that

Figure 9 **Male and female life expectancy at birth between 1841 and 2000, England and Wales**




p-projected

*Data source:* Government Actuary's Department, as presented in Office of Health Economics (2000).

those who support Rawls would suggest that the prevailing health inequalities between men and women should not be ignored.

Another potential point of controversy is whether health inequalities that arise due to certain behaviours or lifestyles should be perceived as inequitable. An example is the health differentials between smokers and non-smokers. Many people would take the view that smokers are aware of the risks of smoking, and that they should take full responsibility for any consequent ill health caused by their smoking habits. Following this line of reasoning, the health inequalities arising from the detrimental health effects of smoking and other activities such as drinking and drug abuse should not be deemed inequitable.

However, the reasons why people choose to engage in health threatening behaviours are poorly understood, as are the reasons why certain groups tend to be particularly susceptible to these behaviours. The prevalence of smoking is much higher among the lower social classes than among the higher social classes in the UK. It may be that smoking compensates for stress induced by social circumstances. Also, many people become addicted to smoking in their teenage years, when they take up the habit due to peer group pressure at an age when personal responsibility for non-addictive actions may not be as fully developed as it is for adults. People may not have full control over whether or not they engage in activities that are potentially detrimental to their health.

If this is the case, it seems inappropriate to disregard the health inequalities that arise from their behaviours. When placed behind a veil of ignorance, it does not seem appropriate to ignore the potential detrimental health effects caused by smoking, drinking or drug abuse. Thus, following Rawlsian theory, significant health differentials that are known to be associated with certain behaviours or lifestyles should be treated as inequitable.[6]

6 If individuals with low incomes engage in risky behaviours such as smoking and drinking as a means of relieving stress, then policies that discourage them from engaging in these activities may make them feel worse off, at least in the short term, even if they serve to improve their health. On the other hand, policies aimed at other factors that cause poor health among the poor, such as housing improvements, may both improve their health and make them feel better off (Hugh Gravelle, personal communication). However, whilst, for example, smoking cessation policies may make people feel worse off in the short term, they may make people feel better off in the longer term due to noticeable improvements in their health and the greater opportunities to spend their money on other things. Even if smoking cessation policies make people feel worse off in the short term and the long term, the concern that we should have for the health inequalities caused by smoking should not be undermined if the decision to smoke lies outside the full control of the individual. Greater efforts, for example, could be made in preventing people from smoking in the first place; for these people the loss of well-being caused by smoking cessation would not arise.

In summary, significant and/or increasing inequalities in health across comparable groups should be a cause of concern, irrespective of where and between whom they occur. Health inequalities across some groups – for example, those defined by education, housing, race and geography – may be reduced as a result of policies directed at reducing inequalities across social classes and income groups. However, even after controlling for income, there are likely to be persistent differentials across the variously defined groups in the UK, and there is a need for further research into the fundamental causes of these inequalities. Such research may facilitate the formulation of effective policies for reducing any persistent health differentials.

# 6 WHAT DOES EQUITY IN HEALTH MEAN?



I have argued that wide and/or increasing health inequalities should be a cause of concern. Inequalities in health should be reduced, yet this requires a working definition of health equity. The most important definitions of health equity discussed in the field of health economics are now briefly introduced.

Most UK health economists analyse the economics of health care services. However, health care services make only a partial contribution to lifetime health (Benzeval et al., 1995; Davey Smith et al., 1994; Department of Health, 1998a; Feinstein, 1993). A high percentage of the average person's lifetime consumption of health care takes place in their last year of life, implying that the contribution to lifetime health is likely to be relatively small. Probably the main reason for the UK health economists' focus on health care services centres on the issue of funding. The principal funders of health economic research, such as the Department of Health and the pharmaceutical industry, are primarily interested in health care services and interventions. As a consequence, most of the definitions of equity that have been proposed by health economists have focussed on equity with respect to health care services.

A brief description of the health equity principles most often referred to by health economists in the context of health care resource allocation is given in Box 2.

Two particular issues are considered here:

(i) whether equal access for equal need or equal utilisation for equal need, two competing and widely cited definitions of equity in health care, are appropriate definitions of equity in health. Need is a slippery concept (Williams, 1978), but among health economists an individual is most often assumed to be in need of health care if their marginal capacity to benefit from treatment is positive. There is no reason why a similar assumption cannot be applied to health-related need for areas of social policy that transcend health care.

## Box 2 **Definitions of equity in health care (Mooney, 1983)**

**Equal expenditure per-capita**
Given the budget constraint, health care resource allocations are allocated entirely according to the size of the population covered by each purchaser.

**Equal inputs (resources) per-capita**
Allowance should be made for the differential prices of inputs (resources), such as labour, land and capital, faced by different purchasers. This should facilitate the same amount of per-capita purchase of inputs, irrespective of purchaser.

**Equal inputs for equal need**
Indicators of need, beyond population size, are incorporated. These may include the age/sex structure of a purchaser's covered population, socio-economic risk factors such as the number of unemployed people, etc.

**Equal access for equal need**
Adjustments are made for the costs associated with gaining access to health care faced by the people covered by each purchaser. The emphasis is on the costs to the patients rather than the prices of inputs (land, labour and capital). Therefore, for example, people living in remote rural areas may face greater costs when visiting a physician or hospital than those living in urban areas, and allocations should be adjusted to account for this.

**Equal utilisation for equal need**
Equal access for equal need gives everyone an equal opportunity to use health care. However, information, tastes and preferences for health and health care differ across individuals. Therefore, equal opportunity does not necessarily equate to equal utilisation. Under the principle of equal utilisation for equal need, allocations are adjusted so as to facilitate positive discrimination in favour of those who are less willing to use health care.

Box 2 **Definitions of equity in health care (*continued*)**

**Equal marginal met need**
This principle assumes that purchasers will rank needs according to priority, and that the ranking will be the same across all purchasers. Allocations should then be adjusted so that, with their available budgets, the last, or marginal, met need will be identical for all purchasers.

**Equal health**
All previous definitions are concerned with equity in terms of health care services. To achieve (more) equality in health across different groups, however, is likely to require much greater positive discrimination.

For example, an individual's health-related need for a healthy diet can be assumed to reflect the cost of the vitamins/calcium/fat/proteins (and other costs, such as the cost of getting the individual to comply with dietary advice) required to reduce their marginal capacity to benefit from a better diet to zero. This definition of need is assumed to apply throughout the current monograph, though there are many competing definitions. Although a thorough discussion of the competing definitions lies beyond our scope, some of the main ones are outlined in Box 3;[7]

(ii) the 'fair innings' argument, which has received increasing attention within health economics in recent years (Williams, 1997).

7 In the competing definitions of need outlined in Box 3, the judgement of society plays no role (Williams, 1978). The definitions rely only on the judgement of experts or the individual and therefore a question mark can be placed against these definitions in relation to whether their adoption would be beneficial to society as a whole.

Box 3 **Definitions of need (Bradshaw, 1972)**

**Normative need**
An expert, professional, administrator or scientist defines need by laying down their desired standard and comparing it with the standard that actually exists.

**Felt need**
Need is equated with want. When assessing the need for a service, the population is simply asked if they feel they need the service.

**Expressed need**
Expressed need is when felt need is turned into action.

**Comparative need**
The characteristics of the population who receive a service are studied, and if there are people with similar characteristics who do not receive the service, then they are adjudged to be in need.

## 6.1 Access or utilisation?

Mooney et al. (1991) argue that equal access to health care for those with equal need is the appropriate equity objective to pursue, and maintain that it is reflected within many countries' policy statements on health. Indeed, the recommendations relating to the NHS in the Acheson Report suggest that it is the most appropriate principle of equity to pursue. The report's thirty-seventh of 39 recommendations states that 'providing equitable access to effective care in relation to need should be the governing principle of all policies in the NHS' (Department of Health, 1998a).

Equal access refers to equal opportunity to use health care services, which can best be understood as a situation in which

individuals with equal need face equal costs or disutility when utilising health care (Le Grand, 1982; Mooney, 1983). Equal access for equal need is consistent with the notion that the use of health care across people with the same need should not be systematically related to differences in ability to pay. However, equal access for equal need does not necessarily imply that wealthy people should receive the same health care as that consumed by poorer people with equal need. People may have different preferences for taking up health care, and if the rich prefer to use more health care than the poor with equal need, then it is legitimate for them to receive more health care, provided that both groups have an equal *opportunity* to use the health care.

Culyer et al. (1992a) criticise Mooney et al. on several levels. First, they state that the terms 'access' and 'utilisation' are used interchangeably in policy statements. They argue that government officials recognise no sharp distinction between the concepts of equal access and equal utilisation. Therefore, to state that equal access for equal need is the specific concept accepted by most policy makers is a misinterpretation. A second more fundamental criticism of the equal access for equal need approach concerns the issue of accommodating different preferences for health care. Culyer et al. argue that emphasis should be placed not on preferences, as preferences reflect what individuals want for themselves rather than what is socially just. Instead, emphasis should be placed on health, which is the intended outcome of health care.

Culyer et al. argue that the adopted health care resource allocation rule should be assessed in terms of the final distribution of health that it generates. If it is believed that wide disparities in health are to be avoided, then the final distribution of health should be reasonably equal. This implies that it may be justifiable to override people's preferences for using health care in some

circumstances. For example, it may be justifiable to attempt to override the preferences of people who have low expected lifetime health and who could benefit significantly from health care, but who normally prefer to avoid using health care.

Mooney et al. (1992) respond by stating that there may be aspects of health care other than the production of health for which people have different levels of preference, and that these aspects should not be ignored. For example, they argue that the knowledge that individuals have that access to health care exists should they or others fall ill is of value to them. Culyer et al. (1992b) retort that though this may be true, it has nothing to do with a society's fundamental health equity concerns, which involve the distribution of health itself.

It may well be the case that equal utilisation for equal need can go some way towards achieving greater equality in health. As mentioned in the introduction, it is well documented that equal access for equal need may be consistent with increasing health inequalities (Culyer, 1995a; Culyer, 1995b; Culyer and Wagstaff, 1992). Whether utilisation is preferred over access thus seems to hinge on whether it is considered justifiable to override people's preferences.

A problem with the concepts of equal utilisation and equal access for equal need is that their focus is restricted to health care. It would perhaps be beneficial if health economists extended more fully their research activities beyond the health care sector, by branching out into researching the health effects of, for example, education, the physical and psycho-social environment, diet and housing.

The implications of equal access and equal utilisation for equal need have been discussed in the context of the allocation of health care inputs. Williams (1997), developing an idea of Harris (1985), advocates a principle of equity that is more directly outcome-based: the 'fair innings' argument.

## 6.2 The fair innings argument

The argument is based on the notion that individuals are entitled to some fair and reasonable quantity of health, which is generally framed in terms of lifetime health expectation; i.e. life expectancy or quality-adjusted life expectancy (QALE). For example, the biblical notion of a health entitlement of three score years and ten could be adopted as a fair innings. The fair innings argument:

(i) is outcome-based;
(ii) incorporates the individual's whole lifetime health experience;
(iii) reflects an aversion to inequality;
(iv) is quantifiable.

An important feature of the fair innings argument is that it may be possible to apply it to policies that transcend health care. Williams (1997, p.121) recognises the possibly limited impact of health care on health and the importance of other areas of social policy when he states that 'limited though the contribution of health care may be, it could be exploited more fully by weighting additional life years gained from the various health care activities according to the social class of the potential recipient. Those same weights might also be applied to other relevant social programmes, so that their combined effect might be coordinated.' Williams, for illustrative purposes, focuses on health inequality across social class, though the fair innings argument can be applied to health inequalities across other groups.

Williams provides further evidence that health inequalities across the social classes are significant. He estimates that the QALE at birth for males born within social classes I and II combined is approximately 66 quality adjusted life years (QALYs), whilst the comparable figure for males in social classes IV and V

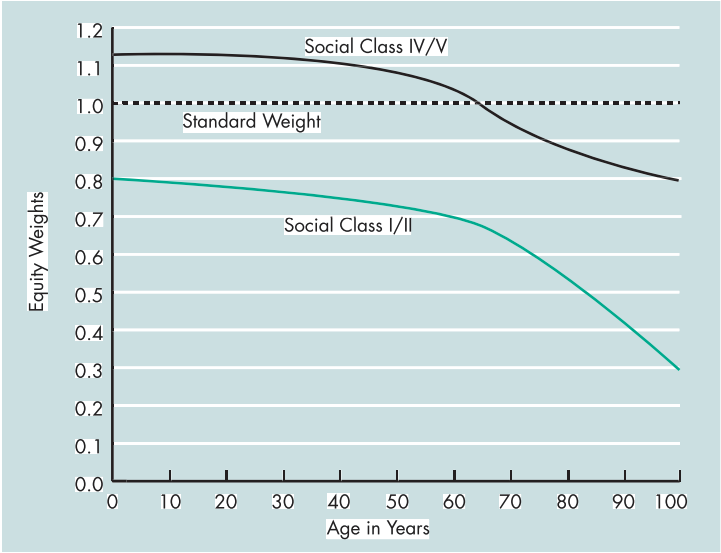
combined is 57 QALYs. Thus, in order to realise the mean value of 61.5 QALYs,[8] men in social classes I/II would have to live for an average of 65 years, and individuals in social classes IV/V, due to higher rates of morbidity during their lifetime, would have to live for an average of 71 years. However, whilst 76% of individuals in social class I/II live for 65 years, only 46% of individuals in social class IV/V live for 71 years.

The fair innings argument when applied specifically to social class involves weighting the health effects of interventions according to the social class and age of each person benefiting from the programme. For example, if 61.5 QALYs is taken as a fair innings, the health benefits gained by a 20 year old individual in social class V would be weighted far more heavily than the benefits gained by a 75 year old individual in social class I. The latter has probably already had a fair innings, while the former has not only not yet had a fair innings, but also has a lower expectation of achieving a fair innings than a representative individual in social class I.

Williams calculated equity weights applicable to age groups across social class. He based these weights on the assumption that movements towards greater equality can only be achieved by reducing the level of overall health, and the weights were calculated in accordance with the question, 'how big a sacrifice in the overall health of the population would you be prepared to accept in order to eliminate the disparities in health between groups?' Williams did not run an experiment to collect answers to this question, but for illustrative purposes supposed that people would be prepared to sacrifice six months of life expectancy at birth in order to eliminate a disparity in life expectancy of five

8 Williams' average figure of 61.5 QALYs is based on a working assumption that the number of people in social classes I and II combined is roughly equal to that in social classes IV and V combined.

Figure 10 **Equity weights over lifetime for males by social class**




*Source:* Williams (1997).

years between the higher and lower social classes. Using social welfare analysis he reported that this would lead us to attach a larger weight to improving the at birth life expectancy of people in social classes IV and V combined than people in social classes I and II combined. Moreover, he argued that the equity weights should be recalculated for each age-defined subgroup of the population in order to account for the life that people have already experienced in addition to that which they are expected to live.

Figure 10 replicates Williams' illustrative equity weights and shows that a unit of health care benefit has a relatively large weight for the lower social classes, and that the weight declines with age for all social classes because as a person ages they will

have already experienced an increasing proportion of their fair innings. The weights would ensure that the lower classes have a better chance of a fair innings. The fair innings argument concentrates on equity in outcome, and is more closely akin to the principle of equal utilisation than equal access for equal need. However, the fair innings argument places greater emphasis on improving the prospects of those who currently have relatively low expected lifetime health, and is thus proposing greater positive discrimination. It is likely to be more effective at narrowing wide health differentials than the resource-based principles of equal access and equal utilisation for equal need. It is for these reasons that it is appropriate to adopt the fair innings argument as our reference definition of equity in health.

Let us now move on to a discussion of the practical policy recommendations that have been proposed to reduce health inequalities in the UK.

# 7 THE ACHESON REPORT



The apparent failure of the NHS to have narrowed health inequalities was, and remains, puzzling to many. In 1977, David Ennals, then Secretary of State for Social Services, said that 'it is a major challenge for the next ten or more years to try to narrow the gap in health standards between different social classes' (Townsend et al., 1992). In the same year, the Labour government authorised a report on the trends in health inequalities across British society, subsequently published as the Black Report (Department of Health and Social Security, 1980).

The Black Report focussed on the decades preceding the mid 1970s, and broadly concluded that the poorer health experience of lower status occupational groups was apparent at all stages of life.[9] Moreover, the class gradient was becoming more marked over time. The authors of the report argued that the causes of the problem were to a large degree attributable to socio-economic factors, such as different income levels, working conditions, unemployment rates, standards and levels of education, housing conditions, transport facilities; and to lifestyle factors, such as smoking, alcohol and diet. Consequently, the authors maintained that the causes of health-related inequalities in Britain lay largely beyond the influence of the health service, though they also concluded that those with manual occupations consumed relatively little health care compared to those in higher social classes, even when their need was greater.

The Black Report recommended an improvement in the material conditions of the most vulnerable members of society. The suggestions included an increase in child benefits, maternity grants, infant care allowances, disabled benefits allowances, sheltered housing and home improvement grants. The suggestions focussed upon improving the material conditions of fam-

9 Illsley and Le Grand (1987) have criticised the Black Report for relying too heavily on the range as a measure of health inequality (see Chapter 2).

ilies with children, as it was recognised that material deprivation in childhood can have long term effects on health. The report recommended improvements in the production and dissemination of information on the benefits of health care consultation and interventions, and called for more emphasis to be placed on prevention policies, primary care and community health.

The Black Report was completed in 1980, by which time there had been a change in government, and the report was largely ignored by the new Conservative administration on the grounds that its recommendations would be too expensive to implement. There was an angry response from the medical journals, with many writers expressing concern that the recommendations of the report were being excluded prematurely from the public policy debate. The Labour Party passed a resolution that the next Labour government would give priority to the implementation of the recommendations.

Seventeen years later, the new Labour government commissioned another independent inquiry into health inequalities under the guidance of Sir Donald Acheson. The Acheson Report (Department of Health, 1998a) concentrated on the period between the 1970s and the 1990s, and was in many ways an updated version of the Black Report. The Acheson Report reached similar conclusions to the Black Report: health inequalities across social classes are significant and had become increasingly marked. As well as social class, the Acheson Report looked at health inequalities across education, gender, race and other groups, and made 39 general recommendations to reduce the health differentials. The recommendations extend far beyond the influence of the NHS. Three points were regarded as crucial:

(i) all policies that are likely to have an impact on health should be evaluated in terms of their impact on health inequalities;
(ii) a high priority should be given to the health of families with children;

(iii) further steps should be taken to reduce income inequalities and improve the living standards of poor households.

The Acheson inquiry team was commissioned to survey the huge health inequality literature of the 1980s and 1990s. They were also asked to make policy recommendations on the basis of the literature. Moreover, they had only one year to complete their inquiry. Given their workload and constraints, the Acheson inquiry team did a remarkable job, not least because their efforts have done much to regenerate the debate on health inequalities. It therefore appears almost churlish to criticise the Acheson Report. However, I shall provide some constructive critical comments with the modest hope of carrying the debate a little further forward.

The Acheson Report did not consider the definition of health, the extent to which health inequalities are inequitable, or the importance of the different definitions of health inequality. I have argued in this monograph that:

- lifetime health, rather than health status at a specific point in time, should be the focus of interest;
- given current knowledge concerning the responsibility of the individual, significant inequalities irrespective of where they occur are inequitable;
- inequalities in health status rather than inequalities in health care access or utilisation should be addressed.

All of these points are of course open to debate, but it would have been helpful if the inquiry team had stated their position in these respects, and discussed their reasons for reaching their position.

Perhaps more importantly, the recommendations of the Acheson Report often seem to focus on improving general population health rather than narrowing health inequality. Improving general health can be consistent with widening health inequality: for example, everybody's health could be

improved, but if the health of those who are relatively healthy improves the most, inequalities will widen. As emphasised in the Acheson Report, general health improvement with widening health inequalities in fact summarises the UK experience. Providing recommendations to counter these widening inequalities was the specific objective of the Acheson Report.

An example where the Acheson Report perhaps does not focus sharply enough on reducing health inequalities is provided by Williams (1999). Williams notes that women have both a greater life expectancy and a greater QALE than men. Therefore, *a priori*, it is intuitively expected that the recommendations of the Acheson Report will extend male life expectancy more than they extend female life expectancy. The three general recommendations in the Acheson Report for addressing health inequalities across gender are policies which:

(a) reduce the excess mortality from accidents and suicide in young men;
(b) reduce psychosocial ill health in young women in disadvantaged circumstances, particularly those caring for young children;
(c) reduce disability and ameliorate its consequences in older women, particularly those living alone.

Recommendation (a) is specifically addressed at young men, and so, on the face of it, will address health inequalities across gender. However, the report gives the following sub-recommendations that underlie this general recommendation:

- policies which improve the opportunities for work and which ameliorate the health consequences of unemployment;
- policies which improve housing provision and access to health care for both officially and unofficially homeless people;
- further measures to encourage walking and cycling as forms of transport and to ensure the safe separation of pedestrians and cyclists from motor vehicles;

- further steps to reduce the usage of motor cars to cut the mortality and morbidity associated with motor vehicle emissions;
- further measures to reduce traffic speed, by environmental design and modification of roads, lower speed limits in built up areas, and stricter enforcement of speed limits;
- measures to prevent suicide among young people, especially among young men and seriously mentally ill people;
- policies which reduce alcohol-related ill health, accidents and violence, including measures which at least maintain the real cost of alcohol.

With the exception of the recommendation that measures should be taken to prevent suicide among young people, especially among young men and seriously mentally ill people, recommendation (a) is accompanied by sub-recommendations that do not explicitly benefit the male population. Whilst most of these sub-recommendations might well improve population health, it is not obvious that they would narrow health inequalities across gender.

The effect of implementing recommendation (b) – to reduce psychosocial ill health in young women in disadvantaged circumstances, particularly those caring for young children – is likely to have a greater positive effect on the expected lifetime health status of women than of men, and so would not address lifetime health inequality across gender. There is a similar focus in recommendation (c) – to reduce disability and ameliorate its consequences in older women, particularly those living alone. Recommendation (b) is also likely to improve the lifetime health status of children reared in disadvantaged circumstances, whether male or female, and thus a focus upon health inequality across gender is lacking. Although recommendations (b) and (c) may both be desirable they are unlikely to reduce lifetime health inequalities between men and women.

The focus on health improvement rather than health inequality is also apparent in the Acheson Report's crucial recommendation (ii): that a high priority should be given to the health of families with children. In fairness to the authors of the report, they may have meant this to apply only to poor families, so as to address the effect of childhood poverty on lifetime health.

Another criticism that can be aimed at the Acheson Report is that its recommendations were not prioritised according to their cost-effectiveness. Resources are always limited and it is a duty of government to ensure that they are utilised in the best possible way. If resources are spent on new programmes or interventions, some alternative programmes have to be delayed or discarded. Quantitative evidence on the effectiveness and costs of policies in reducing health inequalities is scarce. With current evidence, it is not possible to argue rigorously that a particular recommendation is cost-effective. However, it is possible to suggest policies which will plausibly narrow health inequalities, and to attempt to estimate their costs and effects. In some cases, polices can be assessed via pilot projects. In other cases, the policy would have to be introduced on a national scale but this could be for a trial period in order to assess cost-effectiveness. In the case of a fixed trial period, the issue of adequate time frame arises. Evidence of long term reductions in health inequalities will take many years to collect. Thus, proxies for reductions in health inequality will often have to be used: for example, the relative reduction in the prevalence of smoking across groups.

Prioritising policies for reducing health inequalities according to their cost-effectiveness is an important way of taking the health inequality debate forward.

# 8 EVALUATING POLICIES TO ADDRESS HEALTH INEQUALITIES



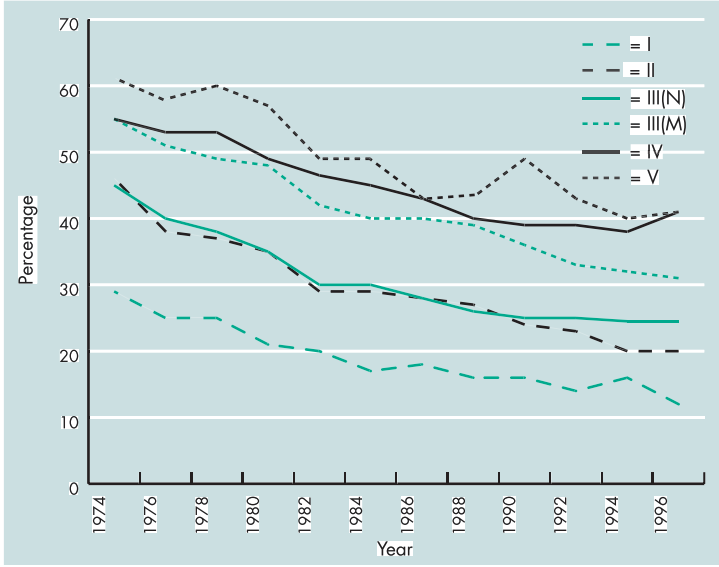
Health economic evaluation can be used to prioritise policies according to their cost-effectiveness. The method can be best applied to downstream policies, or policies introduced specifically to affect health, as the costs and effects of downstream policies are easier to monitor and measure than those of the perhaps more influential upstream policies, such as policies to redistribute income.[10] The methods for undertaking economic evaluation are described elsewhere (e.g., Drummond et al., 1997). In terms of contributing to the health inequalities debate, the appropriate outcome measures of a policy or intervention are crucial. To exemplify the potential contribution of health economists, smoking cessation policy is used as an illustration from among the downstream recommendations given in the Acheson Report.

Smoking cessation policies recommended in the Acheson Report take the form of tobacco price increases and prescription-available nicotine replacement therapy. These measures will reduce health inequalities between income groups only if they serve as a deterrent against smoking by people from relatively poor households. If the price increases lead to the substitution of, for example, food for tobacco, the price rise may well exacerbate health inequalities.

The cost-effectiveness of nicotine replacement therapy compared to other commonly used medical interventions is well documented (Akehurst and Piercy, 1994a and 1994b; Cromwell et al., 1997; Fiscella and Franks, 1996; Lowin, 1996; Oster et al., 1986; Wasley et al., 1997). However, none of these studies focussed upon the effectiveness of nicotine replacement therapy in reducing health inequalities. Although the general availability of this therapy on prescription may improve overall

10 Downstream policies are interventions that only have an effect on health. Upstream policies have a wider range of benefits, including benefits to health.

Figure 11 **Male prevalence of cigarette smoking by social class, 1974-1996, Great Britain**



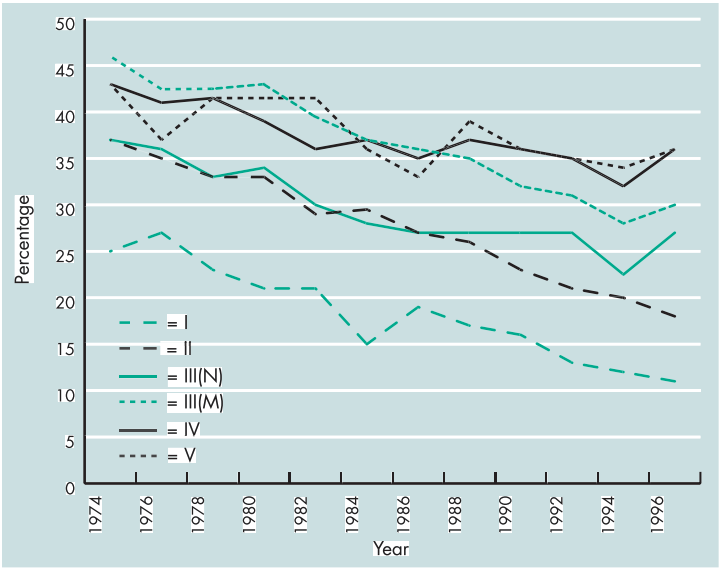

*Data source:* Office for National Statistics (1998).

health, there is not enough information to state with confidence that it will reduce health inequalities.

Figures 11 and 12 show smoking trends in Great Britain since the mid 1970s in different social classes for men and women, respectively.

Figure 11 shows that there has been a decreasing trend in the prevalence of smoking amongst males of all social classes. However, the absolute difference in prevalence between the social classes has remained approximately the same. For example, 29% of men in social class I smoked in 1974, compared to 61% of men in social class V. In 1996, these prevalence rates were 12% and 41%, respectively. These data suggest that

Figure 12 **Female prevalence of cigarette smoking by social class, 1974-1996, Great Britain**




*Data source:* Office for National Statistics (1998).

although the reduced prevalence of smoking may have had a health promoting effect, it did not appear to have a health inequality reduction effect. To reduce the inequalities in smoking-related diseases across the social classes will require an anti-smoking policy that focuses on the lower status social classes.

There has also been a declining prevalence of smoking among females within all social classes, though the reduction within the lower social classes has been much smaller than within the higher social classes. For example, in 1974, the prevalence rates among women in social classes I and V were 25% and 43%. In 1996, these rates were 11% and 36%. To reduce class-related inequalities in lifetime health, emphasis should be placed

on reducing the prevalence of smoking among women in the lower social classes.

The above gives a practical case where the fair innings argument can be used in public policy decisions. With reference to social class differences in lifetime health, the fair innings argument would recommend that particular emphasis be placed on the outcomes experienced by the lower social classes from the smoking cessation policies. The outcomes for the higher social classes would not be ignored, but the health gain experienced by a person in social class V would be given more weight than the same health gain experienced by a person in social class I.[11] Consequently, health programmes that potentially offer most benefit to people in social class V would be deemed more cost-effective than programmes with similar costs and health gains but which mainly benefit people in social class I.

Williams (1997) recommends that fair innings weights be used to weight QALYs, which gives a new measure of health outcome – the equity-weighted QALY. The maximisation of equity-weighted QALYs would simultaneously combine efficiency and equity imperatives. Their use in economic evaluation would involve calculating the additional costs and additional equity-weighted QALYs given by a health intervention. Dividing the additional costs by the additional benefits would give the intervention's incremental cost-effectiveness, or the additional resources required for each additional unit of benefit given by a particular health intervention. By using equity-weighted QALYs, the size of the incremental benefit depends to some extent on the amount of inequality that the intervention addresses. If the prioritisation of interventions incorporates the

11 If the effectiveness of an intervention has to be assessed over a relatively short period of time, proxies (for example, reduced smoking prevalence) would have to be used to estimate future health gains.

use of equity-weighted QALYs, the objective of reducing health inequalities has a greater chance of being realised than by using non-equity-weighted outcome measures, such as QALYs or life years gained, percentage reductions in blood pressure, reduced incidence of hip fractures etc. Moreover, the prioritisation would provide the decision maker with guidance based on good scientific evidence to help determine which interventions represent the most worthwhile use of scarce public resources. On a conceptual level, there is a strong argument to develop the equity-weighted QALY as the standard outcome measure in health economic evaluation.[12]

12 The methodologies underlying both equity weights and QALYs continue to be debated and are potentially flawed. Consequently, the necessity for the methodological development of these measures should not be overlooked.

# 9 CONCLUSION



Over the last several decades, there has been an improvement in the average health status of most groups of people within the UK. However, the inequalities in health have apparently been increasing, at least across social classes. Absolute and relative income hypotheses have been proposed as partial explanations for the health inequalities across social class. Proponents of both hypotheses would prescribe narrowing income differentials to reduce health inequalities. But are these health inequalities really a cause for concern? Using the ideas of Rawls and Sen, I have argued that it cannot be ruled out that all significant health inequalities across groups, however defined, are unjust.

Soon after being elected to office in 1997, the new Labour government commissioned the Acheson Report, which reviewed the available evidence on health inequalities, and made policy recommendations on how they might be addressed. The Acheson Report's policy recommendations perhaps should have focussed more sharply on reducing health inequalities rather than improving general population health. However, the Report reviewed and drew inferences from a vast amount of literature and can be used as a building block for constructing a society that is more socially just.

One way to carry forward the work of the Acheson inquiry team would be to determine which of their recommendations have a clear intuitive basis in reducing health inequalities, and to gather the necessary evidence to prioritise these recommendations according to their cost-effectiveness. In deciding which interventions might have an influence on health inequalities, reviews other than the Acheson Report can also be drawn upon. For example, the NHS Centre for Reviews and Dissemination attempted to identify from a literature review interventions that might help reduce health inequalities, though their work focussed only on the potential contribution of the NHS (NHS

Centre for Reviews and Dissemination, 1995). The authors noted that the evidence that they reviewed was generally of poor quality in terms of methodological design, and that there was very little attention paid to cost-effectiveness in the literature. The authors recommended that the collection of cost data in future studies is crucial.

Prioritising recommendations according to their cost-effectiveness would help policy makers determine which recommendations offer worthwhile uses of scarce resources. Health economists can contribute to these developments by providing expertise and advice concerning the appropriate methods to use when undertaking health economic evaluation. Part of their contribution could involve helping to determine and develop appropriate outcome measures. The equity-weighted QALY is an outcome measure that combines efficiency and equity considerations. In this monograph, equity-weighted QALYs are proposed for consideration, though they should be treated with care and with a view that methodological advancements are necessary, as the validity of both equity weights and QALY measurement techniques are still subject to much uncertainty. Health economists also have much to learn from the debate. More collaboration between health economists and other specialists in the area of health inequalities would improve the health economist's understanding of the fundamental causes of health and inequalities in health that transcend health care.

Significant progress towards reducing unjustifiable health inequalities ultimately lies in the hands of the government. The present Labour government has been treating health inequalities as a cause of concern, and has done much to raise the profile of the debate. Some foundations, such as establishing the Health Action Zones, have been laid for tackling health inequalities. However, reducing the wide health inequalities in the UK is a considerable task and will require a more concerted effort to

show significant effect, even in the long term. On a health economic level, I have focussed upon the potential contribution of economic evaluation in this monograph. But income redistribution policies are likely to play a crucial role if health inequalities are ever to be effectively and significantly addressed. Whether the government is willing to exert the necessary effort remains to be seen.

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