

**CHALLENGING
INEQUITIES
IN HEALTH**

From Ethics to Action

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Introduction

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Unacceptable Disparities in Health

In the last 50 years of the twentieth century, many countries have experienced gains in health status greater than at any other period in their history. Even in some of the poorest countries in the world, remarkable progress has been made with unprecedented increases in life expectancy and improvements in child survival. Although these successes in aggregate health might lead to complacency, once we scratch the surface a very different picture emerges. In some countries of sub-Saharan Africa, for example, the average age of death has declined from 5 years to 2 years in the last decade (Sen 1999). Sharp declines in life expectancy have also been recorded in countries of the former Soviet Union, including a health crisis of unforeseen proportions in the Russian Federation during the years 1993 to 1996, when life expectancy fell below 60 years for men and below 72 years for women (see chapter 11).

When national-level data are disaggregated to discern the fate of different groups within societies, similarly disturbing disparities are apparent. In post-apartheid South Africa, for example, infant mortality is five times higher among blacks than among whites, and even within each racial/ethnic population there is a "health divide" between the poor, middle-income, and rich groups (see chapter 14). In many developing economies, large differentials in health emerge between

rural areas, which tend to be poorer, and the richer urban centers. The proportion of children under age 5 years who are stunted, for example, is 50% higher in rural parts of Malawi than in urban parts of the country. Even more dramatic, in Vietnam and China, rates of childhood stunting are over three times higher in the rural populations (UNICEF 1999). Maternal mortality in the poor province of Quinghai in the Chinese interior is ten times higher than in the more prosperous coastal areas such as Zhejiang Province (see chapter 7).

A similar pattern is evident in the most affluent countries in the world. In the United States, a 13 year gap in women's life expectancy and a 16 year gap for men's have been observed when comparing the counties with the lowest and highest mortality rates—patterns that closely follow the contours of poverty and ethnic minority status in the nation (Murray et al. 1998). Even in some of the healthiest countries in Western Europe—the Netherlands, Finland, and the United Kingdom included—we find a gradient in health across the social spectrum, with poorer groups dying 5 to 10 years earlier than the richer groups (Whitehead and Diderichsen 1997) and with up to a 13 year gap in disability-free life expectancy between the affluent and deprived in the same countries (van de Water et al. 1996; Valkonen et al. 1997).

Health disparities, therefore, appear to be pervasive both between and within nations across the globe.

Whether a country is rich or poor and whether it has high aggregate health or low, opportunities for good health are highly unequal.

What Is Meant by Equity in Health?

This volume reflects a growing concern for the disparities in health that are found both between and within nations. Inequalities in health describe the differences in health between groups independent of any assessment of their fairness. Inequities refer to a subset of inequalities that are deemed unfair. The unfairness qualification invokes assessments of whether the inequalities are avoidable as well as more complex ideas of distributive justice as applied to health (see chapter 3).

Characteristic of the country-case studies in this volume is a focus on equity in health outcomes. This is a deliberate point of departure and reflects the premise that disparities in health outcomes are the most important dimension of health equity. Other dimensions such as equity in access to health care, although important in their own right, need to be further understood in relation to their impact on health status. Achieving equitable access to health care is certainly desirable, but if there remain significant health disparities, then equitable health care is not a sufficient condition for health equity. Indeed, Sen (see chapter 6) argues that the assessment of health equity must extend beyond health care received to include other ways of improving health outcomes (e.g., through education) and the freedom to achieve these outcomes.

Equity in health takes intuitive ideas about what is "fair" and attempts to make them more explicit. Attaining optimal health ought not to be compromised by the social, political, ethnic, or occupational group into which one happens to fall. To the extent that disparities in health coincide with fault lines between such groups, one may make the assessment that they are unfair and thus constitute inequities. Although each of the studies in this volume focuses on a different aspect of disparities in health—child or adult health, disability, morbidity or mortality, disparities between the sexes, occupational groups, in rural and urban populations, by geographic area—in most cases, the authors are making the claim that the inequalities examined are avoidable and unfair. These claims, or value statements, may be articulated discretely through empirical descriptions of social inequalities in health or more overtly. In the Japan case, for example, the analysis sets out to assess the extent to which the cultural value of

"yokonarabi" (same to the next person) is reflected in the magnitude of geographic and occupational inequities in health (see chapter 8). Beyond empirical analyses, the credibility and integrity of these values are strengthened by engaging those most deeply affected in the definition of the dimensions of a specific inequity, as seen in the cases of Tanzania and Kenya (see chapters 12 and 15).

In addition to the moral claim about unfairness and the assessment that health inequities are avoidable, there are other dimensions of disparities in health that are important rationales for policy mobilization and action. These include arguments related to relieving pain and suffering of the least healthy, the aversion that populations feel to unequal outcomes in health for particularly vulnerable groups such as children, the threats to population health represented by residual reservoirs of epidemic infection, for example, in urban slums, and the emerging evidence that serious illness leads to impoverishment and/or acts as a constraint to economic growth.

Deep-seated imbalances generated by discrimination and power differences often underlie disparities in health. Such power discrepancies occur across a broad sociopolitical spectrum—from a state of lawlessness and corruption where a few warlords control the state and command all its resources to the other extreme of a democratic, peaceful nation with entrenched social and occupational hierarchies. Although the differences between these contexts are obvious, the fact that the broader social context influences health, whether subtle or overt, is a common phenomenon.

The aim of this volume is not to argue that the health community should tackle all instances of power differentials and conflict; nor is it our intention to address the challenging and politically unrealistic endeavor of "flattening" the social gradient. The social, economic, and political determinants that lie outside the health sector, yet that profoundly affect health status and its distribution, cannot, however, be dismissed in crafting an effective response. Similarly, a fully articulated effort to redress inequities in health must inevitably work in tandem with wider efforts toward social justice—such as the provision of safety nets; protection against medical impoverishment; provision of education, jobs training, and environmental risk reduction; and efforts to ensure peace and a political voice for all. "Health equity is best thought of not as a social goal in and of itself, but as inherently imbedded in a more general pursuit of social justice" (see chapter 3).

Securing a commitment to equity in health may be facilitated by articulating targets that take into account

the distribution of health. The final chapter in this volume provides examples of two types of targets: symbolic, their main purpose being to inspire and motivate; and practical, to help monitor progress toward equity and to improve accountability in the use of resources (Whitehead et al. 1998).

How Do We Measure Inequities in Health?

Without hard evidence on trends in health equity, we can neither expose current disparities nor prove our success in narrowing these gaps over time. Hence, in many countries the lack of vital statistics and reliable health information represents a de facto statement that the health of its people does not count. "The lack of basic mortality and morbidity statistics for the black population (in South Africa) is a clear sign that their needs were simply not considered in health policy development" (see chapter 14). Even in the context of seemingly plentiful data on health, requirements for equity analysis often necessitate linkages between social and health data sets that are methodologically and logistically challenging (Krieger et al. 1997).

Despite these data constraints, each of the studies in this volume has managed to describe important health disparities that might otherwise be concealed in aggregate health indicators. It is important to recognize, however, that such descriptions of inequities in health—in terms of both their nature and magnitude—are sensitive to a number of basic considerations (see chapter 5). The myriad expressions of illness, whether disease, disability, or death, and the properties of their measurement—what Sen terms *measurability*—are primary considerations in assessing inequities (see chapters 5 and 6). Another basic consideration involves identifying a reference group or norm against which inequities in health outcomes may be assessed. Assessing gender inequities in survival, for example, may involve making judgements about the biological (or inevitable) difference in longevity between men and women (see chapter 16 on Bangladesh) or entail survival comparisons to an average for countries at a similar stage of development (see chapter 11). Values and technical considerations also underlie the discourse surrounding whether distributions of health should be assessed independent of the aggregate level of health. We maintain that it is necessary to do both—to make an assessment of aggregate health, but also to analyze differentials in health, even in data-poor settings.

These challenges or drawbacks notwithstanding, there is a wide spectrum of measures employed in this volume, ranging from the simple and intuitive to the more technically complex (see chapter 5). Despite earlier assessments in the literature (Wagstaff et al. 1991), however, it is perhaps premature to make recommendations on a single best measure. The range of issues involved in moving toward reliable and valid measures that can be compared over time and across contexts is indeed daunting, and, as Amartya Sen concludes in his chapter, "much work remains to be done" (see chapter 6).

What Are the Global Patterns of Health Inequities?

Historical analyses have indicated that although risk factors for ill health change over time, they tend to cluster disproportionately within the lower ends of the social hierarchy. In other words, the better-off, more educated, more powerful, and wealthier in society have much greater capacity to improve their health than do the less well-off—a pattern that is sustained over time and across place.

This time-tested observation is validated in this volume, which brings specific attention to the social stratification of health outcomes in a global context. It challenges the idea that disparities in health only occur above a certain level of national wealth or, alternatively, that some countries are too poor to have significant social stratification of health outcomes (Antonovsky 1979; Wilkinson 1996)—the hypothesis of absolute material deprivation. In the early 1980s in Bangladesh, one of the world's poorest countries, there was a very steep gradient in child mortality according to gender and socioeconomic status: Girls from the poorest households had the highest mortality rates, with better survival chances observed among boys and with increases in the level of household wealth (see chapter 16). The evidence from the cases supports the emerging consensus that inequities in health are found within all countries regardless of their so-called level of development and/or wealth.

A unifying element among the case studies in this volume is that they seek to document differences in health between social groups. In Chile, health disparities between educational groups are measured; in the U.S. case study, the focus is on race/ethnicity and income groups; in Russia, the indicators are sex, education, and marital status; and in Mexico and Japan, county and prefecture-level provide the focus, respec-

tively. Below we draw on this collection of empirical evidence and summarize the most salient findings.

Poverty and Marginalization

In many of the countries represented in this volume, poverty and marginalization are the underlying or "fundamental" causes of inequities in health. In Mexico, the highest death rates at every stage of life, from infancy to adulthood, are found in the most marginalized counties, that is, those with the lowest income, poorest household infrastructure, highest illiteracy, and the largest indigenous populations (chapter 19). In Tanzania, family poverty sets off a domino effect with direct consequences for adolescent health and well-being—children are forced to drop out of school and work. As unskilled labor they resort to informal sector jobs in mines or on the streets, occupations that carry disproportionately high health risks (chapter 12).

Inequities in health occur across a wide range of disease types and causes, with the vulnerability and exposure to these diseases as well as their negative consequences inevitably clustering among those at the lower end of the socioeconomic spectrum. In contradistinction to the existing orthodoxy, communicable diseases are not the only health burden borne by the poor. Accidents, injuries, and violence and many non-communicable diseases and risk factors are disproportionately concentrated in the poorer populations.

Over a lifetime, there are cumulative adverse health effects that result from living in persistent poverty (Kuh and Ben-Shlomo 1997). Multiple, overlapping forms of discrimination or marginalization compound the effects of poverty. For example, being poor, female, and a member of an ethnic group suffering discrimination confers a magnified health risk as a result of heightened vulnerability. Likewise, although the vast majority of South Africa's poor are black, those at greatest risk are members of female-headed families, those with low education, the unemployed, and residents of former "homeland" areas (chapter 14). The cumulative health effects of poverty and marginalization, which extend across generations, are evident in the legacy of apartheid, or institutionalized racism. Furthermore, new technologies, interventions, and health opportunities tend to be more readily appropriated by the better-off (Mechanic 2000). A corollary to these observations is the fact that interventions for one specific disease will not necessarily lower the burden on the poor because their underlying vulnerability makes it likely that one risk, or disease, avoided will be rapidly replaced by another (see chapter 2).

Marginalization is often equated with poverty, but may also be defined through geographic, ethnic, or racially based exclusion or even as a result of disability and illness. The numerous forms of marginalization must be taken into account as their relative importance as stratifying variables will differ according to context. Likewise, poverty must be seen as a heterogeneous concept, a factor that inhibits well-being and multiple facets of livelihoods. As the chapters in this volume attest, part of the answer to redressing health inequities lies in meeting basic needs and eliminating structural poverty. Thus, health interventions would do well to respond to much more than just the currently expressed need, evidenced by a particular symptom or illness. Moving much further upstream to redress disproportionate risks associated with poverty—and not just the health effects of these risks—is critical. As shown in the Britain/Sweden comparative study, the health effects of poverty may be modified by other social policies and safety nets (see chapter 17). The fact that poverty and marginalization are so linked to ill health and yet are unfair, modifiable determinants makes these issues a health equity priority.

Urban/Rural

Rapid urbanization in many parts of the world creates an increasingly complex terrain for analysis of the disparity between rural and urban populations. Traditional "urban bias" has resulted in the preferential allocation of resources and services to the more vocal populations in cities. This bias appears to have been accentuated by China's rapid economic transition with a corresponding increase in the gap in health between urban and rural areas. Urban advantage, however, is less clear in other cases. In Russia, the mortality crisis accompanying the "shock" economic reforms was highly concentrated in urban areas. The emerging patterns of urbanization in Kenya have concentrated the risk of road traffic accidents in the more populated centers. Finally, in South Africa, "informal urban" in addition to rural and homeland dwellers had higher levels of ill health than other groups. The increasing concentration of the world's poor in urban settings presents a new field of inquiry for health equity research and intervention (Stephens 1998).

Social Status

It is commonly observed that increases in social status are paralleled by increases in health. Alternatively stated, each unit increase in education level or occu-

pational hierarchy yields corresponding increments in health outcomes. Below we discuss two primary expressions of social status—education and employment—and their association with health and health equity.

Education

Education's role as a determinant of health has been well documented, and many of the studies in this volume provide additional evidence and new insights into this robust association. In general, survival chances are greatest in the highest educational classes. In the China and South Africa studies, greater levels of literacy or maternal education are strongly correlated with decreased rates of infant mortality (see chapters 7 and 14). In modern Japan, with very high levels of educational attainment, differentials between prefectures in education among women continue to maintain a strong association with prefecture-level life expectancy at age 40 years (see chapter 8). The important role of education may also be seen in the Chilean and Russian analyses, where education appears to act as a buffer against the adverse health effects of economic transition. Vega and colleagues argue that without a doubling of investment in education during the period of economic reforms in Chile, health inequities would be much greater than they are currently (see chapter 10). Similarly, in Russia those with higher levels of education, particularly women, were less affected in the mortality crisis than were those with lower levels of education (see chapter 11).

The weight of evidence here and elsewhere makes education a compelling policy consideration for redressing health inequities. First, higher levels of education appear to confer lower risks of ill health or death across a wide variety of causes, including cancers, cardiovascular diseases, accidents and violence, and alcohol. Second, these benefits occur across cultures and nation states and may be appreciating in the global information age (see chapter 4). Finally, the health benefits of education are not specific to age—they occur across the lifespan and spill over into future generations. As stated in the summation of the Tanzanian analysis, those who remain in school are “on the road to health,” a path that leads to a life of opportunities (see chapter 12).

Employment or livelihoods

At the most basic level, the link between employment and health lies in whether individuals can generate an income sufficient to sustain well-being. In Russia, the unemployed have the highest mortality rates in the adult population. Furthermore, job security has an ef-

fect on life expectancy—in Russia, high job turnover rate is strongly correlated with decreased life expectancy. Also important is the extent to which unemployment coincides with poverty or with lower socioeconomic status. There is evidence of a health benefit in the provision of employment as seen in Bangladesh, where health benefits for both women and their children are correlated with increasing women's income-generating opportunities through microcredit.

Within the employed workforce health is stratified by job-related factors such as exposure to specific health hazards and the degree of labor regulations. In Tanzania, the most destitute adolescents are forced to eke out their livelihoods in the highest risk occupations—working in unsafe mines and engaging in commercial sex work (see chapter 12). Labor conditions affect not only the workers themselves, but the public at large. In Kenya, the increasing health burden attributable to road traffic accidents is seen to stem, in part, from an unregulated, corrupt *matatu* (bus) industry (see chapter 15). Even in contexts where the majority of employment is in the formal sector, there are important health gradations across occupations. In Japan, death rates among male service and agricultural workers are one-third higher than death rates among managers, professionals, clerks, and salesmen (see chapter 8). In both Sweden and Britain, there are striking stepwise gradients in health across the hierarchy from semiskilled/unskilled manual workers to high-level professionals and managers (see chapter 17). Such occupational health gradients have been demonstrated in many other settings and represent one of the primary lines of inquiry into the social determinants of health.

Gender

Inequity in health stemming from gender-related determinants can be thought of in two distinct ways. First, biologically specific health needs of men and women may not be fairly accommodated by health and social systems. Perhaps the starkest example of this type of gender inequity is seen in international differences in maternal mortality: In the poorest countries of the world women's chances of dying in childbirth are 1 in 16, whereas in the richest countries the risks are 1 in 2000. Second, differentials in health between men and women may arise from societal constructions of gender and not from biological differences between the sexes. Differences in the roles societies accord males and females stratify their opportunities for good health. For example, intrahousehold allocation of food is often male biased, leading to greater undernutrition for girls. This cultural preference for sons in some coun-

tries of Asia has led to a disproportionate number of males relative to females, a phenomenon Amartya Sen has labeled "missing women" (Sen 1992; Das Gupta 1998).

Gaps in health outcomes between sexes are observed in most of the cases in this volume. Most striking, perhaps, are the mortality or survival differentials. In Russia, women now outlive men by 13 years on average, among the widest within country gender gaps in life expectancy recorded (see chapter 11). In contrast, in China since 1987, the gender gap in infant mortality rates (IMRs) has grown steadily due to ongoing improvements in male IMRs and a disturbing absence of improvements among females (see chapter 7). When direct mortality comparisons are made between men and women, their underlying biological differences in survival must not be overlooked. Adjusting the comparison of child mortality in Bangladesh according to male and female norms revealed the persistence of a significant gender inequity, whereas the unadjusted comparison indicated gender equality (see chapter 16). The analysis of gender differentials in health provides some revealing insights into the fundamental distinction between equity and equality. Namely, it is entirely conceivable that there may be equality of outcomes that are inequitable and, conversely, unequal outcomes that are equitable.

The cases in this volume suggest that gradients in health may have significantly different expressions for men and women. The chapter on gender and health equity provides examples of how poor women fare compared with poor men in terms of adult mortality—with the relative sex advantages varying across countries (see chapter 13). The analysis in Bangladesh showed that socioeconomic inequities in female child survival were more pronounced relative to those for males in the early 1980s. In contrast, the observation that social gradients in health for adult men are generally more pronounced or steeper than for women (Macintyre 1998) is supported in the analyses of education inequalities in Russia and Chile, income and race differentials in the United States, occupational inequalities in Britain and Sweden, and county marginality in Mexico. It is important to note, however, that the comparison of such social gradients between men and women may be compromised by the gender insensitivity of the classification system itself—for example, specific occupational differences within levels of a job hierarchy and women's dual burden in the home may not be reflected in a straightforward comparison of existing measures of social class (Sacker et al. 2000).

Above all, the evidence herein supports the need for sex disaggregation of health data. Not only are the pat-

terns of inequality in health different, the underlying causes, the pathways through which the social context stratifies health, and the specific diseases through which these social processes are manifested are likely to differ based on gender. Furthermore, the explicit role of policies both within and outside of the health sector must be assessed for their role in exacerbating gender inequities (see chapters 12 and 13).

Social Context and Social Policies

Social policies and social context represent a broad set of determinants encompassing political, cultural, social, and economic factors. As articulated in the South Africa chapter, the nature of the political system, its values and processes for participation, define the frontiers of opportunity for health equity. Systems characterized by the absence of democracy, pervasive corruption, violence, endemic racism, and gender discrimination are breeding grounds for inequities in health (and in other social spheres). In contrast, societies with flourishing democracies, respect for human rights, transparency, and opportunities for civic engagement—high social capital—are more likely to be equity-enhancing.

Reflecting this underlying context, macroeconomic, labor, and social policies may either limit or enhance health opportunities for different groups in the population. In the era of liberal macroeconomic policy "pro-growth" strategies tend to provide enhanced opportunity to those with resources and high levels of education while large segments of the population without these assets are unlikely to be beneficiaries and may—as seen as Russia—even become casualties of economic transition. Unfortunately, less attention has been paid to education and labor policies, which not only modify the effects of macroeconomic policies but are fundamental determinants of human agency, and ultimately health, in all contexts. Regulation of the transport industry, the promotion or subsidization of substances such as tobacco and alcohol, and the government's approach to domestic violence are among the spectrum of policies that have a bearing on health and health equity. Insofar as all of these aspects of the social context are seen as key determinants of health, they must increasingly become an inherent part of public health strategies. As Gilson and McIntyre acknowledge, "health policy makers . . . have a vital role in signaling when other policies may undermine efforts to promote health equity" (see chapter 14).

One critical component of social policy is the health or medical care system. Although it is well established and increasingly acknowledged that health care is but

one determinant of health outcomes (Bunker et al. 1999), it is nevertheless quite an important one. Despite remarkable progress in medical knowledge and technologies, access to health care remains highly skewed both within and between countries. In addition to financial, geographic, and cultural barriers to accessing care, widespread health sector reforms promoting privatization of health care and regressive health care financing schemes figure prominently in the generation of health inequities. In China, where the health care system is undergoing such reforms, up to one-third of the poor are unable to access hospital care due to its prohibitive costs. For those who are able to access care, the costs of doing so may be impoverishing, leading households into a downward spiral of indebtedness and further poor health. Beyond these two stratifying effects of health care lies the more general tendency of health systems—even those offering free and universal health care—to disproportionately cater to the needs of healthier and wealthier groups. In Mexico, in the highly marginalized counties where health needs are greatest, public hospital beds, physicians per capita, and the percentage of deliveries in hospitals are the lowest.

A Global Response

Several global trends over recent decades have made the need to challenge health inequities a matter of greater urgency. First, an increasing number of countries have been going through periods of intense economic transition. When coupled with economic growth policies that pay no attention to social investments or to compensatory educational and labor policies, these transitions have exacerbated the extent of inequity in health. In this respect, a number of the case studies in this volume—those on Russia, Chile, and China—bear witness to these adverse effects.

Second, there has been a transition in the burden of disease in many countries, which is not, as was previously thought, simply a matter of a switch from communicable to noncommunicable disease as countries develop. Rather, in many countries, the poor now carry a disproportionate triple burden—communicable, non-communicable, and sociobehavioral. Thus, death and disability due to violence, substance abuse, and road traffic accidents take a greater toll on the poor in many contexts. The sweep of globalization will likely exacerbate the sociobehavioral threats, with a predicted disproportionate impact on the poor (see chapter 4).

Third, globalization is rapidly emerging as an important stratifier of health outcomes. Whether its po-

tential is effectively harnessed or its threats duly delivered remains to be seen. The global health community, however, cannot afford to stand by idly and watch what happens. Rather, health concerns and opportunities must be actively voiced in global debates and institutional settings (chapter 4). As Jonathan Mann presciently noted in the mid 1990s—not only is the risk of AIDS global but so too is the response (Mann 2000). The litmus test of a new era for global health equity lies in the world's response to the AIDS epidemic.

Fourth is the evidence of a worsening situation, with more countries reporting growing disparities in health between different groups in their populations as socioeconomic inequalities widen. An overriding message in this volume, articulated by Whitehead and colleagues in Chapter 21, is that we need not, and must not, tolerate these adverse developments. Although disparities in health between social groups exist in all societies, it is imperative to emphasize that such disparities can be modified by specific policies: They are not inevitable. This requires a refocusing of effort to

- Become more sensitive to our propensity to generate disparities through the health and social sectors
- Recognize inequities in health as a critical reflection of social injustice
- Promote distribution in health as a legitimate focus of health policy and health research
- Generate evidence on how to monitor and redress inequities

The challenge before us, therefore, is not merely the promotion of health, but a fair chance for all to achieve it.

References

- Antonovsky A. 1979. Social class, life expectancy and overall mortality. *Milbank Memorial Fund Quarterly* XLV(2):31–72.
- Bunker J.P., Frazier H.S., Mosteller F. 1995. The role of medical care in determining health: creating an inventory of benefits. In: Amick C., Levine S., Tarlov A.R., Walsh D.C., (eds), *Society and Health*, New York: Oxford University Press, pp. 304–341.
- Das Gupta M. 1987. Selective discrimination against female children in rural Punjab, India. *Population and Development Review* 13:77–100.
- Krieger N., Williams D.R., Moss N.E. 1997. Measuring social class in public health research. *Annual Review of Public Health* 18:341–378.
- Kuh, D., Ben-Shlomo Y. (eds). 1997. *A Life Course Approach to Chronic Disease Epidemiology*. Oxford: Oxford University Press.
- Macintyre S. 1998. Social inequalities and health in the contemporary world: comparative overview. In: Strickland S.S., Shetty P.S. (eds), *Human Biology and Social Inequality*. 39th Symposium volume of the Society for the Study of Human Biology. Cambridge: Cambridge University Press, pp. 20–33.

- Mann J. 2000. The transformative potential of the HIV/AIDS pandemic. *Reproductive Health Matters* 7(14):164-173.
- Mechanic D. 2000. Rediscovering the social determinants of health. Book Review Essay. *Health Affairs* May/June:269-276.
- Murray C.J.L., Michaud C.M., McKenna M.T., Marks J.S. 1998. *U.S. Patterns of Mortality by County and Race: 1965-1994*. Cambridge: Harvard Center for Population and Development Studies
- Sacker A., Firth D., Fitzpatrick R., Lynch K., Bartley M. 2000. Comparing health inequality in women and men: prospective study of mortality 1986-1996. *British Medical Journal* 320:1303-1307.
- Sen A. 1992. Missing women: social inequality outweighs women's survival advantage in Asia and north Africa. *British Medical Journal* 304:587-588.
- Sen A. 1999. *Development as Freedom*. New York: Alfred A. Knopf.
- Stephens C. 1998. The policy implications of health inequalities in developing countries. In: Strickland S.S., Shetty P.S. (eds), *Human Biology and Social Inequality*. 39th Symposium volume of the Society for the Study of Human Biology. Cambridge: Cambridge University Press, pp. 288-307.
- UNICEF. 1999. *The Progress of Nations 1999*. New York: UNICEF.
- Valkonen T., Sihvonen A.-P., Lahtela E. 1997. Health expectancy by level of education in Finland. *Social Science and Medicine* 44:801-808.
- van de Water H., Boshuizen H., Perenboom R. 1996. Health expectancy in the Netherlands 1983-1990. *European Journal of Public Health* 6: 21-28.
- Wagstaff A., Paci P., van Doorslaer E. 1991. On the measurement of inequalities in health. *Social Science and Medicine* 33:545-577.
- Whitehead M., Diderichsen F. 1997. International evidence on social inequalities in health. In: Drever F., Whitehead M. (eds), *Health Inequalities—Decennial Supplement*. DS Series No. 15. Office for National Statistics. London: The Stationery Office, pp. 45-69.
- Whitehead M., Scott Samuel A., Dahlgren G. 1998. Setting targets to address inequalities in health. *Lancet* 351:1279-1282.
- Wilkinson R. 1996. *Unhealthy Societies: The Afflictions of Inequality*. London, Routledge.

