

The state of global health in a radically unequal world: patterns and prospects

Ronald Labonté and Ted Schrecker

“If living were a thing that money could buy”

Imagine for a moment a series of disasters that killed almost 1400 women every day for a year: the equivalent of four or five daily crashes of crowded long-distance airliners. There is little question that such a situation would quickly be regarded as a humanitarian emergency, as the stuff of headlines, especially if ways of preventing the events were well known and widely practised in some parts of the world. However, remarkably little attention is paid outside the global health and human rights domains to the complications of pregnancy and childbirth that kill more than 500,000 women every year – a cause of death now almost unheard-of in high-income countries (HICs). A Canadian woman’s lifetime risk of dying from complications of pregnancy or childbirth is one in 11,000. For a woman in Niger, one of the world’s poorest countries, it is one in 7 and for the developing world as a whole one in 76 (Say, Inoue, Mills, & Suzuki, 2007; see also UNICEF, 2008a).

This is one example among many of the health contrasts between rich and poor worlds. Average life expectancy at birth (LEB) worldwide has been estimated at 28.5 years in 1800, much of the short average lifespan caused by high rates of death in the early years of life. By the end of the twentieth century, worldwide average LEB had increased to roughly 67 years (Riley, 2005), due in large measure reductions in infant and child mortality. However, global progress conceals large variations between countries. For example, Canadians born today can expect to live to the age of 80, a figure that is among the world’s highest. In countries classified by the World Bank as low-income, where nearly a billion of the world’s people live, estimated LEB averages 59 years. In Zambia, one of several such countries ravaged by the AIDS epidemic, LEB has dropped to 45 years from a peak of more than 50 years in the 1980s (World Bank, 2009, accessed December 14, 2009).

Differences in the prevalence of specific diseases are even more dramatic. Although AIDS was first identified in HICs, more than 95 percent of new HIV infections now occur outside those countries with the highest prevalence rates in sub-Saharan Africa, accounting for two-thirds of the world’s infected population and an estimated 1.4 million of the 2.0 million annual deaths from AIDS (UNAIDS,

2009). Malaria and tuberculosis have been almost entirely vanquished in HICs. Elsewhere in the world they continue to kill almost a million and more than 1.7 million people per year, respectively (United Nations, 2009a), despite the demonstrated effectiveness of relatively low-cost solutions.¹ Health disparities between rich and poor countries involve not only differences in the kinds of illnesses that affect their populations, but also the ages at which illness and death occur. Of the 49.4 million deaths in low- and middle-income countries (LMICs) in 2002, 21 percent occurred among children under five years of age; in the HICs, of 7.9 million deaths in the same year, just one percent occurred among children under five (Mathers, 2010). Although the worldwide statistical risk of child death declined steadily through the last decades of the twentieth century, far more substantial gains could have been achieved. In 2006 nearly 10 million children died before reaching the age of five. All but 100,000 of these deaths occurred outside the industrialized countries, most of them from causes that are either extremely uncommon in those countries or rarely result in death there (Bryce, Boschi-Pinto, Shibuya, & Black, 2005; UNICEF, 2008b). Figures 1 and 2 show the far higher overall death rate among both children and adults outside HICs, but also the difference in causes of death.

The intuitive and largely accurate explanation for these differences involves poverty and material deprivation. On the best available estimates more than a billion people in the world were chronically undernourished as of 2009 (United Nations Food and Agriculture Organization, 2009); this figure refers only to long-term insufficiency of caloric intake, and not to a variety of micronutrient deficiencies some of which are even more widespread. According to one World Health Organization (WHO) estimate, underweight and other nutritional risk factors, including “suboptimal” breastfeeding, “were together responsible for an estimate 3.9 million deaths” in children under five, and “[i]n low-income countries, easy-to-remedy nutritional deficiencies prevent 1 in 38 newborns from reaching age 5” (World Health Organization, 2009a, p. 13). This is a substantial underestimate of the overall contribution of inadequate nutrition to illness, since (for example) maternal undernutrition during pregnancy affects the health status of mothers as well as their children, and undernutrition almost certainly increases adult vulnerability to HIV infection and to a range of other communicable diseases, as well as exacerbating their effects (Bates et al., 2004; Stillwaggon, 2006). Economic deprivation creates situations in which the daily routines of living are themselves hazardous. Charcoal or dung smoke from cooking fires is a major contributor to respiratory disease among the world’s poor (Bruce, Perez-Padilla,

¹ An exception involves increasingly prevalent drug-resistant strains of tuberculosis in all countries of the world. However, the spread of those strains is itself largely attributable to a history of inadequate provision of the resources necessary for vaccination and treatment using first-line drugs in LICs (Coker, 2004).

& Albalak, 2000; Ezzati & Kammen, 2002; Rehfuess, 2006). In the fast-growing cities of the developing world close to a billion people now live in slums, as defined by UN Habitat, with resulting exposure to multiple environmental hazards (Unger & Riley, 2007); the number will increase to 1.4 billion in 2020 in the absence of effective policy interventions (Garau, Sclar, & Carolini, 2005; see also Davis, 2006). Lack of access to clean water is a major contributor to infectious diarrhoea and a variety of parasitic diseases (Prüss-Üstun, Bos, Gore, & Bartram, 2008), yet an estimated 1.1 billion people lack access to clean water and 2.6 billion have no access to basic sanitation (United Nations Development Programme, 2006). A further dimension of the role of material deprivation involves the lack of resources to access health care. At the individual level, the need to pay for health care pushes an estimated 100 million people into poverty every year (van Doorslaer et al., 2006; McIntyre, Thiede, Dahlgren, & Whitehead, 2006; Xu et al., 2007); at the national level, many low-income countries are simply unable to mobilize the resources needed for minimal health care from domestic sources. Ironically, both dynamics have often been worsened by health sector ‘reforms’ actively promoted by high-income countries (Lister & Labonté, 2009).²

In many respects, then, the words of the folk song “All My Trials” (made famous by Joan Baez) ring true: living is a thing that money can buy; the rich do live, and the poor do die. In addition to such national differences, socioeconomic gradients in health status – inverse correlations between health status and various indicators of socioeconomic status – are almost universal within national and sub-national boundaries, in countries rich and poor alike. Figure 3 shows such gradients in mortality among children under five (U5MR): children in the poorest fifth of the population in five largely dissimilar developing countries are at least twice as likely to die before their fifth birthday, and sometimes three times as likely, as children in the richest fifth. In India alone 1.4 million child deaths would be prevented each year if U5MR for the entire Indian population were reduced to the level characteristic of its richest quintile (Commission on Social Determinants of Health, 2008, p. 29). Socioeconomic gradients reflect not only daily conditions of life and work, but also economic influences on access to health services: for example, dramatic income-related disparities are observed in access to the skilled birth attendance that is critical to reducing maternal mortality and avoiding postpartum complications (UNICEF, 2008a). Socioeconomic gradients are widespread in high-income countries, as well. The “eight Americas” study in the United States, where racial and economic inequalities tend to be superimposed on one another,

² We recognize the importance of poor governance (including corruption) and low public spending on health in many LMIC, which compound the problems of medical poverty and inadequate health care coverage; at the same time, these dynamics cannot be separated from those of globalization discussed later in this chapter.

found that the life expectancy of African-Americans in ‘high-risk’ urban counties is almost nine years shorter than that of the mostly white residents of “Middle America” (Murray, Kulkarni, & Ezzati, 2005; Murray et al., 2006). In the words of the authors, “tens of millions of Americans are experiencing levels of health that are more typical of middle-income or low-income developing countries” (Murray et al., 2006, p. 0009). This point was emphasized in a famous study (McCord & Freeman, 1990) that found young men in Harlem, an overwhelmingly African-American area of New York City, had a lower LEB than the national average for men in Bangladesh. Within individual metropolitan areas of the United States and the United Kingdom, even larger health disparities than those found in the eight Americas study can be observed between rich and poor districts: close to 20 years in Chicago and Washington, DC and 28 years in Glasgow (Wang, 1998; Commission on Social Determinants of Health, 2008, p. 31-32).

Growth (and wealth) are not enough

Discussions of global health ethics must avoid the simplistic leap from this set of observations to the conclusion that greater wealth through economic growth is the surest route to better health – and, therefore, that improvements in population health are best achieved by policies that promote economic growth. Superficial support for the growth → wealth → health causal pathway comes from a widely cited graph known as the Preston curve, after the economist who first drew it (Figure 4 shows the curve for the year 2000). The graph represents most of the world’s countries with a circle, the area of which is proportional to the size of the country’s population. The vertical axis shows average life expectancy at birth, and the horizontal axis shows the country’s Gross Domestic Product (GDP) per capita, adjusted for purchasing power. The trend line on the graph shows the national average life expectancy that would be anticipated at a given level of GDP per capita, based on a population-weighted average of all the national data. The graph shows strong returns to economic growth in terms of LEB at low per capita incomes, up to about US\$5,000. Above that point, only a weak and inconclusive relation between LEB and wealth is evident.³ However, wide variations exist in LEB among countries with comparable levels of GDP/capita. For example, in 2007 LEB in the United States, with a Gross National Income (GNI)/capita⁴ /capita of more than \$45,000 was 78 years; it was also 78 years in Chile and 79 in Costa Rica, countries with GNI/capita of \$12,280 and \$10,510, respectively. Conversely, some countries do far less well in terms of LEB than one might expect given their income levels. The most conspicuous outliers in this

³ The same is not necessarily true for more nuanced indicators of health status such as chronic disease prevalence or limited functioning as a result of work-related disability (to give but two examples); mortality-based indicators are intrinsically crude.

⁴ GNI is a measure now widely used in preference to GDP. All figures cited are adjusted for purchasing power.

respect are countries in sub-Saharan Africa where life expectancy has been drastically reduced by the AIDS epidemic. Thus, LEB in Zambia of 45 years in 2007 – a figure comparable to LEB in England in the 1840s - was more than 20 years lower than that in Bangladesh, a comparably poor country but one where AIDS is not a substantial contributor to the burden of disease; LEB in South Africa and Burundi was 50 years, despite the fact that South Africa's GNI/capita was 25 times Burundi's. Indeed, one of Preston's original conclusions was that "[f]actors exogenous to a country's level of income probably account for 75-90% of the growth in life expectancy for the world as a whole between the 1930s and the 1960s. Income growth per se accounts for only 10-25%" (Preston, 2007, p. 486; original publication 1975).

Two sets of factors explain much of the remainder. The first set comprises advances in medical treatment and preventive health measures: antibiotics, immunization, pesticides and bednets to limit exposure to mosquitoes that transmit malaria. In other words, the trend line of the Preston curve moves upward on the graph over time.⁵ The second set of factors involves the extent to which countries use their available resources in ways that result in widely shared improvements in health status for their populations – including access to advances in treatment and prevention. At the high end of the national income spectrum, the United States not only is characterized by high and rising disparities in health status (Braveman & Egerter, 2008; Ezzati, Friedman, Kulkarni, & Murray, 2008) but also underperforms in terms of national average LEB because of such interrelated phenomena as high homicide rates, high and rising rates of poverty and economic inequality, and a substantial proportion of its population that lacks health insurance. Conversely Sri Lanka, Costa Rica and the Indian state of Kerala are often cited as overperformers in population health status despite low GNI/capita and because of their provision of accessible primary health care and other social protection measures (Halstead, Walsh, & Warren, eds. 1985; Caldwell, 1986; Riley, 2008).

Based on such examples (Deaton, 2006, p. 3) concludes that: "Economic growth is much to be desired because it relieves the grinding material poverty of much of the world's population. But economic growth, by itself, will not be enough to improve population health, at least in any acceptable time. As far as health is concerned, the market, by itself, is not a substitute for collective action." That collective action pertains not only to the second set of factors (how countries allocate resource priorities and distribution), but also to the first set of factors (publicly financed or supported innovations

⁵ Readers can observe an animated demonstration of this effect, and of many of the variations discussed in this section of the chapter, in a graph generated on the Gapminder web site (<http://tinyurl.com/ye7vhyb>).

in health knowledge, technology and global diffusion). As Deaton went on to note, most health innovations that contributed to the global convergence in health in the last half of the last century, which has now been replaced by divergence (Moser, Shkolnikov, & Leon, 2007), originated in wealthier countries. “in this sense, the first world has been responsible for producing the global public goods of medical and health-related research and development from which everyone has benefited, in poor and now-rich countries alike” (Deaton, 2004, p. 99). In the last 20 years, however, knowledge creators have attempted to maintain exclusive rights over their goods through expansion of patenting. Undertaken primarily by companies in wealthy countries, this has led to one of the most contentious issues in contemporary global health: that of access to essential medicines and other health technologies.

A further complication of the relation between economic growth and health involves how growth influences the nature and distribution of risks to health. It was once argued that countries experienced a relatively standardized “epidemiological transition” as they grew richer, in which infectious or communicable diseases (disproportionately affecting children) declined while chronic diseases (disproportionately affecting adults) increased (Omran, 1971). Although still useful, the concept only partially captures a pattern in which LMICs are increasingly affected by a ‘double burden of disease,’ as persistent or resurgent communicable diseases coexist with rapid increases in non-communicable diseases such as cardiovascular disease, diabetes and cancer. Figure 2 shows that the combined death rate from cardiovascular disease and cancer in sub-Saharan Africa is comparable to that in the high-income countries; their proportional contribution to mortality in that region is lower only because of the toll taken by other causes of death. On one estimate, 100 million men in China alone will die from smoking-related diseases between 2000 and 2050 (Zhang & Cai, 2003). Additionally, road traffic accidents kill an estimated 1.2 million people a year; WHO projects that the number will double by 2030 given current trends, mostly as a result of increases in LMICs (World Health Organization, 2009b). Ironically, those most likely to be injured are the poor, who are least likely to own a vehicle – a distribution of risks that is sometimes exacerbated by planning practices that favour high-speed roads for the emerging middle classes (see e.g. Rodgers, 2007 on Managua). In many cases, additional hazards are associated with exposures to industrial or motor vehicle pollution and dangers in the industrial or agricultural workplace. Birn, Pillay, & Holtz (2009, chapter 6) have suggested that it may be useful to replace the familiar categories of communicable and noncommunicable diseases with a threefold typology: diseases of marginalization and deprivation, such as diarrhea, neglected tropical diseases, malaria, respiratory infections; diseases of modernization and work, such as cardiovascular disease, cancer, road traffic injuries; and diseases of marginalization and modernization, such as diabetes, COPD,

tuberculosis, HIV/AIDS. Socioeconomic gradients are observable with respect to all three categories of disease, including those widely regarded as 'diseases of affluence' (Ezzati et al., 2005).

The significance of the double burden of disease concept is illustrated by the coexistence of undernutrition with rapid growth of overweight and obesity in LMICs: indeed, in some instances, of undernutrition and overnutrition in the same household (Popkin, 2002). Reflecting a "nutrition transition" involving a rapid shift to diets higher in fats, caloric sweeteners and meat coupled with reductions in physical activity (Popkin, 2003; Popkin, 2009), overweight and obesity in several middle-income countries is approaching the levels seen in countries like the United States. An especially striking study involves a sample of women in regions that account for more than 70 percent of Brazil's population. In 1975, almost twice as many Brazilian women were underweight as were obese; by 1997, the proportions had reversed, with the increases in obesity concentrated among low-income women (Monteiro, Conde, & Popkin, 2004). The emergence of this socioeconomic gradient is a broader trend in Brazil (Monteiro, Conde, & Popkin, 2007) and is characteristic of many LMICs (Mendez, Monteiro, & Popkin, 2005; Popkin, 2008). An equally disturbing observation is that the prevalence of overweight and obesity in many cases is increasing far more rapidly than it did in the high-income countries decades earlier (Popkin, 2002; Popkin, 2006), setting the stage for future increases in cardiovascular disease and diabetes that will widen existing health disparities. These developments, in turn, must be understood with reference to urbanization and its effects on dietary choices and physical activity (Mendez & Popkin, 2004) and various aspects of globalization. The lowering of barriers to trade and cross-border investment has facilitated consolidation of power over food systems in the hands of supermarkets at the top of global commodity chains; led to increased foreign direct investment in supermarkets and fast-food chains; and lengthened the reach of transnational marketing campaigns featuring brands such as McDonald's and Coca-Cola (Hawkes, 2005; Hawkes, Chopra, & Friel, 2009). Mexicans are now the world's leading consumer of Coca-Cola products, drinking roughly 50 percent more per person than people in the United States (The Coca-Cola Company, 2009).

Globalization, markets, and health in an unequal world

Globalization, defined here as "[a] pattern of transnational economic integration animated by the ideal of creating self-regulating global markets for goods, services, capital, technology, and skills" (Eyoh & Sandbrook, 2003), presents broader challenges as well, starting with the "inherently disequalizing" character of global markets (Birdsall, 2006): they reward those countries (and economic elites within

them) already well endowed with financial assets and economically productive factors while operating according to rules that are shaped to magnify these advantages.

The first dynamic is exemplified by the fact that hedge fund managers, the quintessential players on global financial markets, now draw multi-billion-dollar annual incomes (Anderson, 2006; Taub, 2008) against a background of only modest reductions in global poverty rates over three decades during which the value of the world's economic product quadrupled (Chen & Ravallion, 2008). Descriptions of global economic inequality tend to be highly abstract; Figure 5 is a visual presentation of the distribution of income within and among the world's countries. In the figure, countries are allocated a number of rows of columns based on their population; so each column represents approximately one million of the world's people. Countries are ordered from poorest to richest along the left-to-right axis; for each ten million people, income is ordered in deciles (ten columns of one million each) along the front-to-back axis. The vertical axis shows income per capita, after adjustment for purchasing power. Although intracountry income disparities are large even in some countries that are relatively poor as ranked by income per capita – an internal disparity that would be far more dramatic if we could visually depict, say, the top one percent or 0.1 percent of income earners in each country – the commanding heights of the worldwide income distribution are occupied by rich people in rich countries. “In 2005,” when the original version of this graph was published, “the top one-tenth of US citizens [received] a total income equal to that of the poorest 2,200,000,000 citizens in the world” (Sutcliffe, 2005, p. 12). Wealth is more concentrated than income, within countries and globally (Davies, Sandström, Shorrocks, & Wolff, 2008), and as noted the tendency of global markets is to increase the concentration of both; this tendency is not beyond the ability of national policies to reverse, although efforts to do so often confront formidable domestic opposition (see e.g. Teichman, 2008 on Mexico and Chile).

Birdsall's second dynamic is illustrated by the development of a multilateral trade regime with intellectual property provisions driven by the interests of major US pharmaceutical and information technology corporations (Sell, 2003), and the rise in bilateral 'strong-arming' negotiations to increase access to developing country markets given the slow pace of negotiations in multilateral trade talks (where developing countries have more combined bargaining power). More generally, and as noted in other chapters in this volume, globalization as it has emerged over the past few decades was actively promoted by the governments of major G7 powers, acting on their own and through multilateral institutions like the World Bank and the International Monetary Fund (IMF); by transnational corporations that now routinely reorganize production across multiple national borders; and by the

owners of financial assets who can now shift them across national borders in search of higher returns and lower risks, often destabilizing national economies and plunging millions into poverty as a result (Gershman & Irwin, 2000; Woods, 2006; Haslam, 2008; Schrecker, 2009). In many cases, notably the structural adjustment programs demanded by the World Bank and IMF as the price of loans that would enable governments to maintain their ability to borrow on international markets, the results included increased economic inequality and a decline in the ability of governments to meet basic health-related needs (Schoepf, Schoepf, & Millen, 2000; Breman & Shelton, 2001; Mohindra, 2007). Such measures generated social and economic conditions that may have contributed to the spread of HIV infection in Africa (De Vogli & Birbeck, 2005); and similar economic “shock therapy” applied to the former Soviet Union contributed to economic decline that reduced male life expectancy, in particular, as GDP shrank by roughly 50 percent with drastic increases in poverty and economic inequality (Field, Kotz, & Bukhman, 2000). If health was considered at all in such macroeconomic prescriptions, it was on the basis described by a team of World Bank economists writing about the former Soviet Union and its Eastern European satellites: that “In the long run, the transition towards a market economy and adoption of democratic forms of government should ultimately lead to improvements in health status In the short run, however, one could expect that health status would deteriorate” (Adeyi, Chellaraj, Goldstein, Preker, & Ringold, 1997, p. 133). As in other cases, the anticipation of long-term gains is better understood as an expression of faith than as an evidence-based assessment (Labonté & Schrecker, 2007).

As an empirical test of the performance of globalization in delivering health benefits over the first two decades (1980-2000) of intensified economic integration, Cornia and colleagues (Cornia, Rosignoli, & Tiberti, 2008; Cornia, Rosignoli, & Tiberti, 2009) carried out an innovative econometric exercise based on data from 136 countries in which they first identified five main influences on mortality: material deprivation; psychological stress; unhealthy lifestyles; inequality and lack of social cohesion; and medical progress (the variable identified by Preston and Deaton as the primary influence on worldwide life expectancy during an earlier period). They then described a range of variables that affect these influences, classifying them as either (a) related to policy choices made in the context of globalization (e.g. income inequality, immunization rates); (b) endogenous, and therefore unrelated to globalization for purposes of the analysis (medical progress); or (c), describable as “shocks” (e.g. wars and natural disasters, HIV/AIDS). The final stage of their analysis consisted of a simulation that compared trends in LEB over the period 1980-2000 with those that would be predicted based on a counterfactual set of assumptions in which trends in all the relevant variables did not follow the actual

1980-2000 pattern, but rather remained at the 1980 value or continued the trend they followed over the pre-1980 period. Thus, it was assumed in the counterfactual (for instance) not only that income distribution within countries, one of the globalization-related variables, did not change over the period 1980-2000, but also that there was no progress in medical technology and that HIV incidence remained at its 1980 level.

This simulation indicated that, on a worldwide basis, over the period 1980-2000 globalization cancelled out most of the progress toward better health (as measured by LEB) attributable to the diffusion of medical progress, and the effects of shocks (wars, natural disasters and AIDS) combined with globalization to result in a slight worldwide decline in LEB as compared with the counterfactual. Globalization's most conspicuous effects on LEB occurred in the transition economies and the former Soviet Union (where globalization accounted for essentially the entire decline) and sub-Saharan Africa (where globalization contributed almost as much as the AIDS epidemic). Although data limitations mean that "the establishment of a causal nexus between globalization policies and health cannot be but tentative" (Cornia et al., 2008, p. 1), the study nonetheless represents a remarkable rebuttal of claims about globalization's health benefits to date, notably including the performance of the "growth superstars," India and China (Cornia et al., 2008, p. 31). Its authors emphasize that "the negative association noted between liberalization-globalization policies, poor economic performance and unsatisfactory health trends ... seems to be quite robust" (Cornia et al., 2008, p. 36).

It can always be argued that the longer-term benefits of integration into the global marketplace have simply yet to materialize; growth should eventually generate resources to improve health for all. But against the background of lost development progress that followed the financial crisis of 2008 (World Bank & International Monetary Fund, 2009, chapter 1), this might be called the *Waiting for Godot* approach to population health. Even before the crisis, the issue identified in passing by Deaton was an urgent one from an ethical point of view: how long should the majority of the world's people be asked wait for the presumed benefits of globalization to reach them? As Thomas Pogge has pointed out in his important work on poverty and global justice, it is not difficult to envision alternative sets of economic and political institutions that would not involve long periods of pain in anticipation of health gains at some indeterminate point in the future (Pogge, 2002; Pogge et al., 2005; Pogge, 2007). A focus on the institutions of the global marketplace is also necessary because – although the point cannot be pursued further here – globalization has probably created major obstacles to countries wishing today to emphasize "social growth" and widely shared improvements in human welfare. Foreign investors and

the purchasers at the top of global commodity chains for manufactured products demand cost containment and 'flexible' labour regimes; a liberalized financial marketplace facilitates capital flight in anticipation of higher taxation; and trade policies limit countries' ability to favour domestic producers while enforcing intellectual property protections few of which existed when the high-income countries were starting their path to riches (see among many other sources (Gallagher, ed. 2005; Cerny, Menz, & Soederberg, 2005; Labonté & Schrecker, 2007).

Prospects for the future: money matters

Despite the uncertainties created by globalization, some efforts to improve the health status of people outside the metaphorical castle walls have succeeded in recent years. Improvements in vaccination coverage have reduced measles deaths from more than 700,000 in 2000 to an estimated 164,000 in 2008 (Dabbagh et al., 2009). At the end of 2008, four million people were receiving antiretroviral therapy for AIDS in low- and middle-income countries, a tenfold increase over seven years, although still a long way from WHO's stated goal of universal coverage (World Health Organization, UNAIDS, & UNICEF, 2009). Conversely, despite abundant evidence on the effectiveness and cost of the relevant interventions, only limited progress has been made in reducing maternal mortality - within the limits of available data, none in sub-Saharan Africa, where it is highest (United Nations, 2009b) – and progress in reducing child mortality remains far inferior to what could have been achieved based on available evidence (Bryce et al., 2005). An extensive list exists of demonstrably effective interventions to improve maternal and child health (Bryce et al., 2005; Bhutta et al., 2008a; Bhutta et al., 2008b); a fundamental challenge is to improve coverage and strengthen the public-sector health systems that are essential to deliver them. This is a formidably demanding task, particularly since it often entails repairing damage done by long periods of underfunding, driven in part by the imperatives of globalization.

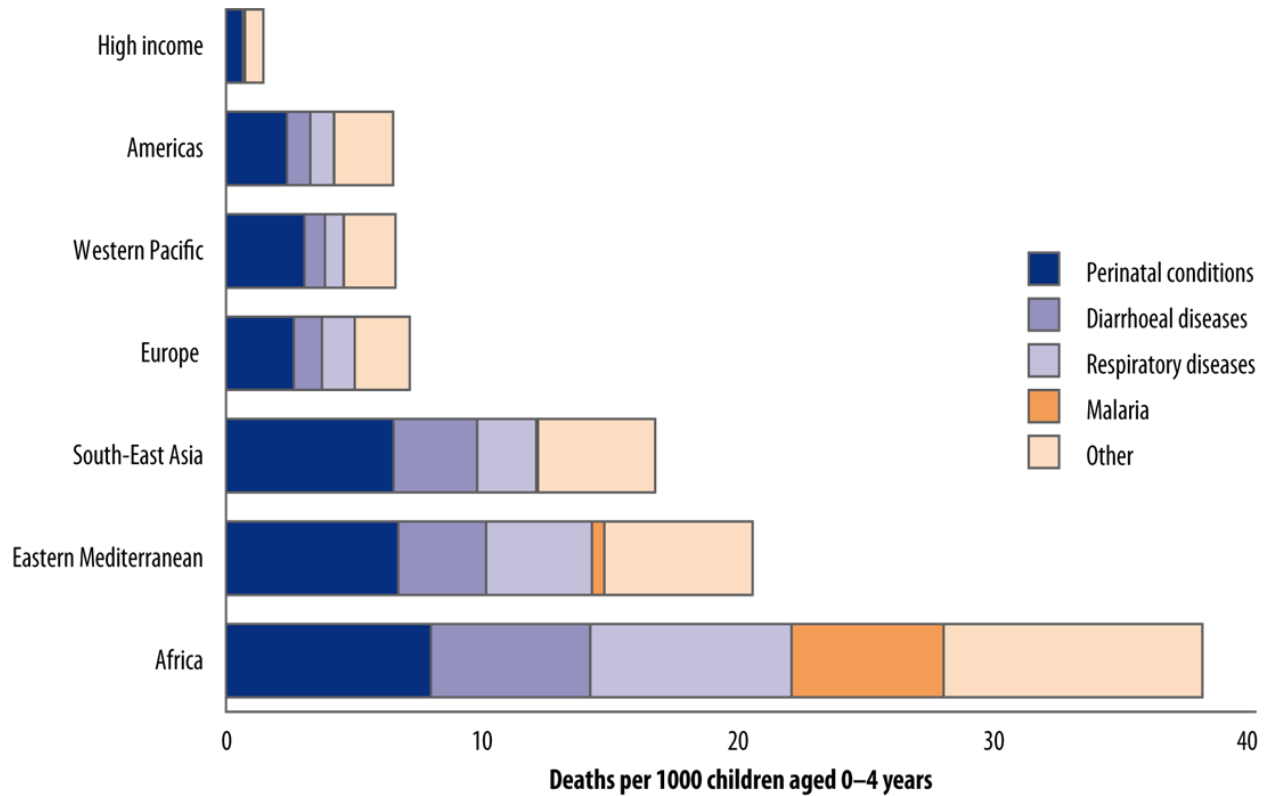
Although detailed analysis is beyond the scope of this chapter, the success stories cited in the preceding paragraph depended on effective and sustained mobilization of financial and other resources, both domestically and internationally. Apprehensions are being expressed about the availability of resources to continue these initiatives in the future (Dabbagh et al., 2009), with one US commentator referring to antiretroviral therapy as a "ballooning entitlement burden" (Over, 2008). According to recent estimates, the value of public development assistance for health increased from \$4.15 billion in 1990 to \$14.08 billion in 2007 (Ravishankar et al., 2009). By contrast, one assessment of the need for such assistance is based on estimates by the World Health Organization's Commission on Macroeconomics and Health of the cost of financing basic health care and preventive interventions in all

low-income countries: \$40/person/year, in 2007 dollars (Sachs, 2007a). *Even if* all the world's LICs were to commit 15 percent of their general government expenditures to health – and many governments' spending on health is well below that figure – annual spending of \$28 - \$36 billion by the high-income countries would be necessary to provide a “global social health protection floor” (Ooms, Van Damme, Baker, Zeitz, & Schrecker, 2008; Ooms, 2009). Factually, this approach recognizes the implausibility of insisting that health systems in LICs can be financed primarily from domestic revenues in the near future (Sachs, 2007b); normatively, this approach is a direct challenge to the “entitlement burden” view of financing health protection outside the high-income countries. This figure, however, represents only part of the resources needed to support widely shared improvements in population health – for example, by investing in the provision of safe drinking water, sanitation, and slum upgrading. Still less would such a commitment satisfy the critical need, identified by the Commission on Social Determinants of Health (2008, see generally chapters 3, 11 and 15), for “changes in the functioning of the global economy” that would redress the unequal distribution of power and resources that it identified as a fundamental cause of ill health.

Rather, the figure is cited here to make two points by way of conclusion. First, money matters, and global health ethics must start from the position that rhetoric is no substitute for commitments of resources to protect health on a much larger scale than at present. This can serve as a point of agreement even among researchers and practitioners who disagree about the relative value of improving social determinants of health and those who emphasize the ‘upstream’ social determinants of health, usually with a focus on poverty and economic inequality, and those who dismiss interventions to address these factors as “romantic but impracticable notions” (Jha, Brown, Nagelkerke, Slutsky, & Jamison, 2005), arguing instead for a focus on biomedical innovations and scaling up health systems. In fact, all of these are necessary, with the relative importance depending on context: no amount of investment in health systems will undo the damage caused by indoor air pollution from cooking smoke; no investment in social determinants of health will substitute for the skilled birth attendance that is essential to reducing maternal mortality; and neither problem can be addressed without real resources. Second, in today's global environment a preoccupation with setting priorities in ‘resource-constrained’ contexts is a diversion (Schrecker, 2008). In addition to providing a harsh demonstration of the vulnerabilities created by globalization, the financial crisis that swept across the world in 2008 emphasized a point that Jeffrey Sachs has been making for years: “in a world of trillions of dollars of income every year,” the resources needed to address emergencies of the kind described in our introductory paragraph *are available* (Sachs, 2003). Pogge has made a similar point in the context of

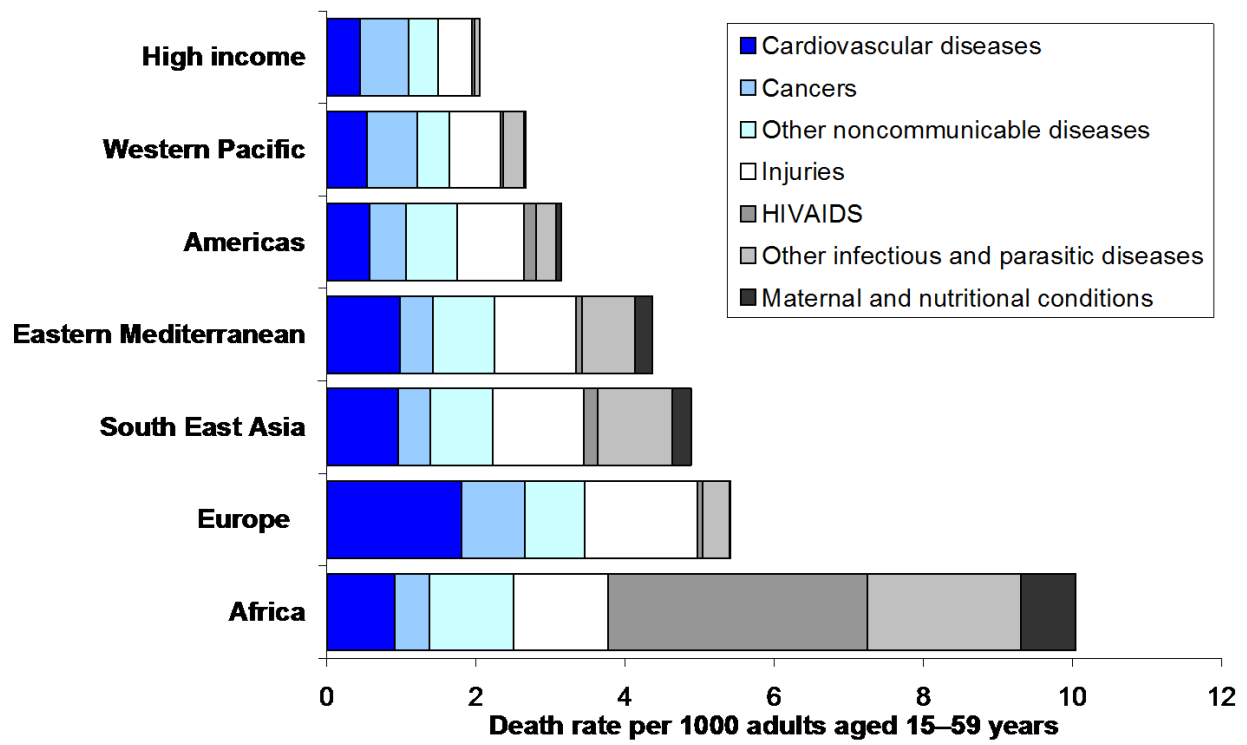
global poverty (Pogge, 2008). The fact that resource scarcities condemn millions every year to premature and avoidable deaths, and millions more to shorter and less healthy lives that most readers of this volume take for granted, must be understood as policy-generated, resulting from choices that could have been made differently and institutions that can function differently.

Figure 1. Annual deaths per 1000 infants and children (age <5) by WHO region and major cause of death, with all high-income countries grouped separately



Source: World Health Organization, Global Burden of Disease 2004 Update: Selected figures and tables (Powerpoint slides); http://www.who.int/entity/healthinfo/global_burden_disease/GBD2004ReportFigures.ppt. Used with permission.

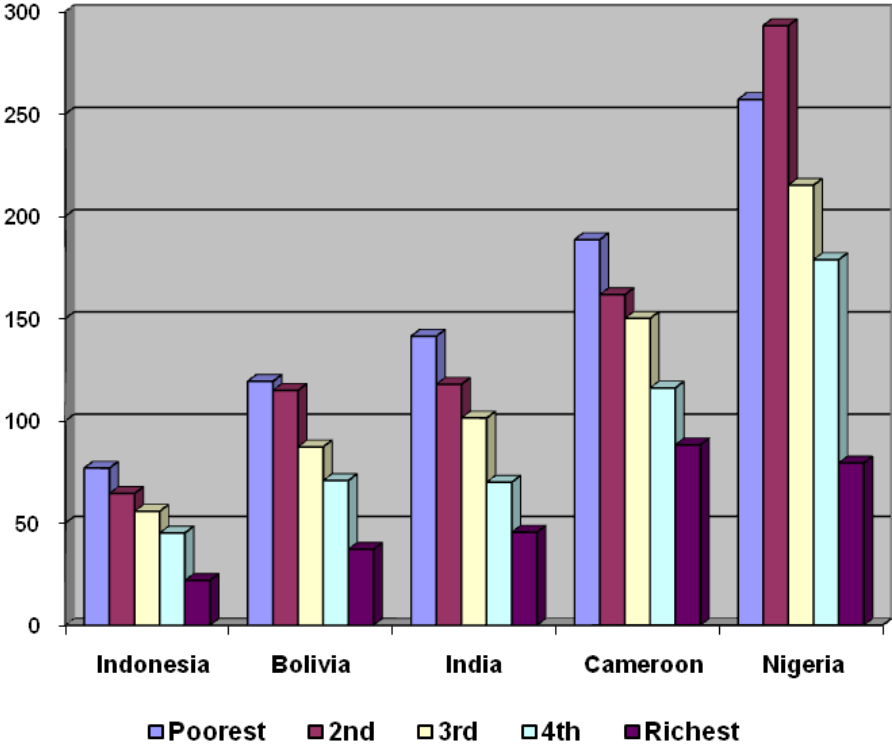
Figure 2. Annual deaths per 1000 adults (age 15-59) by WHO region and major cause of death, with all high-income countries grouped separately



Source: World Health Organization, Global Burden of Disease 2004 Update: Selected figures and tables (Powerpoint slides);

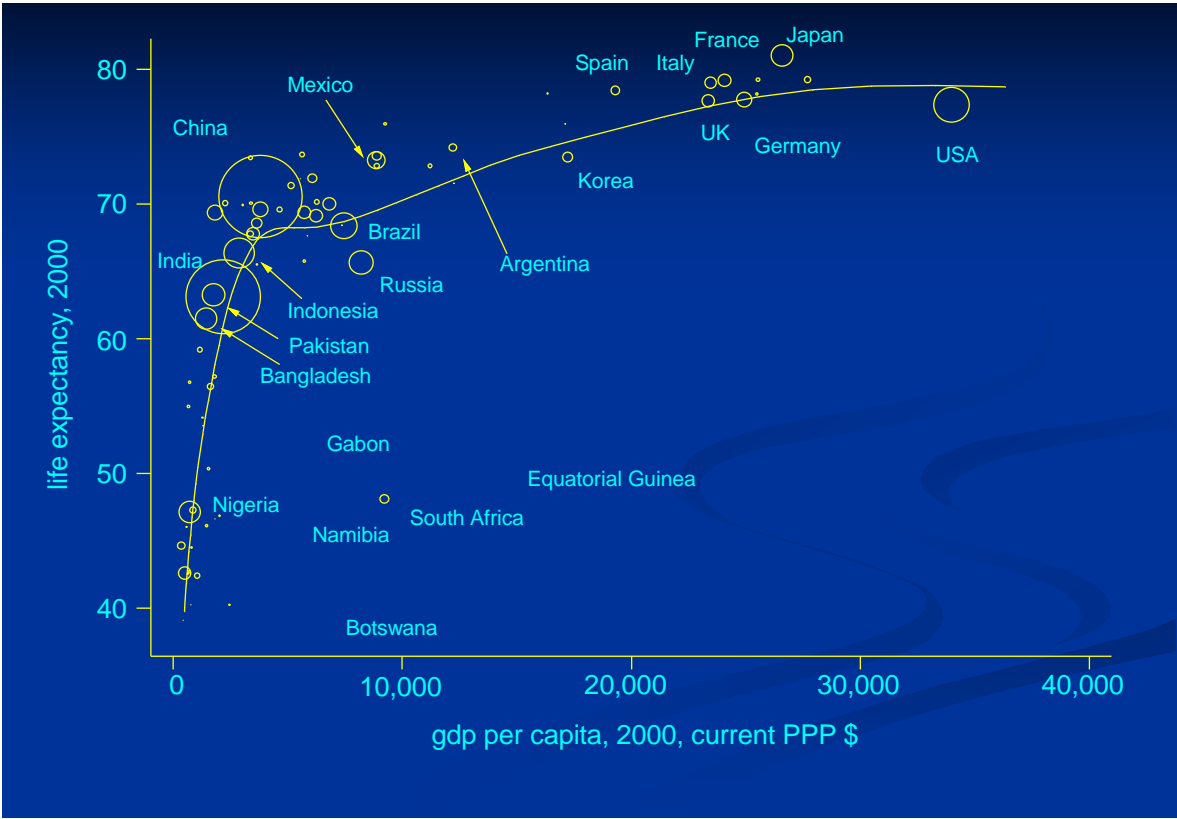
http://www.who.int/entity/healthinfo/global_burden_disease/GBD2004ReportFigures.ppt. Used with permission

Figure 3: Under-5 mortality by income quintile, selected countries, circa 2000



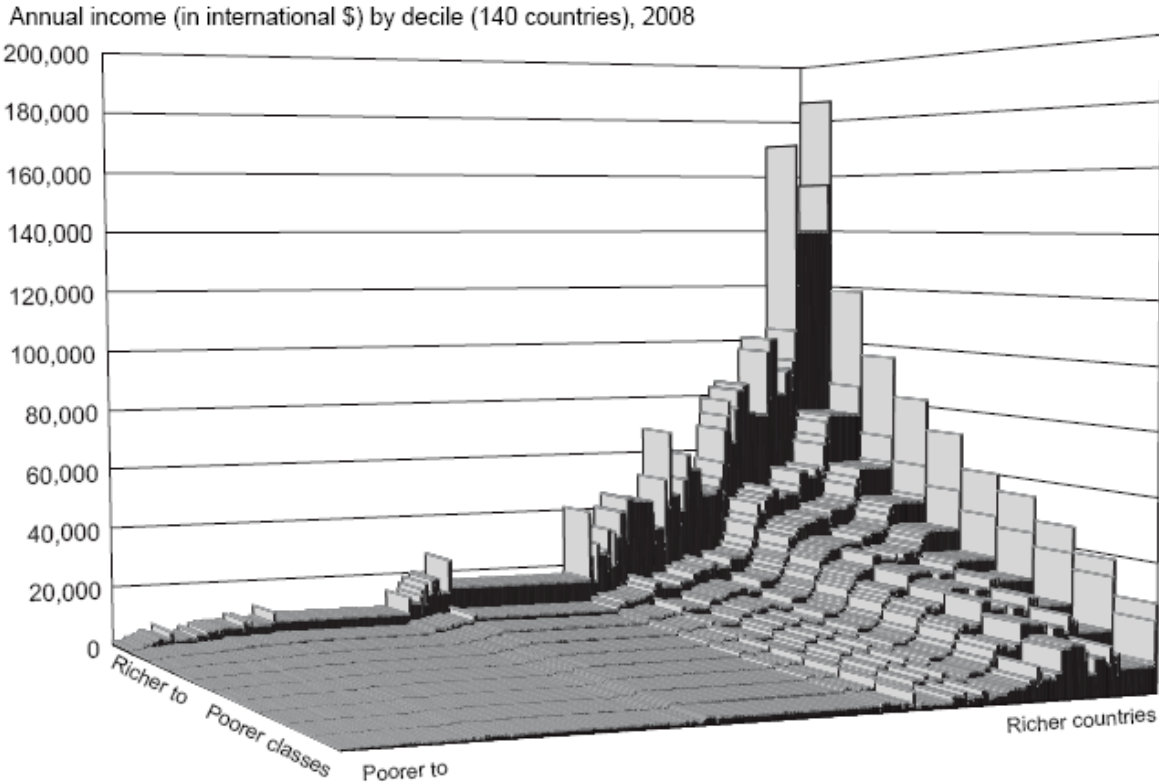
Source: Data from Gwatkin et al. (2007).

Figure 4. The Preston curve for the year 2000



Reproduced with the permission of the author and the American Economics Association, from Deaton (2003, p. 116).

Figure 5: Global income distribution: the world is *not* flat



Source: Graph generated by Bob Sutcliffe, © 2009. Used with permission.

References

- Adeyi, O., Chellaraj, G., Goldstein, E., Preker, A. S., & Ringold, D. (1997). Health status during the transition in Central and Eastern Europe: development in reverse? *Health Policy and Planning*, 12, 132-145.
- Anderson, J. (2006, May 26). Atop Hedge Funds, Richest of the Rich Get Even More So. *New York Times*.
- Bates, I., Fenton, C., Gruber, J., Lalloo, D., Medina Lara, A., Squire, S. B. et al. (2004). Vulnerability to malaria, tuberculosis, and HIV/AIDS infection and disease. Part I: determinants operating at individual and household level. *Lancet Infectious Diseases*, 4, 267-277.
- Bhutta, Z., Ali, S., Cousens, S., Ali, T. M., Haider, B. A., Rizvi, A. et al. (2008a). Alma-Ata: Rebirth and Revision 6 - Interventions to address maternal, newborn, and child survival: what difference can integrated primary health care strategies make? *The Lancet*, 372, 972-989.
- Bhutta, Z. A., Ahmed, T., Black, R. E., Cousens, S., Dewey, K., Giugliani, E. et al. (2008b). What works Interventions for maternal and child undernutrition and survival. *The Lancet*, 371, 417-440.
- Birdsall, N. (2006). *The World is Not Flat: Inequality and Injustice in our Global Economy*, WIDER Annual Lectures. Helsinki: World Institute for Development Economics Research. Retrieved from: http://www.wider.unu.edu/publications/annual-lectures/en_GB/AL9/files/78121127186268214/default/annual-lecture-2005.pdf.
- Birn, A.-E., Pillay, L., & Holtz, T. H. (2009). *Textbook of International Health*. (3rd ed.) Oxford: Oxford University Press.
- Braveman, P. & Egerter, S. (2008). *Overcoming Obstacles to Health: Report From the Robert Wood Johnson Foundation to the Commission to Build a Healthier America*. Princeton, NJ: Robert Wood Johnson Foundation. Retrieved from: <http://www.rwjf.org/files/research/obstaclestohealth.pdf>.
- Breman, A. & Shelton, C. (2001). *Structural Adjustment and Health: A literature review of the debate, its role-players and presented empirical evidence*, CMH Working Paper Series No. WG6:6. Geneva: WHO: Commission on Macroeconomics and Health.
- Bruce, N., Perez-Padilla, R., & Albalak, R. (2000). Indoor air pollution in developing countries: a major environmental and public health challenge. *Bull. World Health Organ*, 78, 1078-1092.
- Bryce, J., Black, R. E., Walker, N., Bhutta, Z. A., Lawn, J. E., & Steketee, R. W. (2005). Can the world afford to save the lives of 6 million children each year? *The Lancet*, 365, 2193-2200.
- Bryce, J., Boschi-Pinto, C., Shibuya, K., & Black, R. E. (2005). WHO estimates of the causes of death in children. *The Lancet*, 365, 1147-1152.

Caldwell, J. C. (1986). Routes to Low Mortality in Poor Countries. *Population and Development Review*, 12, 171-220.

Cerny, P. G., Menz, G., & Soederberg, S. (2005). Different Roads to Globalization: Neoliberalism, the Competition State, and Politics in a More Open World. In S. Soederberg, G. Menz, & P. G. Cerny (Eds.), *Internalizing Globalization: The Rise of Neoliberalism and the Decline of National Varieties of Capitalism* (pp. 1-30). Houndmills, England: Palgrave Macmillan.

Chen, S. & Ravallion, M. (2008). *The Developing World Is Poorer Than We Thought, But No Less Successful in the Fight against Poverty*, Policy Research Working Papers No. 4703. Washington, DC: World Bank. Retrieved from: http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2008/08/26/000158349_20080826113239/Rendered/PDF/WPS4703.pdf.

Coker, R. J. (2004). Review: Multidrug-resistant tuberculosis: public health challenges. *Tropical Medicine & International Health*, 9, 25-40.

Commission on Social Determinants of Health (2008). *Closing the Gap in a Generation: Health equity through action on the social determinants of health (final report)*. Geneva: World Health Organization. Retrieved from: http://whqlibdoc.who.int/publications/2008/9789241563703_eng.pdf.

Cornia, G. A., Rosignoli, S., & Tiberti, L. (2008). *Globalization and Health: Impact Pathways and Recent Evidence*, WIDER Research Papers No. 2008-74. Helsinki: World Institute for Development Economics Research. Retrieved from: http://www.wider.unu.edu/publications/working-papers/research-papers/2008/en_GB/rp2008-74/.

Cornia, G. A., Rosignoli, S., & Tiberti, L. (2009). An Empirical Investigation of the Relation between Globalization and Health. In R. Labonté, T. Schrecker, C. Packer, & V. Runnels (Eds.), *Globalization and Health: Pathways, Evidence and Policy* (pp. 34-62). New York: Routledge.

Dabaghi, A., Gacic-Dobo, M., Simons, E., Featherstone, D., Strebel, P., Okwo-Bele, J. M. et al. (2009). Global Measles Mortality, 2000-2008. *Morbidity and Mortality Weekly Reports*, 58, 1321-1326.

Davies, J. B., Sandström, S., Shorrocks, A., & Wolff, E. N. (2008). *The World Distribution of Household Wealth*, WIDER Discussion Papers No. 2008/03. Helsinki: World Institute for Development Economics Research. Retrieved from: http://www.wider.unu.edu/publications/working-papers/discussion-papers/2008/en_GB/dp2008-03/files/78918010772127840/default/dp2008-03.pdf.

Davis, M. (2006). *Planet of Slums*. London: Verso.

De Vogli, R. & Birbeck, G. L. (2005). Potential Impact of Adjustment Policies on Vulnerability of Women and Children to HIV/AIDS in Sub-Saharan Africa. *Journal of Health Population and Nutrition*, 23, 105-120.

Deaton, A. (2003). Health, Inequality, and Economic Development. *Journal of Economic Literature*, 41, 113-158.

Deaton, A. (2004). Health in an age of globalization. *Brookings Trade Forum*, 2004, 83-130.

- Deaton, A. (2006). Global Patterns of Income and Health. *WIDER Angle*, 2006,2, 1-3.
- Eyoh, D. & Sandbrook, R. (2003). Pragmatic neo-liberalism and just development in Africa. In A. Kohli, C. Moon, & G. Sørensen (Eds.), *States, Markets, and Just Growth: Development in the Twenty-first Century* (pp. 227-257). Tokyo: United Nations University Press.
- Ezzati, M. & Kammen, D. M. (2002). Household Energy, Indoor Air Pollution, and Health in Developing Countries: Knowledge Base for Effective Interventions. *Annu.Rev.Energy.Environ.*, 27, 233-270.
- Ezzati, M., Friedman, A. B., Kulkarni, S. C., & Murray, C. J. (2008). The Reversal of Fortunes: Trends in County Mortality and Cross-County Mortality Disparities in the United States. *PLoS Med*, 5, e66.
- Ezzati, M., Vander Hoorn, S., Lawes, C. M., Leach, R., James, W. P., Lopez, A. D. et al. (2005). Rethinking the 'diseases of affluence' paradigm: Global patterns of nutritional risks in relation to economic development. *PLoS Medicine*, 2. Retrieved from: <http://www.plosmedicine.org/article/info:doi/10.1371/journal.pmed.0020133>.
- Field, M. G., Kotz, D. M., & Bukhman, G. (2000). Neoliberal Economic Policy, "State Desertion," and the Russian Health Crisis. In J. Y. Kim, J. V. Millen, A. Irwin, & J. Gershman (Eds.), *Dying for Growth: Global Inequality and the Health of the Poor* (pp. 155-173). Monroe, Maine: Common Courage Press.
- Gallagher, K., Ed. (2005). *Putting Development First: The Importance of Policy Space in the WTO and IFIs*. London: Zed Books.
- Garau, P., Sclar, E. D., & Carolini, G. Y. (2005). *A Home in the City: UN Millennium Project Task Force on Improving the Lives of Slum Dwellers*. London: Earthscan. Retrieved from: <http://www.millenniumproject.org>.
- Gershman, J. & Irwin, A. (2000). Getting a Grip on the Global Economy. In J. Y. Kim, J. V. Millen, A. Irwin, & J. Gershman (Eds.), *Dying for Growth: Global Inequality and the Health of the Poor* (pp. 11-43). Monroe, Maine: Common Courage Press.
- Gwatkin, D. R., Rutstein, S., Johnson, K., Suliman, E., Wagstaff, A., & Amouzou, A. (2007). *Socio-Economic Differences in Health, Nutrition and Population Within Developing Countries: An Overview*. Washington, DC: World Bank. Retrieved from: <http://go.worldbank.org/XJK7WKSE40>.
- Halstead, S. B., Walsh, J. A. & Warren, K. S., Eds. (1985). *Good Health at Low Cost*. New York: Rockefeller Foundation.
- Haslam, P. (2008). Multinational Corporations. In P. Haslam, J. Schafer, & P. Beaudet (Eds.), *Introduction to International Development: Approaches, Actors, Issues* (pp. 191-210). Don Mills: Oxford University Press Canada.
- Hawkes, C. (2005). The role of foreign direct investment in the nutrition transition. *Public Health Nutrition*, 8, 357-365.

Hawkes, C., Chopra, M., & Friel, S. (2009). Globalization, Trade, and the Nutrition Transition. In R. Labonté, T. Schrecker, C. Packer, & V. Runnels (Eds.), *Globalization and Health: Pathways, Evidence and Policy* (pp. 235-262). New York: Routledge.

Jha, P., Brown, D., Nagelkerke, N., Slutsky, A. S., & Jamison, D. T. (2005). Global IDEA: Five members of the Global IDEA Scientific Advisory Committee respond to Dr. Moore and Colleagues. *Canadian Medical Association Journal*, *172*, 1538-1539.

Labonté, R. & Schrecker, T. (2007). Globalization and social determinants of health: The role of the global marketplace (part 2 of 3). *Globalization and Health*, *3*. Retrieved from: <http://www.globalizationandhealth.com/content/3/1/6>.

Lister, J. & Labonté, R. (2009). Globalization and Health Systems Change. In R. Labonté, T. Schrecker, C. Packer, & V. Runnels (Eds.), *Globalization and Health: Pathways, Evidence and Policy* (pp. 181-212). New York: Routledge.

Mathers, C. (2010). Global Burden of Disease Among Women, Children, and Adolescents. In J. Ehiri (Ed.), *Maternal and Child Health: Global Challenges, Programs, and Policies* (pp. 19-42). New York: Springer.

McCord, C. & Freeman, H. P. (1990). Excess mortality in Harlem. *The New England Journal of Medicine*, *322*, 173-177.

McIntyre, D., Thiede, M., Dahlgren, G., & Whitehead, M. (2006). What are the economic consequences for households of illness and of paying for health care in low- and middle-income country contexts? *Social Science & Medicine*, *62*, 858-865.

Mendez, M. & Popkin, B. (2004). Globalization, urbanization and nutritional change in the developing world. In *Globalization of food systems in developing countries: impact on food security and nutrition*, FAO Food and Nutrition Paper 83 (pp. 55-80). Rome: Food and Agriculture Organization of the United Nations. Retrieved from: <ftp://ftp.fao.org/docrep/fao/007/y5736e/y5736e00.pdf>.

Mendez, M. A., Monteiro, C. A., & Popkin, B. M. (2005). Overweight exceeds underweight among women in most developing countries. *American Journal of Clinical Nutrition*, *81*, 714-721.

Mohindra, K. S. (2007). Healthy public policy in poor countries: tackling macro-economic policies. *Health Promotion International*, *22*, 163-169.

Monteiro, C. A., Conde, W. L., & Popkin, B. M. (2004). The Burden of Disease From Undernutrition and Overnutrition in Countries Undergoing Rapid Nutrition Transition: A View From Brazil. *American Journal of Public Health*, *94*, 433-434.

Monteiro, C. A., Conde, W. L., & Popkin, B. M. (2007). Income-Specific Trends in Obesity in Brazil: 1975-2003. *American Journal of Public Health*, *97*, 1808-1812.

Moser, K., Shkolnikov, V., & Leon, D. (2007). World Mortality 1950-2000: Divergence Replaces Convergence from the Late 1980s. In M. Caraël & J. R. Glynn (Eds.), *HIV, Resurgent Infections and Population Change in Africa* (pp. 11-25). Dordrecht: Springer Netherlands. Retrieved from: http://dx.doi.org/10.1007/978-1-4020-6174-5_1.

Murray, C. J. L., Kulkarni, S., & Ezzati, M. (2005). Eight Americas: New Perspectives on U.S. Health Disparities. *American Journal of Preventive Medicine*, 29, 4-10.

Murray, C. J. L., Kulkarni, S. C., Michaud, C., Tomijima, N., Bulzacchelli, M. T., Iandiorio, T. J. et al. (2006). Eight Americas: Investigating Mortality Disparities across Races, Counties, and Race-Counties in the United States. *PLoS Medicine*, 3. Retrieved from: <http://dx.doi.org/10.1371%2Fjournal.pmed.0030260>.

Omran, A. R. (1971). The Epidemiologic Transition: A Theory of the Epidemiology of Population Change. *Milbank Memorial Fund Quarterly*, 49, 509-538.

Ooms, G. (2009). *From the Global AIDS Response towards Global Health?* Brussels: Hélène de Beir Foundation. Retrieved from: http://www.internationalhealthpartnership.net//CMS_files/documents/global_health_discussion_paper_b_EN.pdf.

Ooms, G., Van Damme, W., Baker, B. K., Zeitz, P., & Schrecker, T. (2008). The 'diagonal' approach to Global Fund financing: a cure for the broader malaise of health systems? *Globalization and Health*, 4. Retrieved from: <http://www.globalizationandhealth.com/content/4/1/6>.

Over, M. (2008). *Prevention Failure: The Ballooning Entitlement Burden of U.S. Global AIDS Treatment Spending and What to Do About It*, Working Papers No. 144. Washington, DC: Center for Global Development. Retrieved from: http://www.cgdev.org/files/15973_file_Presidential_AIDS_Policy_FINAL.pdf.

Pogge, T. (2002). *World Poverty and Human Rights*. Cambridge: Polity.

Pogge, T. (2007). Severe Poverty as a Human Rights Violation. In T. Pogge (Ed.), *Freedom from Poverty as a Human Right: Who owes what to the very poor?* (pp. 11-53). Oxford: Oxford University Press.

Pogge, Thomas (2008). Growth and Inequality: Understanding Recent Trends and Political Choices. *Dissent*, Winter. Retrieved from: <http://www.dissentmagazine.org/article/?article=990>.

Pogge, T., Risse, M., Patten, A., Cruft, R., Anwander, N., & Satz, D. (2005). Symposium: World Poverty and Human Rights. *Ethics & International Affairs*, 19, 1-83.

Popkin, B. M. (2002). The shift in stages of the nutrition transition in the developing world differs from past experiences! *Public Health Nutrition*, 5, 205-214.

Popkin, B. M. (2003). The Nutrition Transition in the Developing World. *Development Policy Review*, 21, 581-597.

Popkin, B. M. (2006). Technology, transport, globalization and the nutrition transition food policy. *Food Policy*, 31, 554-569.

Popkin, B. M. (2008). Will China's Nutrition Transition Overwhelm Its Health Care System And Slow Economic Growth? *Health Affairs*, 27, 1064-1076.

Popkin, B. M. (2009). Global changes in diet and activity patterns as drivers of the nutrition transition. In S. C. Kalhan, A. M. Prentice & C. S. Yagnik (Eds.), *Emerging Societies - Coexistence of Childhood Malnutrition and Obesity, Nestlé Nutrition Workshop Series Pediatric Program*, 63 (pp. 1-10; discussion 10-14, 259-68. Basel: Karger.

Preston, S. H. (2007; original publication 1975). The changing relation between mortality and level of economic development. *International Journal of Epidemiology*, 36, 484-490.

Prüss-Üstun, A., Bos, R., Gore, F., & Bartram, J. (2008). *Safer Water, Better Health*. Geneva: World Health Organization. Retrieved from: http://www.who.int/quantifying_ehimpacts/publications/saferwater/en/index.html.

Ravishankar, N., Gubbins, P., Cooley, R. J., Leach-Kemon, K., Michaud, C. M., Jamison, D. T. et al. (2009). Financing of global health: tracking development assistance for health from 1990 to 2007. *The Lancet*, 373, 2113-2124.

Rehfuess, E. (2006). *Fuel for Life: Household Energy and Health*. Geneva: World Health Organization. Retrieved from: <http://www.who.int/entity/indoorair/publications/fuelforlife.pdf>.

Riley, J. C. (2008). *Low Income, Social Growth and Good Health: A History of Twelve Countries*. Berkeley: University of California Press.

Riley, J. C. (2005). Estimates of Regional and Global Life Expectancy, 1800-2001. *Population and Development Review*, 31, 537-543.

Rodgers, D. (2007). 'Nueva Managua': The Disembedded City. In M. Davis & B. Monk (Eds.), *Evil Paradises: Dreamworlds of Neoliberalism* (pp. 127-139). New York: New Press.

Sachs, J. (2003). *Achieving the Millennium Development Goals: Health in the Developing World, Speech at the Second Global Consultation of the Commission on Macroeconomics and Health*. Geneva: World Health Organization. Retrieved from: <http://www.earthinstitute.columbia.edu/about/director/pubs/CMHSpeech102903.pdf>.

Sachs, J. D. (2007a). The Basic Economics of Scaling Up Health Care in Low-Income Settings. In Working Party on Biotechnology (Ed.), *Horizontal Project on Policy Coherence: Availability of Medicines for Emerging and Infected Neglected Diseases, DSTI/STP/BIO(2007)6* (pp. 7-23). Paris: OECD.

Sachs, J. D. (2007b). Beware False Tradeoffs. *Foreign Affairs* [On-line]. Retrieved from: http://www.foreignaffairs.org/special/global_health/sachs

Say, L., Inoue, M., Mills, S., & Suzuki, E. (2007). *Maternal Mortality in 2005: Estimates developed by WHO, UNICEF, UNFPA, and the World Bank*. Geneva: Department of Reproductive Health and Research, World Health Organization. Retrieved from: <http://www.unfpa.org/publications/detail.cfm?ID=343>.

Schoepf, B. G., Schoepf, C., & Millen, J. V. (2000). Theoretical Therapies, Remote Remedies: SAPs and the Political Ecology of Poverty and Health in Africa. In J. Y. Kim, J. V. Millen, A. Irwin, & J. Gershman (Eds.), *Dying for Growth: Global Inequality and the Health of the Poor* (pp. 91-126). Monroe, Maine: Common Courage Press.

Schrecker, T. (2008). Denaturalizing scarcity: a strategy of inquiry for public health ethics. *Bulletin of the World Health Organization*, 86, 600-605.

Schrecker, T. (2009). The power of money: global financial markets, national politics, and social determinants of health. In O. D. Williams & A. Kay (Eds.), *Global Health Governance: Crisis, Institutions and Political Economy* (pp. 160-181). Houndmills: Palgrave Macmillan.

Sell, S. K. (2003). *Private Power, Public Law: The Globalization of Intellectual Property Rights*. Cambridge: Cambridge University Press.

Stillwaggon, E. (2006). *AIDS and the Ecology of Poverty*. Oxford: Oxford University Press.

Sutcliffe, B. (2005). *A Converging or Diverging World? DESA Working Paper Series ST/ESA/2005/DWP/2*. New York: United Nations Department of Economic and Social Affairs. Retrieved from: http://www.un.org/esa/desa/papers/2005/wp2_2005.pdf.

Taub, S. (2008). Best-paid Hedge Fund Managers. *Alpha Magazine* [On-line]. Retrieved from: <http://www.alphamagazine.com/Article.aspx?ArticleID=1914753>

Teichman, J. (2008). Redistributive Conflict and Social Policy in Latin America. *World Development*, 36, 446-460.

The Coca-Cola Company (2009). Per Capita Consumption of Company Beverage Products. The Coca-Cola Company [On-line]. Retrieved from: <http://www.thecoca-colacompany.com/ourcompany/ar/pdf/perCapitaConsumption2008.pdf>

UNAIDS (2009). *AIDS Epidemic Update 2009*. Geneva: UNAIDS. Retrieved from: http://data.unaids.org/pub/Report/2009/2009_epidemic_update_en.pdf.

Unger, A. & Riley, L. W. (2007). Slum Health: From Understanding to Action. *PLoS Medicine*, 4, e295. Retrieved from: <http://medicine.plosjournals.org/perlserv/?request=get-document&doi=10.1371/journal.pmed.0040295&ct=1>.

UNICEF (2008a). *Progress for Children: A Report Card on Maternal Mortality (No. 7)*. New York: UNICEF. Retrieved from: http://www.unicef.org/publications/index_45454.html.

UNICEF (2008b). *The State of the World's Children 2008*. New York: UNICEF. Retrieved from: <http://www.unicef.org/sowc08/>.

United Nations (2009a). *The Millennium Development Goals Report 2009*. New York: United Nations. Retrieved from: http://www.un.org/millenniumgoals/pdf/MDG_Report_2009_ENG.pdf.

United Nations (2009b). *The Millennium Development Goals Report 2009*. New York: United Nations. Retrieved from: http://www.un.org/millenniumgoals/pdf/MDG_Report_2009_ENG.pdf.

United Nations Development Programme (2006). *Human Development Report 2006: Beyond Scarcity- Power, poverty and the global water crisis*. New York: Palgrave Macmillan. Retrieved from: <http://hdr.undp.org/hdr2006/statistics/indicators/124.html>.

United Nations Food and Agriculture Organization (2009). *More people than ever are victims of hunger*. Rome: UNFAO. Retrieved from: http://www.fao.org/fileadmin/user_upload/newsroom/docs/Press%20release%20june-en.pdf.

van Doorslaer, E., O'Donnell, O., Rannan-Eliya, R. P., Somanathan, A., Adhikari, S. R., Garg, C. C. et al. (2006). Effect of payments for health care on poverty estimates in 11 countries in Asia: an analysis of household survey data. *The Lancet*, 368, 1357-1364.

Wang, Y. (1998). *Life Expectancy in Chicago*. Chicago: Epidemiology Program, Chicago Department of Public Health.

Woods, N. (2006). *The Globalizers: The IMF, the World Bank, and Their Borrowers*. Ithaca, NY: Cornell University Press.

World Bank (2009). World Development Indicators 2009. World Bank [On-line]. Retrieved from: <http://ddp-ext.worldbank.org/ext/DDPQQ/member.do?method=getMembers&userid=1&queryId=135>

World Bank & International Monetary Fund (2009). *Global Monitoring Report 2009: A Development Emergency*. Washington, DC: World Bank. Retrieved from: http://siteresources.worldbank.org/INTGLOMONREP2009/Resources/5924349-1239742507025/GMR09_book.pdf.

World Health Organization (2009a). *Global health risks: mortality and burden of disease attributable to selected major risks* World Health Organization. Retrieved from: http://www.who.int/healthinfo/global_burden_disease/GlobalHealthRisks_report_full.pdf.

World Health Organization (2009b). *Global Status Report on Road Safety: Time for Action*. Geneva: WHO. Retrieved from: http://whqlibdoc.who.int/publications/2009/9789241563840_eng.pdf.

World Health Organization, UNAIDS, & UNICEF (2009). *Towards Universal Access - Scaling up priority HIV/AIDS interventions in the health sector: Progress Report 2009*. Geneva: WHO. Retrieved from: http://www.who.int/entity/hiv/pub/taupr_2009_en.pdf.

Xu, K., Evans, D. B., Carrin, G., Aguilar-Rivera, A. M., Musgrove, P., & Evans, T. (2007). Protecting Households From Catastrophic Health Spending. *Health Affairs*, 26, 972-983.

Zhang, H. & Cai, B. (2003). The impact of tobacco on lung health in China. *Respirology*, 8, 17-21.