Action on the Social Determinants of Health and Health Inequities Goes Global

Sharon Friel[1,2] and Michael G. Marmot[1]

[1]International Institute for Society and Health, Department of Epidemiology and Public Health, University College London, WC1E 7HB United Kingdom; email: s.friel@ucl.ac.uk, m.marmot@ucl.ac.uk

[2]National Center for Epidemiology and Population Health, The Australian National University, Canberra, 0200 Australia

Annu. Rev. Public Health 2011. 32:225–36

First published online as a Review in Advance on January 3, 2011

The *Annual Review of Public Health* is online at publhealth.annualreviews.org

This article's doi: 10.1146/annurev-publhealth-031210-101220

0163-7525/11/0421-0225$20.00

Keywords

global health, health policy, social policy, social movement

Abstract

Marked health inequities exist between regions, between countries, and within countries. Reducing these inequities in health requires attention to the unfair distribution of power, money, and resources and the conditions of everyday life. These are the social determinants of health. The World Health Organization (WHO) Commission on Social Determinants of Health (CSDH) brought together a global evidence base of what could be done to reduce these health inequities, demonstrating that economic and social policy, if done well, can improve health and health equity. A global movement for health equity was reignited by the WHO Commission on Social Determinants of Health when it made a call to action upon delivering its final report.

INTRODUCTION

A global social movement concerned with action on the social determinants of health and health equity is afoot. We begin this review by describing the institutional and technical journey of global health since the establishment of the World Health Organization (WHO) in 1948. The review then describes why the WHO established the Commission on Social Determinants of Health (CSDH), emphasizing the extent of health inequities between and within countries and the role social factors play in producing those inequities. The next two sections provide an overview of the conceptual and organizational approach taken by the CSDH to gather and synthesize evidence, knowledge, and widsom to inform its recommendations for action on the social determinants of health to the WHO. The final sections of the review describe some of the many activities that are taking place at the global, regional, and national levels in response to the CSDH's call to action on the social determinants of global health equity.

THE JOURNEY OF THE SOCIAL DETERMINANTS OF GLOBAL HEALTH AND HEALTH INEQUITIES IN THE TWENTIETH CENTURY

When the WHO was established in 1948 with a holistic health model firmly at its center, there was hope for action on global health equity and attention to the social causes of health (44). However, extraordinary and important medical breakthroughs around that time helped reinforce the belief that a bio-tech approach was the main way forward in addressing the world's health problems. And, as extreme environmental and social abuse post-WWII faded from view in developed countries, emphasis on social factors waned within mainstream public health (6).

Despite the rapid bio-tech advances, the health of many people in developing countries lagged far behind that of the high- and middle-income countries, and many of the socially disadvantaged groups in rich and poor countries alike continued to have poorer health than their more affluent neighbors. Recognizing that the bio-tech model was not adequately meeting the needs of disadvantaged populations, an interest in social determinants of health resurfaced. In 1978, the WHO and UNICEF hosted an international conference in Alma Ata that resulted in the seminal Health for All declaration, and primary health care (PHC) was born. The PHC movement called for a new approach to health, one founded in a holistic understanding of local PHC needs, across the social determinants, and of people-centered action (45). This approach was stalled partly by the economic crisis and structural adjustment to fiscal conservatism in the 1970s and 1980s. The result was the adoption of selective PHC, which concentrated on a small number of cost-effective interventions aimed at countries' major disease burdens (8, 42). Although the PHC movement was at times overshadowed by disease-specific concerns, it never died. Indeed PHC once again plays a central role in the WHO's current agenda (48).

In the 1980s, new work raised the profile of social conditions on health [e.g., the Black Report (2) and the U.K. study of civil servants in Whitehall's work (24, 26)], leading to national inquiries into health inequities, and a social determinants of health focus was strengthened, particularly in the European and North American region. The 1986 Ottawa Charter on Health Promotion embraced a vision of public health through building healthy public policy, reorienting health services, creating supportive environments, strengthening community actions, and developing personal skills (46). Notwithstanding the expansion of its global reach through the Bangkok Charter (4), the emphasis of health promotion action was largely on the noncommunicable disease concerns of middle- and high-income countries.

Action to tackle health inequities grew throughout the 1990s and into the new century. Increasingly vocal civil society called for greater attention to social conditions and health inequity [e.g., the Latin American social medicine movement and the People's Health Movement

(30)]. The adoption of the Millennium Development Goals brought considerable new attention to the issue of health in development (40), whereas the General Comment on the Right to Health affirmed the right to key determinants such as food and nutrition, housing, access to safe water, safe and healthy working conditions, and a healthy environment (39).

A TWENTY-FIRST-CENTURY GLOBAL SPOTLIGHT ON HEALTH INEQUITIES AND THEIR SOCIAL CAUSES: THE WHO COMMISSION ON SOCIAL DETERMINANTS OF HEALTH

So why then, if all this activity was already happening, did J.W. Lee, the former Director-General of the WHO, supported by member states at the 2003 World Health Assembly, establish the global Commission on Social Determinants of Health (CSDH) in March 2005? There are a number of reasons. First, in spite of these impressive initiatives and significant improvements in health generally since the end of WWII, the sheer magnitude of continuing unmet health needs in many countries demands fresh thinking. The inequities in health outcomes between countries and among populations remain large and, in many instances, have increased (33, 35). Premature death among adults is a major health and social issue in both rich and poor countries, but there are vast inequities between regions and countries in the risk of dying prematurely, as shown among men in **Figure 1**.

Similarly, marked health inequities persist within countries, and the health differences are not just between the richest and the poorest in society. A social gradient in child mortality is observed across the entire wealth hierarchy within various low- and middle-income countries (LMICs) (**Figure 2**). Although modest in Poland and Hungary, the increase in absolute inequalities in mortality between the highest and lowest educational group observed among females in four Eastern Europe countries is of concern (19) and illustrative of the ongoing and widening health inequities in developed and transitioning countries (**Figure 3**).

A second rationale for establishing the CSDH was the changed nature of the world's health problems. Although infectious diseases, especially pneumonia, diarrhea, and malaria remain the main killer among children younger than age 5 and persist among adults in LMICs (3), a complex triple threat of communicable and noncommunicable diseases and accidents and injuries has arisen and increased rapidly in LMICs (28, 49, 51), stressing already under-resourced health care systems and social infrastructures.

Although rates of some noncommunicable diseases have, encouragingly, fallen in high-income countries, many of these health problems remain an issue and exhibit widening inequities (28). An assessment of inequities in mortality and prevalence of health risks among 22 countries in all parts of Europe demonstrated persistent and large inequities in health conditions within developed countries in the region (20). As shown in **Figure 4**, obesity, now a major health challenge in many countries worldwide, is distributed very unevenly between European countries, between sexes, and by level of education.

And a third reason for the CSDH is that the conceptual understanding and global evidence base concerning health inequities have been growing, responding to the changing health and social conditions, including the changing global economic and political context. At the global level, we now understand, better than at any previous moment in history, how social factors affect health and health equity. As processes of globalization rapidly advanced, particularly in the second half of the twentieth century, rich and poor countries have become increasingly interdependent for many things, including the promotion of global "goods" and the protection against global "bads." Health, and its causes, has become globalized to a degree hitherto unheard of (18). As we have begun to understand this global interdependence of the causes of health inequity, the imperative for action

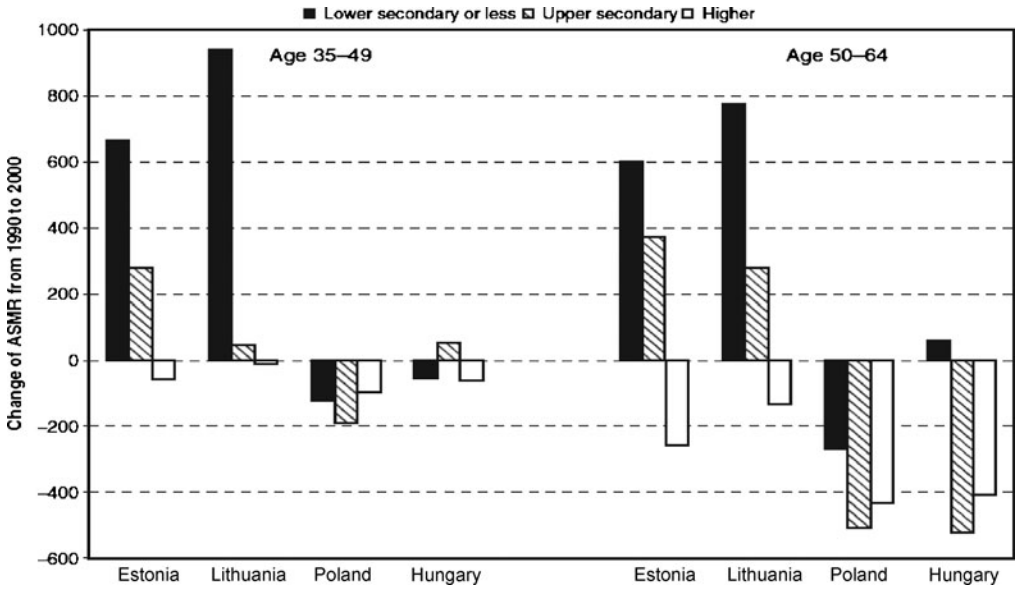

Figure 3

The change in age-standardized mortality rates (ASMR) per 100,000 for total mortality by educational level from 1990 to 2000 in two age groups among women. Source: Reference 19.

that is global, social, and collective has become clear.

Until the CSDH, there had not been a concerted and coordinated global effort that shone a spotlight on the health inequities that continue to exist in the twenty-first century and, perhaps more importantly, that brought together evidence and made recommendations on what could be done to achieve better and more fairly distributed health worldwide through action in the social determinants. As one of the Commissioners said in the early days of the CSDH, "we have had inspiring words in the past and we are still back at the table. This time it has to be about action."

COMPLEX ARCHITECTURE TO ADDRESS COMPLEX PROBLEMS IN A SUSTAINABLE WAY

The CSDH architecture involved a large orchestra of key change-agents in many different types of institutions spread throughout the world. This set-up was vital to achieve the CSDH aims of gathering evidence; harnessing national and local efforts; detailing what effective social action must entail to maintain, promote, and provide better health for all; advocating for change; and engaging with those responsible for health-related decision making.

Chaired by one of the authors of this paper, Sir Michael Marmot, Commissioners guided the work of the CSDH. These were influential global- and national-level policy makers, scientists, practitioners, and civil society leaders from all over the world. With their experience, they brought vision, knowledge, wisdom, and an understanding of realpolitik in different geo-political, institutional, and sociocultural contexts—each attribute vital to the long-term goal of global health equity (11).

The deliberations of the Commissioners were informed by leading academic institutions in the North and the South who formed networks of research, policy, and practice around specific thematic areas: globalization, employment and working conditions, early child development, health systems, urban settings, social exclusion, women and gender equity, and priority public health conditions

(9, 10, 14, 15, 17, 31, 36, 43, 50). The CSDH learned about the process of policy development and implementation and identified success stories from the experience of countries through policy makers and practitioners (32, 47). Civil society organizations contributed learning on how to effect social change through community engagement, advocacy, and other aspects of civil society movements (5).

Although keeping the global orchestra of literally hundreds of players playing in harmony over a three-year period was managerially demanding, the structure of the CSDH was deliberately designed to help ensure diversity of opinion, participation, and a shared ownership of the issues and knowledge, thereby helping to ensure adaptation and implementation of the recommendations and ongoing pursuit of the CSDH goal of health equity.

WHAT DOES EVIDENCE FOR ACTION LOOK LIKE?

The CSDH put social justice at the heart of its concern. If all that was needed was an affirmation of values, the CSDH could have had one short meeting and declared for fairness. But what was needed was a set of recommendations on practical steps that could be taken to achieve the goal of health equity. This action required a review of the evidence.

The CSDH's conceptual meaning of social determinants included upstream political, economic, and sociocultural drivers of health and health inequity as well as the intermediate conditions of daily living and brought together much of the global knowledge in these social determinants of health.

Drawing on scholarly literature, government reports, grassroot experiences, and tacit knowledge was not a traditional approach to what is meant by evidence. Many scholars of health inequities have spent their research lives on analytical epidemiological studies isolating causal effects. Traditionally, case studies, action research, qualitative studies, and descriptive studies were not seen as appropriate for this purpose. Striving to produce a set of evidence-based recommendations about what could be done to improve global health equity, the CSDH had to take a fit-for-purpose approach to evidence, balancing the use of different types of evidence, and assessed the degree to which action in social determinants of health was shown to be possible and effective (27). The CSDH also applied chains of reasoning. For example, suppose one poses this question: Does participatory urban governance reduce health inequities? If it can be reasonably shown that participatory governance improves conditions of housing in urban slums, and given that a wealth of evidence points to the importance of housing for health and health equity, it is a plausible supposition that participatory urban governance is beneficial for health equity. Failure to broaden the approach to evidence in this way would have been a recipe for doing nothing (23).

The final report, presented to the current WHO Director-General, Margaret Chan, in August 2008, was a synthesis of the collective knowledge and wisdom harnessed by the CSDH process. It had three major conclusions and associated recommendations: (*a*) Inequities in the daily circumstances in which people are born, grow, live, work, and age cause health inequities within and between countries; (*b*) these conditions of daily life are influenced by inequities in "structural drivers"—inequities in power, money, and resources. The third overarching recommendation was the need to expand the knowledge base on the social determinants of health, to evaluate the action taken, and critically, to develop a workforce that is trained in the social determinants of health (7).

THE GLOBAL REACH OF ACTION ON THE SOCIAL DETERMINANTS OF HEALTH

The CSDH and its report were steps along a journey to promote global health equity through action on the social determinants of health. Through its creation and actions, the CSDH helped reignite the global movement, first assembled at Alma Ata in 1978, for health

equity through action on the social determinants of health (45). And there are signs that real action is taking place throughout the world.

The World Health Organization

The WHO is mandated to be the foremost global voice advocating for global health and has a vital role in working with governments and civil society and building alliances across global institutions and sectors. A resolution on the social determinants of health and health equity, adopted unanimously at the World Health Assembly (WHA) in May 2009, provided the WHO with a mandate to address the CSDH recommendations (1). Steps have been taken, through a dedicated team in the Department of Ethics, Equity, Trade and Human Rights (ETH), to integrate social determinants of health into its policy and programs at headquarters and at regional and country levels. Three domains of work are being pursued: (*a*) policy implementation, (*b*) policy and program coherence, and (*c*) health equity analysis and research.

In relation to the first domain, the recently published book *Equity, Social Determinants and Public Health Programmes* (50) is an excellent output from the WHO-based Priority Public Health Conditions knowledge network (PPHC). The PPHC is a knowledge network of the CSDH deliberately set up within the WHO to help integrate a social determinants approach into the global disease programs. It extends across departments and regional and country offices of the WHO and covers 16 of its major public health programs: alcohol-related disorders, cardiovascular diseases, child health, diabetes, food safety, HIV/AIDS, maternal health, malaria, mental health, neglected tropical diseases, nutrition, oral health, sexual and reproductive health, tobacco and health, tuberculosis, and violence and injuries. The aim of the PPHC network is to widen the discussion on what constitutes public health interventions and, importantly, to recognize that effectively addressing inequities in health involves not only new sets of interventions but also modifications to the way that public health programs (and possibly the WHO) are organized and operate.

Specific to its second domain of work, in the first half of 2010, the WHO, in collaboration with the government of South Australia, hosted an international meeting on Health in All Policies in Adelaide, South Australia. The meeting advanced one of the CSDH's action areas: to "place responsibility for action on health and health equity at the highest level of government, and ensure its coherent consideration across all policies" (7). Arising from the meeting was the "Adelaide Statement on Health in All Policies," the purpose of which was to engage leaders and policy makers at all levels of government—local, regional, national, and international (53).

The 2009 WHA resolution requested the WHO's Director-General to implement measures, including objective indicators for the monitoring of social determinants of health, across relevant areas of work; to support member states in strengthening existing efforts on measurement and evaluation of the social determinants of health and the causes of health inequities and to develop and monitor targets on health equity; and to support research on effective policies and interventions to improve health by addressing the social determinants of health, which also serve to strengthen research capacities and collaborations. In response to this call, the Department of Ethics, Equity, Trade and Human Rights, as part of its third domain of work, has established the WHO Scientific Resource Group on Health Equity Analysis and Research (**http://www.who.int/social_determinants/implementation/srg/en/index.html**), the aim of which is to work with the WHO in setting its strategic directions, work plan content, objectives, and priorities on equity and health, in particular those relating to measurement, monitoring, analysis, and research.

The recommendations from the CSDH have also been incorporated in other WHO and UN agency activities. For example, under the auspices of the WHO and UN-HABITAT, the World Health Day theme of urban health

matters is being promoted throughout 2010 and draws heavily on the work of the CSDH.

Relevance in Different Regional and National Contexts

The health achievements that Europe enjoyed during the twentieth century have started happening in South Asia and other regions (52)—but have considerable distance still to go—and could happen in Sub-Saharan Africa. Similarly, there is no biological reason why socially disadvantaged groups, in countries rich and poor, experience significantly poorer health outcomes compared with those further up the social hierarchy. Reducing health inequities remains a challenge throughout the world, in low-, middle- and high-income countries alike, but not all countries are equally equipped to address the causes.

A number of countries have been using the CSDH report as a starting point and critically examining how to achieve health equity through action on the social determinants of health in the context of their different political and social systems. One country that took the CSDH recommendations seriously was England. In November 2008, Marmot was asked by the Secretary of State for Health to chair an independent review to propose, on the basis of the recommendations from the CSDH, the most effective evidence-based strategies and delivery mechanisms for reducing health inequities in England. Although it is sometimes difficult for many people to accept that serious and persistent health inequities exist in England, a country with a highly valued National Health Service and where the overall health of the population has improved greatly over the past 50 years, the gap in life expectancy by social class for both men and women has persisted between 1971 and 2005, with some widening taking place in the 1980s and 1990s (21). Many national and local organizations in the United Kingdom are already using the evidence to shape and design interventions, to galvanize and mobilize action, and to implement the recommendations of the review.

A strong nuclei of countries have formed in other regions of the world, providing capability to create new alliances and influence existing ones with the goal of building interest, pressure, incentives, and frameworks for action in the region. Brazil and Chile both have taken concrete policy-related steps, as have Mexico and Costa Rica. In the United States, the prestigious Robert Wood Johnson Foundation (RWJF) Commission to Build a Healthier America highlighted two major issues. First, despite spending more on health care than any other country, the United States ranks poorly on measures of health: Its world ranking on infant mortality has slipped from 18th in 1980 to 25th in 2002; for life expectancy, it has slipped from 14th to 23rd. Second, huge health inequities exist—both socioeconomic and racial in nature—and both are now firmly on the political agenda (34). As might be expected in a country where the policy focus for many years has been on individual responsibility and "making it on your own," most of the ten recommendations made by the RWJF Commission are focused on the individual. Encouragingly, however, the recommendations are set within the broader social context and supported by a rigorous evidence base.

Several Nordic countries have social determinants and health inequities under active consideration, and the European office of the WHO recently instigated a European-wide review of health inequities, chaired by Marmot. The Asia Pacific region is a diverse region characterized by impressive economic growth but with marked social and health inequities (41). The scale of health inequities and the intensification of influences on health in the Asia Pacific region demand attention. In December 2009, a collective of academics, policy makers, and nongovernment organizations from 13 different countries and territories in the region came together to form the Asia Pacific hub of Health GAEN (Global Action for Health Equity Network). They committed to progress the health equity agenda through ongoing analyses of the state of health inequities, evaluation of the societal changes and their

impacts on health inequities, and intervention to ensure that policy and social action promote reduced health inequities in the region (S. Friel, T. Chiang, Y. Cho, Y. Guo, H. Hashimoto, S. Jayasinghe, B. Loring, D. Matheson, H. Nguyen, and M. Rao, under review).

Each of these national and regional developments has been largely in relation to improvements in systems and structures, which will ultimately help improve health and health equity. The impact of these developments will be assessed in the global public arena in 2011—a proposed WHO global conference on health equity, in collaboration with the Brazilian government, will bring together health and nonhealth ministers to report on actions that have taken place since the CSDH reported and the WHA resolution on social determinants of health. This meeting is important; it will provide a vehicle for public accountability and a space to share insights, success stories, and hope.

Salience in the Face of Global Financial and Environmental Crises

Perhaps now is a point in history when attention to how society organizes its affairs can be given in a way that is good for health and health equity. Large, complex matters such as global financial crises, such as the one initiated around 2008, affect employment conditions, financial security, social cohesion, and a myriad of other social factors, with implications for human health (10). The nature of the relationship between economic downturns and health inequities is clear: The health of people who lose jobs, who have poor employment prospects, and who are in precarious employment is affected disproportionately compared with other people (25, 37, 38).

Similarly, the challenges of global climate change and health inequities are closely related. Human-induced perturbation and depletion of the planet's biogeophysical systems, which sustain life, have contributed to environmental degradation, including climate change, which is increasing health risks unequally between regions and populations (12, 13, 29). It is increasingly noted in the international public health literature that convergence of the environmental, health, and equity agendas is an essential, transformative step if humans are to survive across future generations equitably, in a healthy, secure, and peaceful manner (13).

The global financial crisis and worldwide concern for global climate change have helped force more people in society to rethink their purpose and trajectory. A model predicated on global economic growth with a consequent rise in greenhouse gases and the obscene income inequities we have seen within and between countries cannot be justified on moral grounds (25). There is also a strong efficiency rationale for attention to factors that affect fairness in health. The recent review of health inequities in England calculated that if everyone in England had the same death rates as the richest 10% of the population, a total of between 1.3 and 2.5 million extra years of life would be enjoyed by those otherwise dying prematurely each year. The estimated costs of these illnesses account, per year, for productivity losses of US$50–53 billion and lost taxes and higher welfare payments in the range of US$32–52 billion. The additional NHS health care costs in England are well in excess of US$8.9 billion. These activities represent approximately one-third of the NHS budget. The full impact of health inequities on direct health care costs is likely considerably greater than this (21).

PROSPECTS FOR GLOBAL MOMENTUM ON THE SOCIAL DETERMINANTS OF HEALTH

The CSDH was a unique global endeavor that brought together academics, politicians, policy makers, civil society, and global institutions to consider the role of social determinants in effecting greater global health equity. The formal end of the CSDH in 2008 was, we believe, the launch of a global movement that perceives equitable health as a societal good, at the heart of which lies social policy and action, and a broad

field in which countries and people, rich and poor, can unite in common cause.

We have described various activities concerned with that cause—not an exhaustive list by any means—that have taken place worldwide since the CSDH reported, and we suggest that these developments are significant. The hundreds of people worldwide who were involved in one way or another with the CSDH and the many more who have risen to its challenge in different parts of the world are part of the global movement (22). One of the milestones set out in the CSDH final report was the "creation of a post-Commission global alliance to take forward the social determinants of health agenda in partnership with WHO." A global spotlight and action are needed continuously or the status quo will persist. A number of partners involved in the CSDH are working to establish a global alliance called the Global Action on Health Equity Network (HealthGAEN), which will help promote action among the range of academic, policy, and advocacy stakeholders necessary to reach the CSDH goal of health equity.

SUMMARY POINTS

1. Marked health inequities exist between regions, between countries, and within countries.
2. Reducing these inequities in health requires attention to the unfair distribution in power, money and resources, and the conditions of everyday life. These are the social determinants of health.
3. A fit-for-purpose approach to evidence is needed to balance the use of different types of evidence including epidemiological studies, case studies, action research, and qualitative studies.
4. Economic and social policy, if done well, can improve health and health equity.
5. A global movement for health equity through action on the social determinants of health was reignited by the WHO Commission on Social Determinants of Health.
6. Policies concerned with health, sustainability, and equity would benefit from alignment of their agendas.

FUTURE ISSUES

1. Globally, there is relatively good research on disease control strategies, including behaviors, and increasingly on health systems, but we have little coherent research on the underlying structural causes of health inequities within and between countries.
2. Policy makers in governments and international institutions persistently note the lack of workforce capacity to understand and act on these issues.
3. The CSDH noted the need to translate its recommendations into action that was politically relevant and practically achievable in diverse geo-political and socioeconomic contexts; regional and country partners must now adapt and develop the work of the CSDH.

DISCLOSURE STATEMENT

The authors are not aware of any affiliations, memberships, funding, or financial holdings that might be perceived as affecting the objectivity of this review.

ACKNOWLEDGMENTS

SF is recipient of an Australian Research Council Future Fellowship.

LITERATURE CITED

1. 62nd World Health Assem. 2009. *Reducing health inequities through action on the social determinants of health*. WHA62.14, Geneva
2. Black D. 1980. *Inequalities in health*. Rep. Res. Work. Group, Dep. Health Soc. Serv, London
3. Black R, Cousens S, Johnson H, Lawn J, Rudan I, et al. 2010. Global, regional, and national causes of child mortality in 2008: a systematic analysis. *Lancet* 375:1969–87
4. Catford J. 2005. The Bangkok Conference: steering countries to build national capacity for health promotion. *Health Promot. Int.* 20:1–6
5. Civ. Soc. Netw. 2007. *Final Report of the Civil Society Work Stream of the Commission on Social Determinants of Health*. Geneva: World Health Organ.
6. Comm. Soc. Determ. Health. 2007. *Achieving Health Equity: From Root Causes to Fair Outcomes. Commission on Social Determinants of Health Interim Statement*. Geneva: World Health Organ.
7. Comm. Soc. Determ. Health. 2008. *Closing the Gap in a Generation: Health Equity Through Action on the Social Determinants of Health. Final Report of the Commission on Social Determinants of Health*. Geneva: World Health Organ.
8. Cueto M. 2004. The origins of primary health care and selective primary health care. *Am. J. Public Health* 94:1864–74
9. Early Child Dev. Knowl. Netw. 2007. *Early Child Development: A Powerful Equalizer. Final Report of the Early Child Development Knowledge Network of the Commission on Social Determinants of Health*. Geneva: World Health Organ.
10. Employ. Cond. Knowl. Netw. 2007. *Employment Conditions and Health Inequalities. Final Report of the Employment Conditions Knowledge Network of the Commission on Social Determinants of Health*. Geneva: World Health Organ.
11. Friel S, Bell R, Houweling A, Marmot M. 2009. Calling all Don Quixotes and Sancho Panzas: achieving the dream of global health equity through practical action on the social determinants of health. *Glob. Health Promot.* 16:7–11
12. Friel S, Bowen K, Campbell-Lendrum D, Frumkin H, McMichael T, Rasanathan K. 2011. Climate change, noncommunicable diseases, and development: the relationships and common policy opportunities. *Annu. Rev. Public Health* 32:133–47
13. Friel S, Marmot M, McMichael A, Kjellstrom T, Vågerö D. 2008. Global health equity and climate stabilisation—need for a common agenda. *Lancet* 372:1677–83
14. Glob. Knowl. Netw. 2007. *Towards Health-Equitable Globalisation: Rights, Regulation and Redistribution. Final Report of the Globalisation Knowledge Network of the Commission on Social Determinants of Health*. Geneva: World Health Organ.
15. Health Syst. Knowl. Netw. 2007. *Knowledge Network on Health Care Systems. Final Report of the Health Care Systems Knowledge Network of the Commission on Social Determinants of Health*. Geneva: World Health Organ.
16. Houweling TAJ, Kunst AE. 2010. Socio-economic inequalities in childhood mortality in low- and middle-income countries: a review of the international evidence. *Br. Med. Bull.* 93:7–26
17. Knowl. Netw. Urban Settings. 2007. *Our Cities, Our Health, Our Future: Acting on Social Determinants for Health Equity in Urban Settings. Final Report of the Urban Settings Knowledge Network of the Commission on Social Determinants of Health*. Geneva: World Health Organ.
18. Labonte R, Schrecker T. 2009. Introduction: globalization's challenges to people's health. In *Globalization and Health: Pathways, Evidence and Policy*. New York: Routledge
19. Leinsalu M, Stirbu I, Vagero D, Kalediene R, Kovacs K, et al. 2009. Educational inequalities in mortality in four Eastern European countries: divergence in trends during the post-communist transition from 1990 to 2000. *Int. J. Epidemiol.* 38:512–25

20. Mackenbach JP, Stirbu I, Roskam AJR, Schaap MM, Menvielle G, et al. 2008. Socioeconomic inequalities in health in 22 European countries. *New Engl. J. Med.* 358:2468–481
21. Marmot M. 2010. *Fair Society, Healthy Lives. The Marmot Review: Strategic Review of Health Inequalities in England Post-2010*. London: Univ. Coll. London
22. Marmot M, Allen J, Goldblatt P. 2010. A social movement, based on evidence, to reduce inequities in health. *Soc. Sci. Med.* 71(7):1254–58
23. Marmot M, Friel S. 2008. Global health equity: evidence for action on the social determinants of health. *J. Epidemiol. Commun. Health* 62:1095–97
24. Marmot M, Shipley M, Rose G. 1984. Inequalities in death-specific explanations of a general pattern? *Lancet* i:1003–6
25. Marmot MG, Bell R. 2009. How will the financial crisis affect health? *BMJ* 338:b1314
26. Marmot MG, Smith GD, Stansfeld S, Patel C, North F, et al. 1991. Health inequalities among British civil servants: the Whitehall II study. *Lancet* 337:1387–93
27. Meas. Evid. Knowl. Netw. 2007. *The Social Determinants of Health: Developing an Evidence Base for Political Action. Final Report of the Measurement and Evidence Knowledge Network of the Commission on Social Determinants of Health*. Geneva: World Health Organ.
28. Patton G, Coffey C, Sawyer S, Viner R, Haller D, et al. 2009. Global patterns of mortality in young people: a systematic analysis of population health data. *Lancet* 374:881–92
29. Patz JA, Gibbs HK, Foley JA, Rogers JV, Smith KR. 2007. Climate change and global health: quantifying a growing ethical crisis. *EcoHealth* 4:397–405
30. Peoples Health Mov. 2000. People's Charter for Health, Peoples Health Movement. **http://www.phmovement.org/**
31. Prior. Public Health Cond. Knowl. Netw. 2007. *Interim Report of the Priority Public Health Conditions Knowledge Network of the Commission on Social Determinants of Health*. Geneva: World Health Organ.
32. Public Health Agency Can. 2007. *Crossing Sectors—Experiences in Intersectoral Action, Public Policy and Health*. Ottawa: Public Health Agency of Canada
33. Rajaratnam J, Marcus J, Levin-Rector A, Chalupka A, Wang H, et al. 2010. Worldwide mortality in men and women aged 15–59 years from 1970 to 2010: a systematic analysis. *Lancet* 375:1704–20
34. Robert Wood Johnson Found. 2009. *Robert Wood Johnson Foundation Commission to Build a Healthier America. Beyond Health Care: New Directions to a Healthier America: Recommendations from the Robert Wood Johnson Foundation Commission to Build a Healthier America*. Princeton, NJ: Robert Wood Johnson Found. Comm. Build Healthier Am.
35. Sen K, Bonita R. 2000. Global health status: two steps forward, one step back. *Lancet* 356:577–82
36. Soc. Exclus. Knowl. Netw. 2007. *Understanding and Tackling Social Exclusion. Final Report of the Social Exclusion Knowledge Network of the Commission on Social Determinants of Health*. Geneva: World Health Organ.
37. Stuckler D, Basu S, Suhrcke M, Coutts A, McKee M. 2009. The public health effect of economic crises and alternative policy responses in Europe: an empirical analysis. *Lancet* 374:315–23
38. Suhrcke M, Stuckler D. 2010. *Will the Recession Be Bad for Our Health? A Review of Past Experiences*. Utrecht: Eur. Cent. Health Assests Archit.
39. United Nations. 2000. *General Comment 14: The Right to the Highest Attainable Standard of Health*. Geneva: Off. U. N. High Comm. Hum. Rights
40. United Nations. 2000. *Millennium Development Goals*. New York: United Nations
41. Walker R, Pellissery S. 2007. *Giants old and new: promoting social security and economic growth in the Asia and Pacific Region*. Presented at Int. Soc. Assoc. Annu. Acad. Conf. on Social Policy in a Globalizing World: Developing a North-South Dialogue, Florence
42. Walsh J, Warren K. 1980. Selective primary health care: an interim strategy for disease control in developing countries. *Soc. Sci. Med.* 14:145–63
43. Women Gender Knowl. Netw. 2007. *Unequal, Unfair, Ineffective and Inefficient—Gender Inequity in Health: Why It Exists and How We Can Change It. Final Report of the Women and Gender Equity Knowledge Network of the Commission on Social Determinants of Health*. Geneva: World Health Organ.
44. World Health Organ. 1948. *Constitution of the World Health Organization*. Geneva: World Health Organ.

45. World Health Organ. 1978. *Declaration of Alma-Ata*. Geneva: World Health Organ.
46. World Health Organ. 1986. *Ottawa Charter for Health Promotion*. Geneva: World Health Organ.
47. World Health Organ. 2008. *Health Equity at the Country Level: Building Capacities and Momentum for Action. A Report on the Country Stream of Work in the Commission on Social Determinants of Health*. Geneva: World Health Organ.
48. World Health Organ. 2008. *Primary Health Care: Now More than Ever*. Geneva: World Health Organ.
49. World Health Organ. 2009. *The Global Burden of Disease: 2004 Update*. Geneva: World Health Organ.
50. World Health Organ. 2010. *Equity, Social Determinants and Public Health Programmes*. Geneva: World Health Organ.
51. World Health Organ. 2010. *Why Urban Health Matters*. Geneva: World Health Organ.
52. World Health Organ. 2010. *World Health Statistics*. Geneva: World Health Organ.
53. World Health Organ., Gov. S. Aust. 2010. *Adelaide Statement on Health in All Policies: Moving Towards a Shared Governance for Health and Well-Being*. Adelaide: World Health Organ.

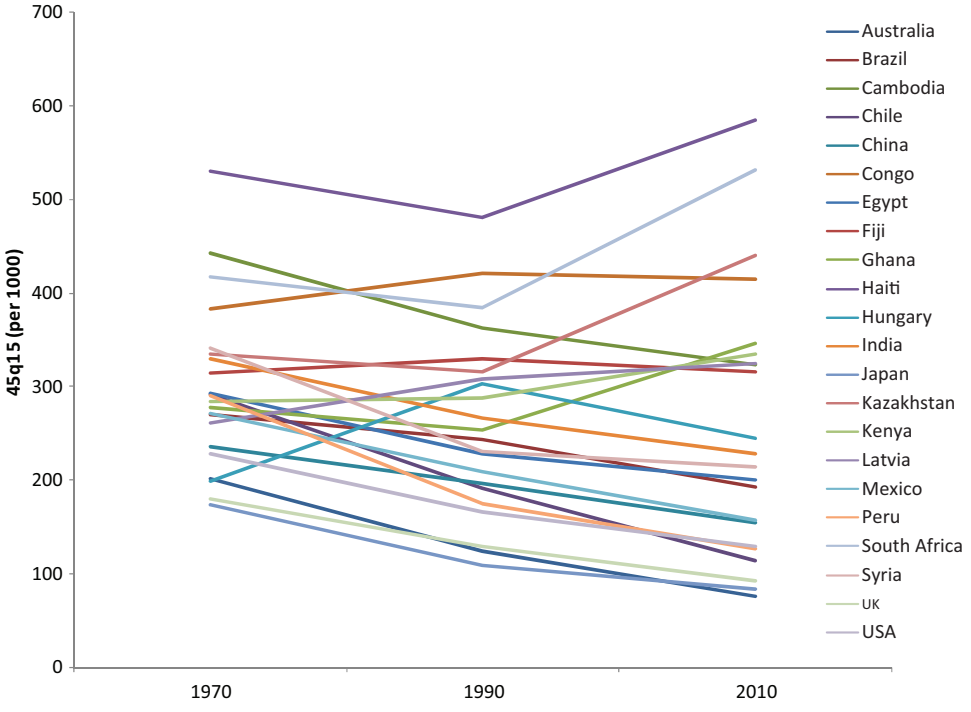

Figure 1

Probability of dying before age 60 years conditional on survival to age 15 years, males, select countries, 1970–2010. Source data: Reference 33.

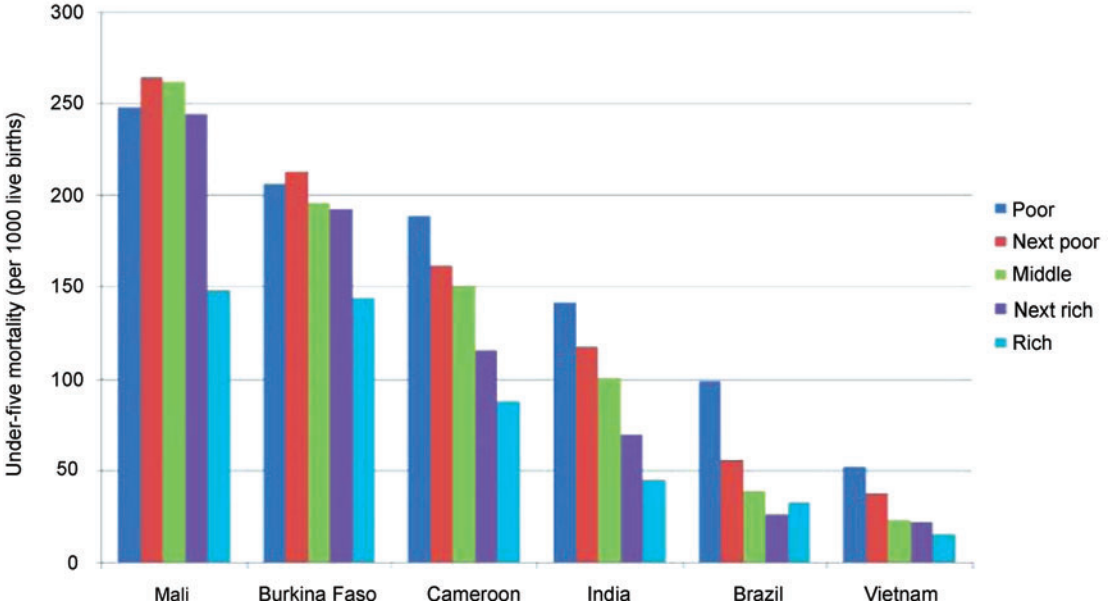

Figure 2

Under-five mortality (per 1000 live births) by wealth quintile. Data are from Demographic and Health Surveys between 1996 and 2004. Source: Reference 16.

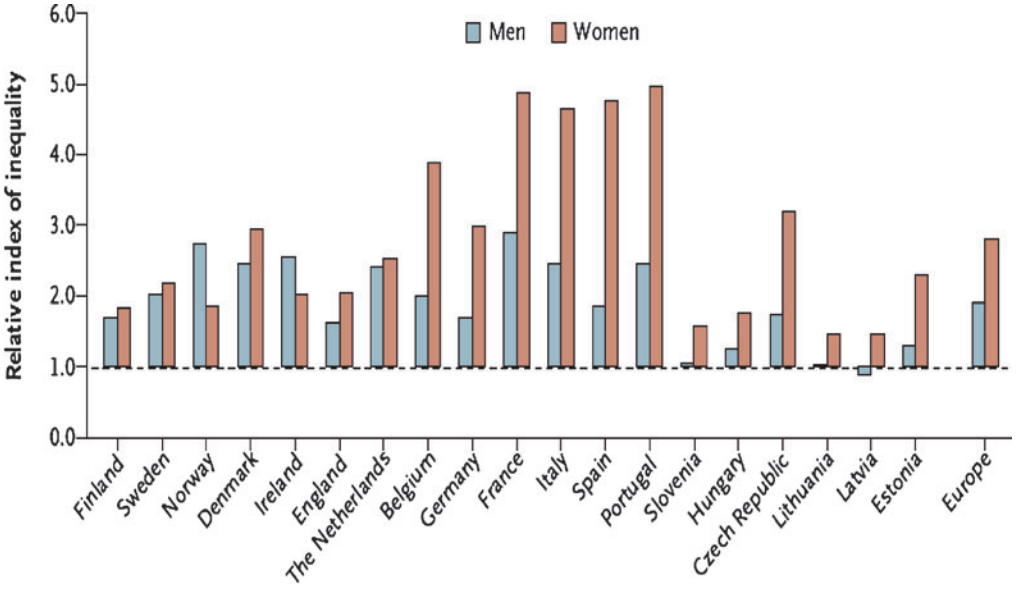

Figure 4

Relative inequities in the prevalence of obesity between persons with the lowest and highest levels of education, according to sex. Source: Reference 20.

Annual Review of Public Health

Volume 32, 2011

Contents

Symposium: Determinants of Changes in Cardiovascular Disease

Epidemiology and Biostatistics

Cardiovascular Disease: Rise, Fall, and Future Prospects
Russell V. Luepker 1

Proportion of the Decline in Cardiovascular Mortality Disease due to Prevention Versus Treatment: Public Health Versus Clinical Care
Earl S. Ford and Simon Capewell 5

Social Determinants and the Decline of Cardiovascular Diseases: Understanding the Links
Sam Harper, John Lynch, and George Davey Smith 39

Sodium Intake and Cardiovascular Disease
Alanna C. Morrison and Roberta B. Ness 71

Environmental and Occupational Health

Public Health Practice

Social Environment and Behavior

Health Services

Indexes

Errata

An online log of corrections to *Annual Review of Public Health* articles may be found at http://publhealth.annualreviews.org/