Improving Equity in Health by Addressing Social Determinants

Edited by: The Commission on Social Determinants of Health Knowledge Networks, Jennifer H. Lee and Ritu Sadana

World Health Organization

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Preface

During its tenure, the Commission on Social Determinants of Health focused on nine broad areas that contain within them major determinants of health. To support this work, the World Health Organization (WHO) invited leading academics, practitioners and advocates from a variety of disciplines and sectors to participate in Knowledge Networks (KN): early child development, employment conditions, globalization, women and gender equity, urban settings, priority public health conditions, measurement and evidence, social exclusion, and health systems. More than 350 individuals from around the world contributed to a tremendous body of literature for the Commission.

The idea for this book originated during a symposium on the findings of the KNs held in September 2007 in Rio de Janeiro, Brazil. This single volume offers the only in-depth effort to date that presents the collective work of the nine Knowledge Networks. The chapters of this book provide a summary of global evidence on the social determinants of health.

In September 2011, WHO organized the World Conference on Social Determinants of Health, hosted by the Government of Brazil. Participating Member States adopted the Rio Political Declaration on Social Determinants of Health pledging to work towards reducing health inequities by taking action on five core areas:

- adopt better governance for health and development
- promote participation in policy-making and implementation
- reorient the health sector towards reducing health inequities
- strengthen global governance and collaboration
- monitor progress and increase accountability.

Actions to reduce health inequities using methods consistent with these principles are synthesized across this book. There is a renewed commitment to achieve health equity and now is the opportunity to act.

The Commission on
Social Determinants of Health
Knowledge Networks

Jennifer H. Lee

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Introduction

1 Strengthening efforts to improve health equity

Ritu Sadana, Sarah Simpson, Jennie Popay, Daniel Albrecht, Ahmad Reza Hosseinpoor and Tord Kjellstrom

1. Health equity from a social determinants' perspective

In the late 1940s, two very important documents were published: The Constitution of the World Health Organization (1946) and The Universal Declaration of Human Rights (1948). Together, these recognize that health as a fundamental human right cannot be separated from other human rights. The path to "the highest attainable standard of health" reflects inputs that are neither confined to medical treatment nor only under the jurisdiction of health systems.

It is worthwhile to reiterate that the Constitution of the World Health Organization sets out nine basic principles in its preamble. The first is that "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." The second is that "The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition." Given these and other principles, the constitution sets out 22 functions (a-v) for the organization, with function (i) setting the stage explicitly for a social determinants' perspective as a means to achieve its objective, namely, "to promote, in co-operation with other specialized agencies where necessary, the improvement of nutrition, housing, sanitation, recreation, economic or working conditions and other aspects of environmental hygiene" (WHO, 1948).

The preamble and 30 articles of the Universal Declaration of Human Rights also establishes the foundation for a social determinants' perspective. Article 25 states:

> Everyone has the right to a standard of living adequate for the health and well-being of himself (sic) and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control (UN, 1948).

Moreover, Article 28 points out that "Everyone is entitled to a social and international order in which the rights and freedoms set forth in this Declaration can be fully realized" (UN, 1948).

Together, these two documents set out a global agenda for improving both the average level of health and its distribution, based on shared principles and the right to health. In recent decades global health efforts have led to improvements in population health around the world. Unfortunately, the result has not benefitted all people equally (WHO, 2003). Empirical evidence documents that health inequities the *unfair* distribution of health outcomes are growing between the rich and poor, privileged and marginalized, and across different countries and global regions. Inequities within all countries exist as a s*ocial gradient*. The relationship between socioeconomic standing and health is on a continuous gradient at all income levels rather than a gap simply between the rich and poor. This phenomenon occurs whether health differences are measured by income, employment, education, or other markers of social stratification. The greater the differences in health between social groups within a society the steeper the gradient or the greater the inequity (Dahl, 2002). Numerous studies discussed in this book and elsewhere conclude that most of these differences in health across different social groups are inequities: they are not due to biologic or genetic factors, but to social factors that are unjust and amenable to policy. Therefore, the terms inequality and inequity are used with intention throughout the book; they are not interchangeable. Inequality refers to differences between people, while inequities are those differences that are unjust and largely determined by one's place in society and ability to access the services and systems that contribute to health and well-being.

The global health architecture and ways of working have evolved dramatically over the past six decades. The number of global, national and local entities working towards improving health, social and economic development, and human rights has increased in all spheres: government, non-government, private and public. Yet, despite this, the responsibility and competency to implement shared global objectives and ensure rights is uneven. A large and growing body of evidence summarized in this book and elsewhere underlines that the path towards improving health for all people requires action to address the underlying causes of health inequities as well as action by health systems. These underlying causes are complex, often reflecting systematic social, political, historical, economic and environmental factors that accumulate across people's lifetimes and are transferred across generations. Health systems and public health also have the potential to improve equity, such as through progressive financing of health services or other approaches towards universal coverage. Conversely, health policies can also reduce equity, for example, through inadequate provision of care or discriminatory practices.

The term "social determinants" is used as shorthand for all of these factors, and was the basis for the name of the WHO Commission on Social Determinants of Health (CSDH), the work of which is described in Box 1. This book reports the work of nine global Knowledge Networks (KNs) that collated evidence on key social determinants of health inequities to inform the work of the Commission. Their overarching argument is that a social determinants' perspective is essential if we are to understand the root causes of health inequities between and within countries and develop effective solutions to reduce them.

Box 1: WHO Commission on Social Determinants of Health

In 2005, the World Health Organization established an independent Commission on Social Determinants of Health ("the Commission" or CSDH) as a global strategic mechanism to strengthen health equity by widening knowledge and encouraging debate on the opportunities for policy and action on the social determinants of health. (Irwin et al., 2006) The Commission's focus was on *socially-determined health inequalities* that are *preventable, avoidable and unfair*. Its goals were to:

- support health policy change in countries by assembling and promoting effective, evidence-based models and practices that address the social determinants of health;
- support countries in placing health equity as a shared goal to which many government departments and other sectors of society contribute; and
- help to build a sustainable global movement for action on health equity and social determinants, linking governments, international organizations, research institutions, civil society and communities.

(CSDH, 2006)

The Commission was led by 20 commissioners from political, advocacy and academic backgrounds , further involved researchers, policymakers and leaders from civil society, and was supported by a joint secretariat in WHO and University College London (Valentine et al., 2007). Their work comprised four areas:

Country action **-** The Commission worked collaboratively with countries to support them in advancing action on the social determinants of health and improving health equity. The learning from these experiences was incorporated into the other areas of work;

Knowledge networks (KNs) **-** nine specific topical themes were chosen for in-depth study by multidisciplinary networks of international topic experts;

Civil society - Civil society representatives across the world were consulted to gather knowledge on different levels of action outside the formal sectors;

Leadership for global action **-** The Commissioners engaged leading voices on health inequities to build support for the work and establish a global movement for continued action.

From the outset WHO recognized that there was already a strong body of work and knowledge supporting the cause of social determinants of health (WHO, 2005). Therefore the Commission was designed to marshal this *existing* knowledge about what can be done to promote health equity and by so doing to focus global attention on the challenges of achieving greater health equity within and between countries.

There are at least three reasons why equity is important to health and its social determinants. First, equity is a value that underpins social justice and has a long history within public health. Recent history provides ample examples of countries committing themselves to work together in the pursuit of greater health equity. In 1978, The Declaration of Alma-Ata brought countries together to consider ways to offer comprehensive primary health care that combined and offered a wide range of social, health and development services (WHO, 1978). Fast forwarding to 2000, the World Health Organization reiterated that the objective of good health and health systems is two-fold: "the best attainable average level goodness and the smallest feasible differences among individuals and groups fairness" (WHO, 2000). In contemporary context, social justice is typically taken to mean distributive justice. The report of the International Forum for Social Development (UN, 2006) identifies three critical domains of equality and equity as central to fair distribution: equality of rights, equality of opportunities, and equity in living conditions.

Second, progress towards equity as an objective requires that the distribution of health is not only described as an average value for a population. Quantitative and qualitative data sources are now more readily available allowing links to be made between people's social characteristics and health outcomes thus enabling more effective monitoring and analyses of health inequities. These data have generated a vast body of research that describe the unfair distribution of health, demonstrating that social factors, which are shaped by one's relative position in society, account for the bulk of differences between social groups and therefore are inequities (Braveman & Gruskin, 2003; Marmot & Wilkinson, 1999; Acheson, 1998; Momas**,** *Caillard & Lesaffre*, 2004). In other words, the poorer people are and the more socially disadvantaged the more likely they are to get sick and/or die younger compared to people in more privileged social positions (Labonté, 2003). This is the case in low-, middle- and high-income countries.

Progress towards equity is also measured in other social determinants that matter to health. For example, accountability towards narrowing inequities in education and literacy has been directly linked to good governance involving countries, donors and others from international agencies to local communities (UNESCO, 2009). Importantly, societies that have narrowed health inequities also have much higher overall levels of health: this suggests that further gains in average population health require that health equity is also improved (Wilkinson & Pickett, 2009). Thus, equity as an accountability mechanism is gaining increasing currency across global health and development efforts. This approach recognizes that information is needed to document and address the processes driving unfair differences in health across and within countries impacting particularly severely on groups who are often not visible in national statistics, such as migrants, indigenous peoples and stateless people.

Third, the process to build evidence in support of equity-enhancing policies and programs must itself be fair and valid. A fair process includes meaningful participation of all stakeholders including the public in all stages of the research process and demands accountability in the use of a society's resources. A valid process considers all important determinants and requires a "health in all policies" approach,[1] as well as a wide range of knowledge producers, experiences and perspectives.

2. The CSDH framework

A common conceptual framework (Figure 1) supported debate and investigation by the Commissioners and the Knowledge Networks (KNs). The CSDH conceptual framework builds on the work of others (Diderichsen & Hallqvist, 1998; Diderichsen, Evans & Whitehead, 2001) and was developed with contributions from the KNs. It served to clarify the following questions germane to reducing health inequities:

- Where do health differences among social groups originate, if we trace them back to their deepest roots?
- What pathways lead from root causes to the stark inequalities in health status observed at the population level?
- How are various determinants linked?
- Where and how should we intervene to reduce health inequities?

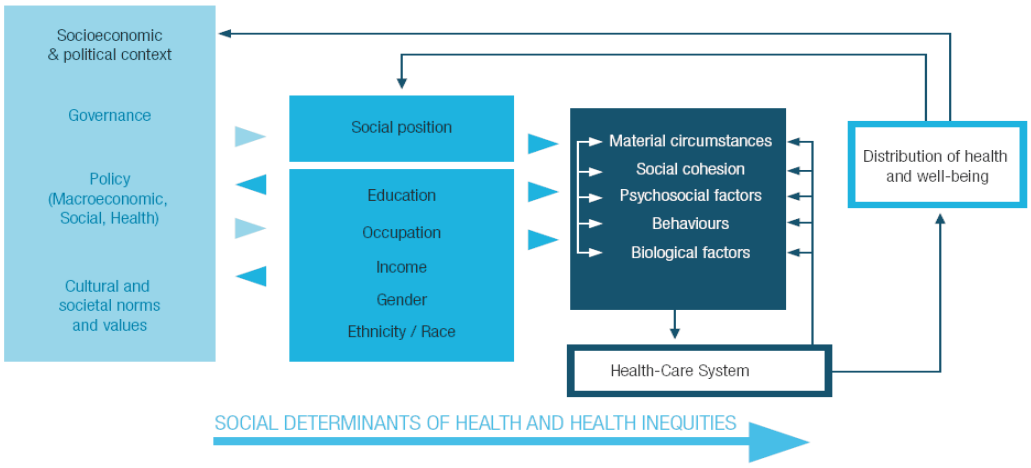
As the subsequent chapters document, a rich literature supports various theories on the production of inequities and each KN developed or drew on conceptual frameworks suited to the specific social determinant it was addressing.

Solar and Irwin (2007) note that the social determinants framework developed by the Commission "differs from some others in the importance attributed to the *socioeconomic-political context*." The social and economic context (which gives rise to a set of unequal socioeconomic positions) consists of three broad domains:

> **Governance** in the broadest sense and its processes, including definition of needs, patterns of discrimination, civil society participation, and accountability and transparency in public administration,
>
> **Policy**, including macroeconomic (fiscal, monetary, balance of payments and trade policies) and underlying labour market structures; social policies affecting factors such as labour, social welfare, land and housing distribution; and public policies that are related to health, such as education, medical care, water and sanitation; and

[1] See: http://www.who.int/social_determinants/hiap_statement_who_sa_final.pdf

Figure 1: Commission on Social Determinants of Health conceptual framework linking social determinants of health and distribution of health



Source: CSDH, 2008.

Cultural and societal norms and values, particularly those that illustrate the social value attributed to health, constitute an important and often neglected aspect of the context in which health policies must be designed and implemented.

Social position is at the centre of the framework reflecting the unequal distribution of material and other resources in every society. This inequality can be portrayed as a system of social stratification or a social hierarchy. The most important stratifiers and their proxy markers include occupational status, educational achievement, income level, social class, gender and ethnicity or race. These social positions translate into specific determinants of individual health status through the following mechanisms:

Social contexts create social stratification and assign individuals to different social positions. **These social positions are characterised by differential exposure** to health-damaging conditions and **differential vulnerability**, in terms of health conditions and material resource availability. Social stratification likewise determines **differential consequences** of ill health for more and less advantaged groups (including economic and social consequences, as well as differential health outcomes per se). The framework also highlights a collection of intermediary factors covering differential exposures, vulnerabilities, and consequences, as playing an important part in the explanation of health inequities:

Material circumstances including environmental factors are linked to conditions of economic hardship, as well as to health-damaging conditions in the physical environment, e.g. housing, physical working conditions, etc.

Social cohesion reflects the closeness (or distance) between social strata and the level of solidarity and community spirit.

Psychosocial factors include stressors (e.g. negative life events), stressful living circumstances, lack of social support, etc.

Behavioural factors include smoking, diet, alcohol consumption and physical exercise, and are certainly important determinants of health.

The health system itself constitutes an additional relevant intermediary factor, and serves as an important entry point for action.

In conclusion, Solar and Irwin (2007) note that "the outcomes that emerge at the end of the social "production chain" of health inequities (far right side of the framework figure), are the measurable impacts of social factors upon comparative health status and outcomes among different population groups, i.e., health equity." These impacts are apparent along the social gradient, across the life-course, on social and economic mobility and on other measures of health.

3. Learning from the global Knowledge Networks

In this section, the chapters that follow are briefly described. The first nine (Chapters 2–10) summarize the work of the KNs. Their task was to synthesize existing evidence and identify effective and appropriate actions to improve health equity in nine thematic areas: globalization; gender; social exclusion; early child development; urban settings; employment conditions; health systems; public health programs; and measurement and evidence.

The specific *objectives* of the KNs were to:

- identify priority associations between social determinants of health and health inequities across different country contexts with attention to widespread cross-cutting determinants such as gender inequity;
- collate evidence on the extent to which important social determinants of health can be acted upon, exemplified through successful national and global policies, programmes and institutional arrangements;
- stimulate societal debate on the opportunities for acting on the social determinants of health;
- inform the application and evaluation of policy proposals and programmes in relation to the social determinants of health nationally, across regions and globally, while assessing implications for women and men.

The nine KNs were guided by the CSDH conceptual framework (Figure 1) and had an inclusive approach to the collection and synthesis of knowledge and evidence as discussed in Chapter 10. An overview of the main findings, options for actions and areas for further research identified by the KNs are summarized in the final Chapter 11.

In Chapter 2, Schrecker and Labonté demonstrate that globalization presents many challenges for policymakers that can negatively affect population health. Pathways linking globalization and health are multiple, including changes in the distribution of income, wealth and other resources among and within countries; deregulation of labour markets; reduced capacity to enact social policies; free trade and movement of financial flows; the expatriation of professionals from low- to high-income countries, or "brain drain"; food insecurity; and access to medicines. In parallel with the expansion of globalization, income inequalities have risen sharply in the last decades. Results of an economic modeling exercise summarized in Chapter 2 show that globalization has actually reduced life expectancy at birth (LEB) relative to a counterfactual in which the effects of globalization post-1980 are set aside.

From the several recommendations proposed in this book, a common call can be identified: it is imperative to improve globalization's governance in ways that reduce its inequitable consequences. Indeed, a fundamental finding of work described in this book is that globalization lacks checks and balances. Globalization is a process that runs mostly unregulated or regulation is not implemented. In order to improve governance, a commitment to a "3 R's" action agenda is endorsed: redistribution, regulation and rights. Redistributive measures will allow governments and international organizations to adopt policies to mitigate or reverse the asymmetric distribution of globalization's benefits. Regulation is needed in a diversity of areas in order to reduce the negative effects of globalization on health. Finally, a commitment to human rights, as noted at the start of this introduction, will refocus governments and international organizations' efforts and put at the core of their agendas the protection of human, social and economic.

In Chapter 3, Sen and Östlin show that taking action to address essential structural dimensions of gender inequity is the most direct way to reduce health inequities overall and ensure effective use of health resources. In doing this, it is necessary to challenge the gender stereotyping of women's and men's roles, and harmful masculinist and patriarchal norms, high risk behaviors, and violent practices. Acknowledging and addressing differential health needs and tackling gendered exposures and vulnerabilities of women and men are critical to address gender inequity in health. It is also essential to tackle the gendered politics of health systems by improving awareness and acknowledging women as both producers and consumers of health care, improving women's access to health care, and making health systems more accountable to women. Importantly, deeply rooted biases in health research itself need to be removed, and can be done through simple measures as collecting sex- and age-disaggregated data to ensuring women researchers a fair place in scientific committees and advisory bodies. Finally, mainstreaming gender equality and equity and empowering women for health by creating supportive institutions, incentives, and accountability mechanisms is an important way by which several countries have succeeded in addressing the structural and normative aspects of gender, and in reducing gender inequity in health.

In Chapter 4, Popay and colleagues argue that describing social exclusion as a "state of being" experienced by particular groups is inadequate. Instead, they suggest that defining social exclusion as dynamic, multi-dimensional processes driven by unequal power relationships has more investigative advantage. These exclusionary processes are conceptualized as operating across economic, political, social and cultural dimensions at different levels: individual, household, group, community, country,

regional and global. Exclusionary processes restrict participation in economic, social, political, and cultural relationships, resulting in systematic patterns of disadvantage which adversely affect health and well being.

Comprehensive social protection systems and universal public provision of basic services (e.g. health, education or water) are most commonly associated with major improvements in access and use of services, reductions in poverty levels and more inclusive social systems. Analyses described in this chapter suggest that targeted initiatives that impose behavioural conditions have limited potential to promote social and political rights, cultural diversity or to reduce poverty and exclusion in a sustained way. Social exclusion is a multidimensional process; however, the dominant focus of targeted initiatives put strong emphasis on the economic aspects of exclusionary process, neglecting other dimensions and hence being less effective in driving more inclusive social systems.

A fundamental principle proposed in this chapter to support more inclusive societies is the promotion of human rights. Moreover, this chapter makes a strong case for states to lead on the implementation of policies to reverse exclusionary practices. While civil society and the private sector can support the adoption of policies aimed at promoting inclusion, governments are argued to be guarantors of citizen's rights. Additionally, the creation of environments supportive of positive social movements and community empowerment is a critical condition to reverse social exclusion. This should include deliberative and participative structures and processes to engage people who are the targets of policy in formulating and implementing action. Finally, in terms of measurement and monitoring, the KN argues that listening to people's stories or narratives is a more powerful way of understanding exclusionary processes than focusing only on numbers and also contributes to empowerment by giving voice to those with direct experience of exclusionary processes.

In Chapter 5, Siddiqi and colleagues discuss evidence that shows how the early years of life are of fundamental importance in shaping health outcomes and inequities that emerge in adulthood. Currently 220 million children under five years in low- and middle-income countries are exposed to poverty, malnutrition, poor health, and unstimulating home environments. These children do poorly in school, are predicted to have low incomes, and provide poor care for their children, contributing to the intergenerational transmission of poverty (Grantham-McGregor et al., 2007).

Life-course approaches to the analysis of health inequities and social determinants of health have received considerable attention in the last years. A significant contribution of this chapter to these approaches is a framework of analysis that conceptualizes several spheres of influence that shape Early Child Development (ECD) and points to appropriate action. Social, economic, cultural and environmental forces are instrumental in human development during the early years. Individual and biological characteristics, family composition and support, type of dwelling and residential communities can determine what children will achieve in the early years. Moreover, regional, national and global factors influence opportunities for children's cognitive and social-emotional development.

While the universal provision of ECD programs and services is proposed as a key policy recommendation, the framework also serves as a basis to call policymakers to pay attention to the

structural factors that prevent child development such as poverty, inequality, parents' lack of support, or gender discrimination. The implementation of policies and strategies to deal with each of the spheres of influence proposed by ECD will stimulate the generation of nurturing environments allowing children to develop to their full potential.

In Chapter 6, Lapitan and colleagues discuss evidence that links the living conditions of urban dwellers with health inequities. Currently three billion people, or half of the world's population, live in urban settings. From this group one billion live in heavily populated urban areas characterized by substandard housing in impoverished areas ("slums"), with almost 95% of those located in low- and middle-income countries. Common living conditions in these areas are marked by lack of adequate housing and lack of or severely constrained access to water, sanitation, education, health, welfare services and public transportation systems (Kjellstrom & Mercado, 2008).

The Knowledge Network on Urban Settings' (KNUS) report (WHO Centre for Health Development, 2008) and this chapter make the case for the adoption of healthy urban governance policies as a key action to address health inequities and unplanned widespread urbanization in many low- and middle-income countries. These policies are defined as the systems, institutions and processes that promote a fairer distribution of health in urban settings and that put health equity as a core value of urbanization initiatives. The evidence collected from a number of studies show that the main effect of healthy urban governance policies is that local residents gain a greater share of decision-making in matters affecting them. Together with an increased control of resources and accountability mechanisms, healthy urban policies enable the improvement of living environments and health care services at the local level.

This chapter makes the case that healthy urban governance policies are a catalyst that can ensure a long term commitment to the implementation of proven, effective initiatives and technologies such as waste management, water and sanitation systems, or slum upgrading by promoting participation and accountability. Global political support for a well-funded effort for social, economic and health equity is suggested as a critical component that should accompany the current process of urbanization around the world.

In Chapter 7, Benach and colleagues present research concluding that informal and precarious employment, and unemployment are major determinants of health inequities. Evidence included in this chapter shows a positive association between informal employment and death as well as increased disability-adjusted life years lost (DALYs). Moreover, research also shows the long-term harmful effects of child labour on physical, physiological, mental and social development.

Studies analyzing health and working conditions at workplaces are common. However, research assessing the links between employment conditions (contracts, security, compensation and benefits) and health are scarce. This chapter aims at filling this gap in the literature. After establishing differences between "employment conditions", and "working conditions", the authors present a two-level framework of analysis to explore labour related health inequities. A "macro" framework analyzes how power relations between unions, employers and the state, labour market regulations, and welfare regimes shape employment conditions, creating institutional environments capable to

either generate or reduce health inequities. A "micro" framework pays attention to the role of working conditions and health inequities (an area that has received more attention in the literature with studies on injuries, occupational safety, and ergonomics). The frameworks proposed describe how health inequities located at the micro level can be linked to macro level dynamics that determine unequal power relations between employers and employees, shaping unequal employment conditions across the social gradient. Unequal power relations are translated in unequal bargaining positions preventing workers to voice concerns and demand improved working environments.

In Chapter 8, Gilson, Doherty and Loewenson argue that health systems are a social system (e.g. policies, financing, and the way services are delivered, reflects current economic, social and political values) and thus are also a social determinant of health. The chapter documents that appropriately designed and managed health systems can improve health equity, with evidence in this area increasing. However, if not designed and managed properly, health systems can make health inequities worse. For example, health systems can aggravate poverty when cost recovery mechanisms, such as the charging of user fees, increases out of pocket payments that either lead vulnerable populations to delay or not seek health services at all, or result in further impoverishment.

Health systems can effectively improve health equity by emphasizing a primary health care approach, including supporting intersectoral action across government departments to promote health as a priority of diverse policy agendas; promoting and ensuring community participation involving population groups and civil society organizations in decision-making processes to identify, address and allocate resources to health needs; taking measures to provide universal health coverage that promote access to effective services to all in need and financial protection, and focusing on the expansion of primary level of care, ensuring that vulnerable groups usually not covered by health systems are able to use effective health services of acceptable quality. The features mentioned before are embedded in the Primary Health Care approach (PHC) that the chapter argues is a core policy action to improve health equity and to address the social determinants of health inequities.

In Chapter 9, Blas and Sivasankara Kurup synthesize the learning from the Priority Public Health Conditions Knowledge Network (PPHC KN), which involved 16 global health programmes of WHO. Health programmes are an integral part of health systems. Most resources for health in countries are directed towards disease control and risk factor reduction programmes, which often focus only on bio-medical interventions. The KN applied this knowledge to the 16 WHO programme areas being studied and identified key entry points for action to address social determinants of health and health inequities at each of the above levels.

The authors argue that while these programmes have had positive impacts, they can achieve better health equity and thereby contribute greatly to the achievement of their global targets by addressing social determinants. It is therefore essential to strengthen the ability of programme staff to integrate social determinants and measure their impact in terms of equity as well as clinical outcomes.

In Chapter 10, Bonnefoy and colleagues consider how to develop the evidence base to support the implementation of policies that address the social determinants of health and the inequities that flow from them. In so doing a range of theoretical, methodological and empirical issues are analysed.

The argument is made that it is important to distinguish between the causes of health improvement and the causes of health inequities. Critically, when thinking about the manner in which the social determinants cause inequitable health outcomes, two causal pathways need to be distinguished one to individual health outcomes and one to the patterning of health inequities at population level. The authors contend that examining the "causes of the causes" of inequality require a thorough analysis of population structure and recognition of the dynamic nature of social differentiation, manifested in the changing pattern of health inequities. To do this, it is necessary to identify the key axes of social differentiation in populations - class, status, education, occupation, income/assets, gender, ethnicity, race, caste, tribe, religion, national origin, sexual orientation, age and residence - and then determine how they intersect, interact, overlap and cluster together in their effects on health and health equity. These patterns of health inequity have been conventionally described in three ways: health disadvantage, health gaps and health gradients. The authors recommend using the health gradient approach since it acknowledges the health differences across the whole spectrum of the population, illustrating a systematically patterned gradient in health inequities.

The chapter also provides argument for measuring the magnitude of health inequities utilizing the most frequently used summary indices and, where possible, both absolute and relative measures, since the choice of only one may affect the assessment of whether a health inequity exists and its magnitude. In generating the evidence base, the authors encourage the use of diverse evidence, assessing its fitness for purpose and avoiding a rigid and traditional hierarchy of evidence. Ultimately they suggest that the challenge is to find out what works, for whom, in what circumstances, what are the barriers to implementation and how can these barriers be overcome.

Finally, in Chapter 11, Lee and colleagues conclude that there is much in this book to help policy-makers or practitioners to think about different options, for example to promote more equitable development in childhood or to improve the availability, accessibility and quality of basic services covering a broad range of health determinants. Effective approaches to reaping the health benefits that will come from regulation of global trading systems, improved employment conditions and greater gender equity are also summarized. Recent events around the world attest to the need for greater accountability in these areas. At the same time, gaps in knowledge and an agenda for research are also outlined.

In the absence of evidence on effective action, knowledge of the pathways between social determinants and health inequities, and of alternative theories of change underpinning different approaches, can help actors to think through what might work, where action should be targeted, and who should be involved. Finally, the crucial importance of the enlightenment model of knowledge utilization should not be under-estimated. Effective action to address the social determinants of health requires us all to rethink dominant understandings of the way in which population health is improved and health inequities reduced.

4. A challenge to the reader

In 2002, some years before he lead a global Commission that promoted the measurement of social progress as an alternative to gross development product as the indicator of a country's development, Stiglitz (2002) argued that the IMF's "economists are practical men striving to make hard decisions quickly, rather than academics calmly striving for intellectual coherence and consistency." We leave the reader with three questions that could serve to support a critical engagement with this material.

The first question while reading the book is to what extent is intellectual coherence necessary for action or would a consistent logic be an imposition, a master narrative voice, stifling creativity rather than engaging the widest range of people, harnessing their innovations, to act up and move towards greater health equity?

A particular challenge for public health, is that approaches to combine efficiency with equity are often viewed as untenable trade-offs, as different value sets make it almost impossible to strike an appropriate balance. Yet Blanchard and colleagues (2003) note that building on notions of justice and fairness, a fair deal can be reached through well structured negotiations. Examining another field, they discuss how on one hand, the international regime for stabilizing the climate, has identified the reduction of greenhouse gas as a global public good, yet on the other, greenhouse gas emissions from "developing countries are expected to grow rapidly over the coming decades. Negotiating a pragmatic and politically feasible approach may require some concessions. A second question is to consider which aspects of the social determinants of health are amenable to negotiations, and what political concessions are possible, to move towards greater health equity?

More recently, Calltorp and Larivaara (2009) examine the changing perceptions of equity and fairness in the four Nordic countries and conclude that the equity principle is deeply embedded, via a number of instrumental mechanisms, to "direct Nordic health systems towards equity, covering laws, priority setting and resource allocation, needs-based services, techniques to measure health in different populations, and other tools to direct services towards equity goals." They observe in these four countries [often cited as the most equitable societies], that these tools will not replace old ways of thinking. In other words, they do not expect or predict a paradigm shift, but that these new tools should enhance system functions, within existing health systems**.** A third question is to consider is if the work of the KNs point to systematic, generalizable and equity-enhancing innovations that can be diffused and adapted relatively quickly, to support health systems functioning, particularly in low-resource settings?

The nine global Knowledge Networks whose work is reported in the chapters that follow were made up of leading academics, prominent activists and policy- makers. It will ultimately be up to the reader to judge whether their analyses and the evidence they have collated has succeeded in moving beyond this problematic division between the intellectual and the pragmatic - between research and action.

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2 Globalization: the global marketplace and social determinants of health

Ted Schrecker and Ronald Labonté[1]

1. Introduction

Globalization is a term with multiple, sometimes contested meanings. Here we treat it primarily as an economic phenomenon, adopting Jenkins' (2004) definition of globalization as: "a process of greater integration within the world economy through movements of goods and services, capital, technology and (to a lesser extent) labour, which leads increasingly to economic decisions being influenced by global conditions." The decisions in question are not only those of national and sub-national governments, but also those of firms, households and individuals. Globalization, in other words, is best understood in terms of the emergence of a *global marketplace,* which did not "just happen" (Marchak, 1991; Bond, 2009). In particular trade liberalization and financial deregulation, two of its key drivers, were actively promoted by industrialized countries and international financial institutions (e.g. World Bank, International Monetary Fund (IMF)). As one jurisdiction after another adopted such policies, economic integration became "a self-reinforcing systemic trend" (Kaul & Conceição, 2006).

[1] With contributions from (in alphabetical order): Chantal Blouin, Patrick Bond, Giovanni Andrea Cornia, Corinna Hawkes, Kelley Lee, John Lister, Corinne Packer, David Sanders, Sebastian Taylor, David Woodward and other members of the Globalization Knowledge Network.

With reference to the conceptual framework adopted by the Commission on Social Determinants of Health (CSDH) (Chapter 1), globalization operates primarily as an influence on and element of the socioeconomic and political context, which in turn affects social position, material circumstances, psychosocial factors and behaviours. These factors individually, collectively and interactively contribute to health status and to socioeconomic gradients in health. Globalization also has direct effects on health-care systems, for instance by way of trade agreements. In this chapter, we first provide an analytical overview of how globalization affects health outcomes by way of social determinants of health (SDH).[1] Selected channels of influence and their policy implications are then described, drawing on a more extensive discussion of the evidence base provided in the Globalization Knowledge Network's (GKN) final report (Labonté et al., 2007), review articles (Labonté & Schrecker, 2007a; 2007b; 2007c), and a book based on the GKN's work (Labonté et al., 2009).

Our analysis responds to the observation of Paluzzi and Farmer (2005) that "the most devastating problems that plague the daily lives of billions of people... emerge from a single, fundamental source: the consequences of poverty and inequality," although we also address such globalization-related phenomena as rapid changes in diet that are not directly related to poverty or inequality. Under each subheading within Section 3, we identify associated policy implications. Finally, we offer a generic policy prescription -- the "three R's" of redistribution, regulation and rights -- for national governments, WHO and other international organizations seeking to address the negative consequences of globalization and maximize its potential for improving population health.

2. Globalization and health: the global story

It has been claimed that "globalization is good for your health, mostly" (Feachem, 2001) because countries that integrate into the global economy more rapidly, especially through trade liberalization, experience more rapid growth. The assumption is that they are therefore better able to reduce poverty (Dollar & Kraay, 2004) and increase the resources available to improve health outcomes.

However, when assessed with reference to the World Bank's poverty lines, poverty reduction during the 1981-2005 period of accelerated global integration was modest, compared to the quadrupling of the value of the world's economic product. Specifically, Chen and Ravallion (2008) estimate that 1.4 billion people were living in extreme poverty[2] in 2005. This represented a decline of 500 million since 1981, but on a worldwide basis the decline was accounted for entirely by fast-growing China. In other words, whenever in the developing world outside China people escaped extreme poverty, a comparable number fell into poverty. Based on a higher poverty line of US$

[1]For previous critical analyses of globalization's effects on human well being by UN system agencies, which provide more detail than is possible here, the reader is referred *inter alia* to United Nations Development Programme, 1999 and World Commission on the Social Dimension of Globalization, 2004.

[2]Defined as an income of $1.25/day or less, in 2005 dollars, adjusted for purchasing power parity.

2.50/day, the number of people living in poverty worldwide actually increased from 2.7 billion to 3.1 billion since 1981, with reductions in China offset by substantial increases in India and sub-Saharan Africa. In other words, when the benefits of growth "trickle down" at all, the process is excruciatingly slow; it has become even slower post-1980 (Woodward & Simms, 2006). In addition, the past 25 years of globalization have seen a slowdown or reversal in earlier trends of gradual convergence in health outcomes between poorer and richer nations (Moser, Shkolnikov & Leon, 2007).

An econometric study using data from 136 countries carried out for the Globalization KN (Cornia, Rosignoli & Tiberti, 2008; 2009) first identified five key pathways that account for variations in health status:

(1) lack of *material resources* for health, including inadequate access to health care and exposure to hazards such as unsafe drinking water, pollution, and dangerous working conditions;

(2) diffusion of advances in *medical and health technology, which historically has been a major contributor to worldwide improvements in population health, but may now be imperiled by harmonization of intellectual property protections;*

(3) *p*sychosocial *stress*, both acute and chronic, resulting for instance from social upheavals or loss of employment;

(4) high levels of *economic inequality* and lack of social cohesion, which adversely affect health through both material and psychosocial mechanisms;

(5) *unhealthy lifestyles* such as smoking, excessive consumption of alcohol, and bad diet.

The authors then selected a range of variables that influence these mechanisms, classifying the variables as related to policy choices made in the context of globalization as endogenous (in the case of medical progress) or as “shocks” (e.g. wars, natural disasters, the HIV pandemic). The final stage of their analysis consisted of a comparison of trends in life expectancy at birth (LEB) for the period 1980-2000 with those that would be predicted based on a counterfactual set of assumptions in which trends in all variables remained at the 1980 value or continued the trend they followed over the pre-1980 period (Figure 2).[1]

Compared to the counterfactual, globalization cancelled out most of the progress towards better health attributable to the diffusion of medical progress, and the effects of shocks combined with globalization to result in a slight worldwide decline (of 0.13 years) in LEB. The most conspicuous

[1]The reader will notice some apparent anomalies, such as the lack of a contribution to reduced life expectancy from alcohol consumption in the former Soviet Union. However, for purposes of the model alcohol consumption is treated as an intermediary variable, which responds to the multiple stresses associated with rapid economic decline, rather than as a structural variable (G.A. Cornia, personal communication, October 2008). This is fully in keeping with the Commission's emphasis on context.

Figure 2: Gains (green colour) and losses (red colour) in life expectancy at birth (LEB) years by 2000 in relation to the counterfactual, due to 1980s-1990s changes in policies, endogenous changes and random shocks

Region	OECD	TRANS	USSR	E. Asia	China	Lamer	MENA	India	S. Asia	SSA	WORLD
Policy driven LEB changes	**2.02**	**-1.78**	**-3.92**	**0.49**	**-3.61**	**-1.54**	**2.19**	**-1.07**	**-1.59**	**-5.63**	**-1.52**
Log GDP/c	0.00	-0.43	-1.91	-1.22	3.98	-0.80	-2.07	1.71	0.69	-0.99	**0.73**
Log GDP/c on volatility	-0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**-0.07**
Gini of income inequality	-0.03	-0.07	-0.12	0.00	-2.14	0.00	0.00	-1.15	-0.61	-0.45	**-0.77**
Gini of income inequality / (year-1959)	0.00	0.00	0.00	0.00	0.00	-0.01	-0.01	0.00	0.00	0.00	**0.00**
GDP/c Volatility	0.00	-0.72	-0.49	-0.05	-1.26	0.01	0.04	-0.63	-0.32	-0.09	**-0.44**
Intra-period D Gini > 4 points	0.02	-0.58	-1.60	-0.08	0.00	-0.03	0.00	0.00	0.00	0.14	**-0.08**
Log physicians per 1000/Log GDP/c	-0.44	0.02	0.37	1.10	-1.67	0.25	0.73	-0.97	-0.44	-0.60	**-0.51**
Migrant stock/population	0.07	0.00	0.00	0.41	0.00	0.01	0.39	0.00	-0.12	0.06	**0.07**
DPT immunization coverage	0.31	0.00	0.00	0.70	-0.73	-0.05	-0.29	-0.18	-0.58	-3.37	**-0.47**
Female education	0.52	0.00	-0.16	-0.57	-1.78	-1.14	3.41	0.15	-0.21	-0.32	**-0.31**
Cigarette smoking/c	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.12**
Alcohol consumption/c	1.21	0.00	0.00	0.20	0.00	0.22	-0.01	0.00	0.00	0.00	**0.22**
Endogenous driven LEB Changes [a]	**1.07**	**0.36**	**0.35**	**0.66**	**3.04**	**1.83**	**1.28**	**3.04**	**3.04**	**3.04**	**2.15**
Age dependency ratio	0.00	0.66	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.05**
Technical progress in health field	1.07	-0.31	-0.31	0.66	3.04	1.83	1.28	3.04	3.04	3.04	**2.10**
Stock driven LEB changes[a]	**0.00**	**0.00**	**0.00**	**0.00**	**-0.02**	**-0.04**	**-0.05**	**-0.57**	**-0.34**	**-6.36**	**-0.76**
War and human itarian conflicts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01	0.18	**0.02**
Disasters	0.00	0.00	0.00	0.00	-0.02	-0.04	-0.05	-0.02	-0.02	-0.01	**-0.02**
HIV/AIDS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.54	-0.31	-6.54	**-0.76**
Total LEB changes	**3.08**	**-1.42**	**-3.57**	**1.15**	**-0.59**	**0.25**	**3.42**	**1.41**	**1.11**	**-8.95**	**-0.13**

Source: Cornia, Rosignoli & Tiberti, 2008.

regional declines in life expectancy relative to the counterfactual occurred in transition economies and the former Soviet Union (where globalization accounted for essentially the entire decline). In sub-Saharan Africa globalization contributed almost as much to a decline of nearly nine years in LEB as did the AIDS epidemic. This was despite considerable benefits from medical progress. The authors concede that multiple uncertainties are associated with lack of data and the choice of variables as endogenous or exogenous, so “the establishment of a causal nexus between globalization policies and health cannot be but tentative” (Cornia, Rosignoli & Tiberti, 2008). Nevertheless, their study represents a highly credible challenge to the macro-level story about globalization's health benefits, notably including those in the “growth superstars”, India and China (Cornia, Rosignoli & Tiberti, 2008).

3. Globalization and health: selected channels of influence

3.1 Global labour markets, insecurity and health[1]

Over the past 30 years, a genuinely global labour market has emerged (World Bank, 1995; 2007) as production has been reorganized across multiple national borders and the world's labour force has roughly doubled in size with the integration of India, China and the transition countries into the world economy. The result is intensified competition among workers at the low end of the income scale, where potential employees are abundant and governments competing for foreign investment and contract production have a strong incentive to maintain "flexibility" in wages and labour standards. In the mid-2000s, more than 500 million people were employed but still existing on less than US$ 1 per day,[2] often with little hope of improvement. Nevertheless “employment [was] not high on the international agenda for poverty reduction” (Chen, Vanek & Heintz, 2006). Conversely, employers compete for highly valued skills at the top end of the income scale, where employees are increasingly mobile a trend that accounts in part for the rapid growth seen in many countries at the top of the income distribution. Consequently, the World Bank now predicts that labour market outcomes will increase economic inequality in much of the developing world as the “unskilled poor” are left even further behind (World Bank, 2007). This pattern is established in several Latin American countries (ECLAC, 2000), it is emerging in much of Asia (Development Indicators and Policy Research Division, 2007), and the “unskilled” have already been left behind in the industrialized world (Nickell & Bell, 1995; Wood, 1998).

The idea of a "race to the bottom" in terms of wages and working conditions is seemingly contradicted by cross-national comparisons indicating that globalization facilitated formal adoption of core labour standards (Neumayer & De Soysa, 2005; 2006; 2007). These findings do not involve labour market outcomes, but rather process-related variables such as free association and collective bargaining. According to the authors,

> It is entirely possible of course, perhaps even likely, that globalization boosts the bargaining power of capital at the expense of labour, which would put downward pressure on outcome-related labour standards such as wages, working times and other employment conditions. These have not been the subjects of our analyses (Neumayer & De Soysa, 2007).

Globalization has usually been accompanied by the reproduction of existing gender hierarchies, as women tend to occupy lower paid, less desirable jobs while continuing to bear a disproportionate share of unpaid household and child-rearing responsibilities. Although expanded employment opportunities for women, notably in export processing zones (EPZs), have contributed to gender empowerment, unsafe conditions and lack of labour rights in many such zones compromise potential health gains. In other words, increased employment opportunities will have mixed benefits unless

[1] A more extensive discussion of the issues raised in this section of the chapter is provided by Schrecker, 2009a.

[2] This was the World Bank's threshold for defining extreme poverty at the time, now replaced by the US$ 1.25 threshold referred to earlier in the chapter.

they are accompanied by changes in gender norms and in public policies related to the double burden of women's work. According to one ILO study:

> The single most important factor which acts as a barrier to women's ability to participate as full economic actors in the global economy is their domestic responsibilities, and for a large subgroup, their childcare responsibilities. The childcare constraint appears to operate across contexts which are otherwise very different (Barrientos, Kabeer & Hossain, 2004; see also Heymann, 2006).

These responsibilities, and the lower pay accorded women workers throughout the world, reflect deeply entrenched patterns of gender discrimination.

3.1.1 *Policy implications:*

- Economic policy should aim to generate livelihoods for all people, providing stable incomes at a level necessary for their physical, mental and social well-being; complementary social policies should ensure social protection for those unable to attain or sustain such a livelihood. This will mean, inter alia, bringing employment and employment conditions back in as a central concern of economic and development policy, in contrast to their recent invisibility (see e.g. Chen et al., 2005; Chen, Vanek and Heintz, 2006).

- Adoption and effective implementation of the ILO's four core labour standards (which address free association, collective bargaining, elimination of economic discrimination by gender, and the elimination of forced labour) should be a priority of all national governments and multilateral institutions, while ensuring that the process does not unintentionally cut off income streams that are vital to the survival of the most vulnerable households within a society.[1]

- In addition to ensuring that labour standards exist in practice as well as in law, priority should be given to providing all women with access to child care, free of charge or at minimal cost, through direct public expenditure by national governments and development assistance providers.

3.2 Trade policy, access to livelihoods, and health[2]

Trade policies and trade treaty negotiations, whether bilateral, regional or multilateral, are premised on opening national markets to freer global exchange in goods, services and capital. A preponderance of current evidence shows that trade liberalization increases economic insecurity, which in turn is associated with negative health outcomes. Trade liberalization can also increase food insecurity. A comparative study of 15 countries by the United Nations (UN) Food and Agriculture Organization concluded that “trade reform can be damaging to food security in the short to medium

[1] An important discussion of how this might be accomplished, of which we only became aware after the completion of the GKN's work, is provided by Barry & Reddy, 2006.

[2] A more extensive discussion of the issues raised in this section of the chapter is provided by Blouin, Chopra & van der Hoeven, 2009; Bhusan & Blouin, 2009.

term if it is introduced without a policy package designed to offset the negative effects of liberalization" (FAO, 2006). Domestic producers are often badly positioned with respect to foreign competitors, especially when the latter are highly subsidized by their national governments. Conversely, trade liberalization can increase domestic agricultural productivity, if it lowers the prices of imported inputs, but the benefits of such productivity increases may or may not affect food security in the countries in question; they may only increase the competitiveness of agrifood exports. For these reasons, generic conclusions about the impacts of trade policy on SDH are suspect; the need is rather for case-specific policy analysis.

At least until recently, customs tariffs in many low- and middle-income countries (LMICs) accounted for 15-25% or more of national government revenue. This likewise was the case for today's industrialized economies at the early stages of their rise to wealth. When tariffs are lowered as part of trade liberalization, revenues that are essential for funding health care and basic services such as water supply may be lost. One investigation of the impact of trade reforms on revenues (Baunsgaard & Keen, 2005) found that middle-income countries were able to recover only 40 to 60% of the revenue lost as a result of tariff reductions. Low-income countries, which are the most dependent on tariffs for government revenue, were able to recoup at best about 30% of lost revenues from other sources. Glenday (2006) found that between 1975 and 2000, of 28 low-income countries studied, 12 were unable to replace any tariff revenues at all. Although the picture appears to have brightened somewhat in recent years, and over the longer term (Baunsgaard & Keen, 2010), the issue remains important.

It is often argued that World Trade Organization (WTO) agreements already in place or under negotiation will restrict the ability of developing countries to pursue policies that favour domestic producers and industries with the potential for rapid growth. Such development policies were routinely used by today's high-income countries during the process of industrialization, and successful late-industrializers adopted economic policies that involved a high level of state planning, including policy instruments at least some of which would not be allowed under current WTO rules (Akyüz, 2005; Chang, 2005; Rodrik, 2005). It is difficult to find clear examples of situations in which these rules have prevented governments from implementing economic development or redistributive social policy objectives to which they were genuinely committed (Amsden & Hikino, 2000; Di Caprio & Amsden, 2004; Rodrik, 2004; Akyüz, 2009). However flexibilities that exist today may be precluded tomorrow (Akyüz, 2005). Thus the ultimate outcome of WTO negotiations on non-agricultural market access (NAMA), which involves lower tariffs across all forms of manufactured goods, is of special concern because of potential impact on "infant" industries in LMICs. Differences in market size affect not only initial bargaining positions in trade negotiations but also the ability of countries to make effective use of dispute resolution, even when the outcome is favourable (Stiglitz & Charlton, 2004). Further, the WTO is only part of the international trade policy regime; bilateral and regional agreements are increasing in number and importance (World Bank, 2004; Choudry, 2005). In these arenas, disparities in bargaining power and resources may be even more glaring than within the WTO framework.

Although intellectual property rights (IPRs) stimulate new research and development (R&D) by pharmaceutical companies, such R&D primarily benefits high-income countries that offer an

attractive commercial market (Correa, 2009). Harmonization of intellectual property protection under the Agreement on Trade-Related Aspects of Intellectual Property (TRIPs) had the potential to limit access to essential medicines. Although policy flexibilities for compulsory licensing were clarified in the Doha Ministerial Declaration on TRIPS and Public Health, and subsequently by the WTO General Council, cumbersome procedures and pressure from rich countries mean the available flexibilities have seldom been used (Kerry & Lee, 2007; Correa, 2008). Further, the United States of America has been writing stronger intellectual property protection ("TRIPS-plus" provisions) into some of the bilateral and regional trade agreements that it negotiates (Fink & Reichenmuller, 2006; Shaffer & Brenner, 2009). The European Union similarly has come under criticism for negotiating TRIPS-plus bilateral treaties (Labonté, Blouin & Forman, 2010), and for its "anti-counterfeit" seizures of generic drugs in transit through its borders. India and Brazil in September 2010 launched a WTO dispute against the EU and the Netherlands arguing that this seizure policy is contrary to flexibilities allowed in the TRIPS agreement (Anon, 2010).

3.2.1 *Policy implications:*

- Governments should ensure that national health and SDH priorities are not negatively affected by trade policy decisions. This requires building up their capacity for analyzing potential trade policy impacts and ensuring that health ministries are better able to articulate the evidence during trade negotiations. WHO should ensure that it has sufficient capacity and expertise, including legal expertise, to provide Member States with technical guidance and support in this regard.

- LMIC governments should actively participate in the Intergovernmental Working Group on Intellectual Property Rights established by the World Health Assembly; ensure that their national legislation allows full use of the flexibilities provided for by TRIPS; and avoid any concessions in bilateral or regional trade agreements that increase IP protection for pharmaceuticals. Over the longer term, urgent attention by WHO and other international agencies is needed to alternatives to the patent system for encouraging research on diseases that disproportionately affect developing countries. One example is the Health Impact Fund now being promoted by philosopher Thomas Pogge and economist Aidan Hollis (Hollis and Pogge, 2008).

- In the interests of food security, countries whose economies are still heavily dependent on agriculture should adopt policies to raise agricultural productivity and create adequate non-agricultural employment before proceeding with such trade reforms as the reduction of tariffs on crops grown by low-income households. This is one instance among many of the importance of "sequencing" in trade policy. Global market instabilities in food supply and price also require mitigating national policies, notably in low-income countries, ranging from targeted input subsidies and supports to improve rural infrastructure, to compensatory measures for low-income groups. Such measures are likely to be increasingly important if, for instance, recent high cereal prices on world markets represent a long-term trend.

- Throughout a country's economy, careful sequencing of trade liberalization commitments can avoid some negative impacts on SDH. Negative impacts can also be mitigated by expanding social protection policies such as health insurance. These policies should be universal, progressively tax-funded when possible, and not tied to employment, since many of the world's poorest workers are in the informal economy or lack access to employment-based social insurance schemes.

- In order to avoid reducing the fiscal capacity that is essential to such programmes, high- and middle-income countries should not demand further tariff reductions in bilateral, regional and global trade negotiations with low-income countries for which tariffs are still an important source of public revenue until these countries are able to develop alternative methods of revenue collection and the institutional capacity to sustain them. Creating a hospitable context for both social protection policies and the taxes needed to finance them is likely to require multilateral efforts to reduce revenue constraints imposed by tax competition and capital hyper mobility, a topic addressed in the next section of the chapter.

3.3 Financial market liberalization and health[1]

A global financial crisis of unprecedented complexity in late 2008, linked to the collapse of the unregulated US market for asset-based securities, led to a catastrophic fall in stock markets worldwide and the mobilization of massive amounts of public funds in an effort to prevent a depression (Goodman, 2008; Lordon, 2008). These events made clear to residents of high-income countries what many in LMICs have long known: the impact of financial crises on the so-called real economy can be devastating, with especially serious effects for the poor and otherwise vulnerable.

National financial crises appear to have become more common and more serious since 1990 (Claessens, Klingebiel & Laeven, 2004). In one estimate, they cost the developing world an average of US$ 150 billion per year in lost economic output between 1995 and 2002 (Griffith-Jones & Gottschalk, 2004). In extreme cases, rapid disinvestment reduced the value of LMIC currencies by 50% or more, plunging millions into poverty and economic insecurity. Such crises compromise health by increasing unemployment and reducing nutrition and access to medical care and education (Hopkins, 2006). Furthermore, experience in ten countries has shown that employment recovers much more slowly than GDP in the aftermath of financial crises (van der Hoeven & Lübker, 2005), thus prolonging the negative effects on houshold incomes.

National financial crises are often the result of capital flight: “the movement of capital from a resource-scarce developing country to avoid social control” (Beja, 2006). Definitions of capital flight differ somewhat, but there is widespread agreement that the magnitudes in question are substantial in regions including sub-Saharan Africa, Asia and Latin America. For example, the investigators whose methodology is widely accepted as setting a standard for the field recently estimated the value of capital flight from 40 sub-Saharan countries between 1970 and 2004, including imputed interest

[1] A more extensive discussion of the issues raised in this section of the chapter is provided by Schrecker, 2009b.

earnings, at US$ 640 billion (Ndikumana and Boyce, 2011). This figure, roughly equivalent to *three times* the value of those countries' external debt obligations circa 2004, confirms the earlier observation of economic historian Thomas Naylor that "[t]here would be no 'debt crisis' without large-scale capital flight" (Naylor, 1987). Not all capital flight is illicit, but one estimate is that illicit capital flight drains between US$ 850 billion and US$ 1 trillion per year from LMICs as a whole, without taking into account revenues from smuggling or tax evasion through transfer pricing (Kar & Cartwright-Smith, 2008).

Implications of capital flight for domestic social policy can be inferred from Williamson's warning that "levying heavier taxes on the rich so as to increase social spending that benefits disproportionately the poor" is conceptually attractive in Latin America, economically one of the world's most unequal regions, but "it would not be practical to push this very far, because too many of the Latin rich have the option of placing too many of their assets in Miami" (Williamson, 2004). Somewhat less dramatically, investor concern about policies that might be adopted by the Workers' Party in Brazil (before the 2002 elections) or the African National Congress in South Africa (after democratization) reduced the value of each country's currency by roughly 40%. These cases arguably led the governments in question to accept, at least temporarily, high unemployment and limited social expenditure rather than risk further depreciation of their currencies (Evans, 2005; Koelble & Lipuma, 2006) and jeopardizing their credibility with international financial markets. Not all countries are equally vulnerable to such influences, leading to the ironic outcome that "those societies most in need of egalitarian redistribution may have, in terms of external financial market pressures, the most difficulty achieving it" (Mosley, 2006).

3.3.1 *Policy implications:*

- Perhaps more than any other area described here, changes in the international regulation of financial activity will require coordinated action at a supranational level. Even before the events of 2008, a consensus was emerging around the idea that financial stability (i.e. the avoidance of financial crises) represents a true global public good, and one that is inadequately provided by existing institutions (Griffith-Jones, 2003; Eichengreen, 2004).
- A related need is for multilateral cooperation to restrict the use of transfer pricing and offshore financial centres for tax avoidance. If the estimated US$ 5-7 trillion of wealth held in offshore financial centres (Ramos, 2007) earned income at 5% per year, and this were taxed at 40%, some US$ 100-140 billion would be raised annually an amount comparable in magnitude to global annual spending on development assistance.
- A broader question is whether the shift in power to favour (largely unaccountable) owners of financial assets that has occurred as a result of globalization requires more fundamental changes in supranational institutions.

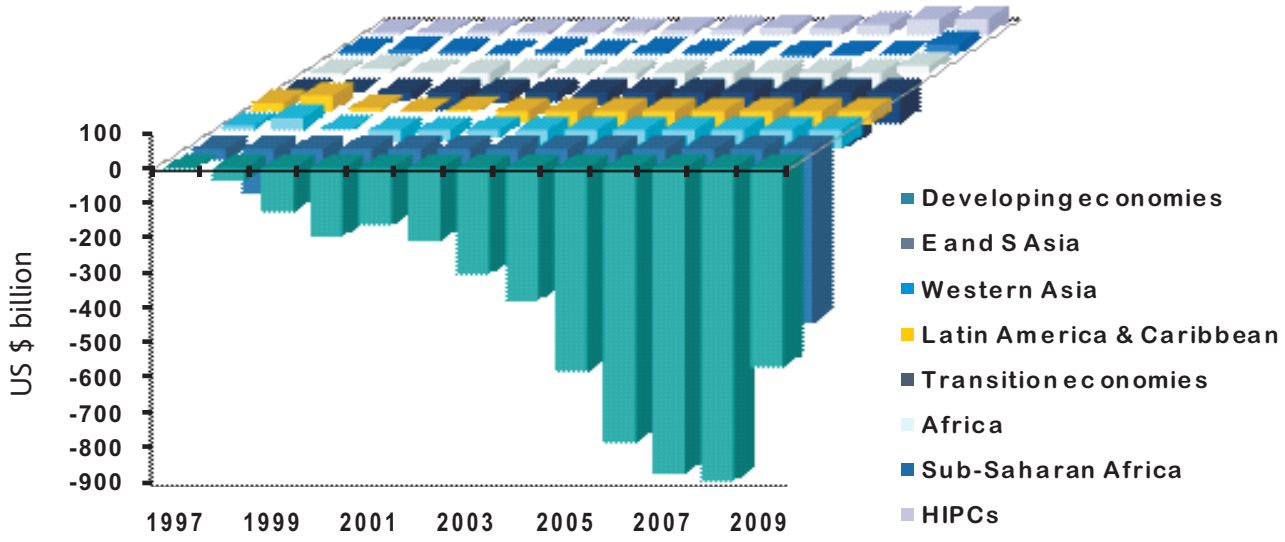
3.4 External debt, debt cancellation, and official development assistance (ODA)

The UN Millennium Project (2005) and the Commission for Africa (2005) each concluded that an approximate doubling of current official development assistance (ODA) spending would be necessary for countries to meet the Millennium Development Goals (MDGs). An examination of the

costs of a minimum package of basic health interventions compared to the funds available to governments in low-income countries further shifted the burden of proof to those who argue against substantial, long-term new development assistance commitments (Sachs, 2007, and see Section 3.6). In 2009, ODA represented 0.31% of donor countries' combined gross national products (GNP); less than half the minimum 0.7% GNP target first pledged at the 1970 UN General Assembly (UNDESA, 2010; OECD Development Co-operation Directorate, 2010).

ODA is the most visible mechanism for international redistribution, although not the most important. Annual flows of remittances amount to nearly three times the value of ODA (Mohapatra, Ratha & Silwal, 2010). In theory, liberalization of financial markets should have resulted in flows of resources from rich to poor countries. In practice, even taking into account development assistance flows, overall financial transfers from the developing to the industrialized world have in fact increased over the past several years, amounting to almost a trillion dollars per year before the financial crisis (Figure 3).[1] Much of this pattern is explained by the accumulation of foreign currency reserves, held in US treasury securities, by China and other Asian countries, with the positive effect of reducing their exposure to future currency crises. A more disturbing trend, however, involves continuing pressure on many LMICs from the International Monetary Fund (IMF) to use development assistance to build up their foreign currency reserves rather than using funds for such purposes as strengthening public health and education (Independent Evaluation Office, 2007; Rowden, 2010).

Figure 3: Net financial flows, by region and all developing and transition economies, 1997-2009



Source: United Nations Department of Economic and Social Affairs, 2010, pp. 89-91. "Sub-Saharan Africa" excludes Nigeria, South Africa.

[1] The Figure is incomplete in two respects. First, the underlying data on financial flows only partly reflect the value of capital flight from developing countries. Second, the data do not reflect the value of remittances from emigrants to their home countries. However since these two flows have opposite signs, and are at least of comparable orders of magnitude, the story presented in the Figure remains valid and important.

A fundamental ethical question is whether aid effectiveness should be assessed primarily in terms of improving the ability of recipient countries to meet basic needs, or on its contribution to economic growth. Both objectives are essential, yet elicit different priorities and measures of success. The apparent inability of aid flows to some parts of the world to generate sustained economic growth led to a powerful backlash, but a strong body of evidence now shows that aid is generally effective in supporting growth, poverty reduction and access to health care. At the same time, recent increases in development assistance for health through disease-specific programmes have distorted health sector priorities and deflected attention from SDH. External donor and global programme funding for HIV, for example, has at times exceeded the total health budget in several sub-Saharan African countries (England, 2007; De Maeseneer et al., 2008). Thus, an urgent need exists not only for an increase in development assistance levels overall, but also for improvement in aid coordination; for a reduction in the use of aid to support donors' economic and geopolitical objectives; and for more effective targeting of aid to support health equity.

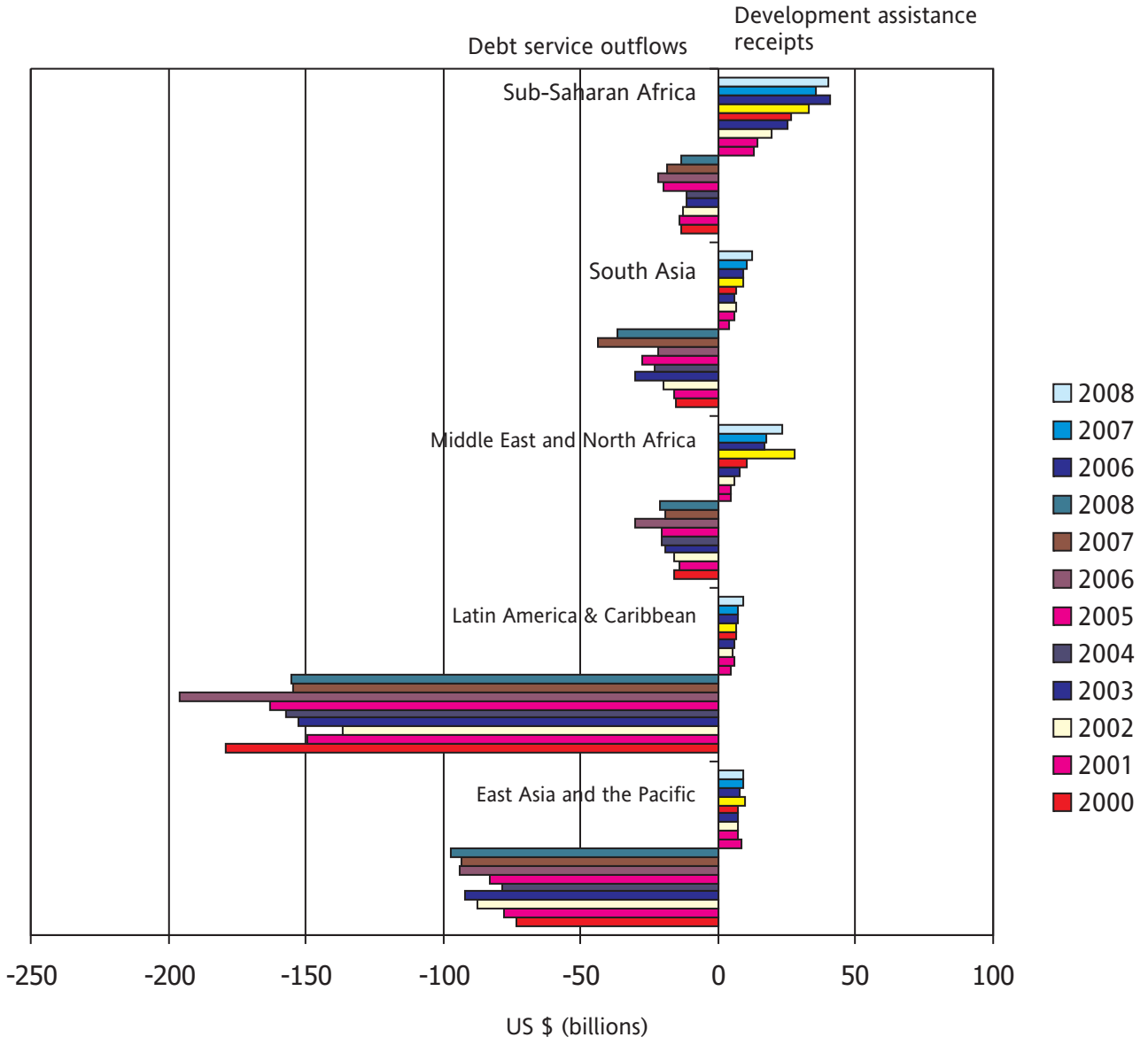
Debt crises of the last two decades are themselves a reflection of the world's growing economic interconnectedness. They have long been identified as reducing debtor countries' ability to meet basic needs such as health and education. In lieu of debt repayment,

> [D]ozens of heavily indebted poor and middle-income countries are forced by creditor governments to spend large parts of their limited tax receipts on debt service, undermining their ability to finance investments in human capital and infrastructure. In a pointless and debilitating churning of resources, the creditors provide development assistance with one hand and then withdraw it in debt servicing with the other (UN Millennium Project, 2005).

Until recently, in every region of the developing world except sub-Saharan Africa, inflows of development assistance were consistently offset by the annual outflow of debt service payments to external creditors. Increases in aid to sub-Saharan Africa largely reflect the commitments made by donors at the time of the 2005 G8 Summit, although at this writing it appeared that the full value of those commitments would not be forthcoming; a spike in aid to the Middle East and North Africa was largely a function of donors' strategic priorities (Figure 4).

The 1996 Heavily Indebted Poor Countries (HIPC) Initiative (initiated in 1996 and expanded in 1999) provides debt relief assistance to some, although not all, countries with unsustainable debt burdens. It led to increased health and education spending in some beneficiary countries, but many experienced only modest decreases in debt servicing costs. A few actually saw increases, and only nine countries had received all the debt relief for which they were eligible by 2004. The amount of debt cancellation on offer was expanded again in 2005 as the Multilateral Debt Relief Initiative (MDRI), but critics argued that many of the older initiative's problems persisted in MDRI (Hurley, 2007). Among them, debt relief continued to count as development assistance; the eligibility requirements excluded countries home to the majority of the world's poor; and debt cancellation, like many other forms of external finance, remained contingent on meeting performance criteria specified by the World Bank and the IMF. In 2010, the UN Department of Economic and Social Affairs warned that “owing to the global financial crisis, a large number of developing countries,” not only

Figure 4: Debt service and development assistance, by region, 2000-2008 (developing countries only)



Source: Adapted from World Bank, World Development Indicators (accessed November, 2010).

the HIPCs, “are facing renewed fiscal stress and challenges” that may increase the risk of future debt crises and compromise achievement of the MDGs (UNDESA, 2010).

Finally, the international community continues to avoid the issue of "odious debts" incurred by repressive and unaccountable governments, often to finance the private fortunes of rulers (Ndikumana & Boyce, 1998; King, Khalfan & Thomas, 2003; Mandel, 2006). A recent application of this concept concluded that the total value of 13 countries' odious debts was estimated at US$ 726 billion and that 10 countries should be paying no debt service, rather should receive refunds of US$ 383 billion in past payments (Mandel, 2006).

3.4.1 *Policy implications:*

- Providing resources for public infrastructure that support health equity and actions on SDH is an ethical obligation and probably also under international law, as per the human rights framework (discussed in section 4) rather than a matter of charity. This requires reorienting the aid architecture away from donor interests and towards health and development goals consistent with multilateral agreements.
- Changes in how debt sustainability is calculated are also required, either estimating the amount of public revenue required to meet the MDGs or similar objectives before determining affordable debt-servicing, or working backwards from a feasible net revenue approach that prioritizes public investments in meeting basic needs.
- Conditionalities attached to debt cancellation should include development of national action plans on SDH; incorporate employment targets with a gender dimension, emphasizing incomes that at the very least will lift households out of absolute poverty; and strengthen transparency and governmental accountability.
- WHO could be among the leaders in promoting multilateral consensus against collecting odious debts.

3.5 Globalization and nutrition transitions[1]

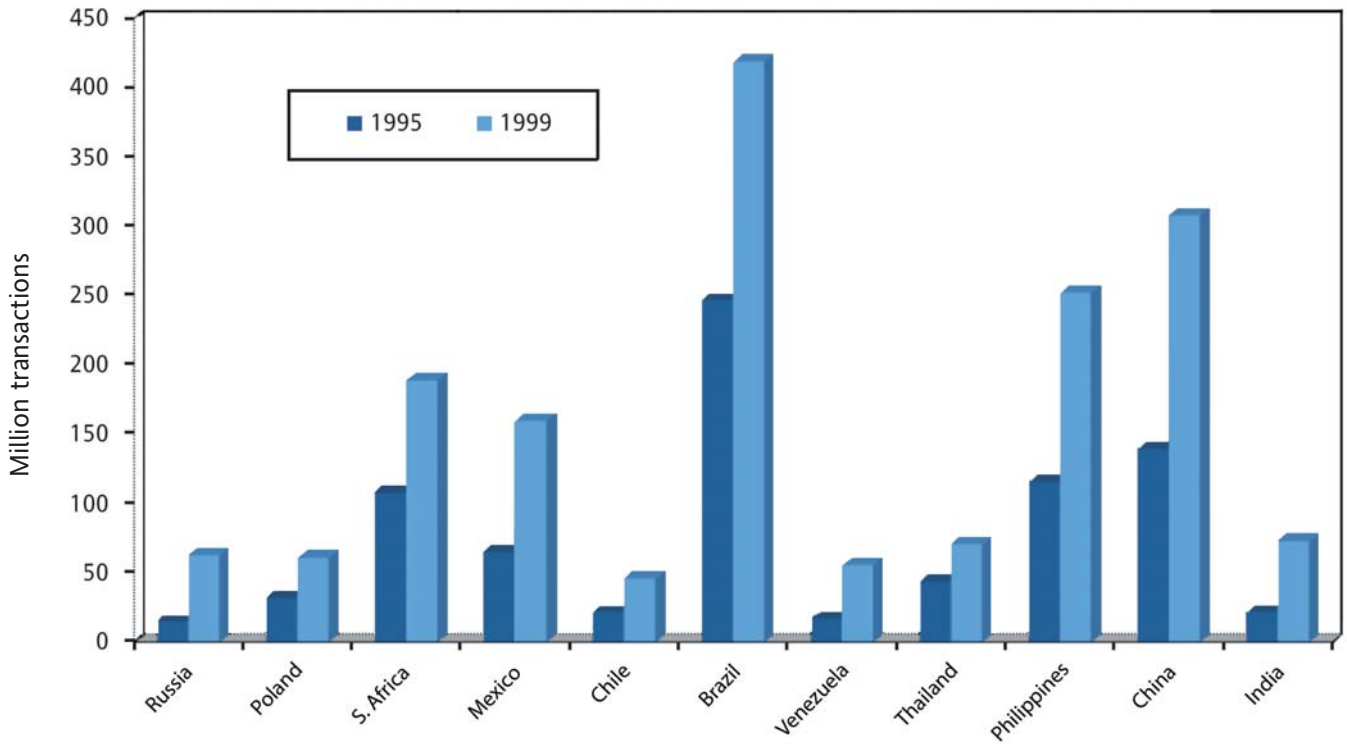
The nutrition transition describes global convergence towards diets high in saturated fat, sugar, and refined foods low in fibre, often termed the "Western diet". Nutrition transitions have led to rapid increases in the prevalence of overweight and obesity in many low and middle-income countries, sometimes to levels approaching those in high-income countries (Popkin, 2009). The consequence is a multiple burden of disease: increasing levels of chronic, non-communicable diseases such as diabetes and cardiovascular disease combined with the persistence of substantial morbidity and mortality from infectious diseases. The burden of diet-related chronic conditions is predicted to increase even where they have not already emerged as significant health problems. In high-income countries, the burden of these conditions falls disproportionately on the poor and on racial minorities, and this pattern is beginning to repeat itself in middle-income countries.

Globalization leads to changes in the structure of food demand through income growth, urbanization and changes in employment. Urban populations and countries with higher GDPs consume more fats, sugars and refined, processed foods, and are more likely to be overweight or obese (Ezzati et al., 2005; Popkin, 2009). To the extent that globalization has played a role in generating higher national incomes and encouraging a more urbanized world, it can be said to be associated with the nutrition transition through changes in demand.

[1] A more extensive discussion of the issues raised in this section of the chapter is provided by Hawkes, 2006; Hawkes, Chopra & Friel, 2009; Thow & Hawkes, 2009.

Globalization is also implicated in three supply-side shifts. First, the growth of foreign direct investment by transnational food corporations (TFCs) has increased the availability and accessibility of processed foods and drinks. Mexicans now drink more Coca-Cola products per capita than people in the United States. Trade policy reforms have removed numerous barriers to entry to TFCs, including companies that manufacture processed foods, and supermarkets which sell them. Second, an important and under-researched area involves the parallel removal of barriers to entry to franchised fast-food operators. Figure 5 shows the growth in meals taken at fast food outlets in a number of countries over a period of just four years. Third, intensive marketing campaigns that have accompanied the first two trends normalize the consumption of the products being marketed, especially among children, as part of daily life.

Figure 5: Number of transactions at chained burger and chicken outlets in selected countries, 1995 & 1999



Source: Euromonitor data in Hawkes, 2002.

3.5.1 *Policy implications:*

- International organizations, agencies and national governments need to develop a coherent strategy for building capacity to address diet-related chronic diseases.
- The legitimacy of ensuring coherence between nutritional and trade goals must be recognized, e.g. linking market access to responsible corporate behaviour or permitting tariff escalations on highly refined foods known to have low nutritional and high health-negative effects.
- Apart from trade policy, national regulations that limit advertising to children would provide powerful disincentives to the marketing of these foods in developing countries. Excise taxes could also be used to reduce demand for low-nutrition across all income groups.

3.6 Globalization and health systems[1]

Health care interventions that are taken for granted in the industrialized world are routinely unavailable, or available only to the wealthy, in developing countries. Access to care reflects the same distributions of economic (dis)advantage that characterize other SDH.

The costs of necessary health care, or the income losses associated with lack of access to it, create destructive downward spirals or "medical poverty traps" (Whitehead, Dahlgren & Evans, 2001) involving poor nutrition, abandoned education, and still more illness. These can be disastrous at the household level, and when sufficiently widespread can lead to substantial reductions in economic growth at the national level. Thus, health systems are an integral component of the broader systems of social protection that are critical to reducing health inequities. Unfortunately, key international institutions have contributed to health resource scarcities, in particular as they affect the poorest and most vulnerable, by promoting a market-oriented concept of health sector reform that strongly favours private provision and financing (Mackintosh, 2003; Petchesky, 2003; Koivusalo & Mackintosh, 2004).

Under the General Agreement on Trade in Services (GATS), countries are allowed, but not required to make binding commitments related to trade in health services as part of the overall process of liberalizing trade in services. Trade in services (including health services and insurance) also features prominently in many bilateral and regional agreements. Such commitments are very difficult to undo without exposing a country to damaging trade sanctions, and many countries are working with incomplete information about what GATS actually requires and involves (Woodward, 2005). A legitimate concern is that trade policy commitments will "lock in" the commercialization of health services and associated inequities in access. Foreign investors or service providers (or their countries on their behalf) may then be able to invoke trade dispute resolution processes if denied access to a country's domestic market, and denying similar opportunities to domestic actors will become politically unfeasible.

[1] A more extensive discussion of the issues raised in this section of the chapter is provided by Lister, 2005; Blouin et al., 2007; Lister & Labonté, 2009.

The "brain drain" of health professionals from poor to rich countries threatens the viability of many developing country health systems (Chen et al., 2004; WHO, 2006).[1] Barriers in rich countries are being actively lowered for professional, technical and "skilled" immigrants including health professionals (Crush, 2002); conversely, the lack of resources for developing country health systems creates a powerful "push factor". Recruitment of health professionals from developing countries is often cited as one of the forces driving outward migration, and led to a World Health Assembly Resolution in 2010 approving a voluntary global code on recruitment practices (WHO, 2010). However "pull" factors or practices of destination nations, including recruitment, may be less of a concern than the "push" of under-developed health systems in source countries. The picture is further complicated by the growth of disease-specific global public-private partnerships (GPPPs), which often fragment national health systems, divert attention for the need for wider public health and social policy initiatives, and create an internal brain drain from a chronically under-resourced public sector. Commercialization of health systems has also been identified with creating an internal brain drain from public health systems to better financed private systems (Pachanee & Wibulpolprasert, 2006).

3.6.1 *Policy implications:*

- On the principle of "first, do no harm", further market-oriented health sector reforms should not be promoted or implemented until and unless research has established their appropriateness, effectiveness and compatibility with the advancement of health equity. Subsequent to the completion of the Knowledge Network's activity, a strong consensus has emerged in support of universal coverage, ideally financed from general tax revenues, with social insurance as a second-best solution, limited by such factors as incomplete coverage of those employed in the informal sector (Rannan-Eliya, 2009; Reich & Takemi, 2009).

- National governments should avoid making any binding health service commitments in trade agreements until they have demonstrated ability to effectively regulate private investment and provision in health services in ways that enhance health equity. It is not clear that any government, anywhere in the world, has met this test. At a multilateral level, cancelling existing trade treaty health service commitments and removing health services from the scope of trade treaties remains an option that should be considered.

- In some contexts, substantial health gains are achievable with low-cost, targeted efforts (Anon, 2002; de Savigny et al., 2004; Bryce et al., 2005). However, these efforts do not substitute for broader mobilizations of resources. Providing a package of basic, low-cost health interventions in low-income countries will require roughly US$ 40 per capita per year. Even if low-income country governments were to increase public spending on health care to 15% of their

[1] A more extensive discussion of the issues raised in this section of the chapter is provided by Packer, Labonté & Runnels, 2009.

central government budgets, and many are a long way from doing this,[1] providing this basic standard of health services to all their citizens would require approximately US$ 30 billion in annual development assistance for health, i.e. nearly twice the recent total of US$ 12-14 billion in development assistance for health provided to all countries for all purposes (Ooms, Derderian & Melody, 2006; Sachs, 2007). Beyond this, a variety of policy measures aimed specifically at limiting the loss of health professionals and/or compensating countries for the resulting costs need to be considered.

4. "Disequalizing" globalization, global governance and human rights

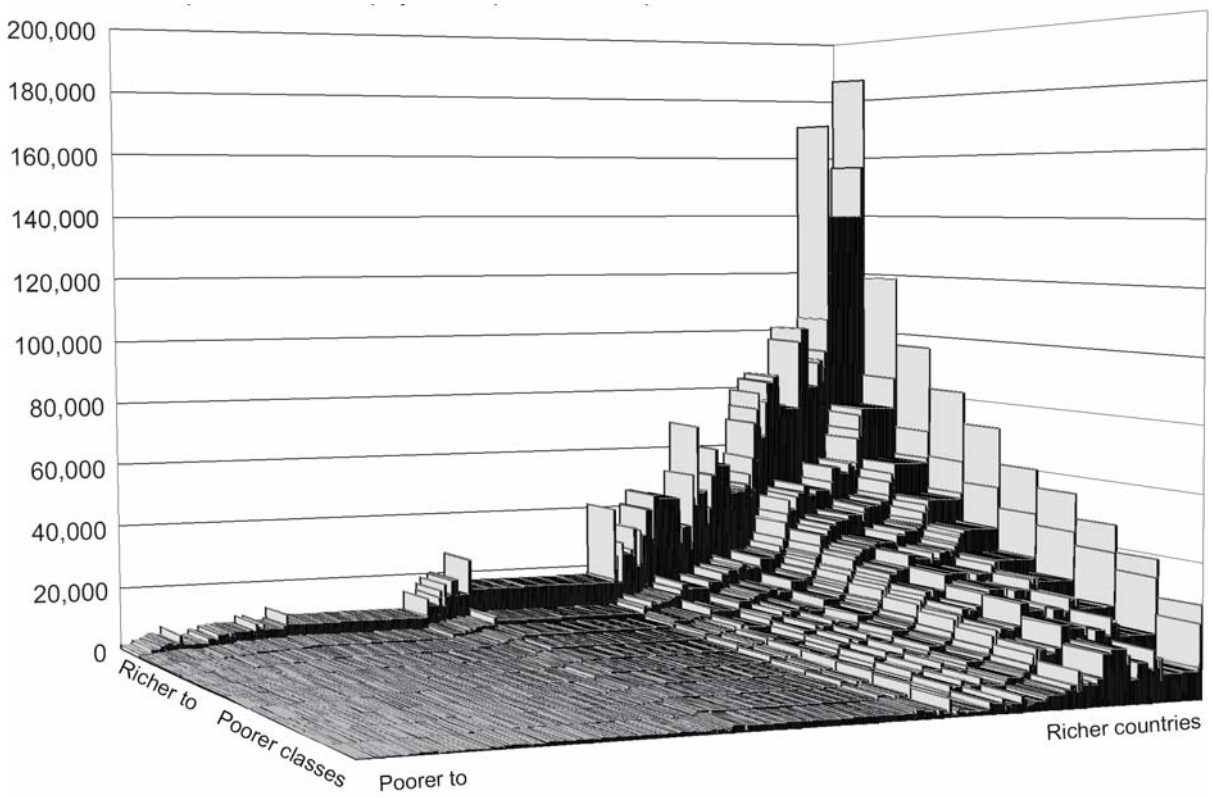
In a context of high and rising global economic inequality (see Figure 6), it is especially important to address the "inherently disequalizing" nature of global markets (Birdsall, 2006), which tend to magnify inequalities by rewarding people and countries with marketable skills and assets. In the graph, countries have been allotted a number of rows of columns based on their populations. Each row of columns is divided into 10 segments based on income deciles; thus, each of the 6,000 columns represents one million people. The graph makes it clear that while intra-country income disparities are dramatic even in some countries that are relatively poor as ranked by income per capita, the commanding heights of the worldwide income distribution are occupied by relatively rich people in rich countries. Further, the powerful tend to design the rules of the global marketplace to their own advantage, sometimes generating a vicious circle of mutually reinforcing increases in economic and political inequality. Reducing health inequities will require a fundamental shift in the trajectory of globalization, redesigning institutions so that they redress or compensate for such tendencies rather than reinforcing them.

Borrowing terminology from the Finnish social policy research unit STAKES, reduction of inequities due to globalization can be achieved through policies and institutions organized around the "three R's" of:

- systematic resource **redistribution** between countries and within regions and countries to enable poorer countries to meet human needs,
- effective supranational **regulation** to ensure that there is a social purpose in the global economy, and
- enforceable social **rights** that enable citizens and residents to seek legal redress (Deacon et al., 2005).

[1] Most sub-Saharan African governments made a commitment to this objective in the 2001 Abuja Declaration. WHO figures show that, as of 2005, only three had lived up to it, and oil-rich Nigeria was one of the lowest spenders on health (Working Group on IMF Programs and Health Spending, 2007, p. 20). In March, 2010, African Union finance ministers attempted to repudiate the Abuja commitment, although it was reaffirmed by AU heads of government in July 2010.

Figure 6: Global distribution of income per capita, 2008, US$ at purchasing power parity



Source: Bob Sutcliffe, 2010. Used with permission.

Although much can be accomplished by national and subnational governments, achieving "a vision of the world where people matter and social justice is paramount," in the words of Commission Chair Sir Michael Marmot (2005), *requires coordinated action on an international scale by national governments and multilateral institutions.*

A first step is for national governments to adopt the rubric of "Health in all Policies", which was the theme of Finland's presidency of the European Union in 2006 (Ståhl et al., 2006). At the very least, health ministries should have the opportunity to contribute to policy discussions on such matters as macroeconomic policy and trade which are relevant to health, and need to have the necessary expertise and resources to make the case for considering health impacts and develop the necessary evidence base. Developing WHO's ability to assist health ministries and other relevant departments in doing this will require scaling up an expanded range of expertise and competencies within WHO, not only in medicine and the life sciences but also in social sciences and law.

Changes are also needed in global governance structures:

> the complex of formal and informal institutions, mechanisms, relationships, and processes between and among states, markets, citizens and organizations, both inter- and non-governmental, through which collective interests on the global plane are articulated, rights and obligations are established, and differences are mediated (Weiss & Thakur, 2010).

Global governance structures are robust and well formed in certain areas, notably economic relations such as trade and investment and finance, but underdeveloped and comparatively fragmented in others, such as social policy (Fidler, 2005). Overall, far too little attention has been paid to SDH in the context of global governance (Koivusalo & Ollila, 1997; Buse & Walt, 2002; Ollila, 2003; Lethbridge, 2005).

"Health in all Policies" should therefore be adopted as a theme for the reform and redesign of global governance. This will require revitalizing WHO itself. Among institutions directly concerned with health, the relative decline of WHO's importance in global health governance has coincided with (and to some extent resulted from) the rise of the World Bank as a source of health sector financing, a proliferation of GPPPs and private institutions such as the Bill and Melinda Gates Foundation (Bloom, 2011; People's Health Movement et al., 2008). Beyond the health sector, key actors include the IMF, the World Bank, the WTO, and transnational corporations and players in global financial markets. As a first step, WHO should continue to strengthen engagement with such institutions as the WTO and the international financial institutions, supported by (more) effective working relationships with civil society organizations and with other UN system entities such as the International Labour Organization, the United Nations Development Programme and the Economic and Social Council. The longer-term objective must be to return WHO to a central position in global governance for health, which will require restoring appropriate levels of resources from member states. WHO's core (regular budget) funding has been static and even shrinking for many years, leaving the organization reliant for much of its activities on extra-budgetary funds over which donors exert varying degrees of control. Kickbusch and Payne (2004) note, "It is a scandal of global health governance that WHO Member States ... would allow a situation to arise in which a private philanthropy, the Gates Foundation, has more money to spend on global health than the regular budget of their own organization."

The discussions of trade policy and financial markets in Section 3 suggest a common theme: the need to protect the ability of national and sub-national governments to intervene in support of health equity, for example by implementing redistributive domestic policies. One way of doing so involves the international human rights framework, identified in a background paper for the Commission (Solar and Irwin, 2007) as "the appropriate conceptual structure within which to advance towards health equity through action on SDH." The paper continued,

> Human rights offer more than a conceptual armature connecting health, social conditions and broad governance principles, however. Rights concepts and standards provide an instrument for turning diffuse social demand into focused legal and political claims, as well as a set of criteria by which to evaluate the performance of political authorities ... (Solar and Irwin, 2007).

While providing the opportunity for such legal claims requires action by national and sub-national governments, the concepts and vocabulary of human rights represent perhaps the most powerful and widely accepted normative challenge to the values of the global marketplace, with substantial potential to reduce health inequities (Schrecker et al., 2010).

Opportunities to be pursued include building on WHO's earlier work on health and human rights (see e.g. Nygren-Krug, 2002) by establishing a closer working relationship with the United Nations Special Rapporteur on the right to health.[1] The objectives pursued should include:

- acting on recommendations already made by the first Special Rapporteur, such as his finding that that "the progressive realization of the right to health and the immediate obligations to which it is subject, place reasonable conditions on the trade rules and policies that may be chosen" (Hunt, 2004) and "that urgent attention be given to the development of a methodology for right to health impact assessments in the context of trade" (Hunt, 2004);
- promoting the establishment of an international mechanism to protect nations from sanctions imposed as the result of dispute resolution processes under trade agreements when the policies in question can be defended with reference to national human rights obligations as defined in international law.

The disparities that characterize contemporary globalization involve not only material resources but also power within international institutional frameworks. This point has been recognized in the establishment of such forums as the Helsinki Process on Globalization and Democracy (Helsinki Process, 2007). Notably important are the recommended reforms of such key institutions as the World Bank and IMF (Woods & Lombardi, 2006; Chowla, Oatham & Wren, 2007) and the WTO (South Centre, 2003; Jawara & Kwa, 2003; Blagescu & Lloyd, 2006). For instance, representation on the Executive Boards of the IMF and the World Bank reflects the economically weighted votes of the members. Consequently, high-income countries which account for 15% of the world's population have a substantial majority of votes in both institutions. At the IMF, the USA alone has veto power on eighteen subjects where decisions require 85% of the votes, and the USA and four other G7 members acting together have veto power on 21 other subjects (Buira, 2004).

[1] Specifically, the right of everyone to the enjoyment of the highest attainable standard of physical and mental health (OHCHR E/CN.4/RES/2002/31).

The ideal mechanism would be a forum comparable to the post-war Bretton Woods conferences (which established the World Bank and IMF), but with greater transparency and civil society participation. Until recently, the level of multilateral support needed for such an effort might have rendered it improbable. The financial crisis of late 2008 underscored the breadth of interests served by institutions that manage and regulate the world economy for purposes not defined solely by the marketplace, while simultaneously illustrating the difficulty of pursuing "globalization with a human face" (UNDP, 1999) at the supranational level.

5. Postscript

Two months after the Commission's final report was published, a financial crisis swept across the world. The crisis dramatized the extent of global economic interconnectedness, and also the asymmetrical distribution of its risks and rewards: effects were felt first, and worst, by those who had no role in creating it and no control over its consequences. The World Bank and IMF, which are not usually alarmist about the consequences of globalization, estimate that an additional 265,000 infants and 1.2 million children under 5 in LMICs would die between 2009 and 2015 as a result of the economic consequences of the crisis (World Bank & International Monetary Fund, 2010). This asymmetry was observable even at the epicentre of the crisis, the United States. By late 2009, foreclosure proceedings had been started on three million homes, a million schoolchildren were homeless or precariously housed, and one in four children lived in a family that was receiving the government-issued food vouchers known as food stamps (DeParle & Gebeloff, 2009; Eckholm, 2009; Stewart, 2009).

Furthermore, it was argued by many that the financial crisis was not an isolated event, but part of a new and highly inequitable phase in the development of the global marketplace. Mortgage-backed securities themselves were identified as way of extracting resources that "moves faster than extracting profit from lowering wages" (Sassen, 2009). Other researchers were linking the sharp increases in food prices in 2007-08 that worsened the effects of the financial crisis for millions of households and led to a rise in chronic undernutrition (Ruel et al., 2010; Dawe & Drechsler, 2010) to the expansion of speculative trading in agricultural commodities (Conceição & Mendoza, 2009; Zoomers, 2010) and to the growing number of large-scale purchase or long-term leases of productive land in LMICs to meet the demands of affluent consumers outside their borders (Cotula et al., 2009; Smaller & Mann, 2009; von Braun & Meinzen-Dick, 2009). Some development researchers now warn of a long-term "triple crisis" involving interacting dynamics of financial volatility, food insecurity and climate change that will worsen existing patterns of privation (Addison, Arndt & Tarp, 2010). Implications for health equity have not yet been adequately explored.

Against this background, both the Commission's recommendations for change in the organization of the global economy and its insistence on such change as an ethical imperative acquire renewed urgency. Having seemed utopian to some observers in August 2008, the Commission now appears prescient. WHO Director-General Margaret Chan warned at the United Nations that:

> The policies governing the international systems that link us all so closely together ... need to look beyond financial gains, benefits for trade, and economic growth for its own sake. They need to be put to the true test. What impact do they have on poverty, misery, and ill health in other words, the progress of a civilized world? Do they contribute to greater fairness in the distribution of benefits? Or are they leaving this world more and more out of balance, especially in matters of health? (Chan, 2008).

One can only hope that her warning and her question are taken seriously.

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3 Gender inequity in health

Gita Sen and Piroska Östlin[1]

1. Introduction

During the last half century, a great deal of evidence has accumulated based on work in almost all the social sciences and humanities as well as some of the natural sciences about the presence, scope and depth of gender inequality and inequity throughout much of known history and in practically every part of the world. In connection with the tenth anniversary of the Fourth World Conference on Women in Beijing a number of agencies reviewed the evidence on gender and development and found gender inequality to be widely present (Sen, 2006). While its forms vary across time and space and may be blatant or more subtle, the system of gender power that places women in subordinate social positions has been remarkably pervasive and persistent. The consequences of gender power can be felt by women and men in practically every field, and most certainly in health (Lorber, 1997).

[1] This chapter is based on the Final Report of the Women and Gender Equity Knowledge Network (WGEKN) (Sen et al. 2007) of the Commission on Social Determinants of Health. Core members of the Knowledge Network: Rebecca Cook; Claudia Garcia Moreno; Adrienne Germain; Veloshnee Govender; Caren Grown; Afua Hesse; Helen Keleher; Yunguo LIU; Piroska Östlin (Coordinator); Rosalind Petchesky; Silvina Ramos; Sundari Ravindran; Alex Scott-Samuel; Gita Sen (Coordinator); Hilary Standing; Debora Tajer; Sally Theobald; Huda Zurayk.

Gender analysis does not mean simply disaggregating the data by sex and counterposing men's health versus women's health. It requires, instead, an analysis of the power differentials that shape the relations between women and men along multiple dimensions, and hence affect their health. Because women are typically at the subordinate end of these power differentials and tend therefore to be negatively affected by them, gender analysis primarily focuses on the implications for women. This chapter mainly follows this approach. However, reference is also made to the effects of gender power relations on men's health, and also on how this is different from the ways in which gender relations affect women's health. For transgender and intersex people, gender analysis goes further to include the social determinants of gender identity and their consequences for health.

2. Gender as a social determinant of health

While a number of concepts[1] have evolved over the years to provide analytical bases for understanding and action, central to most of them is the role of gender power in organizing relations among people, creating and sustaining unequal values, norms, behaviour and practices, and structuring organizations to reflect and consolidate those same beliefs and relationships. Gender affects people's "functionings" and their capabilities (Sen, 1999). Gender relations operate through processes of *having, being, knowing* and *doing; these processes* differentiate, stratify, subordinate, and place people in hierarchies, and particularly, though not only, in the case of transgender and intersex people, marginalize and exclude them.[2]

Women have less land, wealth and property in almost all societies; yet they have higher burdens of work in the economy of "care" - ensuring the survival, reproduction and security of people, including young and old (Elson, 1993). For example, in Cameroon, Kenya, Nigeria, the United Republic of Tanzania and other countries in sub-Saharan Africa, while women undertake more than 75% of agricultural work they own less than 10% of the land. In Pakistan, women own less than 3% of the land and the situation is no better in the Americas: 11% of land in Brazil, 13% in Peru, 16% in Nicaragua and 22% in Mexico are owned by women (Grown et al., 2005). Girls in some contexts are fed less, educated less, and are more physically restricted; and women are typically employed and segregated in lower-paid, less secure, and "informal" occupations. For example, women's estimated earned income is around 30% of men's in countries surveyed in the Middle East and North Africa, around 40% in Latin America and South Asia, 50% in Sub-Saharan Africa and around 60% in the Central Eastern Europe/Commonwealth of Independent States, East Asian and industrialized countries (ILO, 2006, cited in UNICEF, 2007).

Gender hierarchy governs how people live and what they believe and claim to know about what it means to be a girl or a boy, a woman or a man. Girls and women are often viewed as less capable or able (Summers, 2005), and in some regions they are seen as repositories of male or family

[1] Subordination, discrimination, bias, patriarchy, gender system, hegemonic masculinity to name a few.

[2] Transgender and intersex people are not the only ones to face social exclusion; but the distinction between social exclusion and unequal inclusion is an important one.

honour and the self-respect of communities (Fazio, 2004). Restrictions on their physical mobility, sexuality, and reproductive capacity are perceived to be normal; and in many instances, accepted codes of social conduct and legal systems condone and even reward violence against them. Findings from the WHO multi-country study on women's health and domestic violence showed that the reported lifetime prevalence of physical or sexual partner violence, or both, varied from 15% to 71%, with two sites having a prevalence of less than 25%, seven from 25% to 50%, and six from 50% and 75%. Between 4% and 54% of respondents reported physical or sexual partner violence, or both, in the past year (Garcia-Moreno et al., 2006).

Women are thus seen as objects rather than subjects (or agents) in their own homes and communities, and this is reflected in norms of behaviour, codes of conduct, and laws that perpetuate their status as lower beings and second class citizens.[1] Even in places where extreme gender inequality may not exist, women often have less access to political power and lower participation in political institutions from the local municipal council or village to the national parliament and the international arena. For example, women are under-represented in all national parliaments: in June 2011, they accounted for 19% of parliamentarians worldwide. Nordic countries have the highest rates of participation (41%), followed by the other European countries and the Americas (22%), Sub-Saharan Africa (19%), Asia (18%), the Pacific (12%), and Arab states which rank lowest, with a regional average of less than 12% (Inter-Parliament Union Database, 2011).

While the situation described above is true for women compared with men in general, there can be significant differences among women themselves based on age or life-cycle status, as well as on the basis of factors including economic class, caste, and ethnicity.

A similar general situation to that of women also holds for transgender and intersex people who are often forced to live on the margins of mainstream society with few material assets. They face extreme labour market exclusion which often leaves them with little other than sex-work as a means of survival, and they are often ostracized, discriminated against, and brutalized (IDS Bridge Cutting Edge Pack on Gender and Sexuality).

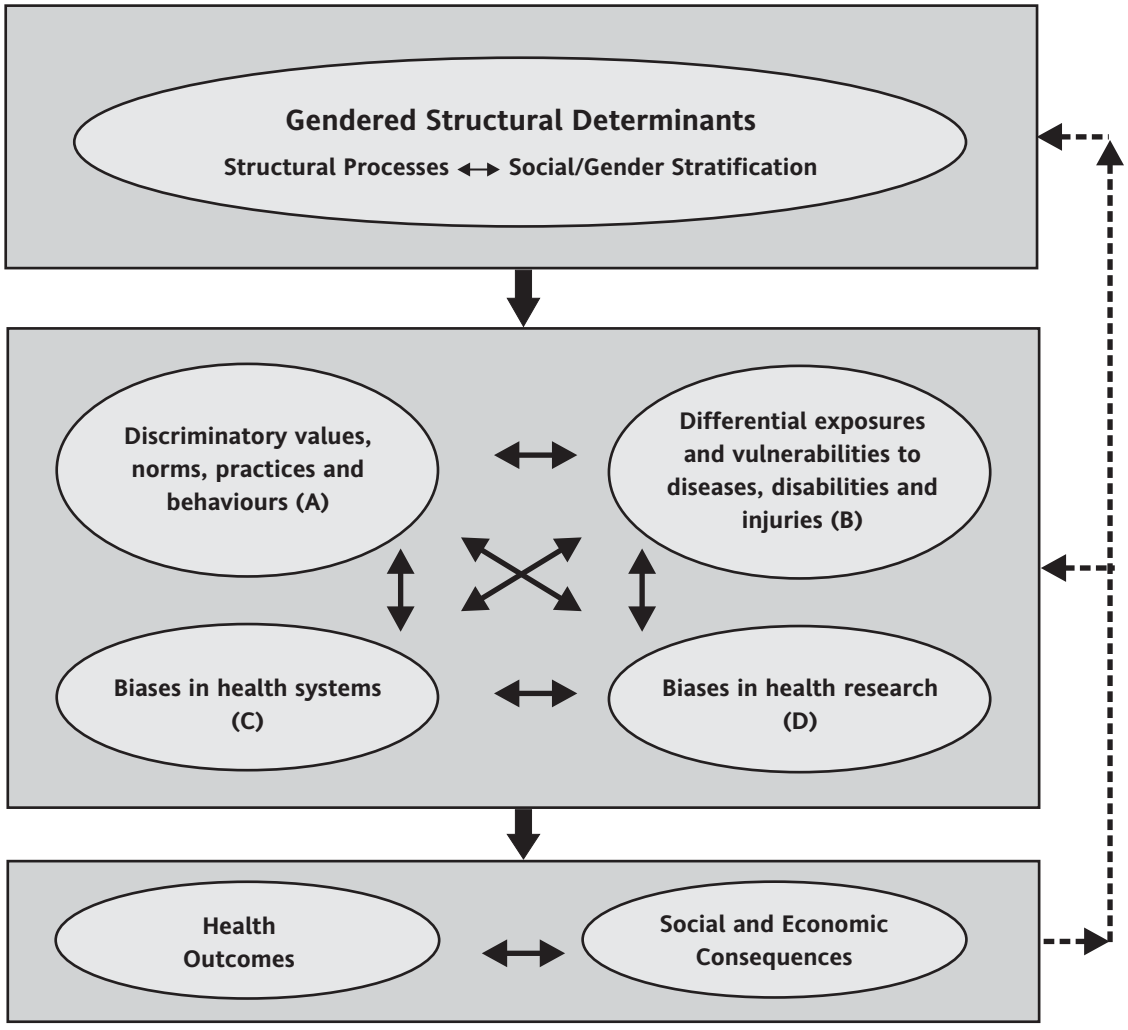
The other side of the coin of women's subordinate position is that men typically have greater wealth, better jobs, more education, greater political power, and fewer restrictions on behaviour. Moreover, men in many parts of the world exercise power over women, making decisions on their behalf, regulating and constraining their access to resources and personal agency, and sanctioning and enforcing behavioural norms through socially condoned violence or the threat of violence. Again, not all men exercise power over all women; gender power relations are intersected by age and life-cycle as well as the other social stratifiers such as economic class, race or caste (Iyer et al., 2008). Poor women and those who belong to subordinated racial or caste groups, for instance, tend to be near the bottom of the social order, bearing multiple burdens of poverty, work load, discrimination and violence. At the same time, gender systems often allow possibilities for some women to exercise

[1] The concept of citizenship has been interrogated and expanded to include not only the public sphere but also politics within the home (Pitanguy, 2002).

power and authority over other women richer over poorer women, older over younger women, for example and even along some dimensions, over poorer men (Sen & Iyer, 2011).

The impact of gender power for physical and mental health of girls, women and transgender/intersex people, and also of boys and men can be profound. It affects health norms and practices, exposures and vulnerabilities to health problems and the ways in which health systems and research respond. While gender systems tend to change slowly, they can sometimes be altered by sudden sharp bursts of social upheaval. The social upheavals set off by the civil rights and women's movements of the 1960s and the intensified focus on a broad human rights agenda at the United Nations conferences of the 1990s have challenged the narrower understanding of human rights that had prevailed until then (Laurie & Petchesky, 2008).

Figure 7: Framework for the role of gender as a social determinant of health



Note: The dashed lines represent feedback effects
Source: Sen and Östlin (2010)

The pathways from the gendered structural determinants to the intermediary factors that determine inequitable health outcomes are summarized in Figure 7. The intermediary factors are discussed in more detail in the following section.

3. Intermediary factors: understanding the pathways

The conceptual framework (Figure 7) proposes several pathways to explain how different factors interact at the individual and collective level to generate inequities that influence the health status of women and men in a given population.

The intermediary factors are broadly four-fold: (A) discriminatory values, norms, practices and behaviours in relation to health within households and communities; (B) differential exposures and vulnerabilities to disease, disability and injuries; (C) biases in health systems; and (D) biased health research. These intermediary factors result in biased and inequitable health outcomes, which in turn can have serious economic and social consequences for girls and boys, women and men, for their families and communities, and for their countries.

(A) Discriminatory values, norms, practices and behaviours in relation to health within households and communities

Gendered norms in health manifest in households and communities on the basis of values and attitudes about the relative worth or importance of girls versus boys and men versus women; about who has responsibility for different household/community needs and roles; about masculinity and femininity; who has the right to make different decisions; who ensures that household/community order is maintained and deviance is sanctioned or punished; and who has final authority in relation to the inner world of the family/community and its outer relations with society (Quisumbing & Maluccio, 1999).

Gender-biased values translate into practices and behaviour that affect people's daily lives, as well as key determinants of wellness and equity such as nutrition, hygiene, acknowledgement of health problems, health-seeking behaviour, and access to health services. Health equity and wellness can be affected through the preferred sex of children, and practices surrounding coming of age and menarche, adolescence, sexuality and marriage, childbirth, widowhood and divorce. Many, though not all, of these practices are in the areas of sexuality, biological reproduction and the life-cycle.

Worsening sex-ratios and the problem of so-called "missing women", especially in parts of East and South Asia, due to preference for sons has been well documented (Sen, 1992; Croll, 2002; Banister, 2004). It is estimated that 60 million girls are missing in Asia (UNFPA, 2007). The pressure to bear sons has led to increasing use of ultrasound technologies followed by second trimester abortions that can carry significant risks for the pregnant woman. Drastic declines in female:male sex ratios have resulted in kidnapping, forced marriages, and trafficking in girls and women. In South Asia, these practices have worsened in recent decades with rising aspirations for consumption (linked to economic globalization and growth), and growing prevalence and intensification of the use of dowry as a means to meet those aspirations (Klase & Wink, 2003; WHO, 2011).

Adolescence is, almost everywhere, the time when masculine and feminine roles are strongly defined, with boys being groomed for independence, strength and authority, while girls are trained to suppress their capacities and abilities.

> These social norms create the conditions in which some young and adult men (in the family or outside of it) sexually abuse girls or use physical violence against them, the preference by some adult men for younger female sexual partners, and the practice of sexual coercion by too many men and boys against girls (Barker, 2006).

Practices around sexuality sometimes include ritual (and painful) "deflowering" of brides, and sanctioned marital rape. They are also among the most punitive of deviance from the social norm by women, subordinate castes/races, or lesbian, gay, bisexual, transgender people. At least since the UN conference on Human Rights in Vienna in 1993, "honour" killings and other forms of violence on the basis of sexuality are increasingly recognized as such in the global arena.

Childbirth practices that affect the survival of infants and mothers are among those that have been most extensively documented, yet the links between maternal nutrition and well-being and infant survival have not yet been effectively translated into policy. Maternal mortality itself has undergone many policy ups and downs and these have made the problem impervious to multiple policy initiatives (Sen, Govender & Cottingham, 2007).

Widowhood, in many societies, is a time of greater impoverishment and weaker financial capacity to address health needs, along with other practices that may demean or subordinate women (Chen et al., 2005). For example research in Kenya revealed significant violations of widows' human rights, especially in HIV affected households, including through property grabbing and

> ...customary practices of wife inheritance and ritual cleansing, the latter involving a short-term or one-time sexual liaison with a man paid to have sex with the widow to cleanse her of evil spirits thought to be associated with her husband's death (Human Rights Watch, 2003). In the latter two cases, women are granted conditional access to their homes and property in exchange for enduring these practices which are often conducted without condoms, presenting new risks for further spread of HIV" (ICRW, 2004).

Norms around masculinity not only affect the health of girls and women but also of boys and men themselves. Research with men and boys in various settings worldwide has shown how inequitable and rigid gender norms influence the way men interact with their intimate partners on a wide range of issues, including HIV and sexually transmitted infection (STI) prevention, contraceptive use, physical violence (both against women and between men), domestic chores, parenting and men's health-seeking behaviours (Barker & Ricardo, 2005). A global systematic review of factors shaping young people's sexual behaviour confirmed that gender stereotypes and differential expectations about what is appropriate sexual behaviour for boys compared to girls were key factors influencing the sexual behaviour of young people (Marston & King, 2006).

> These and other studies affirm that both men and women are placed at risk by specific norms related to masculinity. In some settings, for example, being a man means being tough, brave, risk-taking, aggressive and not caring for one's body. Men's and boys' engagement in some risk-taking behaviours, including substance abuse, unsafe sex and unsafe driving may be seen as ways to affirm their manhood. Norms of men and boys as being invulnerable also influence men's health-seeking behaviour, contributing to an unwillingness to seek help or treatment when their physical or mental health is impaired. In sum, prevailing notions of manhood often increase men's own vulnerability to injuries and other health risks and create risks for women and girls (Barker, Ricardo & Nascimento, 2007).

Challenging gender norms, especially in the areas of sexuality and reproduction touch the most intimate personal relationships as well as a person's sense of self and identity. No single or simple action or policy intervention can therefore be expected to provide a panacea for the problem. Targeting women and girls is a sound investment but outcomes are dependent on integrated approaches and the protective umbrella of policy and legislative actions (Keleher & Franklin, 2008). Multi-level interventions are needed, including three sets of actions: (1) creating formal agreements, codes and laws to change norms that violate women's human rights, and then implementing them; (2) adopting multi-level strategies to change norms including supporting women's organizations; and (3) working with boys and men to transform masculinist values and behaviour that harm women's health and their own.

(B) Differential exposures and vulnerabilities to disease, disability and injuries

In a wide range of countries male survival at all ages is inferior to that of females and this is reflected in lower life expectancy for men. However, there are also a number of countries such as Bangladesh, Tonga, Afghanistan, Nepal, Malawi, Benin, Botswana, Cameroon, the Central African Republic, Kenya, the Niger, Nigeria, Pakistan, Qatar, Tuvalu and Zambia where women's life expectancy is either lower or equal to that of men (WHO, 2006). Even where men die earlier than women, most studies on morbidity from both high- and low-income countries show higher rates of illness among women. Thus, women's potential for greater longevity rarely results in their being or feeling healthier than men during their lifetimes. This so-called "gender paradox" (Danielsson & Lindberg, 2001) and the ways in which biological and social determinants interact to produce it are not yet fully understood, but there is a growing body of evidence about health differences between men and women.

Male-female differences in health vary in magnitude across different health conditions. The Global Burden of Disease estimates for 2002 (WHO, 2003a) indicate that 68 out of the 126 health conditions have at least a 20% difference between women and men. These numbers suggest that male-female differences in health are widespread (Snow, 2008). One area where differences exist is in health conditions and risks directly related to reproduction. Other areas where women lose more disability-adjusted life years (DALYs) than men, as indicated by female:male ratios, include those related to eye sight (e.g. trachoma, cataract, age-related vision disorders, glaucoma), migraine, mental health (e.g. post-traumatic stress disorder, panic disorder, unipolar depressive disorder,

insomnia, obsessive compulsive disorder), muscle and bone strength (e.g. rheumatoid arthritis, osteoarthritis, other musculoskeletal disorders, multiple sclerosis), ageing (e.g. Alzheimer and other dementias), nutrition (e.g. other nutritional disorders, iron-deficiency anaemia, vitamin A deficiency) and burns (Snow, 2008).

Areas where men lose more DALYs than women, as indicated by male:female ratios, include those related to excess consumption (e.g. gout, alcohol use disorder, drug use disorder, lung cancer, oral and oropharyngeal cancers, liver cancer, oesophageal cancer, stomach cancer, cirrhosis of the liver, ischemic heart disease, peptic ulcer disease), infectious diseases (e.g. lymphatic filariasis, hepatitis B, trypanosomiasis, tuberculosis, schistosomiasis, leprosy, leishmaniasis, onchocerciasis) and deaths or injuries caused by drowning, falls and road traffic accidents. In addition, there are extreme consequences from violent individual or collective practices and behaviours (e.g. war, violence, other intentional injuries, poisoning, and self-inflicted injury) (Snow, 2008).

Male-female differences in health vary in magnitude across different health conditions. Some health conditions are determined primarily by biological sex differences. Others are the result of how societies socialize women and men into gender roles supported by norms about masculinity and femininity, and power relations that accord privileges to men, but which adversely affect the health of both women and men. Risk and vulnerability have to be understood, not only in bio-medical terms, but in social terms.

An important difference in the way in which gender roles and norms affect women's versus men's health is that women rarely have any control over them, while male ill-health is more likely to result from men's own behaviour, e.g., rash driving or excessive alcohol consumption. Globally, 2.7 times as many men as women die from road traffic injuries. Males are not only more likely than females to drive after they have been drinking, but when simulated driving was evaluated among 18-year-olds who had their blood alcohol raised experimentally, girls drove more cautiously as they became more inebriated, while boys became more reckless (Snow, 2008; Oei & Kerschbaumer, 1990).

Violence against women is another consequence of "macho" behaviour and the epitome of unequal power relationships between women and men (Garcia-Moreno, 2002). While causes of violence are multiple and interlinked, gender inequity and norms of masculine behaviour that sanction violence include the gendered effects of poverty, low education, and alcohol consumption. The health consequences of violence against women are many: death and injuries ranging from cuts, bruises to permanent disabilities, STIs, HIV infection and AIDS, unwanted pregnancy, gynaecological problems, miscarriage, stillbirth, chronic pelvic pain and pelvic inflammatory disease, depression, post-traumatic disorder, and others (WHO, 2005; ARROW, 2005; Campbell, 2002; Astbury, 2002; Gielen et al., 2000; Coker et al., 2000; Letourneau, Holmes & Chasedunn-Roark, 1999).

Smoking is an area where men have traditionally borne the bulk of the health effects. Globally, women comprise about 20% of the world's more than 1 billion smokers (Haglund, 2010). However, with considerable gendered marketing by the cigarette companies,[1] smoking is seen as both an

[1] For example, Virginia Slim's ad targeting the emancipated woman...*You've come a long way baby*!

emancipating and coping strategy for women and this gender shift is most notable among the young. Data from 151 countries show that about 7% of adolescent girls smoke cigarettes as opposed to 12% of adolescent boys. In some countries, almost as many girls smoke as boys (WHO, 2009). Future projections of tobacco-related deaths must consider these changing gender trends in smoking[1] (Snow, 2008; WHO, 2003b).

The workplace is another critical arena determining gendered health differentials. The gendered division of labour, exemplified by the allocation of specific tasks to men and women is extensive and pervasive in all countries, regardless of level of development, wealth, religious orientation or political regime.[2] These factors negatively affect women's social position relative to men's and the resulting inequities contribute to gender inequities in health (Messing & Östlin, 2006; Östlin, 2002a; Östlin, 2002b).

In terms of health hazards in the workplace, both in high- and low-income countries, work-related fatalities are more common among men, due to the fact that men work in environments with greater risk for accidents, e.g. transportation, mining, fishing and fire fighting (Laflamme & Eilert-Petersson, 2001; Islam et al., 2001). Nonetheless, women's occupational health hazards are not insignificant. Evidence mainly from high-income countries suggests that women more than men are engaged in work characterized by considerable demands and little control, with highly repetitive movements and awkward postures, often facing intense exposure to the public (Messing, 2004; Östlin, 2002a; Östlin, 2002b). For example, women are the majority of those involved in lower levels of health care, which involves higher risks of infection (e.g. from biological agents in hospitals, needle injuries), violence, musculoskeletal injuries and burnout (WHO, 2002; Mayhew, 2003; Aiken et al., 2002; Josephson et al., 1997).

The few studies that exist for developing countries show that, for example, in *maquiladoras*[3] in Latin America, women are exposed to chemicals, ergonomic hazards, noise and stress (Cedillo Becerril et al., 1997). Among women, 17% had a cumulative trauma disorder diagnosed on physical examination (Meservy et al., 1997), with almost twice as many women as men reporting such disorders. Where access to safe water and sanitation does not exist, women are at higher risk of water-borne diseases when washing laundry and utensils in affected canals (Watts, 2004). Women cooking on open stoves not only are at risk of burns, but are at high risk of illness due to smoke pollution, as was found in India (Mishra et al., 1999) and Guatemala (Albalak et al., 2001). In

[1] There are differences in the biology of male and female lungs, such that an equivalent exposure to nicotine does greater damage to the female This underlying sex difference in vulnerability may contribute to the convergence of lung cancer rates (i.e. more cancer for less smoke among women), but changes in smoking patterns account for the majority of the convergence (Snow, 2008).

[2] Messing and Östlin (2006) found that women in general face unequal hiring standards, unequal opportunities for training, unequal pay for equal work, unequal access to productive resources, segregation and concentration in female sectors and occupations, different physical and mental working conditions, unequal participation in economic decisions-making, and unequal promotion prospects.

[3] A *maquiladora* is a factory that imports materials and equipment on a duty-free and tariff-free basis for assembly or manufacturing and then re-exports the assembled product usually back to the originating country. Most of these are on the Mexican side of the border between Mexico and the United States.

developing countries, nearly 2 million poor women and children die annually from exposure to indoor air pollution caused by smoke from cooking fuels. Many more suffer from acute and chronic respiratory infections (Smith, Metha & Maeusezahl-Feuz, 2004).

Unlike some other social determinants, it is impossible to ignore biology when considering why health outcomes for women and men may be different. The complex interplay between sex (as a biological factor) and gender (as socially shaped) is one that has to be disentangled in tracing causality. For example, young women worldwide between the ages of 15 and 24 are 1.6 times as likely as young men to be HIV-positive. In sub-Saharan Africa, approximately 6.2 million young people are infected, 76% of whom are females (UNAIDS, 2004, 2006). In sub-Saharan Africa and the Caribbean, young women are 3 times and 2.4 times, respectively, more likely than men to be HIV-positive. In Trinidad and Tobago, the number of women between 15 and 19 years old with HIV is 5 times higher than among adolescent males (UNICEF, 2003). In Swaziland, HIV prevalence among pregnant women attending antenatal clinics rose from 4% in 1992 to 43% in 2004 (UNAIDS, 2006). How much of women's greater vulnerability to HIV infection is due to female biology, and how much can be attributed to girls' and women's lack of power in sexual relationships? Understanding the roles that biological difference and social bias play is important to understanding differential exposure and vulnerability. However, analyses of gender and health are currently undermined by conflation of sex and gender in much of the epidemiologic and clinical literature, thus precluding any meaningful reflection on the contributions of genetics versus gendered socialization to health vulnerabilities (Snow, 2008).

Where biological sex differences interact with social determinants to define different needs for women and men in health, policy efforts must address these different needs. Significant advocacy is required to raise attention and sustain support for other services that address the specific health needs of poor women, and those in low-income countries, thereby reducing their exposure and vulnerability to unfavourable health outcomes. Not only must neglected sex-specific health conditions be addressed, but sex-specific needs in health conditions that affect both women and men must be considered, so that treatment can be accessed by both women and men without bias. Two intertwined strategies to address social bias are tackling the social context of individual behaviour, and empowering individuals and communities for positive change. Strategies that aim at changing high risk life-styles would be more effective if combined with measures that could tackle the negative social and economic circumstances (e.g. unemployment, sudden income loss) in which the health damaging life-styles are embedded. Individual empowerment linked to community level dynamics is also critical in fostering transformation of gendered vulnerabilities. For strategies to succeed, they must provide positive alternatives that support individuals and communities to take action against the status quo.

(C) Gendered politics of health systems

Evidence suggests that health care systems may in many ways fail to achieve gender equity from the perspective of women as both consumers (users) and producers (carers) of health care services.

Women as consumers of health care

Women in most places need more health services than men. A large part of this additional need can be attributed to women's use of preventive services for contraceptives, cervical screening, and other diagnostic tests (Gijsbers van Wijk, van Vliet & Kolk, 1996), but it can also be attributed to an excess of female health problems (for example musculoskeletal disorders) that are not caused by reproductive morbidity. Although in low-income countries reproductive problems and other chronic diseases play a large role in explaining gender differences in health, women may also have less access to health care services than men (Puentes-Markides, 1992) due to a series of barriers at the individual, familial, and community levels that stand between women and their access to health care.[1] The principal barriers are the following:

(1) Women themselves, their families and health care providers need to be *aware* of the existence of a health problem. They may look upon health problems, such as chronic pain, depression and reproductive tract infections, as normal or natural aspects of women's biology or everyday activities (Iyer, 2005).

(2) Women may refuse to *acknowledge* the health problem by choosing to remain silent if they fear adverse reactions from the family, community and health care providers. For example, adolescent girls in Koppal, India (Iyer, 2005) or young women with TB in the Socialist Republic of Viet Nam (Long et al., 2001) do not publicly acknowledge their health problems, because it would lead to poorer chances for marriage.

(3) Even when women and their families *acknowledge* the need for treatment, *social and financial barriers* may be encountered before health care can be utilized (Iyer, 2005). In some places, because of discrimination within the household, granting preferential allocation of resources to male health needs or requiring consent from partners or other family members, girls are likely to receive less expensive and more home-based care than boys (Lane, 1987) and are also more likely to suffer from outright neglect of their health needs than boys (Ahmed et al., 2000).

Physical and economic barriers may also prevent women from accessing health services, due to long distances to health facilities and lack of transportation, user fees or lack of private/public insurance coverage. For example, out-of-pocket expenditures for public and private health care services, drive many families into poverty, especially in developing countries (Krishna, Kapila & Pathak, 2004). This situation has been termed the “medical poverty trap” (Whitehead, Dahlgren & Evans, 2001). Under-the-counter payments, referring patients from the public service to their own private clinic, making patients pay for drugs and supplies that should be provided free, recommending unnecessary interventions which they can charge for are examples of abusing users

[1] The unwillingness to acknowledge health problems may occur also among men in both low- and high-income settings. Masculine norms of men and boys as being invulnerable may influence their health seeking behaviour, contributing to unwillingness to seek help or treatment when their physical or mental health is impaired (Barker et al., 2007).

of services, sometimes contributing to maternal deaths (Parkhurst & Rahman, 2007; George, Iyer & Sen , 2005).

(4) Women in some cultures are *reluctant to use health services* because respect, privacy, confidentiality and information about treatment options are not ensured by the often overworked, underpaid and gender-insensitive health care providers (George, 2007; Govender & Penn-Kekana, 2008). There is growing evidence on how women (and men) may be abused by care providers physically, verbally and economically (Govender & Penn-Kekana, 2008), as well as a large literature on the physical abuse by health care workers of women undergoing labour (Freedman, 2005). Verbal abuse of women seems often to be linked to health care workers presuming that women have "violated" roles and behaviours that are seen as appropriate for them, and to health care workers taking out their own frustrations on patients (Kim & Motsei, 2002).

In highly patriarchal societies, socio-cultural and/or religious norms and practices restrict social and physical contact between women patients and male care providers (Govender & Penn-Kekana, 2008; Holroyd, Twinn & Adab, 2004; Rizk et al., 2005). In many cultures, women are reluctant to consult male doctors. For example, women seeking antenatal care in Saudi Arabia and Thailand strongly preferred female doctors (Nigenda et al., 2003). The lack of female medical personnel itself- a reflection of gender bias in educational opportunity - is an important barrier to utilization of health services for many women (Zaidi, 1996).

Women as health providers

A majority of the health work force at large (i.e. physicians, nurses, community health workers, etc.) is female, and the contributions of women to formal and informal health care systems are significant (George, 2008; Gupta et al., 2003; JLI, 2004; Ogden, Esim & Grown, 2006; Schindel J, 2006; WHO, 2006). But it is undervalued and unrecognised, partly due to unavailability of sex disaggregated data on the care economy.

Female carers in the health system are less likely to occupy positions that involve decision making and more likely to become unemployed than male counterparts (De Koninck, Bergeron & Bourbonnais, 1997; Fox, *Schwartz & Hart*, 2006; Kassak et al., 2006; Magrane, Lang & Alexander , 2005; Mayorova et al., 2005). Many studies have shown that women are often expected to conform to male work models that ignore their special needs, such as childcare or protection from violence. A study in the United States of America revealed that more female doctors than male doctors are found in specializations where taking care of family responsibilities are more accepted (De Koninck, Bergeron & Bourbonnais, 1997). Women more often than men have to work part-time in order to be able to combine gainful employment with family responsibilities (Fox, *Schwartz & Hart*, 2006; George, 2007; Mayorova et al., 2005). A meta-analysis of studies on physicians' suicides has revealed highly elevated suicide risk among female doctors (Schernhammer & Graham, 2004).

Community health workers may be subjected to violence in some settings (George, 2008). For example, studies in Pakistan (Mumtaz et al., 2003) and India (George, 2007) revealed that female

community health workers have reported often being harassed when they are on their way to or performing work. The fear of being exposed to physical or sexual violence en route makes them hesitant to attend to the obstetric needs of patients at night.

Home carers have been estimated to provide up to 80% of all health care and 90% of HIV/AIDS related illness care (Uys, 2003). In the context of the HIV/AIDS epidemic, it is generally recognized that women and girls are the principal caregivers and bear the greatest degree of responsibility for the psychosocial and physical care of family and community members (Ogden, Esim & Grown, 2006). However, home carers remain unsupported and unrecognized by the health sector and policy makers. There are documented health effects on these caregivers. Female home caregivers in Japan had higher scores for work burden and depression than their male counterparts (Sugiura, Ito M & Mikami, 2004) and in Chile, home caregivers reported insomnia, stress, stomach ailments, over-sensitivity, anxiety, sadness, depression, loneliness, anguish and worry (Reca, Alvarez & Tijoux, 2002).

Absence of effective accountability mechanisms for available, affordable, acceptable and high quality health services and facilities may seriously hinder women and their families from holding government and other actors accountable for violations of their human right to health. The recent review by Govender and Penn-Kekana (2008) argues that gender biases and discrimination occur at many levels of the health care delivery environment and affect the patient-provider interaction. Ensuring good interpersonal relationships between patients and providers an important marker of quality of care requires a broader approach of gender-sensitive interventions at multiple levels of policies and programmes.

Health sector reforms can have fundamental consequences for gender equality and for people's lives and well-being, as patients in both formal and informal health care, paid and unpaid care providers, health care administrators and decision makers. However, health sector reforms implemented in many countries have tended to focus on their implications for the poor. Their consequences for gender equity in general, and particularly in health care, have seldom been discussed or taken into consideration in planning (PAHO, 2001). Key reform measures, such as decentralization, financing, privatization of services and priority-setting methodologies may differentially affect women and men due to the positions they occupy in society, the different roles they perform, and the variety of social and cultural expectations and constraints placed on them (Östlin, 2005). For example, decentralization can inadvertently support more conservative agendas in reproductive health, particularly in services for adolescents (Aitken, 1999). Furthermore, a range of gender biases have been revealed in some priority setting methodologies for reform, such as DALYs, which lead to the underestimation of women's burden of disease. These systematic gender biases are generated through various technical and conceptual limitations (Hanson, 2002). Not surprisingly, health sector reform strategies, policies and interventions introduced during the last two decades have had limited success in achieving improved gender equity in health (Batthyany & Correa, 2010).

Minimizing gender bias in health systems requires systematic approaches to building awareness and transforming values among service providers; steps to support improvements in (especially poor) women's access to services; recognition of women's role as health care providers;

and building accountability for gender equality and equity into health systems, and especially in ongoing health reform programmes and mechanisms.

(D) Health research

Gender discrimination and bias not only affect differentials in health needs, health seeking behaviour, treatment, and outcomes, but also permeate the content and the process of health research (Sen, George & Östlin et al., 2002; Östlin, Sen & George et al., 2004; Theobald, Nhlema Simwaka & Klugman et al., 2006).

Research content: Gender imbalances in research content include the following dimensions:

***Slow recognition of health problems that particularly affect women**:* For example, it is only within the past decade or so that serious research into the prevalence of reproductive tract infections and the health consequences of domestic violence has occurred (Garcia-Moreno, 2002). The lack of research is obvious also in areas concerning menstruation and non-lethal chronic diseases that affect women disproportionately, such as rheumatism, fibromyalgia, and chronic fatigue syndrome (Doyal, 1995).

***Misdirected or partial approaches to women's and men's health needs in different fields of health research**:* Occupational health research and safety regulations are mainly focused on health hazards in formal employment, where men predominate. Thus, research has long ignored the problems of indoor air pollution and smoke-filled kitchens, factors that are critical to the health of poor women in the developing world (Smith & Maeusezahl-Feuz, 2004; Albalak et al., 2001). Misdirected or partial approaches may also affect men. Because of gender stereotyping, reproduction is viewed as women's domain, resulting in a neglect of study on male reproductive health problems related to occupational exposures (Varga, 2001). Nonetheless, many chemicals, ionizing radiation, toxic contamination, high temperatures and sedentary work have been identified as hazardous to the male reproductive system (Bonde & Storgaard, 2002). Similarly, mental health research often ignores the role of reproduction in relation to men's mental health (Astbury, 2002).

***The lack of recognition of the interaction between gender and other social factors**:* Little attention is being paid in health research to the interaction between gender and other social stratifiers, such as socioeconomic class, race, ethnicity or sexual orientation (Sen & Iyer, 2011). Like co-morbidity, these causal interactions make problems more complex and require more intensive research efforts. A positive example of such efforts is in the area of HIV/AIDS. There was recognition relatively early on that women were especially vulnerable because of genderpower inequities, which are often related to the economic inequities between men and women (Smith, 2002; Turmen, 2003). While there has been research on this, particularly in Africa, much more attention needs to be paid to this issue in other parts of the world.

Research process: Gender imbalances in research process include the following dimensions:

***Data*:** Health data in individual research projects and in national and regional data systems is still not systematically collected or disaggregated by sex. The reliability of data when collected in the

home or community and through records of health service providers is sometimes questionable in societies where gender biases exists in health-seeking behaviour, or where social norms whereby women are expected to suffer silently prevail. For example, several studies suggest that prevalence rates of tuberculosis in women may be under-estimated (Thorson & Johansson, 2004; Thorson, Long & Larsson, 2007, Thorson & Diwan, 2001; Begum et al., 2001; Johansson et al., 2000).

One good example of recording sex-disaggregated, gender-sensitive and gender-specific health data comes from Malaysia. In 2000, the Asian-Pacific Resource & Research Centre for Women (ARROW) published *A Framework of Indicators for Action on Women's Health Needs & Rights after Beijing* (ARROW, 2000). This publication was developed as a tool for all government, non-government and international organizations to use in monitoring implementation of the Beijing Platform for Action. Another good practice comes from Sweden, where every year since 1994, the annual Statement of Government Policy has declared that a gender equality perspective must permeate all aspects of government policy (Swedish Institute, 2004). At the national level in Sweden, one of the main measures that have been taken to integrate a gender perspective into every policy area, including health research, is that all official statistics should be sex-disaggregated.

The importance of having good quality data and indicators for health status disaggregated by sex and age from infancy through old age cannot be overstated. Gender-sensitive and human rights-sensitive country-level indicators are essential to guide policies, programmes and service delivery; without them, interventions to change behaviours or increase participation rates will operate in a vacuum.

Gender-sensitive methodologies*:* Research methodologies are not always sensitive enough to capture the different dimensions of disparity. For example, a study comparing the utility of active and passive case-finding methods for tuberculosis[1] in Nepal found that females made up 28% of the 159 TB cases who came to the clinic, whereas with active case-finding the percentage of female TB cases detected rose to 46% of 111 cases identified (Cassels et al., 1982). There are a number of evaluated tools available today for counteracting methodological biases. For instance, the *BIAS FREE* Framework[2] is an innovative tool designed to provide a unified approach to detect methodological and other types of biases that derive from *any and all* social hierarchies. The Framework identifies three major forms of bias maintaining hierarchy, failing to recognize differences and using double standards and employs a set of 20 analytical questions to alert users to its presence in research (Eichler & Burke, 2006).

Representation of women and men in clinical trials*:* Research results based on studies of male subjects are seen as universally valid and applicable to women, which is not always the case. In response to critics, efforts have been made to include more women in relevant clinical trials and pharmaceutical research. In 1993, the National Institutes of Health Revitalization Act in the United States required the inclusion of women and minority groups in all human subject research, except

[1] Active case finding is looking systematically for cases of active tuberculosis, rather than waiting for people to develop symptoms of the disease and present themselves for medical attention (passive case finding).

[2] BIAS FREE is an acronym for Building an Integrative Analytical System For Recognizing and Eliminating InEquities.

when it is inappropriate to the purpose of the research or the health of the subjects (Mastroianni, Faden & Federman, 1994). Similar measures have been implemented in many other countries (Caron, 2003).

Gender balance in research communities, ethical committees, and in research funding and advisory bodies*:* The gender imbalance in ethical committees, research funding and advisory bodies, and the differential treatment of women scientists have been acknowledged as contributing factors to gender bias in research (Wennerås & Wold, 1997; Park, 2002). There is also growing evidence of differential treatment of female scientists in terms of career opportunities, salary and as applicants for research funds. It has been shown that female applicants for post-doctoral fellowships in Sweden had to be 2.5 times more productive than their male colleagues to obtain the same peer review rating for scientific competence (Wennerås & Wold, 1997).

4. What can be done?

Gender inequity damages the physical and mental health of millions of girls and women across the globe, and also of boys and men despite the many tangible benefits it gives men through resources, power, authority and control. Because of the numbers of people involved and the magnitude of the problems, taking action to improve gender equity in health and to address women's rights to health is one of the most direct and potent ways to reduce health inequities and ensure effective use of health resources. Deepening and consistently implementing human rights instruments can be a powerful mechanism to motivate and mobilize governments, people and especially women themselves.

Remove the organizational "plaque"[1]

Many of the organizational structures of government and other social and private institutions through which gender norms and practices need to be confronted have been in existence for decades, even centuries. Thickly encrusted with traditional (i.e. male-dominated) values, relationships, and methods of work, it is naive to expect these same structures to automatically deliver gender equality and equity. Working towards gender equality challenges longstanding power structures, and patriarchal social capital (“old boys' networks”) within organizations. It crosses the boundaries of people's comfort zones by threatening to shake up existing lines of control over material resources, authority, and prestige. It requires people to learn new ways of doing things about which they may not be very convinced and from which they see little benefit to themselves, and to unlearn old habits and practices. Resistance to gender-equal policies may take the form of trivialisation, dilution, subversion or outright resistance, and can lead to the evaporation of gender-equitable laws, policies or programmes.

[1] Plaque here refers to a strong buildup and encrustation of material that is difficult but essential to remove, e.g. removal of dental plaque is essential for optimal oral health.

Tackling this requires effective political leadership, well designed organizational mandates, structures, incentives and enforceable accountability mechanisms. It also requires actions to empower women and women's organizations so that they can collectively press for greater accountability for gender equality and equity. Murthy (2008) observes that four kinds of accountability mechanisms - human rights instruments, legislation, governance structures and other tools have been used by citizens to press for accountability on gender and health. Among other things, Murphy recommends that accountability strategies should be extended to the private health sector and donors; that resources should be earmarked to respond to gender specific health needs and that mechanisms for enforcement of policies should be improved. In their paper on gender-mainstreaming in health, Ravindran and Kelkar-Khambete (2008) argue that the gap between intention and practice is large. This can be attributed to depoliticising and de-linking of gender mainstreaming from social justice agendas; top-down approaches; hostility within the global policy environment to justice and equity concerns; privatisation and retraction of the state's role in health.

Seven approaches that can make a difference:[1]

1. Address the essential structural dimensions of gender inequity

- Transform and deepen the normative framework for women's human rights and achieve them through effective implementation of laws and policies along key dimensions.
- Ensure that resources for, and attention to access, affordability and availability of health services are not damaged during periods of economic reforms, and that women's entitlements, rights and health, and gender equality are protected and promoted.
- Support through resources, infrastructure and effective policies/programmes the women and girls who function as the "shock absorbers" for families, economies and societies through their responsibilities in caring for people, and invest in programmes to transform both male and female attitudes to caretaking work so that men begin to take an equal responsibility in such work.
- Equip and empower women, particularly through education, so that their ability to challenge gender inequity individually and collectively is strengthened.
- Increase women's participation in political and other decision-making processes from household to national and international levels so as to increase their voice and agency.

2. Challenge gender stereotypes and adopt multilevel strategies to change the norms and practices that directly harm women's health

- Create, implement and enforce formal international and regional agreements, codes and laws to change norms that violate women's rights to health.

[1] These policy recommendations were submitted to the WHO Commission on Social Determinants of Health, in September 2007, as part of the Final Report of the Women and Gender Equity Knowledge Network (Sen et al., 2007).

- Work with boys and men through innovative programmes for the transformation of harmful masculinist norms, high risk behaviours, and violent practices.

3. Reduce the health risks of being women or men by tackling gendered exposures and vulnerabilities

- Meet women's and men's differential health needs. Where biological sex differences interact with social determinants to define different needs for women and men in health, policy efforts must address these different needs. Not only must neglected sex-specific health conditions be addressed, but sex-specific needs in health conditions that affect both women and men must be considered, so that treatment can be accessed by both women and men without bias.

- Tackle social biases that generate differentials in health-related risks and outcomes. Where no plausible biological reason exists for different health outcomes, policies and actions should encourage equal outcomes. More comprehensive policies are required that balance working lives with family commitments. Domestic work, including care for other family members, needs to be acknowledged as work and work-related health risks need to be addressed regardless the location of the workplace. Family leave policies must mandate that men share these responsibilities with women. Social insurance systems must ensure that even those who may not have had formally recognized and remunerated occupations are also protected when not working or ill.

- Address the structural reasons for high-risk behaviour. Strategies that aim at changing health damaging lifestyles of men (or women) at the level of the individual are important but they can be much more effective if combined with measures to change the social environment in which these lifestyles and behaviours are embedded. These measures should tackle the negative social and economic circumstances (e.g. unemployment, sudden income lost) in which the health damaging lifestyles are embedded.

- Empower people and communities to take a central role in these actions. For strategies to succeed they must provide positive alternatives that support individuals to take action against the current status quo, which may be either gender blind or gender biased.

4. Transform the gendered politics of health systems by improving their awareness and handling of women's problems as both producers and consumers of health care, improving women's access to health care, and making health systems more accountable to women

- Provide comprehensive and essential health care, universally accessible to all in an acceptable and affordable way; ensure that user fees are not collected at the point of access to the health service, and prevent women's impoverishment by enforcing rules that adjust user fees to women's ability to pay; offer care to women and men according to their needs, their time and other constraints.

- Develop skills, capacities and capabilities among health professionals at all levels of the health system to understand and apply gender perspectives in their work.

- Recognize women's contributions to the health sector, not just through formal, but also informal care. Women as health providers in auxiliary, volunteer and informal care need multiple linkages to formal and professional sectors: training, supervision, acknowledgement and support, functioning referral systems linking them to drugs, equipment and skilled expertise.

- Strengthen accountability of health policy makers and health care providers to gender and health. Incorporate gender into clinical audits and other efforts to monitor quality of care.

5. Take action to improve the evidence base for policies by changing gender imbalances in both the content and the processes of health research

- Ensure collection of data disaggregated by sex, socioeconomic status, and other social stratifiers by individual research projects as well as through larger data systems at regional and national levels, and the classification and analysis of such data towards meaningful results and expansion of knowledge for policy.

- Women should be included in clinical trials and other health studies in appropriate numbers and the data generated from such research should be analysed using gender-sensitive tools and methods.

- Funding bodies should promote work that broaden the scope of health research and links biomedical and social dimensions, including gender considerations.

- Strengthen women's role in health research. Redress the gender imbalances in research committees, funding, publication and advisory bodies.

6. Take action to make organizations at all levels function more effectively to mainstream gender equality and equity and empower women for health by creating supportive structures, incentives, and accountability mechanisms

- Gender mainstreaming in government and non-government organizations has to be owned institutionally, funded adequately, and implemented effectively. It needs to be supported by an action-oriented gender unit with strong positioning and authority, and civil society linkages to ensure effectiveness and accountability.

- Effective interventions for women's empowerment need to build on and reinforce authentic participation ensuring autonomy in decision making, sense of community and local bonding. If these interventions are integrated with economic, education, and/or political

sectors, they can result in greater psychological empowerment, autonomy and authority and they can substantially affect a range of health outcomes.

7. **Support women's organizations which are critical to ensuring that women have voice and agency**

   - Such organizations are often at the forefront of identifying problems and experimenting with innovative solutions and prioritizing demands for accountability from all actors, both public and private. Their access to resources has been declining in recent years.

5. Conclusions

The key conclusions reached by the Women and Gender Equity Knowledge Network (WGEKN) are the following:

1. Gender power relations function as a key social determinant of health and of inequity in health.

2. While girls and women as well as inter-sex and transgender people are typically more at risk of poor health outcomes because of gendered norms, structures, behaviours and practices, boys and men are also negatively affected by gendered norms and behaviours.

3. Although gender inequity in health is pervasive and persistent, it can be changed through effective political leadership, well designed policies and programmes, and institutional incentives and structures.

The seven policy approaches outlined by the WGEKN and discussed in the previous section encompass a set of priority actions that need to be taken both within and outside the health sector, and which need the engagement and accountability from all actors international and regional agencies, governments, the for-profit sector, civil society organizations and people's movements. Health ministries and WHO and have critical leadership roles in mobilizing national and international political will, respectively, and energizing coalitions and alliances. Yet, no individual or organization can be exempt from action to challenge the barriers of gender inequity. Only by concerted action can the vicious circles of health inequity, injustice, ineffectiveness, and inefficiency be broken.

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4 Social exclusion and health inequalities: definitions, policies and actions

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1. Introduction

This chapter presents an overview of the work of the WHO Social Exclusion Knowledge Network (SEKN) and provides key messages for policy-change and action aimed at promoting greater health equity through reversal of exclusionary processes. These messages relate to the diverse meanings attached to the concept of social exclusion and the strengths and weaknesses of current policies and actions. The policies and actions appraised by the SEKN are pragmatic, making use of the limited data available. They all seek to reduce or eradicate poverty and/or its many adverse

[1] This chapter is based on the final report of the Social Exclusion Knowledge Network (Popay et.al. 2007) with contributions from: Argentina: Hugo Spinelli; Australia: Lareen Newman, Katherine Biedrzycki, Fran Baum and Jan Patterson; Bangladesh: Abbas Bhuiya, Syed Masud Ahmed, Sabina Faiz Rashid, Mushtaque Chowdhury and Shimeen Mahmud; *Brazil*: Ligia Giovanella, Lenaura de Vasconcelos Costa Lobato, Monica de Castro Maia Senna, Patty Fidelis de Almeida, Pedro Herculano G. Ferreira de Souza and Lara Escorel Arouca; Canada: Bernice Downey; Colombia: Manuel Vega, Oscar Rodríguez, Amparo Hernández, Alejandro Perdomo and Mauricio Torres; Egypt: Aziza Khalidi, Sany Kozman, Hani Serag and Kabir Karim; Perú: Margarita Petrera and Sandra Vallenas; Niger: Almoustapha Alhacen, Aghirin'man; South Africa: Sellinah Dumela, Boitumela Molomo; Tanzania: Mwajuma Masaiganah; United Kingdom: Etheline Enoch, Antony Morgan Nina Larsen;USA: Anna Schurmann, Nidhi Khosla, Wendy Werner and Arachu Castro; Venezuela: Maria Esperanza Martínez and Sarai Vivas; WHO: Kumanan Rasanathan, Sarah Simpson, Anand Sivasankara Kurup, Sebastian Taylor and Amine Kébé.

consequences, including extending access to essential services, particularly healthcare and education. Yet underlying this commonality are profound differences in the ultimate aim of these policies and actions. Some seek to establish universal publicly funded services available to everyone, for example health care, education and social protection, and aim to reduce socio-economic and health inequities across society and promote social cohesion. Others involve the establishment of targeted selective services with the narrower aim of improving the conditions of poor people.

The first part of the chapter discusses the origins and meaning of social exclusion and the relationship to health inequities. Inevitably there were some aspects of social exclusion that SEKN could not consider, for example, the role of ill health as a factor contributing to exclusion processes or the role health system can have promoting more inclusive social systems. These issues were considered by other knowledge networks (see chapters 8 and 9). The second part presents a critical overview of current attempts to address social exclusion by nation states, civil society and the private for-profit sector. The potentially unique contribution universal provision of health care and social protection can make towards promoting more inclusive societies as opposed to selective programmes which involve eligibility conditions (for example, income tests and a requirement that children attend school or have health checks), is emphasized and the particular role of international agencies is considered.

2. The rise and popularity of the concept of social exclusion

Development of the concept. Contemporary interest in the concept of social exclusion began in 1974 when René Lenoir, then French Secretary of State for Social Action first popularized the term. When Lenoir spoke of "les exclus" (Lenoir, 1974) he was referring to population groups that were unable to find stable employment and therefore excluded from the salary nexus and the welfare services employment gave access to. Over the next few years this understanding of social exclusion was adopted across the European Union (EU), consequently marginalizing the concept of poverty within policy discourse.

From the early 1990s, the International Labour Organization (ILO) led the effort to incorporate the concept of social exclusion into development policies in low–income regions. However, the association with the highly developed welfare systems of Western Europe meant it was not easily transferable to contexts with less developed health, welfare and education systems. In 1994, the International Institute for Labour Studies (IILS), attached to ILO, launched a research programme which aimed to fashion a notion of social exclusion that would be relevant for anti-poverty strategies worldwide (Gore & Figueiredo, 1997). This research broadened the notion of exclusion beyond its original focus on restricted/no access to publically funded welfare services to include a focus on groups with limited social, political, economic and cultural resources/rights. The ILO research has had a major influence on other important players with the concept of social exclusion entering the lexicon of international agencies and donors, including notably the Organization for Economic Cooperation and Development (OECD, 1997), the United Nations

Educational, Scientific and Cultural Organization (UNESCO) (Bessis, 1995), and the World Bank.[1] Reflecting this, James Wolfensohn, then President of the World Bank, remarked in his 1997 annual address:

"Bringing people into society ...who have never been part of it before... This *the Challenge of Inclusion* - is the key development challenge of our time" (Wolfensohn, 1997: original emphasis). Notwithstanding the significant international reach of the concept of social exclusion in some regions of the world, notably sub-Saharan Africa, alternative discourses of poverty, marginalization, vulnerability and sustainable development still appear to have more policy leverage and have received much critical attention (Rispel et al., 2008).

Shifting the discourse from poverty to social exclusion. The rapid rise in the popularity of social exclusion as a conceptual lens through which to view problems of inequality, poverty and disadvantage has been driven by both positive and negative forces. For some commentators the concept owes its political acceptability to the potential it has to obfuscate the "real" problems of inequality and poverty. For example, in the context of the EU, Jordi Estivill (2003) has argued that a policy focus on poverty inevitably raises difficult political questions about the distribution of wealth in society and "optimistic assessments of the ineluctably positive effects of economic development." In contrast, he suggests, striving for an inclusive society does not provoke any special fears, is acceptable to a wide range of political positions and may be less stigmatizing than poverty and therefore more acceptable to public opinion and to those primarily affected (2003).

The shift from a poverty discourse to the discourse of social exclusion has been generally linked to the rise of neo-liberal and individualistic ideologies from the mid-1970s onwards and the related attack on universal publicly-funded health care and social protection in particular (Veit-Wilson, 1998; Byrne, 1999; Levitas, 2005; Gough, Eisenschitz & McCulloch, 2006). Veit-Wilson (1998) argues that in the EU this discursive shift was "deliberately chosen for closure, to exclude other potential discourses in European political debate and to depoliticize poverty as far as income distribution was concerned. " As in Europe, many people in low- and middle-income countries are concerned that this new concept shifts attention away from poverty and inequality towards individual inadequacies. There are also major questions about the analytical utility of the concept in countries and regions where the great majority of the population is living in severe poverty or where there is formalized and deeply entrenched exclusion, for instance through apartheid and caste systems.

There are, however, those who have welcomed the arrival of the concept of social exclusion. For many - researchers, activists in social movements and government planners - the concept has provided an opportunity to shift the policy/practice discourse towards a broader framework for analysis and action that encompasses human and social rights, justice and the distribution of income and wealth. Serge Paugam (1996), for example, argues that since Lenoir's book there has been:

[1] For more detail on the use of the concept of social exclusion by the World Bank, the Economic Commission for Latin America and the Caribbean (CEPAL, for its acronym in Spanish) and the Panamerican Health Organization (PAHO) in Latin America and a critical discussion of these different definitions (see Hernández et al., 2008).

> .....a double shift in the concept of exclusion. First, that it is not an individual phenomenon but a social phenomenon whose origin must be sought within the principles of operation of modern societies. Secondly, it is not a marginal phenomenon that affects only the fringe... but a process that affects more and more people and spreads like a cancer in society.

Similarly, Didier argues that:

> The category exclusion is not limited to describing the relationship that it does, it also judges, and in a negative way. This conviction is always at the same time a call for mobilization.... The name of exclusion is a standard: calling to act to change the state of the world that allows it to be pronounced (Didier, 1996).

3. Social exclusion and health inequities

Characteristics of social exclusion. There is widespread agreement that social exclusion is:

(a) multi-dimensional, encompassing social, political, cultural and economic dimensions, and operating at different social levels;

(b) dynamic, impacting in different ways to differing degrees at different social levels over time; and

(c) relational, focusing on exclusion as the rupture of relationships between a group of people and the wider society. However, despite this consensus the concept of social exclusion remains deeply contested with multiple and sometimes conflicting meanings being proffered (see for example, Silver, 1994; Levitas, 2005; 2007; Beall, 2002; Mathieson et al., 2008). In general there are two contrasting ways in which the term is used. Most commonly social exclusion is understood as a "*state*" of multiple disadvantage experienced by particular population groups existing outside the "mainstream" of society, unable to participate and without rights. Alternatively, social exclusion can be understood as a set of processes embedded *in* unequal power relationships and which produce a continuum of unequal conditions of inclusion and exclusion.

Exclusionary processes. Amartya Sen has argued that: "...it is to investigative advantage rather than to conceptual departure that we have to look to see the major merits of the recent literature on social exclusion" (Sen, 2000). Leaving aside concerns about the potential for political manipulation, a focus on exclusionary processes creating inequalities across and between societies would seem to offer the greatest investigative advantage from the perspective of health inequities, rather than a static "state" approach which identifies and labels particular groups as "excluded". Focusing on the nature and impact of exclusionary processes rather than on states of exclusion has two key

advantages: (1) it allows for the possibility of social groups being differentially included rather than suggesting an artificial dichotomy between included and excluded groups; and (2) it shifts the focus towards the structures and systems that create social and health inequities and away from the characteristics of individuals and groups. The SEKN developed the framework shown in Figure 8 to illuminate the relationship between different types of exclusionary processes and health inequities. In this framework, which builds on the work of Escorel (1999; 2009), exclusionary processes are understood to operate along and interact across four relational dimensions - economic, political, social and cultural - and at different levels including individual, household, group, community, country and global/regional levels. A continuum of inclusion/exclusion is produced characterized by an unjust distribution of resources and unequal access to the capabilities and rights required to:

- Create the conditions necessary to meet and go beyond basic needs;
- Enable participatory and cohesive social systems;
- Value diversity;
- Guarantee peace and human rights; and
- Sustain environmental systems.

The key characteristics of each dimension are briefly described below:

1. The *social dimension:* refers to proximal relationships of support and solidarity (e.g. friendship, kin, neighbourhoods and communities, *guanxi*[1]) generating a sense of belonging. Along this dimension, social bonds are strengthened or weakened;

2. The *political dimension:* refers to power dynamics in relationships generating unequal patterns of formal rights embedded in legislation, constitutions, policies and practices, and the conditions in which rights are exercised, including the right to health care. Along this dimension, there are unequal opportunities to participate in public life, access services, express desires/interests and to have these taken into account.

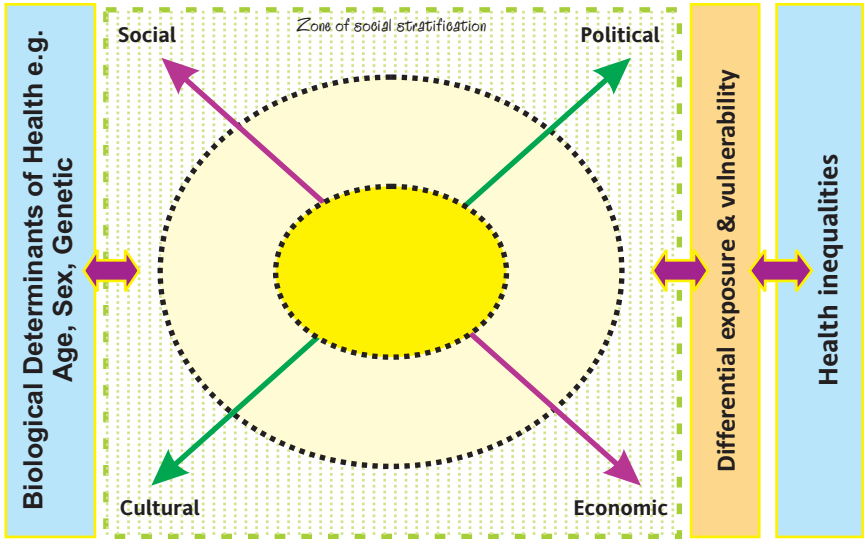
3. The *cultural dimension*: refers to the extent to which diverse values, norms and ways of living are accepted and respected. At one extreme cultural diversity is accepted and at the other there are severe situations of stigma and discrimination.

4. The *economic dimension:* refers to the distribution of the material resources necessary to sustain life (e.g. income, employment, housing, land, etc).

In reality these four relational dimensions are interconnected and overlapping. Their

[1] Guanxi is a central concept in Chinese society describing, in part, a personal connection between two people in which one is able to prevail upon another to perform a favour or service, or be prevailed upon. (Source: Wikipedia, last updated 25 September 2011).

Figure 8: Exclusionary processes, social stratification and health Inequities



presentation in the diagram is intended to aid understanding of exclusionary processes, the pathways linking these to population health and health inequities, and to provide a framework for appraising policies and actions. For simplicity's sake, the model assumes biological determinants of health are separate from social, economic, political and cultural determinants; but in fact, a growing body of research reveals complex interactions between biology, social factors and population health.

Generation of exclusionary processes. On the right of the framework, it is assumed that interactions between the four relational dimensions of power social, political, economic and cultural - generate hierarchical systems of social stratification along lines of gender, ethnicity, class, caste, ability and age. These systems of social stratification and the unequal access to power and resources associated with them result in differential exposure to health-damaging circumstances. At the same time they reduce people's capacity (biological, social, psychological and economic) to protect themselves from such circumstances and restrict their access to services essential to health protection and promotion. These processes create health inequities which feed back to further increase inequities in exposures and protective capacities, thereby amplifying the systems of social stratification.

From this perspective, exclusionary processes are generated within the socio-economic and political context to the left of the Commission on Social Determinants of Health (CSDH) conceptual framework (see Chapter 1). They are the product of failed governance on the part of nation states and/or international agencies; absent, inadequate or inappropriate policies; and dominant value systems (whether among political elites or civil society) that promote or condone oppression and discrimination against specific groups including women, ethnic minorities, and indigenous people. Not shown in the CSDH framework but also shaping the socio-economic and political context is the market sector: private corporations which generate powerful exclusionary processes when they fail to accept social responsibilities.

Links to health inequities. The pathways linking exclusionary processes to health inequities operate through the various axes of social stratification class, gender, ethnicity/race, ability/disability, etc. and are both constitutive and instrumental. In constitutive terms, the right and freedom to participate in economic, social, political and cultural relationships has intrinsic value, creating a sense of belonging to a social system and a sense of control over one's life. Research has shown this to be health promoting. Inequalities in opportunities to participate fully in social, political, cultural and economic relationships will therefore contribute to inequities in health and well-being. In instrumental terms, inequalities in opportunities to participate in these relationships will result in inequities in material circumstances running along the contours of social stratification, which in turn contribute to inequities in health. For example, being excluded from the labour market or included on disadvantaged terms will lead to low income, which can in turn lead to poor nutrition, housing problems etc., which contribute to ill health.

These pathways contribute to health inequities however these inequities are defined: as the *health state* of a group defined as "poor"; as the *health gap* between the health state of a group defined as poor and a comparison group such as average mortality rate for the population as a whole, or as the *health gradient* across all socio-economic positions in an entire population (Graham & Kelly, 2004). Health inequities are, however, most obvious in relation to the state of health of people at the extreme of the exclusion/inclusion continuum and the gap between these groups and other more advantaged groups.

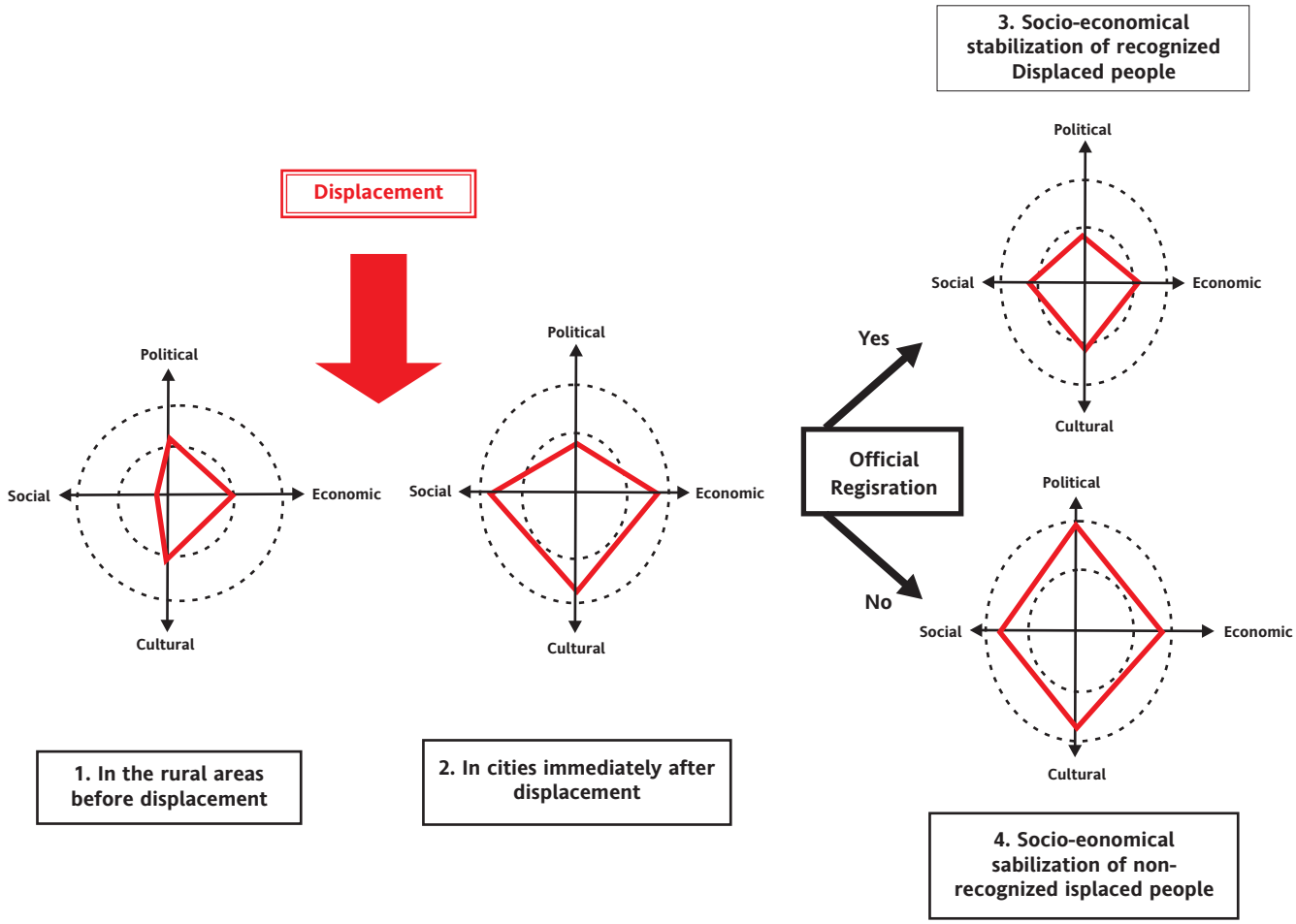
Impact of exclusionary processes. Exclusionary processes and their material and health impact are particularly evident among displaced people - the stateless, refugees and asylum seekers. As Diken and Lausten (2005) argue, such people live in a "state of exception" where the laws applying to citizens are not recognized. As Moorehead (2005) says of the refugees living in the camps along the Guinea border with Liberia:

> Poverty is very hard to describe. It is an absence, a nothingness not easy to put into words. But the poverty of camp refugees is about more than not just having things; it is about controlling one's own life. Their poverty curbs and crushes all hope and expectation. Kuankan's refugees are destitute in possibilities.

Similarly, the experience of people displaced within their own country by conflict or economic need provide clear illustrations of exclusionary processes driving health disadvantage. Figure 9 illustrates the multidimensional character of exclusionary processes affecting people displaced from rural areas by violence in Colombia. Before displacement, as the first diagram to the left illustrates, rural populations already experience economic, political and cultural disadvantage but they preserve social ties and community support. However, displacement disrupts these social ties and stigmatizes people because they are perceived as agents of the violence, not as victims. Displacement also intensifies exclusionary processes resulting in declining living conditions (water, food, housing, job, education, health). Hence, as can be seen in the second diagram on the left, the contours of exclusion are widened.

In cities, displaced people are forced to live in high risk urban areas on the fringes of the city or in precarious environments. They have low educational attainment with high drop-out rates, low rates

Figure 9: Displacement and exclusionary processes



Source: Popay, et. al., 2008

of employment, high rates of teenage pregnancies and 93% of displaced households live below the poverty line (Econometría-SEI, 2005; Ibáñez et al., 2006). These households have poor health outcomes, with a higher burden of disease and worse nutrition status than poor people in non-displaced areas (WFP, 2003). But as Figure 9 illustrates, state action can have contradictory impacts. In Colombia, for instance, displaced people are required to register with civil or military authorities before they can access services. This can alleviate the material and health impact of exclusionary processes by providing access to healthcare and education, political rights and more opportunities to integrate socially (top right). However, registration also makes people more visible, so increasing the risk of discrimination and victimization (Hernández et al., 2006; Ojeda & Murad, 2006). Hence some people choose not to register and face intensified exclusionary processes along all dimensions (bottom right).

The HIV and AIDS epidemic illustrates the complex relationship between exclusionary processes and health disadvantage as HIV and AIDS are both a cause and a consequence of exclusionary forces. Although few parts of the globe have been left untouched, and with some exceptions, those at greatest risk of infection are in groups and countries (particularly in sub-Saharan Africa) also most affected by exclusionary processes and experiencing the greatest social, economic, cultural and political disadvantage. Infection intensifies these exclusionary processes because of limited access to services for diagnosis and treatment. The disability and ill health arising from AIDS and the stigma and discrimination associated with HIV status thus combine with other exclusionary processes to exacerbate social, economic, political and cultural inequalities. The stigma associated with HIV is particularly pernicious, interfering with prevention, diagnosis, and treatment. HIV infection, as with other STIs, is widely perceived as an outcome of sexual excess and low moral character rather than as a disease of poverty and inequality. As a result there is a strong culture of silence and denial by people living with HIV and AIDS because of fear of rejection and isolation by close relatives and the community at large. (Rispel et al., 2008)

The experiences of other groups severely affected by exclusionary processes are discussed in the SEKN final report (Popay et al., 2008). The list is long including a majority of the world's 300 million indigenous people, people living with diseases of poverty such as malaria, TB and HIV/AIDS, people living on the riverine *chars* of Bangladesh and the *favelas* of Rio de Janeiro and homeless people in the cities of the world's richest nations.

Genesis of health gradients. While the pathways from exclusionary processes to a state of extreme poor health and health gaps between groups are most obvious in extreme situations, a relational perspective on exclusionary processes also helps us to understand the genesis of the health gradients found within and between all societies. It does this by focusing attention on the processes that generate gradients of inclusion/exclusion characterized by unequal access to the life circumstances that maintain and promote health. As Graham (2007) has argued there are "formidable methodological challenges" involved in relating these types of pathways to specific health risks and health outcomes. Nevertheless, the burgeoning evidence of a strong correlation between relative material advantage and relative health advantage is difficult to explain as anything other than the cumulative impact of social processes on health outcomes over the life-course.

An exclusionary lens therefore produces a materialist explanation for health inequities, giving primacy to processes operating at different levels that generate unequal material circumstances. This begs a question about the relationship between an explanation focusing on exclusionary processes and materialist explanations centred on social class. There are two key issues here:

1. Lack of consensus regarding what the concept of materialism includes. There is broad agreement that it includes socio-economic position and other dimensions of social class including the degree of financial security and stability provided through labour markets and publicly funded welfare provision (Chung & Muntaner 2006; Chung & Muntaner 2008; Graham 2007; Mackenbach & Bakker, 2002). In addition, some include a subjective dimension, for example, psychosocial factors such as self fulfilment, control, job satisfaction and the pressure of social

hierarchies (Macintyre & Anderson, 1997). Others, however, restrict the material to physical phenomena (Siegrist & Marmot, 2006; Lynch et al., 2000).

2. Lack of engagement in the health inequities literature with what Scambler (2002) has termed "hard" class theory. As Veenstra (2006) has argued, "... the means by which income, education and occupational prestige are accumulated in society have received relatively short shrift in the health literature." Although much intellectual work remains to be done to unravel the relationship between different materialist explanations for health inequalities, it is perhaps in terms of these "means of production" that a materialist explanation focused on exclusionary processes most clearly intersects with explanations framed in terms of class dynamics.

4. Appraising policy and action to tackle social exclusion

The SEKN also used the conceptual framework discussed above as a guide to identify and appraise a selection of policies and actions that have the potential to reverse exclusionary processes.[1] Few of these policies and actions were explicitly described as addressing social exclusion; they were not chosen for appraisal because they were judged a priori to represent "good practice". Rather, the aim was to appraise a diversity of policies and actions and identify the strengths and weaknesses of different approaches.

In the discussion that follows the policies and actions are grouped into those led by (1) nation states, (2) NGOs, community groups and social movements and (3) private sector organizations. Because time constraints limited the work, formal action to protect and promote human rights was not reviewed by the SEKN, and the actions of multilateral agencies and donor countries/agencies were appraised only when they were working with or influencing others. The actions of individuals and households most directly affected by exclusionary processes were not appraised although the creativity and resilience reflected in such "survival strategies" is described in SEKN background papers.[2]

Before summarizing the results of the SEKN appraisal it is also important to acknowledge that all of the actors with the potential to reverse exclusionary processes multilateral and donor agencies, nation states, the private sector, community groups and social movements may also be powerful drivers of exclusionary processes. For example, the IMF, World Bank and the Inter-American Development Bank were involved in the widespread implementation of neo-liberal policies fuelling a

[1] Details of policies and actions appraised are given in the SEKN Final Report: http://www.who.int/social_determinants/knowledge_networks/final_reports/sekn_final%20report_042008.pdf

[2] Background papers of all the Knowledge Networks are available for download at: Www.who.int/social_determinants/themes.

dramatic increase in world poverty. The private sector is most obviously a driver of economic exclusionary processes but may also collude with global agencies and governments in generating political and cultural exclusion. Social movements can similarly increase exclusionary processes by, for example, campaigning for restrictive asylum policies or racist policies. In this context, while states must recognize that peaceful civic action for change is an essential element of democratic processes, regulation of civic society action may be appropriate in some cases.

4.1 State-led policies and actions

Three main types of state-led policies and actions are discussed here:

- ***Universalist policies:*** These policies reflect values of social solidarity and collectivization of risk; they extend rights to publicly funded services, typically to all citizens with no fee, or a minimal fee, at the time of use. Examples would include the welfare systems introduced in the 20th century in OECD countries, the Venezuelan Barrio experiments, and Brazil's Unified Health System (SUS) which was established in 1988.

- ***Conditional targeted transfers:*** Traditionally these policies have involved means testing, i.e. they are conditional upon recipients having income below a threshold level, and they are based on the assumption of added value or efficiencies from targeting scarce resources to groups most in need. These transfers may be cash, as in many social security systems or services as in Colombia's subsidized health care system. More recently, transfers involving a double conditionality are being introduced. Typically, these are means tested and involve conditions relating to behaviour, for example *Bolsa Familia* in Brazil in which recipients meeting the means test must also ensure that children attend health centres and school. These conditional transfers reflect a view of poor people as irresponsible, and in need of incentives to adopt socially-valued behaviour.

- ***Market-oriented actions:*** These reflect theories about "social risk management" (Holzmann & Jørgensen, 2000) which argues the need to build self-reliance and consumerism to support people out of poverty. These policies promote market-oriented solutions, such as private or state subsidized insurance schemes or private sector "for profit" providers of healthcare, as in the Colombian subsidized system.

In practice these different types of policies/actions are combined in many country contexts, producing hybrid initiatives. For example, not all conditional transfers are targeted at low-income groups (for example, the Female Secondary School Stipend in Bangladesh) and universal services can be conditional (for example, child benefits in France).

4.1.1 *Universalist policies*

The decades since the late 1970s have seen profound changes in the policy discourse on poverty, inequality and welfare provision at the level of multilateral agencies and nation states, leading to significant changes in policies and action relevant to social exclusion. Triggered initially by the oil crisis of the 1970s and driven by the global reorganization of production and trade and financial market liberalization, these changes have involved a shift away from universal collectivist provision of social security, social protection and essential services such as health and education funded through taxation and social insurance and provided by national governments. These approaches are exemplified in the welfare provision developed in OECD countries in the 20th century and the widely accepted Economic Commission for Latin America and the Caribbean (ECLAC) model of economic and social development in Latin America (2007). Counter to the universal imperative, neo-liberal thinking has become dominant, emphasising individualistic models of welfare and social protection, a greater reliance on targeted means-tested conditional policies, minimal state involvement and a reliance on "market"-oriented approaches and private sector provision of essential services.

Universal welfare systems played a key role in the economic and social development of OECD countries by reducing poverty, reversing exclusionary processes, promoting social cohesion and improving population health. According to an analysis by Townsend (2007), despite pressure to reduce spending OECD countries have continued to increase investment in social security and essential services. Today these countries spend on average one eighth of their GDP (12.6%) on public social security cash benefits and one fifth (20.9%) on public social services and social security together (excluding education). Evidence that reducing spending promotes higher economic growth is inconclusive, Townsend argues, while substantial spending of more than one sixth of GDP is often consistent with above-average economic growth. Reviewing the evidence on the OECD experience, he concludes that “the strength of a universalistic, human rights approach to social security is in turning to future advantage what, after extraordinary struggle, proved to be a highly successful strategy in the past” (Townsend, 2007).

Universal approaches to meeting basic needs can also be seen as delivering additional benefits in terms of the promotion of social cohesion, political inclusion and cultural diversity, although these are difficult to evaluate. Over the past decade the advantages of comprehensive systems of social protection and universal public provision of services such as healthcare, education, water and sanitation, funded through taxation and social insurance, are again being recognized. This is partly through the campaigning work of international agencies including ILO and the United Nations Development Programme (UNDP) and major civil society organizations such as Oxfam. There is a growing body of evidence suggesting that these approaches are the most effective, efficient and sustainable way of reversing exclusionary processes along the four dimensions identified in the SEKN model: social, economic, cultural and political (Oxfam, 2006; Mkandawire, 2005; Chung & Muntaner, 2006; UNDP, 2007; Townsend, 2007). Comprehensive publicly funded social security and services for four groups in particular women, children, the disabled and the elderly are central to these approaches.

The historical investment in OECD countries is far in excess of the proportion of national income devoted to social services and social security in low- and middle-income countries today. However, some countries are pursuing universal approaches to social protection and the provision of health, education and other essential services, though they may have to be introduced in stages. Universal policies, for example, in Brazil, the Bolivarian Republic of Venezuela, and South Africa, are associated with major improvements in access and use of services and reductions in poverty levels. There is also evidence of positive health and educational outcomes, and greater social cohesion and solidarity (Popay et al., 2008). Similarly, a study by Lundberg and colleagues (2008) of the health impact of welfare state policies sponsored by the CSDH found universalism to be an important determinant of population health.

Public provision of social protection and essential services also has the potential to generate multiplier effects in local economies, particularly those consciously designed into programmes through mandating the use of local enterprise to provide services.

In the foreword to the appraisal of the Venezuelan "Barrio Adentro"[1] (PAHO, 2006), Dr. Mirta Roses Periago, Director of the Pan American Health Organization (PAHO), notes that it provides an alternative model to that which is currently dominating social protection policy globally. While many governments are seeking to improve health through self management, personal responsibility and the transfer of responsibility for care from the state to civil society with reduced public expenditure, the Bolivarian Republic of Venezuela is one of a number of countries experimenting with a model of co-responsibility between the State and its citizens, with the State acting as guarantor of social rights.

Funding these services is clearly an important challenge. Oil reserves have made that country's social experiments easier to implement. By 2005 around US$ 5 billion from this source had been invested in social missions to supplement mainstream budgets for government departments. This has implications for the transferability of such policies. Countries like South Africa and Brazil have also implemented universal policies, but without the benefit of additional "windfall" resources.[2] If exclusionary processes are to be reversed and health inequities reduced, multilateral agencies and donors have to rise to this challenge and develop ways for universal systems of social protection and essential services free at point of use to be funded in low- and middle-income countries. Key funding mechanisms might include global tax systems. The ILO undertook work on this linked to their global campaign: Social Security and Coverage for All. The staged approach to the introduction of universal health care described in Chapter 8 may provide some lessons to support the gradual introduction of universal social security systems.

[1] Barrio Adentro is the name of the Venezuelan social policy that aims to strengthen the public health system and prioritize primary health care for population groups in poverty and exclusion. In 2006 it offered comprehensive health care coverage to 17,378,000 inhabitants previously excluded from health services (Hernández et al, 2008).

[2] For further information on Brazil's Unified Health System see Lobato (2000) and Lobato & Burlandy (2000).

4.1.2 *Conditional transfers*

Selective approaches - advantages: The SEKN's review of contemporary policies and actions aimed at reversing exclusionary processes suggests that these are more likely to be selective than universal, targeting groups living in poverty and involving some form of means test. Both universal and targeted means-tested cash transfers can lead to improved household incomes in the short term, with evidence that in the longer term they can increase household assets and create positive incentives for people to seek work to continue to raise their living standards. For example, evidence from evaluations of the South African Child Support Grant and the universal Child Benefit in the United Kingdom of great Britain and Northern Ireland suggests that most mothers will spend unconditional cash benefits on promoting the health and wellbeing of their children through the provision of more nutritious food, clothing, payment of school fees and purchase of school equipment (Popay et al., 2008). Targeted means-tested policies providing access to essential services such as healthcare and education are also resulting in significantly increased coverage. Targeted policies - whether providing cash and/or services - can also trigger wider multiplier effects in local economies by investing resources in local service providers.

Selective approaches-disadvantages: Research has also highlighted important social and administrative disadvantages to selective/targeted policies. While these policies may promote greater economic inclusion, the individualist and minimalist nature of the benefits means they have limited potential to promote social and political rights and cultural diversity the necessary conditions for more inclusive and cohesive societies (Lauthier, 2005). The dominant focus on economic aspects of exclusionary processes and neglect of other dimensions, including political and cultural aspects, can also reduce the effectiveness of these policies as vehicles for promoting more inclusive societies. For example, the Female Secondary School Stipend in Bangladesh (which is not means-tested) does not address the cultural barrier to girls' education generated by *Purdah,*[1] therefore parents still hesitate to send girls to school and girls who do attend are subject to harassment. Increasing the social, cultural, and economic capabilities of girls was not an explicit aim of this programme and it therefore has limited transformational potential (Schurmann, 2009).

Other limitations of selective means-tested policies include:

- The amount of money transferred to households is typically very low and is often insufficient to provide sustainable pathways out of low-income living.
- Differential access to information, complex eligibility rules and stigma all restrict the reach of selective policies, disadvantaging those in most need.
- Considerable resources are spent on policing compliance with eligibility criteria.
- Great potential for fraud exists due to complex eligibility criteria and compliance monitoring methods, poor quality governance and low paid, poorly trained staff.

[1] System of excluding women from public view.

- The complexity of eligibility processes and fraudulent systems encourage leakages of resources to people who are not eligible.
- Delayed or incorrect payments are made to recipients and/or service providers because of complex systems combined with weak administrative processes.
- Perverse incentives can be created by eligibility rules (e.g. claims that young women are getting pregnant to obtain child support grants in South Africa) or provider payment systems (e.g. a per capita subsidized insurance system in Colombia with no attention to outcomes may be leading to problematic rationing of services).[1]
- Inadequate state funding can undermine the effectiveness of policies.
- Targeted policies may reduce absolute poverty and disadvantage but leave inequities between the poorest and the rest of society unchanged or, in the worst situations, widened.

Behavioural conditionality. Globally, there has been a rapid move to attach additional behavioural conditions to the receipt of means-tested targeted transfers of cash or services. These *conditional transfer policies* raise important evidential questions and issues of principles and values (Popay, 2008; Cookson, 2008). Two of the best known programmes and among the largest are the Brazilian *Bolsa Familia* programme and the Mexican *Progresa/Oportunidades* programme (both focusing on maternal and child health and education) but such conditional programmes can be found in countries as diverse as the United States of America, the United Kingdom and Ethiopia. A growing body of research (Escorel et al., 2007; Kakwani et al., 2005; Lagarde, Haines & Palmer, 2007; Magalhães et al., 2007; Morris, 2004; Serrano, 2005; Spinelli, 2007; Villatoro, 2004) suggests that conditional transfer programmes can have positive impacts including poverty reduction, improved living standards and improved health and educational outcomes. These benefits, however and particularly the health benefits, appear to be small.

Conditional transfer policies have the limitations of the means tested targeted action without behavioural conditions, and are also open to other equally important criticisms. Some programmes, for example, fail to provide the services people require to meet the conditions, and/or pay little attention if any to the quality of services which is often very poor. When behavioural conditionality refers to labour market participation, the quality and sustainability of employment is often neglected or ignored. Furthermore, evidence on the "value added" by "behavioural conditionality" *per se* is inconclusive while other evidence suggests if conditions "fit" with household priorities to protect child health for example conditions that mandate behaviour are not needed. The widespread and indiscriminate use of programmes designed around behavioural conditionality and aimed at the most disadvantaged individuals and households is particularly problematic given, as Townsend (2007) notes, “the more conditional and even punitive forms of transfers are counter-productive for

[1] An especially poignant example is the targeting of social protection policies in the USA at people living with HIV infection (see Crane, Quirk & van der Straten, 2002).

social cohesion, wellbeing and productivity." From this perspective conditionality creates second-class inclusion and/or citizenship undermining any attempt to promote greater social cohesion.

There is limited evidence for the added value of attaching behavioural conditionality to programmes aimed at reversing exclusionary processes. This, combined with the problematic values underpinning behavioural conditionality (e.g. that people living on low- incomes are not socially responsible) and the potential to undermine social cohesion, present a powerful case against these programmes. Regardless, there continues to be a high level of political interest and investment in them in both high- and low-income countries (McColl, 2008). Given this situation, greater emphasis in the design of these programmes should be placed on evidence that suggests that they will be more likely to have positive outcomes and offer greater transformational potential at individual and societal levels. This includes:

- Providing higher levels of cash transfers;
- Paying more attention to the quality and sustainability of services;
- Focusing "conditions" at community rather than individual/household levels;
- Involving communities in programme design and delivery; and
- Ensuring programmes are embedded in universal welfare systems.

4.1.3 *Market oriented policies/actions*

State-sponsored insurance remains a principal approach to the funding of welfare systems in OECD countries. In some high-income countries, notably the USA, private health insurance has been dominant and has been shown to be associated with large-scale inequalities in access. Today, public, private and co-operative insurance schemes are being proposed by some commentators for use in low- and middle-income countries as an effective approach to providing access for disadvantaged groups to essential services such as healthcare and/or protecting against the economic risk associated with natural hazards and ill-health. In some countries, for example Colombia and Peru, these involve state-subsidized healthcare insurance provided in partnership with private sector organizations. Evidence suggests that these schemes are associated with an increase in public resources directed at poor people, leading to increased healthcare use. However, critics point to problems with equality of access to effective services (typically the benefits under these schemes are less than those available to higher-income groups), to the poor quality of services, neglect of preventive services, and to poor health outcomes (Popay et al., 2008).

It is possible that these problems result from *per capita* payment systems which encourage providers of subsidized schemes to create administrative and geographical barriers to deter access and/or delay referral to secondary care. Other payment approaches may therefore remove some problems. However, these schemes also have similar problems to other targeted policies/actions: complex and restrictive eligibility procedures, high risk of fraud and corruption and limited capacity to meet demand. A social model of insurance is more common in Asia typically run by NGOs to

protect people against catastrophic health events and/or environmental hazards such as floods and drought. Types of these schemes in India have been reported to be very successful. Examples in Bangladesh illustrate the limits in very poor communities where the resource base is insufficient to fund adequate population cover (Popay et al., 2008; Werner, 2009).

Whatever the model, many state led policies aiming to reverse exclusionary processes have been severely restricted in their potential to extend rights to basic services by a lack of capacity and/or infrastructure. This is particularly, but not exclusively, true in low-income countries. Programmes aiming to extend rights to healthcare, education, housing etc., require extensive and long-term capital investment, including investment in training and development. Both universal and targeted policies to reverse exclusionary processes can be undermined by resistance from established professional groups and negative attitudes towards people living on low incomes. Partnerships with civil society and/or private sector organizations can increase capacity. However, civil society agencies must be adequately funded and should not be expected to address large scale structural inequities. Similarly, private sector partners need to have incentives to produce positive outcomes and to be prevented from rationing services in ways that adversely impact on health outcomes to minimize costs.

4.2 *Non-governmental organizations (NGOs) and community[1] action*

Three main types of action under this heading were appraised by the SEKN:

- autonomous action by communities in pursuit of social, economic, political and/or cultural rights (ranging from small scale action to large scale social movements);
- the engagement of communities in policy/action decision-making commonly facilitated by other actors such as the state, NGOs or the private sector;
- the direct provision of services or other support by NGOs.

At a micro level, community involvement in the design and/or delivery of policy/action to reverse exclusionary processes cannot solve large-scale structural problems. Historically, however, large-scale social movements, including the involvement of formal civil society organizations such as trade unions, have been powerful drivers of social transformation. Examples include trade union campaigns around the world for improved labour standards, workers' voluntary co-operatives providing health and welfare protection in Europe in the 19th and 20th centuries, and the 20th century movements of indigenous people in Latin America and the anti-apartheid movement in South Africa (Ballard et al., 2005) .

It is now widely accepted that people who are the targets of policies and actions aiming to reverse exclusionary processes have a right to be actively involved in the design, delivery and evaluation of these policies and actions. There is also increasing recognition of the need for

[1] Community refers to groups of people whose membership can be defined geographically or through a common interest or Heritage.

researchers to recognize the legitimate claim of the "subjects" of their research to be actively involved in all aspects of the research process. The involvement of people who are the targets of policy and action will ensure that the full range of relevant knowledge lay and professional, scientific and experiential informs policy and action and hence increases the likelihood of these policies and actions being appropriate, acceptable and effective. The same argument applies to research outputs. However, in many countries, particularly but not exclusively those with strong scientific communities, the un-codified knowledge of lay people, particularly indigenous peoples, are routinely devalued and the potential for this knowledge to shape more appropriate, acceptable and potentially more effective responses is lost.

Community participation can be the key to successful policy and/or action to reverse exclusionary processes, yet research has highlighted many barriers to effective participation and involvement of communities (Popay et al., 2007). For example, genuine engagement must involve a transfer of real power, and resources must be dedicated to support lay people to become involved. Without support, community activists can be damaged by their experiences blamed by their communities for failing to deliver real change and held accountable by professionals for the communities they represent. The SEKN argued that community involvement in action to reverse exclusionary processes at a local level can only be effective when embedded in effective state action to guarantee human rights and provide decent living standards and essential services. It is also important to recognize that professional workers will often resist the challenge to their power-base, which is inherent in effective community involvement. The agencies involved must therefore ensure that appropriate training and technical support is available for both professionals and community activities to support the cultural change which is required and to increase knowledge and skills.

NGOs have an established role in working to reverse exclusionary processes at global, national and local levels through advocacy; monitoring the impact of policies/action; mobilizing community action for change; providing technical support and training to improve governance systems; providing channels for negotiation; and giving a voice to the most disadvantaged sections of society. They often act as pressure groups to change repressive/discriminating policies, legislation and programmes, and delivering services to support economic and human development. NGOs need to attend to issues of appropriate representation, transparency and good governance, but it is unrealistic to expect them all to be fully representative of the groups they seek to represent. Larger, relatively resource-rich NGOs have an important role in advocating for progressive change at a global level and in supporting smaller national and local NGOs by building capacity and working in partnership, rather than duplicating efforts or competing for resources.

The state's response to social movements in general and civil society organizations in particular can vary from active support to peaceful co-existence, and from neglect to control and oppression. National governments need to:

- Recognize the political legitimacy of civil society and "community voice";
- Involve civil society in all its forms in policy development, implementation and monitoring;

- Enact and implement legal protection for civil society organizations within an appropriate regulatory framework;
- Design policies that transfer real power to people who are targeted by those policies;
- Provide resources for policy implementation to support "community" empowerment; and
- Reform professional education to give greater status to lay and indigenous knowledge.

Multilateral agencies and other international donors also have an important role to play, supporting genuine community engagement in policy and actions to reverse exclusionary processes and ensure a real sharing of power. They can act as role-models and promote good practice in their own relationships with NGOs and communities. In their funding policies they can provide incentives for governments to work effectively with communities and NGOs, resource capacity building for NGOs, community action and community involvement, and simplify regulations for grants so that smaller community and voluntary groups can access funds and hence develop capacity. At an international and national level they also have a powerful advocacy role, promoting legal protections for NGOs and community action within nation-states.

4.3 *The private sector and exclusionary processes*

The role of the private sector as a driver of powerful exclusionary processes is considered in some detail in other chapters in this volume, particularly those focusing on globalization and employment conditions. On a more positive note, earlier sections of this chapter have described a potential role for the "for profit" sector working with others, notably multilateral agencies, national governments and civil society organizations, to increase service capacity and extend access to basic services such as healthcare. However, the SEKN appraisals have also highlighted serious contradictions and constraints on these approaches, including:

- Public resources being directed to profits rather than used to extend access to and/or improve the quality of services;
- Gross inequities in the quality of services in parallel public and private sectors services, particularly in education and healthcare;
- Resources and professional personnel being "captured" by the private sector;
- A bias towards urban areas and acute care in private sector provision, neglecting preventive care and population-based health-promotion;
- Perverse incentives for private providers to increase throughput rather than focus on health outcomes, which can increase exclusionary processes;

- Excessive cost-control systems leading to poor employment conditions for health workers and professionals, thereby impacting negatively on the quality of health services; and

- The limitations of insurance-based approaches in protecting against risks in populations experiencing severe poverty.

Beyond service provision, private sector organizations can contribute to reversing exclusionary processes in two broad ways: complying with high standards in operation and employment in their own companies and the companies which supply them, and extending their role in relation to corporate social responsibility.

Private sector companies may contribute to a reversal of exclusionary processes by employing disadvantaged groups, even when labour conditions fall far short of good practice, but this is not an alternative to improving employment conditions. Legislation protecting the terms and conditions of paid labour is reasonably well developed in high-income countries but has been under attack in recent years, and even in the most regulated economies there are segments of the labour force where conditions are very poor. Legislative protection of workers is urgently required in all areas of the world, particularly in the context of globalization.

There is some evidence that voluntary initiatives to promote compliance standards and to encourage greater social responsibility in the private sector can lead to improved labour conditions and may have wider impacts on exclusionary processes, but the reach and impact of these initiatives are insignificant against the powerful exclusionary processes driven by current global trade relationships (Barrientos et al., 2006). Wider social movements, including action by large international NGOs, are increasing the pressure on the private sector to comply with higher labour standards and demonstrate greater social responsibly in terms, for example, of investing in low resource communities and protecting the environment. However, as the reports of the Globalization and Employment Conditions Knowledge Networks powerfully demonstrate, these initiatives are having only a marginal impact on the scale of exclusionary processes currently driving social and health inequities worldwide.

5. Conclusions

The strength of the SEKN work reported here has been in highlighting the importance of defining social exclusion in a way that maximizes investigative advantage and supports actions that are most likely to be effective. A number of higher-level lessons for future policy and action aiming to reverse exclusionary processes were identified, including:

- *The pivotal role of action to protect and promote human rights and full and equal inclusion.* This includes the provision of universal access to living standards which are socially acceptable to all members of a society, to the same level and quality of health

and educational services, safe water, sanitation and "decent work", as defined by ILO, and respect for cultural diversity.

- *The primary responsibility of the State for promoting full and equal inclusion for all groups while respecting cultural diversity*. The State, in all its manifestations (national and local government, state officials, providers of public services, legislative branch, the judicial system, etc) must ensure that human rights are met and protected, including funding and overseeing universal provision of healthcare, education and social protection and establishing and maintaining accountable and transparent political and legal systems. The State also has a key role in requiring and supporting other actors, including public and private sector organizations and NGOs, to develop and support processes that encourage social cohesion, and in resisting actions by others, including international agencies, which are likely to increase exclusionary processes.

- *Multilateral agencies and donor agencies have a major role in reversing exclusionary processes*. In the future, a minimum requirement from these agencies must be to ensure their policies and actions "do the poor no harm". They should assess the exclusionary/inclusionary impact of their own policies and actions, and those of others, and act on the results. They need to increase their efforts to promote more egalitarian relationships between countries and regions, to support the extension and protection of human rights and to require and support others to reverse exclusionary processes and promote positive inclusion including genuine community empowerment.

- *Conditional means-tested transfers of cash or services* have proven short-term economic benefits but they have high transaction costs, problems with uptake and are subject to "leakage". They may also be stigmatizing and disempowering, reproduce exclusionary processes and therefore exacerbating inequities. Given these limitations, targeting should only be used within a framework guaranteeing human rights and universal access to essential services and socially acceptable living standards. Behavioural conditionality should only be incorporated into policies and actions where there is convincing evidence that it is necessary to achieve the intended outcome. Such policies will be less stigmatizing and more likely to promote social cohesion and collective capacity for action if they provide higher levels of cash transfer and/or higher quality services than is currently the case and if conditions are located at the community level and prioritized by the communities and/or groups themselves.

- *Insurance-based approaches* are an important funding mechanism supporting comprehensive and universal welfare systems free at the point of use. These systems are demonstrably powerful drivers of positive inclusion. The insurance principle has also underpinned collective action by disadvantaged groups through, for example, labour movement organizations, mutual societies and co-operatives. However, while more recent means-tested subsidised insurance, typically involving private sector "for profit" organizations, may offer protection to some, their ability to reverse exclusionary processes is severely limited. In this context, insurance-based systems of social

protection should only be implemented within a public policy framework oriented towards a guarantee of human rights and universal access to essential services and socially acceptable living standards.

- *Private sector provision of essential services*, notably healthcare, results in two-tier services and undermines the public sector where it exists. In theory at least, greater corporate social responsibility can be a powerful force to reverse exclusionary processes. However, when corporate social responsibility is optional it will be subservient to economic considerations and therefore insecure. Additionally, where corporate social responsibility is driven only by philanthropic values, it can reinforce exclusionary processes through paternalistic attitudes and discrimination. In this context social responsibility by corporate bodies and NGOs should be an expectation enshrined in national and international legislation, and the benefits of corporate social responsibility should be more carefully analysed and publicized.

- *Social movements and community empowerment are essential prerequisites for more inclusive and cohesive social systems.* Too often community participation is used as an instrument for delivering policy designed by other actors. National governments and international agencies must create and maintain the conditions required for genuine delegation of power and control to people who are the targets of policy. These conditions should include: transparent, accountable and participative political and legal systems; legal protection for civil society organizations within an appropriate regulatory framework; adequate resources to support "community" empowerment; and reforms of inspection systems and professional education to give greater status to lay and indigenous knowledge.

Perhaps the most profound and neglected dimension of social exclusion is the absence from the policy domain of the voices of those most adversely affected. Only by combining quantitative and experiential evidence combining statistical indicators with people's stories about their experience of exclusion will there be full insight into the complex nature and impact of these processes on people's health and on the causes of health inequities, and hence to craft more effective action to reverse them.

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5 Early child development: a powerful equalizer

Arjumand Siddiqi, Emily Hertzman, Lori G. Irwin and Clyde Hertzman

1. Introduction

It is now beyond doubt that equity in early child development (ECD) is imperative for bringing about health equity along the entire lifespan. This is because the early childhood period is *the most important* developmental phase in life (Hertzman & Boyce, 2010; Hertzman & Power, 2003). Healthy early child development physical, social/emotional, and language/cognitive is fundamental to success and happiness not only for the duration of childhood, but throughout the life-course. At the individual level ECD strongly influences multiple indicators of health and well-being including obesity/stunting, mental health, heart disease, literacy and numeracy skills, criminal behavior, and economic participation throughout life (Hertzman & Boyce, 2010). At the population level, these issues have profound implications for the economic and social advancement of societies. Consequently, if the window of opportunity presented by the early years is missed, it becomes increasingly difficult, in terms of both time and resources, to support the success of individuals and of societies.

This chapter provides an overview of the findings of the Early Child Development Knowledge Network (ECDKN). It begins with the rationale that establishes the multiple strong ties between ECD and health across the life-course, with a special emphasis on equity considerations. The Total Environment Assessment Model for ECD is discussed as a framework for understanding the

environments that are most salient for young children, the aspects of those environments that provide optimally "nurturant" conditions for ECD, and the interconnections therein.[1] Finally, areas for further research are identified, and policy options are proposed for action from local to global level to ensure that all children are afforded opportunities for healthy development to the fullest extent possible.

2. Child health and ECD

With noteworthy exceptions (Grantham-McGregor et al., 2007) the medical and public health communities have largely concerned themselves with a rather narrow “disease-based” approach to child health. In the work of the ECDKH, children's health is viewed through a more holistic lens. Somewhat analogous to “well-being” which is incorporated into the broader notion of health supported by the World Health Organization (WHO, 1946), ECD encompasses a broader notion of the health of young children, employing a *developmental* concept of children's wellness which includes physical, language/cognitive, and social/emotional domains of being.

2.1 Population health, population inequalities, and ECD

The developmental perspective endorsed here is consistent with a population orientation toward health (Rose, 1981). This approach suggests that in contrast to clinical practice, there is greater utility in conceptualizing health outcomes as continuous phenomena, rather than conventional dichotomies that indicate "presence" versus "absence" of illness.[2] ECD is best framed as degrees of development, rather than as notions of presence versus absence of developmental "milestones" (Patterson, 2008). In this way, physical health outcomes such as stunting/wasting, and mental health outcomes such as attention deficit disorder, can be reframed as extreme degrees of deviation in physical and social/emotional development respectively. Cast with a population health orientation, ECD would be concerned not only with children characterized as stunted or wasting, but with examination of the population distribution of height and weight; and rather than focusing only on extreme forms of mental distress, ECD would encompass the distribution of social and emotional capabilities of the children in a society.

Perhaps the most powerful illustration of this point comes from a re-framing of the current child survival crisis being experienced worldwide. Recent estimates suggest that, among developing nations, there are 6 million preventable child deaths annually (Jones et al., 2003). This is a tragic and shocking figure, but “...unfortunately, death is the tip of the iceberg...” (Grantham-McGregor et al., 2007). Many more children (over 200 million) fail to reach their full developmental potential (Grantham-McGregor et al., 2007). Framed solely in mortality terms, only the most extreme end of developmental deprivation is captured. Framed on a continuum however, the full population-

[1] The term "nurturant" describes conditions that provide optimal support and care for children to be able to fully realize their cognitive, social, and physical developmental potentials.

[2] Most diseases and related symptoms can be characterized in this manner.

context of children's well-being becomes apparent. The conditions in which children are *dying* are, unfortunately, also the conditions in which they are *living*. Child survival and child development are indivisible phenomena.

Equity considerations become explicit when viewing ECD from a population distribution perspective. Inherent to the population approach is the notion of differences between individuals and sub-groups within a population. The population lens reorients focus from the "abilities" of an individual child to reach predetermined developmental standards, to the causal factors that underlie ECD and inequalities in ECD. By emphasizing differences in ECD at the population-level, environmental conditions are primarily implicated, since variations at this level are much more likely to be attributable to experiential (environmental) differences between children than differences in their biological or genetic characteristics.

2.2 Biological embedding of the environment

While a population-based approach provides insight into the "social causation" of ECD, it is insufficient for understanding the mechanisms involved as ECD unfolds, i.e. how social conditions "penetrate" the brain and body. The fundamental mechanism through which this occurs in early childhood is an interactive process known as *biological embedding* (Keating & Hertzman, 1999). Biological embedding involves the interplay moment by moment, hour by hour, day by day between the information contained in a child's genetic code and the exposures the child receives from the environment in which he/she lives and grows (Keating & Hertzman, 1999). Differences between children in the process of biological embedding (and thus in ECD) are driven primarily by differences in experiences, rather than differences in genetic coding.

In more specific anatomical and physiological terms, experiential differences mainly affect the prefrontal cortex of the brain (which controls executive functions) as well as two physiological systems in the brain: the hypothalamic-pituitary-adrenal (HPA) axis (which controls cortisol secretion), and the sympathetic-adrenal-amdullary (SAM) axis (which controls epinephrine and norepinephrine secretion). In addition, biological embedding stimulates neural sculpting (Cynader & Frost, 1999), in which two simultaneous processes govern the production of neurons and synapses between neural cells, and the elimination of "unnecessary" cells. A child's environment therefore plays a central role in facilitating "healthy" neural sculpting, and thus in the resultant developmental outcomes (Eisenberg, 1995).

Although brain plasticity continues through adulthood, the majority of "critical periods" in brain development occur during the first three years of life. At these times, particular parts and/or functions of the brain are the focus of development and undergo rapid growth (Cynader & Frost, 1999; DiPietro, 2000). Most of the identified critical periods relate to aspects of motor and sensory function (DiPietro, 2000), though scientific evidence increasingly suggests that critical periods also exist for many intellectual and affective processes of development (Cynader & Frost, 1999). As a critical period unfolds, a specific area of the brain becomes especially sensitive to the environmental stimulation that the brain receives. During this time, cells associated with the region are the most ready to learn, but they are also the most vulnerable to cell death and degeneration (Cynader & Frost,

1999). The extent of learning versus cellular death and degeneration that occurs is directly attributable to the environmental experiences of the child.

2.3 ECD and health throughout the life-course: the fundamental role of socioeconomic resources

The impact that children's development (and underlying processes) will have on their well-being during the early childhood years is sufficient grounds for public concern regarding ECD and the experiences of children during this period. The need to protect this especially vulnerable population may seem obvious. Nevertheless, the responsibility of states to safeguard children's welfare has been codified by (among other initiatives) the United Nations Convention on the Rights of the Child (CRC) (United Nations, 1989).

From a public health standpoint, there are additional reasons to be concerned about ECD. A robust body of published research now provides compelling evidence for the role of early life experience as a "determinant" of health and well-being more generally (including economic and social success) throughout the life-course. At the individual level, childhood experiences ("exposures") determine not only contemporaneous ECD outcomes, but also school readiness and school performance in later childhood, as well as death, illness and disability throughout adulthood (Hertzman & Power, 2003).

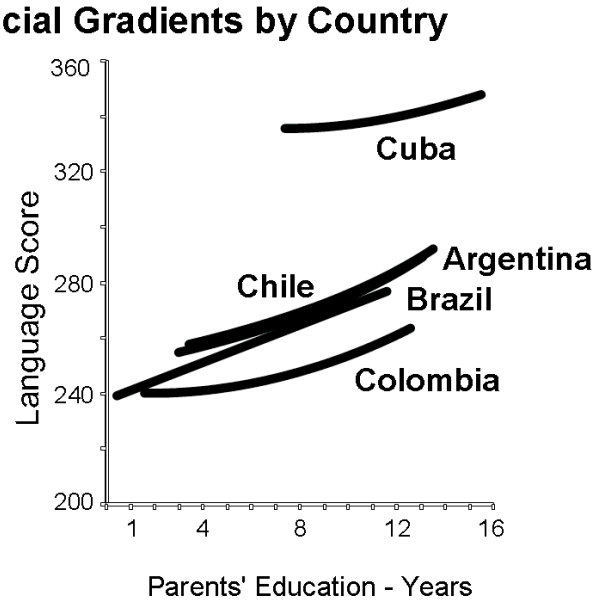
While many childhood experiences are significant, differences in the extent to which experiences for children are nurturant seem to be largely rooted in differences in the amount of social and economic support that families are able to access (DiPietro, 2000). At the population level, inequalities in socioeconomic resources lead to inequalities in ECD outcomes (Hertzman & Power, 2003). Furthermore, these socioeconomic inequalities in early life are a key source of socioeconomic inequalities in a host of health outcomes and mortality in adolescence (Goodman, 1999) and throughout adulthood (Mackenbach, 1997), and in an array of outcomes such as educational attainment (Breen & Jonsson, 2005), income attainment (Lee & Solon, 2006) and social versus anti-social behaviours (Heimer, 1996). This is in part due to the health trajectory that is set by early circumstances, but also due to the role of early exposures in creating vulnerability to exposures later in the life-course, and to their effects on health. In other words, there are both latent and cumulative pathways through which early childhood affects future outcomes (Hertzman & Power, 2003). Equity of ECD, then, is not only important to consider during the childhood years, but also functions as a bellwether for health equity across the lifespan, for a productive and contributing citizenry and thus for the future success of societies. The powerful phenomenon of socioeconomic gradients in influencing ECD is discussed below.

2.4 *Socioeconomic gradients*

Socioeconomic inequalities in ECD and in health follow a pattern that has come to be known as a “gradient effect”. This term characterizes the nature of the relationship between socioeconomic resources and the overwhelming majority of health and developmental outcomes (of children and

adults).[1] In stylized terms, the gradient effect implies that incremental improvements in socioeconomic resources result in incremental improvements in health and ECD. This is in contrast to a "dichotomous effect" which would suggest a difference in outcomes only between those falling above and those falling below some predetermined threshold, such as a poverty line. The gradient effect applies to a remarkably broad range of outcomes, and the association with socioeconomic status (SES) has been replicated in every wealthy and non-wealthy society where it has been measured (Adler et al., 1994; Braveman & Tarimo, 2002; Buchmann & Hannum, 2001; Kunst, Geurts & van den Berg, 1995; Kunst, Groenhof & Mackenbach, 1998; Kunst & Mackenbach, 1994a; Kunst & Mackenbach, 1994b; Lahelma et al., 1994; Siddiqi & Hertzman, 2007; Mackenbach et al., 2000; Marmot, Kogevinas & Elston, 1987; Vagerö & Lundberg, 1989; Wagstaff, Paci & van Doorslaer, 1991; van Doorslaer et al., 1997; Marmot, et al., 1991; Antonovsky, 1967; Houweling et al., 2001). Figure 10 provides an example of socioeconomic gradients in language scores for several South American nations (Willms & Somers, 2000).

Figure 10: Socioeconomic gradients in stunting among three Andean countries



Among ECD outcomes, children's physical health and development is the domain that has shown perhaps the weakest association with SES. In large part, this is due to the combined phenomenon of research being concentrated among the resource-rich nations, and a low burden of chronic physical illness or death among children in those countries. One exception is the strong indication that SES is associated with exposure to lead and the incidence of asthma in wealthier

[1] There are also "gradients" observed for other social characteristics, most notably race/ethnicity. These are thought to be in large part due to inequalities in SES patterned by race/ethnicity. The scope of the current discussion is limited to SES-based gradients.

nations, particularly the USA (Litonjua et al., 1999; Weitzman, Gortmaker & Sobol, 1990; Guralnik & Leveille, 1997; Ernst et al., 1995). By contrast, as studies begin to accumulate in resource-poor nations, the gradient effect for illnesses and death becomes evident. Several recent studies have found a striking association between SES and under-5 mortality in resource-poor countries (Razzaque, Streatfield & Gwatkin, 2007; Houweling et al., 2005). Moreover, it is particularly compelling that the gradient effect is asserting itself even in countries which are traditionally defined only in terms of abject poverty (Houweling et al., 2005). Also of note, the same study suggested that, among these nations, socioeconomic inequality in child mortality was increasing (i.e. that the gap was widening) as the overall economies were growing.

In the cognitive domain, SES has been linked to school enrollment, mathematics and language achievement and literacy, and educational attainment. Although most of these studies involve older children and adults, there is data to demonstrate the effects of SES on young children's cognitive development outcomes. Much of this data is derived from research conducted in the USA and other resource-rich nations (Smith, Brooks-Gunn & Klebanov, 1997) but there is also evidence from investigations in resource-poor nations. In particular, the gradient effect of SES on reading literacy among fourth-graders was clearly demonstrated in the Progress in International Literacy Study (PIRLS), which involved a sample of 43 nations, many of which could be characterized at the lower end of the world economic spectrum (Williams, 2006). In Zimbabwe, cognitive performance as measured by children using taxonomic versus functional classification strategies was associated with social class. A host of studies have also found that language proficiency is associated with SES in young children (Bradley & Corwyn, 2002). Compared with cognitive development, socio-emotional development shows a less consistent association with SES. In part this is due to the fact that psychological phenomena are difficult to assess in children. In very young children, there seems to be an absence of an SES gradient in socio-emotional development. However, in middle childhood, there is relatively strong evidence of SES gradients, particularly in externalizing behaviours (Bradley & Corwyn, 2002).

There are also some exceptions to the general pattern of SES gradients in which health and development outcomes improve with improved SES. For example, gradients in obesity for some nations suggest that wealthier individuals are more likely to be obese (Lawlor et al., 2005). In addition, a recent study found that childhood insulin resistance appeared to be more prevalent among children with wealthier and more educated parents in Estonia and Portugal (Lawlor et al., 2005). Notwithstanding these examples, it is clear that the gradient effect is the major pattern that describes the relationship between socioeconomic resources and ECD.

2.5 Characteristics of socioeconomic gradients

Across the remarkable body of evidence on health outcomes throughout the life-course, there are five main common characteristics of SES gradients:

1. ***Within a population the effect of SES is generally continuous or stepwise***, such that each additional increment of SES results in additional gains to health and development (though not strictly true in all contexts). There are successive improvements in these outcomes from lower

to higher socioeconomic levels in society. The gradient effect can be conceptualized as a roughly linear relationship for the purposes of this discussion (see Figure 10). The continuous nature of the relationship is best illustrated by comparing it to a threshold effect. A threshold effect would imply a dichotomous relationship within a society, based on the assumption that one level of health/development is associated with being "rich" and another with being "poor". In contrast, the gradient effect describes a situation in which degrees of change in health and development are associated with degrees of change in SES (Siddiqi & Hertzman, 2007). The gradient effect thus challenges many commonly held beliefs and policy solutions, which tend to be based on absolute notions of poverty, and instead casts poverty in a relative perspective (Foster, 1998).

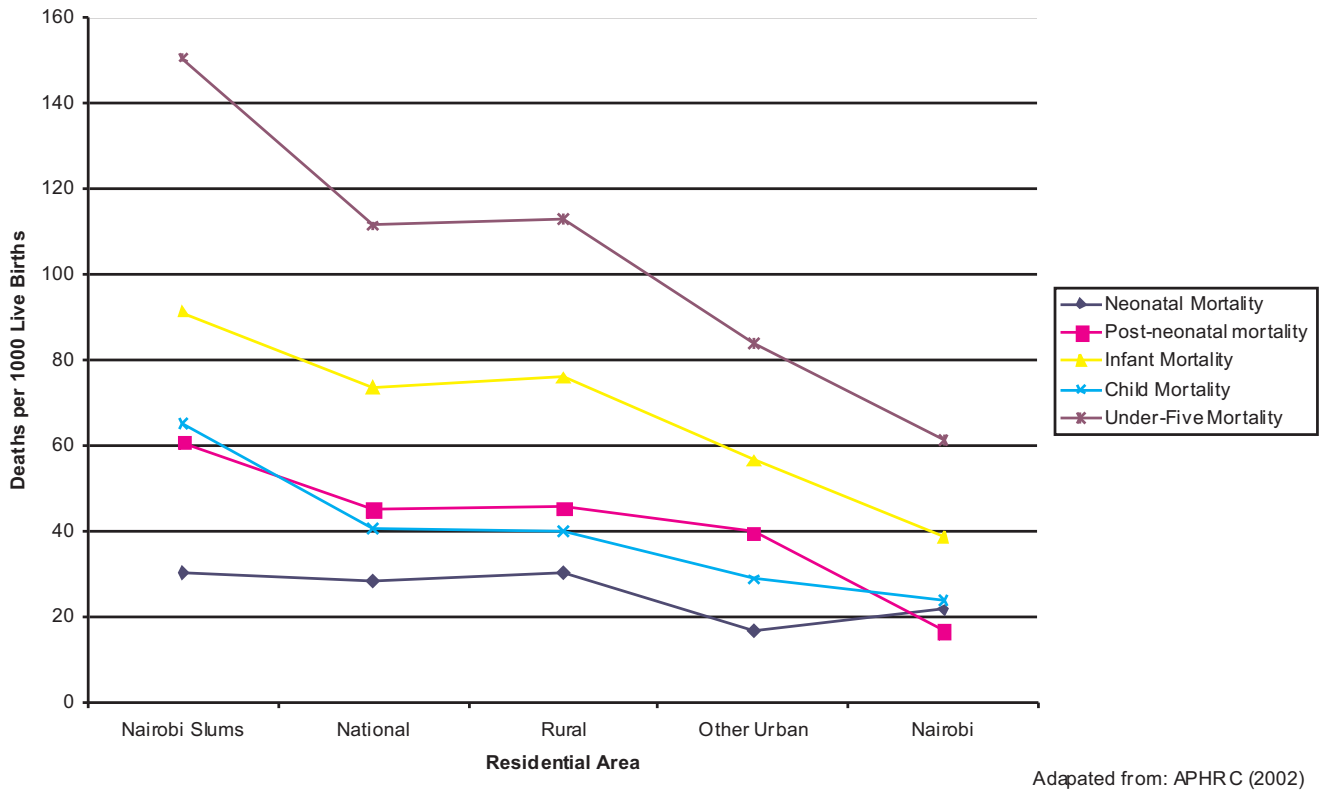
2. ***SES gradients in health and development are evident in every country in which they have been measured***, including countries in widely different stages of socioeconomic development. Therefore, irrespective of the position of any nation on the "world's socioeconomic spectrum", poverty thresholds (though important) do not adequately characterize the relationship between individual/family socioeconomic conditions and health. Even in countries with widespread severe deprivation, degrees of improvement in socioeconomic circumstances are associated with degrees of improvement in health and development.

   This is well illustrated in resource-poor nations where socioeconomic gradients extend even to "slum" living conditions. In Kenya, neonatal, infant, child, and under-five mortality rates are highest among those who reside in Nairobi's urban slums. However, this is not a threshold effect, and as Figure 11 shows, there appears to be a clear gradient effect by residential location (urban versus rural versus slum), albeit minimally for neonatal mortality (APHRC, 2002). A similar pattern emerges for diarrhoea rates among children aged 0-35 months, with rates of 32% for slum children, 17% for rural children, and 13% for children in Nairobi (Mugisha, 2006). Remarkably, even *within* slum areas in Nairobi and rural areas of Kenya, there exist socioeconomic gradients in diarrhoea rates (Mugisha, 2006).

   This is not to minimize the profound ill effects of poverty as it is commonly understood. Rather, it illustrates that there is no clear division in well-being between the "haves" and the "have nots", even in nations where those living in extreme poverty and those in extreme wealth seem worlds apart. People's resources and welfare are separated by incremental differences and they are more connected to each other than a solely poverty-based approach might suggest.

3. ***The SES gradient effect represents a causal link from SES to health.*** It cannot be attributed to reverse causation or differential mobility (Goldman, 2001; Benzeval & Judge, 2001). Early on, the evidence base for socioeconomic gradients in health mainly came from cross-sectional studies, which led to considerable ambiguity regarding the "direction" of the association between SES and health: did declining health status result in downward social drift (due to loss of employment and income), or was low SES responsible for ill health? Subsequent studies have shown that the overwhelming portion of the relationship represents a “causal” link from SES to health rather than the converse. This was demonstrated by different methods, including longitudinal studies (Benzeval & Judge, 2001), and the finding of a consistent association

Figure 11: Socioeconomic gradients in infant and child mortality in Kenya



Adapated from: APHRC (2002)

1. van Doorslaer E et al. (1997). Income-related inequalities in health: some international comparisons. Journal of Health Economics, 16(1):93-112.

2. Beaujot R & Liu J (2002). Children, Social Assistance and Outcomes: Cross National Comparisons, Luxembourg Income Study Working Paper Series N° 304.

between educational attainment (a measure of SES that is usually obtained prior to measurement of health) and health outcomes (Feinstein, 1993). Further, for children's outcomes, it highly unlikely or plausible that poorer developmental health is the cause of declines in family SES.

4. ***Across populations or societies, the "steepness" of the gradient (i.e. the strength of the linear association) is not uniform.*** The patterns that emerge when SES gradients in different societies are examined concurrently are illustrated in Figure 10; the lines are not exactly superimposed, suggesting that the additional gains to health from increased SES are greater in some societies than in others. This in turn indicates that, across nations, differences in health outcomes at high levels of SES are much smaller than at lower levels. The cross-societal perspective provides insights into the role of societal policies and institutions for ECD, and

provides a broad societal context for the role of family socioeconomic conditions as determinants of ECD Those societies with a "shallow" SES gradient (indicating less socioeconomic inequality in developmental health) do not achieve greater equity by "pulling down" the health of the high SES groups, but rather by "pulling up" the health of the lower groups.

It then also follows that the average health of "shallow gradient" societies tends to be better than that of "steep gradient" societies. International comparisons have shown this for the development of literacy and numeracy skills across OECD countries (OECD, 1995) and for health status across the European Community (van Doorslaer et al., 1997; Grantham-McGregor, 2007). Thus it is characteristic of SES gradients that those societies which produce the least inequality in health and human development across the socioeconomic spectrum have the highest average levels of health and development. This pattern is sometimes referred to as the "flattening up" of the SES gradient (Hertzman et al., 2001).

5. ***The arrangement or ordering of nations according to the steepness of their socioeconomic gradients (and average well-being) appears not to be random.*** That is, although they have been poorly studied to date, there seem to be systematic differences in institutional arrangements between those societies in which the SES gradients in health and development are steep, versus those in which they are shallow. There is no necessary, or predictable, level of health or development associated with any given position on the socioeconomic spectrum (as described in the fourth point, above). As such, health and development at any given socioeconomic position is highly dependent on the extent to which SES is tied to ability to procure health-promoting resources and, conversely, the extent to which SES serves as a sorting mechanism for "exposures" that are harmful to health. It can be argued that societies which are nurturant for all children (and adults) are those whose institutions work to break these ties and to provide resources as a right, rather than according to socioeconomic status. It is in this way that societies succeed in fostering equity of ECD and health equity throughout the life-course.

2.6 The fundamental influence of societal conditions

The thesis that societal factors are fundamental to the expression of socioeconomic inequalities (gradients) in health and development is also supported by another line of reasoning: that if socioeconomic inequalities are critical for health, then so are the societal conditions that create these inequalities. The extent of socioeconomic stratification that exists in society is not innate. Rather, it is strongly influenced by actions and inactions taken by societies that, cumulated over time, become embedded in institutions. Most of the evidence in this regard arises from research on resource-rich nations. The notion is powerfully illustrated by contrasting child poverty rates in these nations before and after taxes and transfers are accounted for. Data from the Luxembourg Income Study demonstrates that, based on market income (*i.e.* prior to taxes and transfers), poverty rates across OECD nations for lone parents are consistently high, with a range of 32% in Italy, to a shocking 80% in the Netherlands. However, after redistributive measures were applied by governments, the rate for lone mothers was reduced to approximately 10% in many OECD nations,

with a low of 4% in Germany. By contrast, the poverty rate for lone mothers in the USA remains at 60% (Beaujot & Liu, 2002).

It is difficult to separate the roles of institutional arrangements in reducing socioeconomic inequality, and in undoing the link between a given level of socioeconomic resources and health status, since they may function in a reciprocal manner. That is, reductions in income inequality provide public support for increases in systems that distribute resources in an egalitarian manner, and the egalitarian distribution of resources in turn may reduce levels of socioeconomic inequality (Kawachi, 2000). From the perspective of creating societies that support ECD, an imperative of future research is to understand which institutional features promote socioeconomic equalities in ECD and which detract from it. The next section of this chapter describes a framework that identifies and organizes what is known to date about the aspects of societies that provide the most nurturance for the most children and families around the world.

3. Total Environment Assessment Model of Early Child Development (TEAM-ECD)

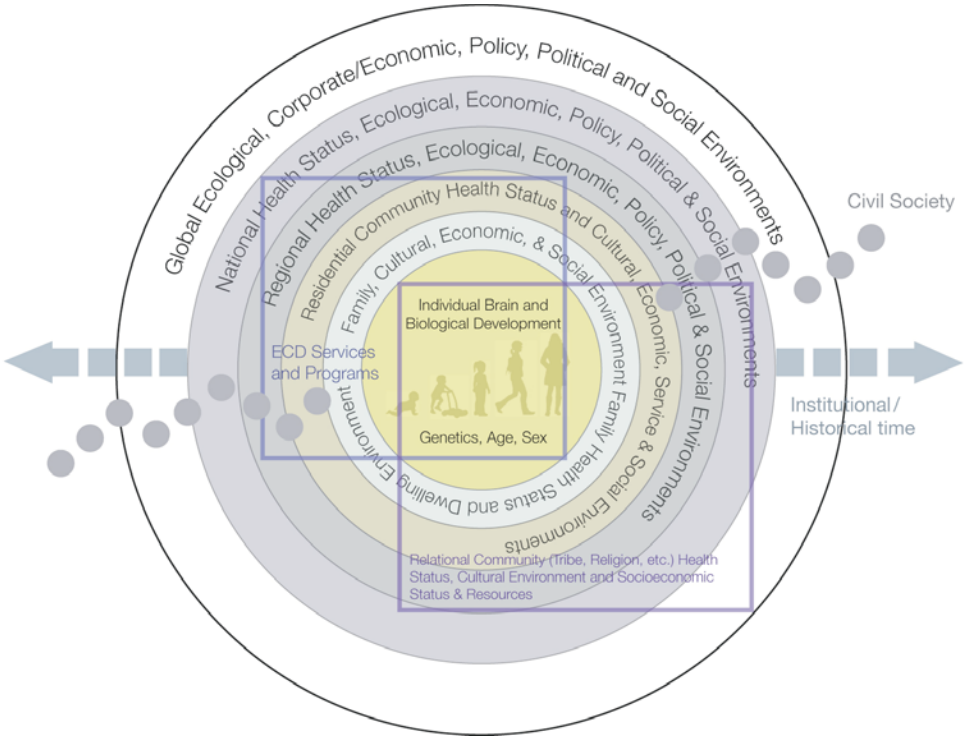
The Total Environment Assessment Model of ECD (TEAM-ECD) was developed to understand the environmental conditions that provide the most "nurturant" experiences for ECD. There are several ecological models of health and human development that have preceded TEAM-ECD, including the Whitehead/Dalhgren "sunrise" model (Dahlgren & Whitehead, 1991) and Bronfenbrenner's ecological model of child development (Bronfenbrenner, 1979). TEAM-ECD is rooted in the Bronfenbrenner model, with modifications based on a global approach to ECD and the feedback of the WHO Knowledge Network on ECD. It has several unique features which are discussed below. Briefly, TEAM-ECD describes in detail aspects of the broader macro-environment (regional, national, and global) while explicating their relation to more micro-environments (e.g. family and community). TEAM-ECD also includes contexts that are not necessarily defined spatially, such as relational communities and ECD services.

It is the intention of TEAM-ECD to frame aspects of the environment that are *universally* important for providing nurturant conditions and the interdependence between these environments. However, it is not the intent of the model to suggest a singular, unique set of factors that characterize nurturance. Rather, TEAM-ECD focuses on the types of *resources (both social and economic)* in each environment that enable families and communities to create nurturance for children in accordance with local contexts and realities. TEAM-ECD thus provides a means for understanding how to bring about global equity in children's well-being.

3.1 Overview of the model

The complete model is shown in Figure 12. Each sphere or square represents an environment. Of note, environments are defined in geographic *and/or* in social terms. Interdependence is shown through the overlap (rather than strict hierarchy) of environments. Civil society actors are organized at and act upon every level of society, and thus are depicted as traversing all environments.

Figure 12: TEAM-ECD **m**odel



Temporality is also incorporated in two respects: historical time refers to the gradual building-up and or/tearing down of nurturant conditions (particularly salient at the institutional/policy levels), while changes in the child over her/his lifespan are represented by the growing person at the centre of the model. These changes are induced primarily through the process of biological embedding described above.

3.2 The role of the family

The family is the primary influence on a child's development (UNICEF, 2007), both because family members interact most with the child, thus providing the most stimuli, and because they moderate the extent to which children are exposed to other environments in which the child is embedded (Richter, 2004). As discussed above, familial social and economic resources are perhaps the most salient aspect of the family environment and have been associated with a diverse array of children's outcomes (Siddiqi et al., 2007; Houweling et al., 2005; Brooks-Gunn, Duncan & Mariato, 1997). Children born into poor families are more likely to be exposed to and affected by conditions that are adverse for development (DiPietro, 2000). The power of socioeconomic resources is primarily rooted in two interconnected aspects of family life: the material resources (e.g. housing, child care, nutritious foods and the like) that families can provide for themselves and for children, and the influence these resources exert on the quality of relationships between children and their primary caregivers. We focus here on the latter.

A key requisite for healthy development during the earliest years is the presence of "secure attachment" to a trusted caregiver with consistent caring, support, and affection early in life (Francis et al., 1999). Securely attached infants and toddlers use their emotional and physical security as a base from which to explore their environment. Successful attempts at exploration increase the child's self-confidence and encourage further exploration. Compelling experimental evidence of this phenomenon comes from studies of rats, which show that the more "nurture" provided by the mother (as exhibited by handling, licking, and suckling) results in better physiological regulation of the baby, in particular with respect to functioning of the adrenocortical axis, which in turn results in diminished glucocorticoid secretion in response to stress, and less neuronal loss in the hippocampus as they age (Francis et al., 1999).

Social and economic resources enable families to foster this fundamental bond between parent and child. For instance, parents with low levels of literacy and education may have a compromised skill-base with respect to forms of bonding; feeding and breastfeeding practices (which have many benefits for children) are known to vary by SES (Smith et al., 2003). SES can also influence the bonding process through its effects on parental stress. Lower-income parents have been found to be at increased risk for a variety of forms of psychological distress, including negative feelings about self-worth and depressive symptoms (Shonkoff & Phillips, 2000). It is thought that this arises through a combination of greater exposure to negative life events and having fewer resources with which to cope with adverse life experiences. Physical illness among parents is also a pressing concern with respect to ECD. HIV infection in the adult population is a major issue globally, and disproportionately affects those of limited means. Further, the effects on children have extended well beyond bonding and include contracting the infection themselves, and the phenomenon whereby children sacrifice schooling to take up adult roles such as care-giving for ill parents and siblings (Heymann, 2006; Richter, 2004).

These insights suggest that an optimally nurturant family environment is facilitated by providing families with access to a range of services such as parenting and caregiver support, quality child care, primary health care, and basic education. The family also requires economic protection such as the guarantee of a "living wage" or its equivalent, and social protections that enable the balance of work-life and home-life.

3.3 The role of the residential community

Children and their families live in localities or residential communities which have enormous disparities. The majority of research on the influence of localities has been conducted in the urban neighbourhood context in resource-rich nations. However, this evidence base also provides insights for resource-poor nations and suggests avenues for further research in other contexts.

The pertinent features of a residential community include the economic, physical, service, and social environments (Kawachi & *Berkman*, 2003). Inequalities in these residential characteristics result in inequalities in ECD through their influence on the ability of children and families to access quality goods and services from their immediate surroundings. The economic environment of a locality is critical for the well-being of children, and has been linked to better school readiness and

school achievement in younger children, as well as fewer externalizing behaviours, less aggression reported by peers, less delinquent and criminal behaviour, and less peer rejection in older children (Leventhal & Brooks-Gunn, 2000).

The economic environment of a neighbourhood is also heavily linked to the physical, service, and social environments. There is a clear inverse association between the economic status of a community and the extent to which its residents will be exposed to toxic or otherwise hazardous materials such as solid waste, air pollutants and poor water (Evans & Kantrowitz, 2002). The financial resources of neighbours also bear directly on the extent of services available in a residential community. These include institutions and facilities for learning and recreation, child care, medical facilities, access to transportation, food markets, and opportunities for employment (Leventhal & Brooks-Gunn, 2000).

Finally, the social environment of a neighborhood is also associated with its degree of economic stability. The underpinning for exploring the social environment of neighborhoods comes largely from the concept of social capital (Coleman, 1988; Bourdieu, 1984; Putnam, 2000). The premise of this notion is that there are social properties of communities that deserve distinct characterization, over and above an individual's social relationships (Coleman, 1988). This includes the extent to which there is reciprocated exchange of services and other forms of support between individuals. Recent research suggests that neighbourhoods rich in such social resources may be able to buffer some of the ill effects of socioeconomic deprivation (Kershaw et al., 2006).

3.4 The role of the relational community

Relational communities are central to the lives of most people in the world. People belonging to the community may or may not be geographically linked. Rather, these communities are defined by commonalities in religion, race/ethnicity or tribe, or other socially recognized characteristics. Such bonds offer many forms of social support for children and families, including informational, emotional, and instrumental (which refers to tangible goods and services) support.

Relational communities are often a main mechanism through which child rearing practices and other norms regarding child health and development are transmitted. Occasionally, a community's child rearing practices may conflict with prevailing norms of the larger society, the laws of the state, or with universally recognized human or child rights. The Indian context provides an illustration in this regard. In some areas of India, there is a common belief that babies should not be fed colostrum, so that breast feeding does not begin immediately after birth as recommended by WHO (WHO, 2001). Another example is the internationally widespread phenomenon of denying children of single mothers the right to have their births registered - a clear violation of the right of the child (UNICEF, 2002).

These issues are not easy to resolve, particularly when they are considered in the broader context in which they occur. Female genital mutilation (FGM) is another potent example. FGM causes immediate physical and long-lasting psychological trauma in girls and women (Toubia, 1994) and was affirmed as a violation of human rights by the Sixty-first World Health Assembly in resolution

WHA61.16 in 2008. Yet the practice continues because of the cultural beliefs about female sexuality and marriage of some relational communities (Amnesty International, 1997). In some localities of several African nations, the ability of parents to find husbands for their daughters (which itself is tied to the economic and social sustainability of families) is said to be compromised if they have not been circumcised (Toubia, 1994). By no means is this a justification of the practice, rather it calls attention to the fact that resolving such an issue requires understanding and attending to cultural contexts and practices *in their entirety*.

It is also important to acknowledge the potential adverse effects of social bonds within relational communities. In many circumstances, the interconnections between members of a community (known as bonding social capital) are not replicated in connections between communities (known as bridging social capital) (Szreter & Woolcock, 2004). This may result in inequities between communities, particularly when power differentials exist between groups, as is often the case. Research from Sweden demonstrates that recently arrived immigrants are far less likely to participate in civic activities (such as union meetings and meetings of other organizations) than their Swedish-born counterparts. Lack of social participation may have several consequences for families (and thus for children), including feelings of disempowerment, compromised access to information and services, and lowered general trust in society at large (Lindstrom, 2005).

3.5 The role of the ECD services environment

Innumerable benefits accrue from programmes and services that directly target the cognitive, social, and physical well-being of young children. Economic analyses have now well established that investments in early childhood are the most powerful investments in human development that a country can make, with returns over the life-course many times the original amount. ECD programmes foster and promote the quality of human capital, thus facilitating the creation of a more competent work force (Knudsen et al., 2006; Schweinhart, 2004; Schweinhart, Barnes & Weikart, 1993). The competencies and skills fostered through ECD programmes are not limited to cognitive gains, but also include physical, social, and emotional gains, all of which are determinants of health, thereby contributing to economic and social well-being over the life- course (Carneiro & Heckman, 2003; Cleveland & Krashinsky, 1998). Unfortunately, however, in every nation there are inequities in access to quality ECD programmes, with the poorest children experiencing the least access, despite having the greatest need (UNESCO, 2007).

As governments, international agencies, and civil society groups organize ECD programmes and services, three factors are critical to consider: structure, process, and nurturance. *Structure* of programmes includes the extent to which staff has appropriate training and expertise, staff:child ratios, group size, and quality of the physical environment where services are being delivered most notably attention to safety considerations. *Process* refers to issues such as staff stability and continuity, and relationships between service providers, caregivers, and children (Goelman, 2003; NICHD, 2002; NICHD, 1996). Nurturance is cultivated when programmes are designed to encourage exploration, a rich and responsive language environment is established, development of new skills is guided and extended, the child's developmental advances are celebrated, and protections from inappropriate discipline are in place (Ramey & Ramey, 1998).

Health care systems (HCSs) are in a unique position to contribute to ECD services at a population level, given that HCSs are concerned with well-being and are a primary contact for child-bearing mothers. In many instances, health care providers are the only health professionals with whom families come into contact during the earliest years of a child's life and they reach the majority of children in a community. When HCSs are used as a linkage point, health care professionals can be highly effective in promoting ECD. HCSs can serve as a platform for information and support to parents around ECD (such as the importance of early stimulation); they can integrate ECD into existing programmes such as Integrated Management of Childhood Illness, Care for Development, and Accelerated Child Survival and Development (UNICEF, 2007). The most sustainable ECD services are those that are built on existing infrastructure, particularly HCSs.

The overall ECD objective is to provide universal access to inclusive, appropriate quality services and programmes that offer and promote strongly nurturant conditions. Local, regional, and national governments, with the support of international agencies and civil society partners, must be the key players in developing, promoting, and funding ECD programmes and services that meet this goal.

3.6 The role of regional and national governments

Many interrelated aspects of regional environments are significant for ECD, including the physical (e.g. degree of urbanization and health status of the population), the social, the political and the economic environments. These aspects of the regional environment affect ECD through their influence on the family, community, and ECD services. The role of government is discernable both through direct evidence, but as well as from an inescapable extension of logic; that is, if socioeconomic conditions at the family and community levels matter, then so too do the societal factors that create the conditions (and inequalities in the conditions) themselves (Siddiqi et al., 2007).

Governments, particularly at the national level, should be held responsible for guaranteeing the rights to which they are obligated through their signing of the Convention on the Rights of the Child (CRC), and the Millennium Development Goals (MDGs). In practice, this means putting in place policies to alleviate disparities in the socioeconomic conditions in which disparities in ECD are rooted. This includes, but extends well beyond policies regarding ECD services per se; investing in ECD requires implementing child- and family-friendly *social* policies.

> The most comprehensive review to date of social policies in relation to cross-national inequities in child welfare identified five primary policy domains of significance (Kamerman et al., 2003): income transfers (cash and tax benefits); employment policies; parental leave and other policies to support maternal employment; early childhood education and care services; and prevention and other interventions related to teenage pregnancy and births.
>
> Additional evidence from the Nordic nations also suggests that societies which implement policies supportive of families with two earners have better child health outcomes (Lundberg et al., 2008). Reporting obligations under key international

conventions, such as the CRC, the International Labor Organization Global Reports, and the Convention on the Elimination of All Forms of Discrimination against Women can be effectively used as levers for change.

3.7 The role of the global environment

It is often difficult to characterize the global environment, let alone its influence on children. However, we suggest here that the major way global actors can influence ECD is through their effects on domestic policies. A major feature of the global environment is the element of power in economic, social, and political terms. Power differentials may compromise the ability of some nations (usually those which are resource-poor) to enact policies that are favourable for ECD. Efforts to enable nations to gain independence over their own futures, and encouragement of multilateral organizations to favor policy directions that benefit children, are major elements in promoting ECD globally.

A well-known set of policies implemented in many resource-poor nations in the 1980's and early 1990's was the Structural Adjustment Program (SAP) of the World Bank and International Monetary Fund. Briefly, SAPs involved increasing privatization and decreasing the role of the government in many aspects of national economic and social endeavours, including reducing investments in social welfare programmes such as education and health care. In general, the direction taken by these policies is antithetical to the types of social investments mentioned in the preceding section. As time has progressed since the arrival of these massive structural overhauls, evidence suggests that they have had a substantial negative influence on children (directly or indirectly) in the areas of survival, immunization, prevalence of health attendants, nutrition, and balanced urbanization (Bradshaw et al., 1993).

The global environment is also characterized by important declarations that have tremendous influence on children's well-being. In particular, the new General Comment #7 (GC7) of the CRC on Implementing Rights in Early Childhood (GC7) creates opportunities to hold "state parties" responsible for the physical, social/emotional, and language/cognitive development of young children. The establishment of GC7 also provides an incentive for the global community to build a global ECD measurement system analogous to the existing global measurements of other indicators of health and human development such as mortality rates, stunting, and the Human Development Index. Measurement enables national and international recognition of the scale of ECD challenges, and facilitates formation of credible international goals. The very act of measurement has led to recognition of problems in these other areas of well-being, and can have the same effect for inequities in ECD. Creating a global measurement system to monitor ECD needs to be an essential component of every nation's ECD strategy (Young & Richardson, 2007).

4. Policy proposals for action

A set of policy proposals identified by the ECDKN as having the potential to improve and strengthen equity in ECD are listed below. These apply to the most distal environmental spheres (the

global, national, and regional) and to the most intimate (individual and family). While most of these proposals are intended to be applicable to any national government, a few are directed to specific international organizations or bodies that are seen to possess substantial responsibility or to have particular potential for action.

4.1 Global, national and regional environments

1. *Governments should adopt a strategy of investing in early child development in order to meet the Millennium Development Goals for poverty reduction, education and health.*

2. *The WHO and the international community should model ways to promote an understanding that the MDGs will only be achieved if ECD is addressed seriously.*

3. *The World Health Organization should strengthen its commitment to ECD as a key social determinant of health and health equity throughout the life-course.*

4. *Local, regional, and national governments should incorporate the "science of early child development" into policy.*

5. *Governments should build upon established child survival and health programmes to make ECD programmes accessible through existing platforms, such as the health care system.*

6. *Governments should create an inter-ministerial policy framework for ECD that clearly articulates the roles and responsibilities of each sector and how they will collaborate.*

7. *Governments should integrate ECD policy elements into the agendas of each sector to ensure that they are routinely considered in decision-making across government.*

8. *Governments need to develop strategies for "scaling up" effective programmes from the local to the national, without sacrificing the characteristics of the programmes that render them effective.*

4.2 Civil society, residential and relational communities

1. *Governments should involve local communities in developing and implementing ECD policies, programmes, and services.*

2. *NGOs should form a consortium to ensure broad dissemination of the science of ECD in conjunction with social marketing campaigns.*

3. *Civil society groups should take a primary role in initiating government, NGO, and community action on social determinants of ECD at all levels, but especially at the level of the residential and relational community. At these levels, civil society is well positioned to advocate on behalf of children to ensure that governments and international agencies adopt policies that positively benefit children's well-being.*

4. *Civil society groups should be instrumental in organizing strategies at the local level to provide families and children with effective delivery of ECD services; to improve the safety, cohesion, and efficacy of residential environments; and to increase the capacity of local and relational communities to better the lives of children.*

4.3 The family

1. *All families need some level of support to learn how to develop and apply sensitivity and responsiveness in their childcare practices.*

2. *Families must have access to resources that enable them to make choices and decisions in the best interests of their children, including services such as parenting and caregiver support, quality childcare, primary health care and education.*

3. *There should be universal public provision of quality, affordable childcare. This is part of the solution to the global problem of work-life/home-life conflicts.*

4.4 The child

1. *Improving the quality of children's day-to-day experience through relationships needs to be a primary goal of all initiatives regarding parenting, childcare and monitoring rights in early childhood under the CRC.*

2. *One of the most efficient strategies for improving ECD is simply to find ways to convince parents and caregivers of the importance of play and the ways they can promote it.*

3. *Parents, caregivers, and societies must share the responsibility to provide children with warm, responsive environments that protect them from inappropriate disapproval and punishment, allow opportunities to explore their world, to play, and to learn how to speak and listen to others.*

5. Areas for further research

The results of the ECDKN analysis show that gaps remain in the body of knowledge required to make effective change for ECD. Two primary directions for future areas of research are proposed:

1. The effects of environments on biological embedding and ECD. In particular, there is a need to focus on broader environmental factors such as policies, and the manner in which they interact with more intimate settings such as the family and neighborhood.

2. Identification of effective strategies, from grass-roots to global level, for providing nurturant conditions to all children everywhere. This should include not only strategies for each environment, but also approaches that facilitate interactions between various environments. For example, what are the processes through which local communities can best be supported by governments and international agencies? In this way, research

should address the goal of a "grass-roots to global" child-centered social investment strategy.

In addition, more research about ECD in resource-poor nations is necessary in order to account for the specific social and economic phenomena that occur in the context of national economic insecurity. For example, ECD outcomes in the context of slums have not been explored in any notable way. The consequences for ECD of living in conflict zones and in nations with high prevalence of premature adult mortality (e.g. nations experiencing high rates of HIV/AIDS) are also necessary components of the ECD research agenda.

In sum, current understandings indicate that ECD is essential for the health and well-being of individuals throughout the life-course, and for the economic and social success of societies. It is therefore essential to broaden the base of evidence from which strategies can be developed to enable universal access to the conditions that are nurturant for ECD and will foster equity of ECD outcomes.

6. Conclusions

Nurturant conditions. A child requires nurturant conditions to thrive. Environments from the intimate realm (e.g. family and community) to the distal (e.g. national and global contexts), interact with biological characteristics to determine a young child's developmental trajectories in the physical, language/cognitive, and social/emotional domains. Inequities in child development result from inequities in access to nurturant environments. Further, inequities that manifest in the earliest years persevere, resulting in inequities in health and human development throughout the lifespan; early nurturant conditions are critical for well-being.

Support for families. In order to provide nurturant environments for their children, all families need social and economic support from community and government. The quality of support received by families should be included as part of the reporting criteria under the CRC. The overall goal for nation-states is to provide universal access to a range of services including parenting and caregiver support, quality childcare, nutrition, social protection, primary healthcare and basic education. To be effective, these services are best coordinated at the regional or national level, and delivered in a manner that is mindful of each local context. Children also benefit when national governments adopt child- and family-friendly policies that guarantee adequate income for all, and allow parents and caregivers to balance their time spent at home and work.

Government and community roles. Much of the necessary intersectoral coordination can be achieved through the creation of an interministerial policy framework for ECD that clearly delineates the roles and responsibilities of each sector and how they will collaborate. However, community involvement is also critical to the success of ECD programs, and thus governments should involve local communities in developing and implementing ECD policies, programmes and services. One key strategy is for governments to find ways to "scale up" programmes that are known to be of high quality and efficacious at the local level.

Advocacy for ECD. To achieve a global consensus on the importance of ECD, there is a need to foster a broader and more profound understanding of what the implications of ECD are for the well-being of children and across the life-course. This is best done through a social marketing campaign that expands to include audiences not traditionally thought of as ECD stakeholders, but are very relevant: finance and planning departments of governments, the corporate sector, and media. In addition, because of its global responsibility in population health, WHO should strengthen its commitment to ECD as a key social determinant of health, most notably by embracing the developmental perspective articulated here for all of its health programmes.

Interdependent responsibilities. Nurturing the development of children requires true social responsibility, from the family to the global community. Further, the ability of each environmental sphere is very much dependent on the support it receives from the others; families require communities and governments to do their part, governments require the assistance of global entities. Realizing and acting upon these interdependencies is the underpinning for the establishment of a child-centered social investment strategy.

Key messages

From the evidence collected by the ECDKN, the following key messages are proposed:

1. *A broader and more profound understanding of what is involved in ECD needs to be disseminated to a much wider audience than in the past.*

2. *Governments, international agencies and civil society should recognize that the agenda to improve child survival and health is indivisible from the agenda to improve early child development; survival, health and development are equally fundamental to the well-being of children and societies.*

3. *A developmental perspective on children's well-being that includes, but is not limited to, issues of survival and health will produce policies that use a population-based approach that addresses fundamental causes, rather than an approach that is limited to measures for those children at highest risk.*

4. *Governments must recognize that effective investment in the economic and social welfare of children and families is the cornerstone of human development and central to the successfulness of societies.*

5. *Creating a global measurement system to monitor ECD needs to be an essential component of every nation's ECD strategy.*

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6 Urban settings: our cities, our health, our future

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1. The urban health situation: An overview

Where people live and work affects their health and their chances of leading flourishing lives. The urban setting was therefore the focus of the Knowledge Network on Urban Settings (WHO Centre for Health Development, 2008) that prepared evidence for the WHO Commission on Social Determinants of Health (CSDH, 2008). Urbanization represents the growth of towns and cities, defined as the process of increasing size and density of a population in a fixed geographical environment. At the end of the 19th century, less than 3% of the world's population lived in towns and cities. Now, more than half of the world's 6.7 billion inhabitants live in urban areas. By 2015, an estimated 564 cities around the world- 425 of them in low- and middle-income nations- will each have more than one million residents (UNFPA, 2007).

Urbanization is not inherently or necessarily a negative force. It can be a positive determinant of health in the appropriate circumstances. History has shown that urbanization has been a promoter of development when rural economies and agricultural productivity could no longer support

[1] With contributions from Kirsten Havemann, Susan Mercado, and other members of the Knowledge Network on Urban Settings (KNUS).

population growth. Urban areas can provide a healthy living environment through their various materials, service provision, and cultural and aesthetic attributes (Kirdar, 1997). The improvements over the last 50 years in mortality and morbidity rates in highly urbanized countries like Japan, Sweden, the Netherlands and Singapore are testimony to the potentially health-promoting features of modern cities.

While urbanization can be a force for development, the growth of cities and the concentration and migration of populations into urban areas challenge global and local infrastructures and resources, the environment and health. Despite positive opportunities offered by cities, poor management and governance, inadequate infrastructure, and failure to develop policies that promote equity, collectively tend to magnify the effects of poverty, inequity and unhealthy conditions in urban communities.

Emerging challenges of urbanization include growing income inequality, economically-lagging regions, and issues related to growing regional and global economic integration. Additionally, in an effort to improve their living conditions, people in disadvantaged regions pour into urban areas for job opportunities, leading to the rise of urban poverty and associated social problems. The dynamics of cities, with their concentration of the poorest and most vulnerable (even within the industrialized world) pose an urgent challenge to those actors who want to improve health across the social gradient. Whether its impact is beneficial or detrimental to health depends on the context, the conditions, and the level of organization in which urbanization takes place. Thus, it is important to understand how urbanization influences health matters and agendas.

1.1 Purpose of this chapter

This chapter provides a summary of the KNUS report (WHO Centre for Health Development, 2008; Kjellstrom & Mercado, 2008) and a related overview of what is known about social determinants of health in urban settings. General guidance and examples of effective interventions for improving health equity in urban settings are provided. That being noted, the work of the KNUS may be equally relevant to rural settings.

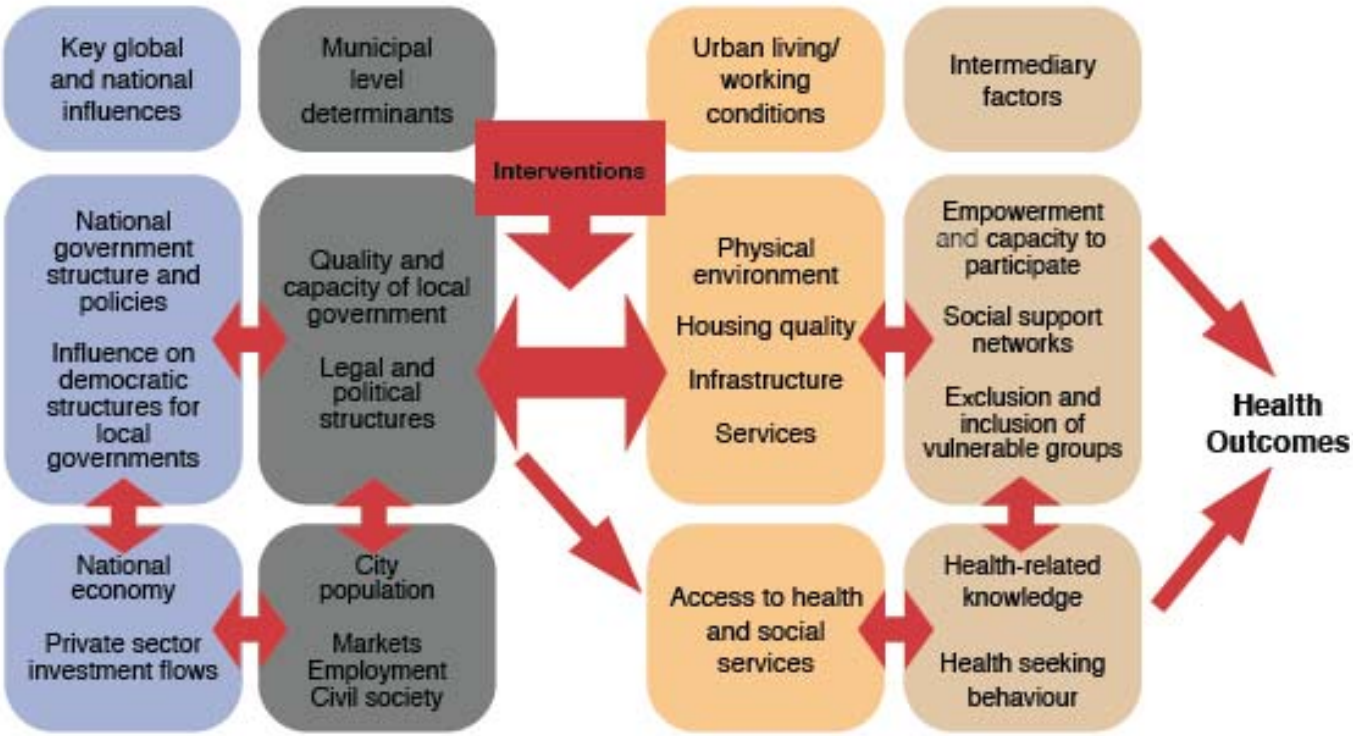
2. Conceptual framework

In the conceptual framework for analysing and acting on the social determinants of health presented in Chapter 1, the environment in which people work and live contributes to health outcomes through differential exposures, vulnerabilities and consequences. This component of the framework includes material circumstances; health-related behaviors and biological factors; social cohesion/social capital; psycho-social factors; and health systems. Socioeconomic position (e.g., power, prestige, and resources) primarily works through these intermediary factors to produce health inequities.

2.1 Framework for urban health

Further extending this framework by making potential actors explicit, the core concept on the pathway from determinants to ill health in the urban context (Vlahov et al., 2006, see Figure 13) is that the physical and social environments that define the urban context are shaped by multiple factors and multiple stakeholders at various levels (Ompad et al., 2006). Global trends, national and local governments, civil society, markets and the private sector all shape the context in which local factors operate. Thus, interventions in the urban setting must consider determinants that express themselves at global, national and municipal levels and should strive to influence both urban living and working conditions as well as intermediary factors that include social processes and health knowledge. Interventions can also work upwards to influence the key global, national, municipal and local drivers. The health sector has an important role to play in advocating for government approaches to health, urban policy and planning, strengthening local government responses to

Figure 13: A conceptual framework for urban health



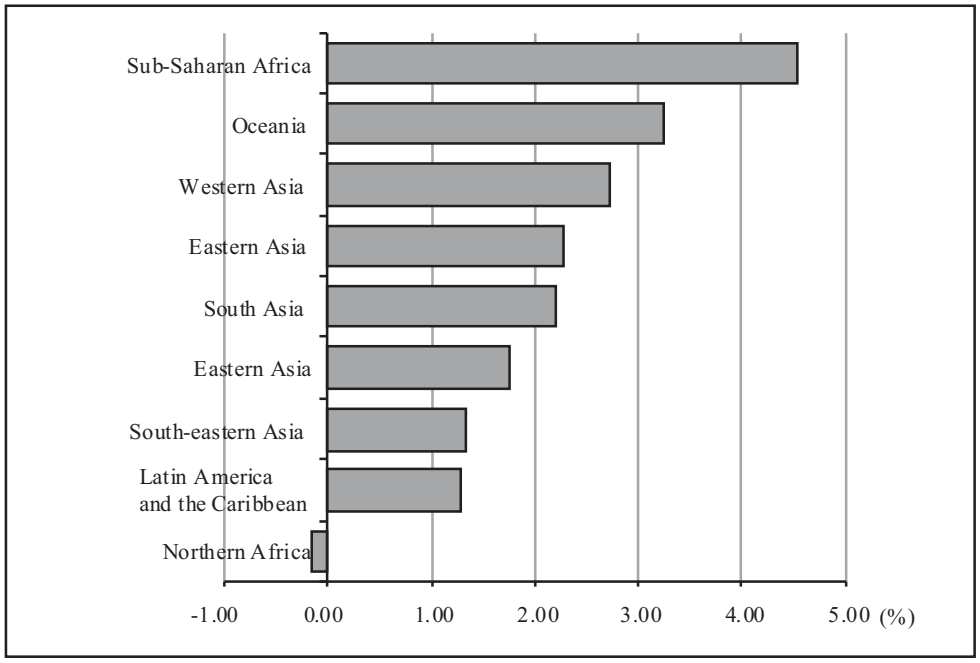
emerging health needs and the promotion of healthy settings (such as through Healthy Cities in Europe, the Americas and the Western Pacific Region; Healthy Villages in Africa; and Community-Based Initiatives in the Eastern Mediterranean Region).

3. Key issues and challenges to health equity in the urban environment

3.1 A strategic focus on slums and informal settlements in the urban setting

Failure of governance in today's cities has resulted in the growth of informal settlements and slums in urban areas that constitute an unhealthy living and working environment for one billion people (Garau, Sclar & Carolini, 2005). According to the 2003 Global Report on Human Settlements (WHO & UN-HABITAT, 2003), 43% of the urban population in developing regions live in slums. In the least developed countries, 78% of urban residents are slum dwellers. The percentage of urban people living in slums varies regionally (among the most affected regions where such figures were supplied) between 25% in eastern Asia (including China) and 72% in sub-Saharan Africa (Figure 14). It is no coincidence that the regions of the world with the fastest growing urban populations are also the regions with the highest proportion of slum settlements it is one of the most iconic illustrations of the relationship between unmanaged urban growth, poverty and ill-health.

Figure 14: Annual growth rate of urban people living in slums, 1990-2001



Source: UN-HABITAT, 2003

Slum dwellers currently face health challenges which are often similar to those faced by the poor in past centuries, despite the availability at the global level of knowledge and the means to eliminate unhealthy living conditions (WHO Centre for Health Development, 2005; Mercado et al., 2007). This is of major political relevance as it is evident that most differences can be avoided by adopting a social determinants of health approach to urban development.

3.2 Environmental health threats in the home, neighborhood, and the wider urban area

The primary issues that affect the health of urban residents are environmental concerns such as air and water pollution, sanitation, solid-waste management, and the lack of living space that compounds these problems (Kjellstrom et al., 2007). For example, poor drainage in urban areas is an ongoing problem both in developed and developing countries. Large amounts of rain and storm water need to be diverted from residential areas, and flooding is a major risk if drainage is not carried out efficiently. High population density in urban areas also creates an increasing problem with regard to disposal of solid waste. In addition, vector-borne diseases such as dengue and urban malaria have also been found to be increasing in many towns and cities due to migration, climate change, stagnant water, insufficient drainage, flooding and improper disposal of solid waste (Yassi et al., 2001).

The quality of outdoor air in cities is compromised, especially in slum areas, due to the presence of factories and heavier vehicular traffic, the disruption of air circulation by clustered buildings, and ventilation closed off by houses cramped into small, unplanned neighbourhoods. Together, these are conducive to the spread of respiratory and other diseases (Bruce et al. 2000; 2006). Moreover, absence of open areas and greenery makes urban air vastly inferior in quality to that of rural areas. Similarly, indoor air within households can be tainted, even poisoned, by the burning of solid fuels (Smith, Mehta & Feuz, 2004). The inefficient burning of solid fuels on traditional stoves indoors creates a dangerous cocktail of hundreds of pollutants, and the dilemma that it poses (a cooked meal in exchange for noxious air) is aggravated in more confined urban settings, and compounded by higher risks for fires and burn injuries.

The urgent need to create more living space often encourages haphazard construction using cheap materials and unsafe methods. Families with little income may live in buildings built with substandard and fire-prone materials, poor foundations and in hazardous locations. Urban houses are more prone to extreme heat, poor ventilation, and are often inhabited by multiple families. Moreover, the poor settle on marginal lands that are more prone to floods, landslides and fire but have little or no infrastructure to deal with these hazards.

Unhealthy living conditions compromise early child development, adversely affecting the growth of young children, their nutritional status, their psychomotor and cognitive abilities, and their ability to attend school. Consequently, these factors can affect future earning capacity and raise susceptibility to chronic diseases later in life (Case, Fertig & Paxson, 2003; Keusch et al., 2006; Irwin, Siddiqi & Hertzman, 2007). Additionally, unhealthy urban living conditions can increase the risk of communicable disease, noncommunicable disease and injuries (Sheuya, Howden-Chapman & Patel, 2006). The Canadian Institute for Health Information (CIHI, 2004) found strong causal relationships between ill-health and exposure to some biological, chemical and physical agents, such as lead, asbestos and radon, house dust mites and cockroaches, temperature extremes and poor ventilation, and multiple family dwellings. These factors are relevant in countries of all income levels.

3.3 Working conditions

Urbanization is generally associated with poor working conditions in a large informal sector including cottage industries, child workers and sex workers (EMCONET, 2007). Deprived urban areas

and informal settlements are often a mixture of living places and workplaces. These workplaces can create health hazards due to the use of toxic products, injury risks, noise and traffic. In slums, the unhealthy and unpleasant conditions often lead to ghetto-style segregation, with the poorest living close to their workplaces in the worst-affected areas. Social inequality is a key feature of these types of workplaces and living conditions, leading to social strife and clashes between economic classes. The multifaceted health hazard panorama of workplaces has been described in detail in numerous reports and books (e.g., Levy & Wegman, 1988; Stellman, 1998). In low-resource settings, workplaces are often just as poorly planned and zoned. Major disasters have occurred in metropolitan areas because dangerous industrial processes were taking place in or near residential areas. The 1984 Bhopal gas disaster in India that killed 2000 people and poisoned more than 200 000 (Dhara & Dhara, 2002) is one of the more infamous examples.

More economic activities, without appropriate controls, lead to more frenetic and less managed riskier and more hazardous environments, with the result of the urban poor often living in unsafe conditions. Increased economic activity also creates demand for more transportation, which can also negatively impact health through increased pollution of the environment and traffic accidents. For example, urban areas have the highest rate of road accidents in all countries and the most fatalities in low- and middle-income countries. (Lopez et al., 2006; Pope & Dockery, 2006; Kjellstrom et al., 2006, WHO/World Bank, 2004).

3.4 Health systems in the urban environment

Access to affordable health care in urban settings is a key health equity issue. Accessibility to services in urban settings is linked more to inability to pay rather than proximity to facilities. The ability of the rich to afford tertiary hospital care while the poor only has access to government-funded services, which is often limited and poorer quality, creates a double standard of care. Many urban poor would rather borrow money and go into debt to seek treatment for serious illness from a private care provider that has a reputation for quality, rather than risk maltreatment, humiliation or death in local government health centres (Lee et al., 2006). Moreover, urban health care systems are often ill-equipped and under-resourced to handle emergency conditions (e.g. acute chemical or pesticide poisoning, drug intoxication, poisoning, gun-shot wounds, maternal haemorrhage or trauma).

3.5 Other urbanization-related health outcomes

Other simultaneously causal factors and results of the urban environment include: crime and violence, mental illness, loneliness, depression, substance abuse, road traffic injuries, rural-urban migration, the exploitation and marginalization of migrants, and climate change. All of these tend to have greater incidence and impact in cities, emerging as both causes and effects in a cycle of social problems. The living and working conditions in cramped urban settlements (e.g. unsafe water, unsanitary conditions, poor housing, overcrowding, hazardous locations and exposure to extremes of temperature) create increased health risks, sometimes greater than those confronting rural citizens. This is especially true among the urban poor and vulnerable sub-groups, including women, infants and very young children, the elderly and the disabled.

Chronic stress and easy access to harmful products in the urban setting create additional risks for substance abuse and dependency. Physically deteriorated urban areas with concentrations of young, unemployed males are more prone to substance abuse (Resnick, Ireland & Borowsky, 2004; Allison et al., 1999). Such abuse is more common in areas where there is physical violence, where social disorder is abundant, collective life is unregulated and residents are not investing in their property, while local authorities are not investing in or maintaining public areas.

There is a growing body of evidence to show urban predisposition for mental health problems. For example, community-based studies of mental health in low- and middle-income countries show that 12-51% of urban adults suffer from some form of depression (Blue, 1999). The underlying causes and risk factors for poor mental health in urban areas are linked to lack of control over resources, changing marriage patterns and divorce, cultural ideology, long-term chronic stress, exposure to stressful life events and lack of social support (Harpham, 1994). Among the urban poor, the lack of financial resources and high costs of living, harsh living conditions, and physical exhaustion from lack of convenient access to transport are examples of conditions that contribute to sustained and chronic stress and predispose individuals and families to mental health problems.

Moreover, in all but the poorest settings, urban populations are experiencing adverse, "obesogenic" shifts in dietary composition, which are "taking place at a much higher speed than potentially beneficial changes: there have been relatively little changes in levels of fruits and vegetables, but very large increases in edible oils, ASFs (animal source foods) and added sugar and caloric sweeteners over short periods of time" (Mendez & Popkin, 2004). There are numerous reasons for the urban nutrition transition (Dixon et al., 2006) and these include enhanced access to non-traditional foods as a result of lower prices, changing production and processing practices, trade, and the rise of supermarkets and hypermarkets.

3.6 Gender and women's health

Women, children, and disabled people face particular disadvantages and vulnerabilities in the urban setting. As the conceptual framework in Chapter 1 sets out, groups marginalized by structural inequities, i.e. migrants, women, children and the disabled, are more exposed to health threats in cities than others. The consequences of illness for these groups tend to be more extreme, with worse access to primary, secondary and tertiary health services when needed. Moreover, the difficulties faced by women and children are closely interlinked.

Children's needs can be compromised when urban poor women have to struggle to manage households, childcare and work demands (Cornia, 2001). In urban as in rural settings, women are usually the ones who cope with and compensate for weak infrastructure by fetching water, gathering firewood and buying food and other resources for the home. Consequently, urban poor children are often left to fend for themselves. Schools, which may be inadequate and inaccessible, come low in their families' priorities. Children take to the streets to beg or make money by selling cigarettes, food, flowers or trinkets, and become susceptible to exploitation, crime, road accidents, violence, smoking, drinking or substance abuse. For young urban females, the vulnerability to exploitation and abuse is magnified. Prostitution and sexual abuse are relatively frequent in urban settings (Hubbard &

Sanders, 2003), as are HIV and AIDS and other sexually transmitted diseases. UNAIDS (2006) estimates that the average urban HIV prevalence is 1.7 times higher than it is in rural areas, and that the prevalence is also considerably higher among girls than boys.

3.7 The health of vulnerable groups and marginalization

Migrants are often the first and most numerous inhabitants of slums. Driven out of one community to another, the ethnically, culturally, or religiously defined population groups can all too easily find themselves in ghettos, still far removed from the opportunities they seek, and potentially suffering from racial or linguistic discrimination as well as non-resident, non-tenured status. Also, people with disabilities such as blindness, deafness, and paraplegia are likely to be vulnerable to health threats associated with social exclusion or discrimination. Such vulnerability may be most pronounced in urban areas due to the challenges related to high population density and unsuitable living environments (e.g. high staircases, road curbs, intense traffic), as well as lack of social support. Moreover, slum dwellers and informal settlers may face stigma and social exclusion by living in a settlement for which there are no official addresses. They may not be able to vote, register, or get their children into government schools or access other entitlements (Garau, Sclar & Carolini, 2005). They are easily missed and undocumented in the national census and in health surveys. With no official status, the urban setting further lowers their ability to gain control over their own conditions, society's resources, and the often unmanageable environment that burdens their lives and health.

3.8 Building healthier environments

While still exposed to traditional health hazards related to poverty, unemployment, malnutrition, poor shelter and inadequate environmental and social services, the urban poor are also more exposed to hazards related to modernization, unhealthy urbanization and pollution, while the lack of social support systems in cities, combined with social exclusion, increases the risk of mental health problems (Kjellstrom et al., 2007; Barten, Mitlin et al., 2008). The urban setting exacerbates and complicates a number of public health challenges across a range of social issues from air pollution to workplace hazards, from illicit drug use, violence and crime, to the emerging problem of obesity due to the pervasiveness of inappropriate foods or lack of facilities and areas for exercise. Because the urban environment is a product of a web of factors and interventions (or lack of interventions), specific investments in improving it will likely bring both direct and indirect benefits. Improving water, sanitation, housing, and air quality leads directly to improved physical well-being and ultimately has an impact on employment, productivity, education, social opportunities, and even peace and order.

In low-income regions, the benefit of a US$ 1 investment in improved water supply has been estimated to have an impact valued from US$ 5 to US$ 28 (Hutton & Haller, 2004). Clean water affords people better health, better food, more sanitary households, healthier children, and more productivity in work. Likewise, efforts to lower air pollution in cities lead to a range of healthy developments that are not always obvious or expected. For example, it has been found that cleaner air encourages more people to walk or use bicycles, so that they both contribute to and benefit from clean air. More walking and cycling also mitigate against the lack of opportunity and space for

exercise. In shantytowns, encouraging residents to shift from burning biomass and charcoal to more efficient modern fuels, such as kerosene, liquid propane gas and biogas, not only brings about large reductions in indoor smoke, it also cuts the amount of fuel needed, minimizes the risk of fires and burns, and can result in cost savings.

4. Opportunities for action to improve health in the urban environment

The challenges described thus far in the KNUS report (WHO Centre for Health Development, 2008) and in this chapter are complex and interrelated. Economic, environmental and sociopolitical factors combine to produce and aggravate inequities in urban health. Nevertheless, the main message to urban reformers in the KNUS report is that specific policies and interventions are possible in every type of setting and can result in improved urban health and development that benefits people across the social gradient. Based on evidence gathered from around the world, successful policies and interventions have a common thread; they have tackled urban governance and the politics of power, participation, equity, decision-making, and empowerment. Improving urban settings is not only about what is done but also how it is done; urban governance coupled with increasing social capital and empowerment of communities are pre-conditions for success. Thus, a broad spectrum of interventions across the opportunities for action, listed below, is required to create healthier cities.

4.1 Opportunities for action include:

- Adequate leadership and capacity in all sectors and at all levels in planning, policy formulation and infrastructure investments.
- Strengthening social cohesion within urban communities by providing opportunities to build social capital.
- Organization and empowerment of communities to enhance their capabilities to act, including education and deliberations with people concerning their own environment, risks, rights, responsibilities and capabilities.
- Promotion of healthy communities through provision of safe drinking water and sanitation, improved energy supply and air pollution control, and healthy housing.
- Promotion of good nutrition and physical activity and creation of safer and healthier workplaces.
- Effective actions to prevent and mitigate social ills such as urban violence and substance abuse.
- Organizing and financing more equitable health systems within urban settings.

4.2 Promoting "healthy" urban governance, management and planning

Better housing and living conditions, access to safe water and good sanitation, efficient waste management systems, safer working environments and neighbourhoods, food security, and access to services like education, health, welfare, public transportation and child care are examples of social determinants of health that can be addressed through good urban governance (WHO Centre for Health Development, 2008). In the urban setting, governance is "the sum of the many ways individuals and institutions, public and private, plan and manage the common affairs of the city" (UN-HABITAT, 2002). Good governance is an essential prerequisite for accommodating all of these urban setting changes. Ensuring good governance requires attention to trust, reciprocity and social accountability mechanisms in both centralized and decentralized systems (Burris et al., 2006). To support the one billion people who live in informal settlements today (and to avoid the projected doubling in the number of people living in such conditions in the next 25 years), bold steps are needed to improve urban governance so as to promote and facilitate improvements in the social determinants of health.

Empowered and enlightened leadership at all levels (i.e., local, national, and international) is just as important as the identification of good policies. For good governance, there is a need to raise the education and capacity of formal leaders at every level of decision-making, including an appreciation of the value of having an organized citizenry enabled to participate in community building. National government institutions need to equip local governments with the mandate, powers, jurisdiction, responsibilities, resources and capacity to undertake "healthy urban governance". Good governance can have a positive impact on urban health even before top-down spending and investments take place. Simply by recognizing the power of planning, and by setting priorities and directions, good governance practices can begin to change, protect people's lives and promote health.

Based on the evidence collected from around the world, elements identified by the KNUS (WHO Centre for Health Development, 2008) for building good governance include:

1. Assessing the urban context to understand how urbanization itself affects social and health issues.

2. Identifying stakeholders, clarifying the people, groups and organizations that have interest and control over urban health concerns and factors.

3. Developing the capacity of stakeholders to take action and build social capital and social cohesion to affect policy change.

4. Assessing institutions and creating opportunities to build alliances and ensure intersectoral collaboration, since it is institutions that determine the frameworks in which policy reforms take place, and can safeguard such improving policy environments.

5. Mobilizing resources necessary for social change. This may require redistribution of resources that increase social justice and accountability.

6. Strengthening the demand side of governance: assessing and ensuring people's participation from the organizational and legal perspective; taking into account their need and right to have access to information; and the need for government transparency and social accountability.

7. Advocacy for scaling up and policy change to relevant stakeholders at different levels.

8. Monitoring and evaluating of process and impacts, starting from the early stages of planning.

While this chapter focuses on urban issues, it does not imply that rural health equity and any rural-urban gaps in health development are less important than urban health equity.

National and subnational governments should collectively address the push-pull factors behind rural-urban migration, urban sprawl, “boom cities” and other contexts that are stimulated by related processes.

4.3 Social capital and cohesion - empowering the people

Typically, cities are subject to the power of higher government bodies that determine to a considerable extent municipal resources and power for action. To be successful, the community itself needs to be driving the agenda, whether it is in a slum area or a more affluent neighbourhood. Social capital and cohesion are key resources to promote health equity in urban contexts. Social capital is the stock of connections among people - the trust, mutual understanding, and shared values and behaviours that bind members of human networks and communities empowering them to make cooperative action and participation possible (Cohen & Prusak, 2001:4). Social cohesion is the process of developing shared values, shared challenges and equal opportunities within a community. Social capital and cohesion can generate the conditions necessary for mutual support and care; the mechanisms required for communities and groups to exert effective pressure to influence policy structures; and a firm base for urban health equity interventions and programmes that build stronger communities. Moreover, social capital allows communities and citizens to compensate for weak and dysfunctional government.

Thailand has invested heavily in the Community Organizations Development Institute (CODI), which over the years has demonstrated the power and potential of organized communities (Boonyabancha, 2005). CODI is a government agency formed in 2000 through the merging of the Urban Community Development Office (UCDO) and the Rural Development Fund. As such, its aim is to help the urban and rural poor alike. Among other initiatives, the institute channels government funds in the form of infrastructure subsidies and housing loans directly to community organizations formed by low-income informal settlers. The members of the community plan and carry out improvements to their housing, water and sanitation, and sometimes develop completely new housing. The CODI experience in Thailand is exemplary for the level of community involvement, and

the extent to which it seeks to institutionalize community-driven solutions within local governments. It is also significant that it draws funds almost entirely from domestic resources.

In India, the Committee of Resource Organizations formed a network with other like-minded organizations to provide technical support, research and advocacy to its urban members. These services have enabled members to access better housing. In South Africa, a group-based microfinance scheme that combined with a participatory learning and action training programme has helped to raise household incomes and widen options for services (Pronyk et al., 2006).

Such examples show clear benefits to recognizing the value of social capital as part of a wider health and social sector programme (Pridmore et al., 2006). The examples of citizen empowerment described demonstrate how an urban society can mobilize its residents as active stakeholders in the improvement of their environment. Governments at all levels can encourage and facilitate such community involvement. Initiatives to strengthen social capital for health should be part of a broader, holistic, social development process. Programmes could be specifically targeted at enhancing the social capital/cohesion of communities using a social educational approach, sharing knowledge and skills and intervening in sectors that are considered relevant for improving health in urban settings and especially for vulnerable population groups.

4.4 Enabling healthy settings and healthy cities

"Healthy Settings" refers to places and social contexts that promote health, and is a relevant approach for improving health in neighbourhoods and communities. Building on the work of WHO in the 1980s, (e.g. the Ottawa Charter for Health Promotion (WHO, 1986)) the Healthy Settings approach has been applied to cities, municipalities, villages, marketplaces, schools, hospitals, prisons, restaurants and public spaces. The mechanisms to do so require pro-health policies and actions at the community level, that align at regional, national and global levels, supported by substantial financial resources.

The WHO Healthy Cities programme fosters such policies (see www.euro.who.int/healthy-cities), based on the principles that 1) communities must drive the agenda (Stephens, 1996), whether in slums or more affluent neighbourhoods, 2) governments at all levels need to develop appropriate methods to encourage and facilitate community involvement, and 3) major financial and human resources should be channeled to infrastructure, housing and service developments via government structures. The Healthy Cities concept recognizes that investments in crucial interventions trigger a cascade of other desirable outcomes for urban communities; creating a healthier urban environment involves addressing many structural and functional aspects of urban living; and leadership benefits from the healthy participation of its citizens. Interventions should address the needs for better housing, schools, hospitals, police, places of work and recreation, accessible markets, good roads, adequate drainage and sewage, and making workplaces and other centres of activity safer and more accessible for their intended purpose.

The Healthy Cities approach is apparent in the strategies being adopted by some governments for the management of informal settlements. Traditionally, governments have chosen from four main options in relation to informal settlements: remove, upgrade, prevent, or ignore. Most governments

implement a mixture of these - few have the policy, plans and capability to prevent the development of informal settlements; however, upgrading is recognized as the most effective way to improve conditions in most instances. The advantages of upgrading are both financial and social. It is usually cheaper to build onto or improve existing structures than to construct new ones, and upgrading avoids dislocations that impact people's livelihoods and social networks. Most importantly, upgrading recognizes the importance of the informal economy (and implicitly, "informal housing") for cities' economies. This is crucial given the large proportion of informal workers in urban economies. For example, in Accra, Ghana, the ratio of informal to formal workers is seven to one. In Yaoundé, Cameroon, close to 60% of the population is employed in the informal sector (Sikod, 2001). Over 70% of urban workers in Mali, Uganda, Zambia and Pakistan are informally employed (Urban Resource Centre, 2001).

Acknowledging all communities including informal settlements and slums as potential and actual contributors to local economies further validates the holistic Healthy Cities approach to managing urban areas. Such holistic management benefits individual and societal productivity, which improves people's finances and the community's economy, leading in turn to rewards such as greater food security, more accessible health services and then, in a virtuous circle, to further gains in productivity. With the interplay between empowerment of the people and a more enlightened regime of leadership and policies, cities worldwide see that their financial, social and material investments pay off socially and in these respects, they are more sustainable. Other social interventions (e.g., reducing urban violence and substance abuse, fighting communicable diseases, etc.) become easier to deliver and realize, given an overall environment that is more conducive to positive change.

4.5 Enabling and sustaining more equitable health systems and societies

In order to ensure access to essential health care services, the health system needs to be designed on an equitable basis with resources that are accessible and beneficial to all.

A comprehensive primary health care system can integrate the efforts of different parties and stakeholders within and outside the health sector (Lee et al., 2006). A growing body of epidemiological evidence demonstrates that strong primary health care systems that place families and communities at the heart of the health system and offer integrated services that emphasize health promotion and illness prevention contribute to health equity gains. According to the Knowledge Network on Health Systems, these systems most effectively address health problems predominantly faced by socially disadvantaged groups, offer benefits to these groups by timely intervention which helps detect and prevent co-morbidity and limits the effects of illness severity, and makes services more accessible to them. Wider evidence also shows that strong primary health care systems enable local level intersectoral initiatives and social empowerment that address health needs, even in the face of wider constraints (Gilson et al., 2007).

Optimizing positive determinants and developing synergy between health, the urban environment, governance and society creates and contributes to an enabling environment for more effective and efficient health systems. This would also ensure that all benefits primary health care,

healthy cities, responsive governance, productivity and opportunities are equitable. Where the benefits are adequate and accessible to all, social, political, and material capital is constantly replenished, paving the way for truly sustainable and equitable health systems and societies.

4.6 Resources

Realistically, low- and middle-income countries are unlikely in the near future to be able to provide all the funds needed to ensure a truly healthy living environment for their entire populations. Funding from more affluent countries is needed to implement the plans for healthy environments created by people and governments in less wealthy countries (Sachs, 2005). Substantial experience and adequate resources for the necessary interventions are already available. Financially, with a gross world product of US$ 40 trillion per year, the capital needed to eliminate intolerable living conditions for the urban poor and significantly reduce health inequity is achievable. Notably, US$ 30 trillion of this global economic output comes from affluent countries alone, and this figure has been rising at more than US$ 1 trillion per year. Health and development experts claim that the mobilization of a mere 20% of the annual increase in average economic output of the wealthy nations would be enough to support health equity programmes in low-income countries (WHO Centre for Health Development, 2008). However, most OECD countries fail to deliver on the recommendation to allocate 0.7% of annual GDP to international development cooperation funding, the level never having reached more than 0.36% or US$ 90 billion (OECD, 2006).

In order to implement the MDGs and to support other urgent interventions in low-income countries, it is estimated that at the global level, transfer of approximately US$ 200 billion per year is needed from high-income countries to support health equity programmes in low-income countries. There is evidence that such an investment in equity may result in creating economic returns of much greater magnitude (Yusuf, Nabeshima & Ha, 2006). The question therefore is not whether societies have the material and social capital to effect change, but whether its members and leaders are willing to mobilize and invest these resources towards creating fair and equitable opportunities for health for all people of all nations. Sustained improvement of health equity in urban settings can only be achieved if a global commitment to provide the necessary resources is made.

5. Areas for further research

Data on urban populations, their health, social status and conditions are generally deficient, across high-, middle- and low-income countries. While health conditions in urban areas may be better on average than in rural areas, averages can be deceptive, as they can hide large gaps between groups (see Table 1). Moreover, the health outcomes in urban areas vary drastically. Among urban poor groups, by disaggregating urban data and using intra-city differentials, infant and child mortality rates often approach and sometimes exceed rural averages (Montgomery et al., 2003; Satterthwaite, 2007). Similarly, a simple comparison of rural and urban incomes can be misleading. Average incomes in rural areas are often lower (Montgomery & Ezeh, 2005; Montgomery et al., 2003), but the cost of transporting food and the presence of an affluent minority in cities tends to make the cost of living

higher in urban than in rural settings. The price of other basic subsistence goods such as water and shelter are also generally higher in urban areas, further reducing the purchasing power of urban incomes. The rural poor can often secure such goods outside the cash economy.

Table 1: Infant and under-five mortality rates in Nairobi, Kenya, Sweden and Japan

Location	Infant mortality rate (IMR)	Under-five mortality rate (U5M)
Sweden	5	5
Japan	4	5
Kenya	74	112
Rural	76	113
Urban (excluding Nairobi)	57	84
Nairobi	39	62
High-income areas (estimate)	Likely < 10	Likely < 15
Informal settlements (average)	91	151
Kibera slum	106	187
Embakasi slum	164	254

Note: IMR = deaths per 1000 infants (one year of age or younger); U5M = deaths per 1000 children five years of age or younger) Source: APHRC, 2002.

Quantitative evidence of health inequities within cities is not easily available and more research on this is needed to underpin policy development (WHO Centre for Health Development, 2008:vii). In response, the WHO Kobe Centre developed the Urban Health Equity Assessment and Response Tool (Urban HEART) (WHO Centre for Health Development, 2008) in collaboration with WHO regional offices as well as national and city officials across the world. Urban HEART is a decision-support tool to identify and reduce health inequities in cities. It enables local communities, programme managers and municipal and national authorities to: 1) better understand the unequal health determinants, unequal health risks and unequal health outcomes faced by people belonging to different socioeconomic groups within a city (or across cities); 2) use evidence when advocating and planning health equity interventions; 3) participate in intersectoral action for health equity; and

4) apply a health equity lens in policy-making and resource allocation decisions. There are 6 steps to follow in the Urban HEART process (WHO Centre for Health Development, 2011). Since the launch of the pilot programme in 2008, Urban HEART has been used in cities in 10 countries: Brazil, Indonesia, Islamic Republic of Iran, Kenya, Malaysia, Mexico, Mongolia, the Philippines, Sri Lanka and Viet Nam. A brief documentation of the experience in using Urban HEART in Parañaque City, the Philippines in 2008-2009, provides valuable information (WHO/UN-HABITAT, 2010) as to process and outcomes.

6. A way forward

Rapid and unplanned urbanization presents new challenges for global health and primary health care systems. The processes of contemporary urbanization can be a positive determinant of health in the appropriate circumstance. At the same time, coordinated actions are needed to minimize risks and inequitable distribution of goods, opportunities and rights. The key to improved health equity lies in optimizing urban settings for health. Ensuring that urbanization is beneficial for health and a driver of positive health outcomes requires good governance and community empowerment to achieve collective social action (Kumaresan, 2008).

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7 Employment and working conditions as health determinants

Joan Benach and Carles Muntaner with the EMCONET[1]

1. Introduction

The ways various employment and working conditions affect workers' health is a central area of the social determinants of health (SDH) research agenda. This chapter explains the relationship between how societies structure labour relations, labour/capital agreements and employment contracts, and in turn how these conditions differentially affect workers' health.

Employment conditions and working conditions are two different, yet interrelated concepts. *Employment conditions* are determined by contracts between the employer and the employees. In capitalist economies, most employers hire workers with the intention of creating profits;[2] the worker contributes labour to the enterprise, usually in return for payment of wages. Employment conditions include the power relationship between employers and employees (buyers and sellers of labour) which stipulate payment of wages, working conditions, and the level of social protection that

[1] Members of the Employment Conditions Network (EMCONET) which contributed to the current chapter include: Antía Castedo, Haejoo Chung, Yucël Demiral, Gerry Eijkemans, Il Ho Kim, Michael Quinlan, Javier Ramos, Vilma Santana, Atanu Sarkar, Amit Sen Gupta, Orielle Solar, and Montserrat Vergara.

[2] Exceptions to this would be the public sector and non-profit organizations.

employees can count on. In wealthy countries, employment conditions are subject to the provisions of law or a contract of hire. In low income countries, most employment agreements are not explicitly regulated and a high proportion of total employment takes place in the informal sector. *Working conditions* are related to the tasks that workers perform: physical and chemical environment, ergonomic conditions, psychosocial factors, and the technology being used. Working conditions also include hierarchy and power relations, participation of workers in decision making, as well as workplace discrimination.

Health inequities emergent from these related conditions are closely connected to other kinds of social inequalities such as in wealth, political participation, and education. Thus, through regulating employment conditions, political actors can not only redistribute resources affecting social stratification, but also have an impact on the life experience of different groups of workers and their families, including opportunities for well-being, exposure to hazards leading to disease, and access to health care. Although there is extensive literature on specific working conditions and health (i.e. occupational health), it does not fully cover the social determinants that shape health inequities in relation to employment. It is hoped that this chapter will play an important role in bridging the gaps in knowledge and contribute to a better understanding of the mechanisms leading to health inequities in employment and working conditions. More general information on the global transformation of employment relations as well as detailed information including numerous case studies can be found in the full EMCONET report (Benach et al., 2007).

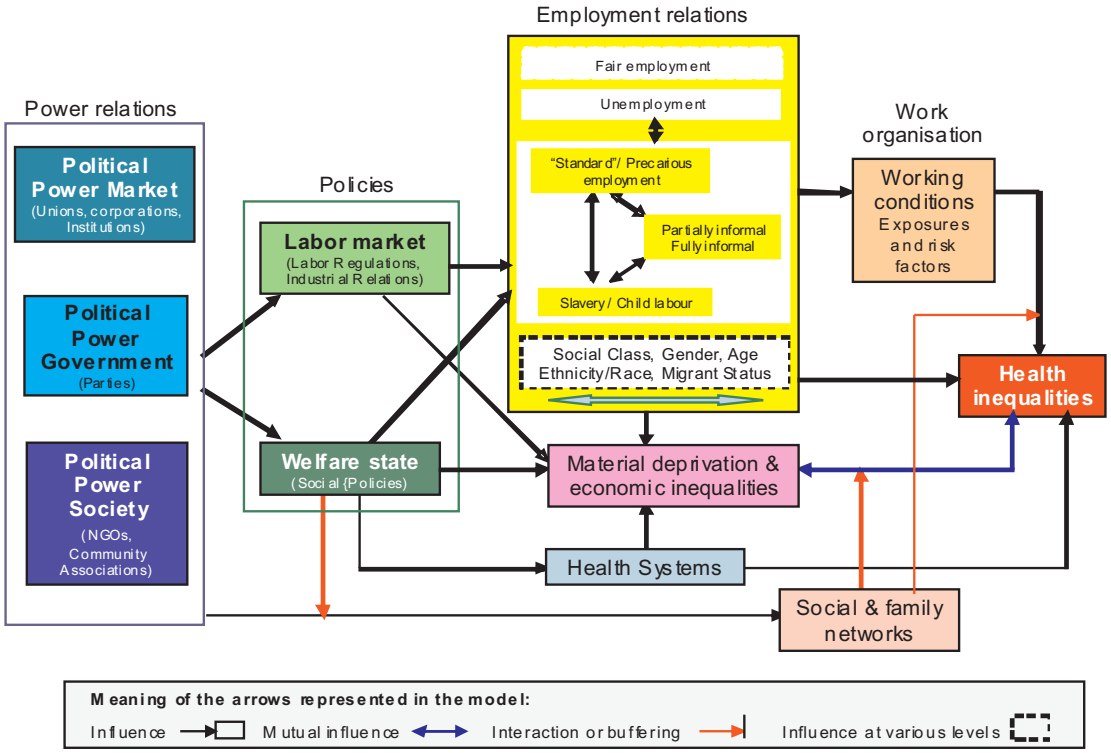
2. Employment relations

This section provides a descriptive overview of employment relations across the world: theoretical models (macro- and micro-structural framework), the relations between markets and welfare states, and an historical perspective on markets (wealthy and "developed" countries versus poor and "developing" countries).

2.1 Employment relations frameworks

Two frameworks based on a single theoretical model have been developed. These frameworks represented in Figures 15 and 16 have two purposes: first, to show the origins and consequences of different employment relations; and second, to illustrate the connection between employment relations and economic and political factors, working conditions, and health inequities. In addition, this theoretical framework of employment relations is extrapolated to typologies of world labour markets and welfare states.

Figure 15: Macro-structural framework of employment relations and health inequities.



Macro structural framework

The macro-structural framework (Figure 15) situates employment relations in their larger national institutional context, determined by social institutions that ultimately respond to a global division of production. That is, it is compatible with a world-system[1] approach (Wallerstein, 1974).

This model explains the effects of the distribution of political power (called "power relations") on health inequities through intermediary forces. In the macro-structural model, the political power holders and their interaction affect health inequities in numerous ways. Their influence over the market is broad ranging, with jurisdiction extending across labour regulations, collective bargaining and unions. They also have an impact on the life experience of different social groups through their influence over access to health care, social services, and the regulation of health hazards (Navarro & Muntaner, 2004).

The next part of the model concerns the balance between welfare state policies and relations in the labour market. These are deeply interconnected. The more protection people receive from welfare state policies, the higher the level of what Esping-Andersen called "decommodification".

[1] The world-system perspective considers the world as a single system, that can be "defined as a unit with single a division of labour and multiple cultural systems" (Wallerstein, 2004).

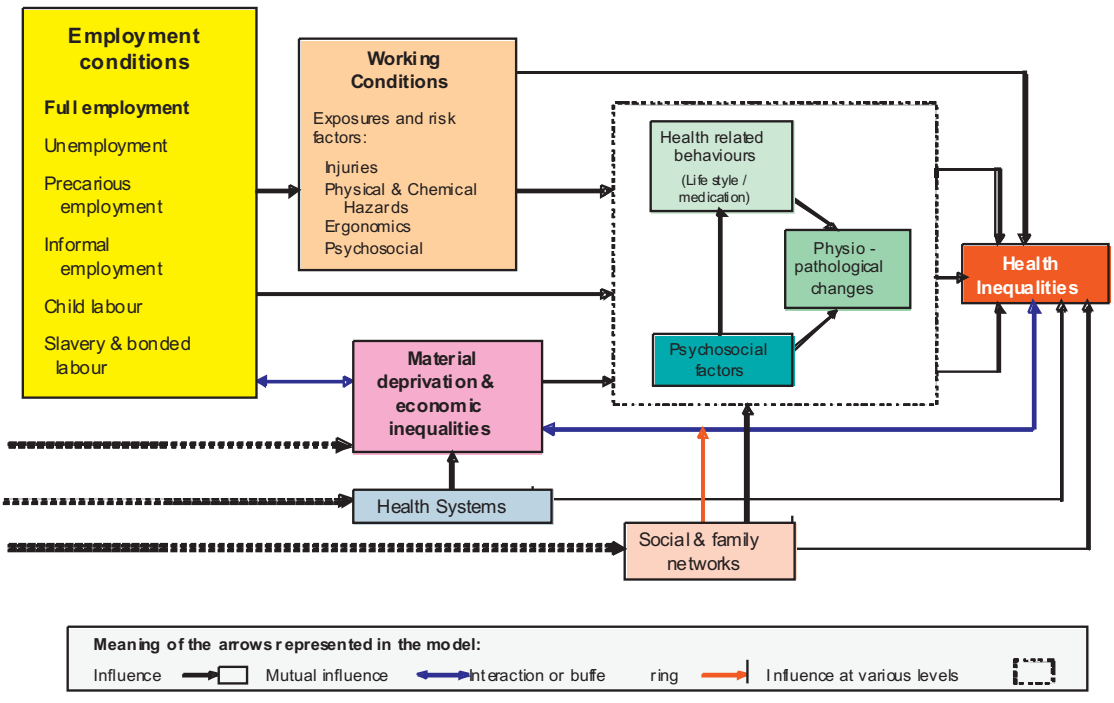
Decommodification is the extent to which workers are able to maintain their livelihood when they find themselves outside the labour market, or in other words out of a job, for one reason or another (Esping-Andersen, 1990).

During recent decades, wealthy countries have experienced dynamic changes in the labour market, characterized by: reduced social safety net for the unemployed and the poor; job losses in the public sector; growth in job insecurity and precarious employment; a weakening of regulatory protections; and the historical re-emergence of an informal economy, including home-based work (Huber & Stephens, 2001a). In poor countries, the reliance on neo-liberal economic policies has resulted in a new model of economic development oriented towards productivity and supplying products to global markets (Stiglitz, 2001). However, irrespective of their income generating effects on communities, the strategies employed mostly include "race to the bottom" working conditions to attract overseas capital and the use of corporate-friendly, low regulatory special export zones (Singh & Zammitt, 2004; Lee, 1997; Drezner, 2001).

Micro framework

The "Micro-Conceptual Framework" (Figure 16) delineates the links between employment conditions and health inequities through three different pathways: behavioural, psychosocial, and physio-pathological. Potential exposures and risk factors are classified in four main categories: physical, chemical, ergonomic, and psychosocial.

Figure 16: Micro-conceptual framework of employment conditions and health inequities.

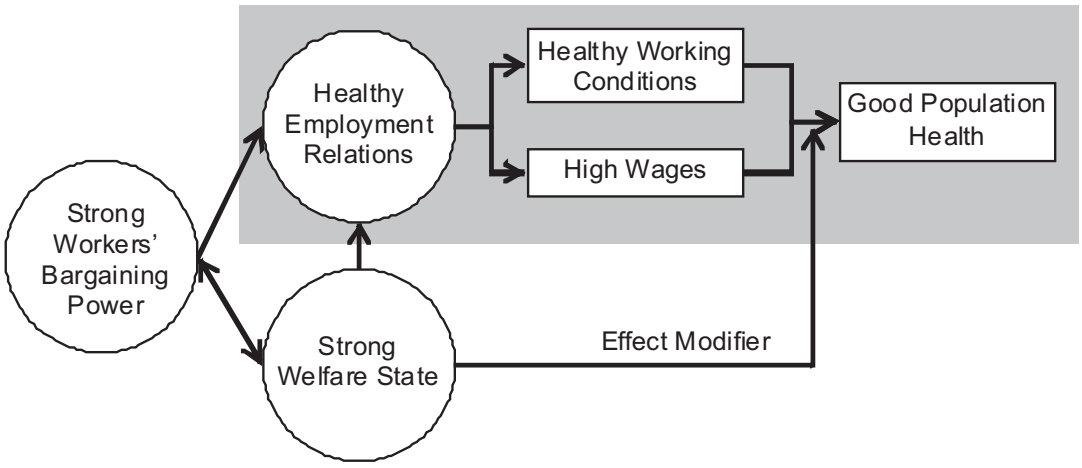


Each risk factor may lead to different health outcomes through different mechanisms. The key specific social mechanisms underlying social class, gender, and ethnicity/race explain how workers are exposed to risk in different ways through different levels of exploitation, domination and discrimination (Muntaner, 1999; Krieger, 2000; Muntaner et al., 2006). Although the profile of risk factors may vary for particular diseases, the social relations (or "fundamental causes") generating work-related health inequities have overarching influence on many diseases (Link & Phelan, 1996). For example, exposures to material deprivation and economic inequalities, such as poverty and low income, poor nutrition and bad housing, are closely related to employment conditions. These factors may have an important effect on chronic diseases and mental health via several psychosocial factors, life-style behaviours, and stress-induced physiological changes (Marmot, 2004).

Employment relations and welfare states

A new research agenda has emerged at the intersection of health policy and social epidemiology, focusing on two political determinants of health (e.g. Navarro et al., 2006; Chung & Muntaner, 2006; 2007; Muntaner et al., 2006). The first of these comprises the political processes in the labour market that give rise to social class. The second involves the welfare state policies that follow from social class conflict.

Figure 17: The relationship between workers' bargaining power, welfare state, employment relations, and health.



In this model (Figure 17), employment relations are at the core of a country's welfare system (Korpi, 1983; Locke, Kochan & Piore, 1995). It represents the interaction between these factors at national level, and the model can also be applied to regional or global levels. Employment relations are a centerpiece of west European welfare states (Esping-Andersen, 1990). They are the result of a "social pact" that cements the power relationship between organized labour (trade union and collective bargaining), government (especially social democratic parties), and business associations. The power of organized labour, usually measured by union density or collective bargaining coverage, varies consistently according to the type of welfare state regime (Chung, 2006), providing an effective means of classifying the type of employment relations. Employment relations are closely interwoven with welfare services. The key to understanding employment relations and their impact on workers' health is to understand workers' bargaining power, which gives them leverage to push for a stronger welfare state and healthier working conditions.

Country typology of employment relations

EMCONET conducted a series of cluster analyses of middle- and low-income countries in an effort to understand the relation between labour market conditions and health (Schneider, 2002; World Bank, 2000; ILO, 1997; WHO, 2006). For high income countries variations of Esping Andersen's empirical typology as applied to the health field were used (Chung & Muntaner, 2007). In order to highlight the interdependence of countries in the global context, the terminology of world-systems theory (core, semi-periphery and periphery) was substituted for that of high-, medium- and low-income according to tertiles of a global national income distribution (Chung, Muntaner, Benach, 2010, Table 1). Countries marked in bold and italics in Table 2 are analyzed in more detail in the full EMCONET report.

The empirical categorization of countries within the world-systems theory reveals two very important distinctions. First, it highlights the difference between labour institutions and informal labour markets. Labour institutions are closely related to the strength of the welfare state (Huber & Stephens, 2001b). In other words, labour institutions are the means by which the state regulates the labour market (e.g. provisions for collective bargaining). Labour institutions, measured through union density and collective bargaining coverage, correlate closely with welfare state regime type in wealthy countries (Chung & Muntaner, 2006; 2007). Informal labour markets emerge in the absence of state regulation (Majid, 2001). Labour institutions and informal labour markets both serve to bring order to an otherwise chaotic marketplace, yet the results are very different. A second conclusion pertains to the labour market in semi-peripheral countries. Union density and coverage are still important, as some have emergent or residual welfare states (e.g. countries of the former Soviet Union), but their effects could not be analyzed due to the small sample size.

Table 2: Typology of countries classified by national economic level and labour market indicators.

	More Equal ←	LABOUR MARKET	More Unequal →
High Income	**Social Democratic Labour Institutions**	**Corporatist Labour Institutions**	**Liberal Labour Institutions**
	Sweden, Denmark, Norway	Germany, ***Spain***, France, Austria	***USA, Canada, Republic of Korea***, the United Kingdom
Medium Income	**Informal Labour Institution**	**Informal Labour Market, more successful**	**Informal, Labour Market, less successful**
	Chile**,** Hungary, Poland, Malaysia	Turkey, ***Brazil, Venezuela***, Russian Federation, Thailand, South Africa	***El Salvador***, Botswana, Gabon
Low Income	**Informal market, more successful**	**Labor market Insecurity**	**Maximum labour market insecurity**
	India, ***Sri Lanka***, Indonesia, Armenia, Pakistan, Bulgaria, Tajikistan, Sudan	***China, Nigeria***, Jordan, Algeria, Morocco, Egypt, Iran	***Ethiopia*****,** Haiti, Ghana, Kenya, Bhutan, Bangladesh, Angola

2.2 An historical perspective on labour markets

It is widely held that the apogee of certain forms of industrial production (Taylorism-Fordism), social provision (welfare states), and public economic intervention (Keynesianism) collectively molded the socioeconomic order of the so-called "golden age of welfare capitalism" in the second half of the 20th century. There are, of course, notable differences between wealthy and low income countries.

Wealthy countries

The expression “mid-century compromise” has been used to describe the socioeconomic order that became established in post-World War II Europe after the implementation of the Marshall Plan until the oil crises of the 1970s. A large portion of the labour force, including low-skilled workers, profited from abundant and stable jobs with acceptable wages and social benefits (Esping-Andersen & Regini, 2001).

The oil crises from 1972-1974 and 1978-1979 sparked a period of economic adjustment that realigned dominant economical-political interests. With an increase in unemployment and a slowdown in productivity during the 1980s, a strong neo-liberal ideological offensive challenged previous wisdom. The acceptance of the overriding need for flexible markets among elite and middle classes as a key to creating employment in competitive contexts legitimized the use of part-time jobs, temporary work, and self-employment. In addition, part-time work was considered a better means of tying paid time to work time, shorter shifts being seen as the solution to unproductive time on the job (Delsen, 1993; Smith, Fagan C & Rubery, 1998). Furthermore, self-employment became a pragmatic option for the unemployed when changes in the labour market prompted mass unemployment (Staber & Bogenhold, 1991).

Low income countries

Despite the growing prosperity of some nations, much of the developing world was confronted with dependency. According to this model, the periphery of the world-system (Wallerstein, 1979) is exploited and kept in a state of relative backwardness by a core of dominant countries that profit from poor countries' lack of sufficient skilled labour and industries to process raw materials locally.

The oil crisis in the early 1970s greatly affected the poorest oil-importing countries, already heavily dependent on oil imports and external aid. Total long-term debt service increased by 29.4% on average (World Bank, 2007). In recent decades, some trends suggest that developing and poor economies have been catching up in economic growth. This is mostly due to China and India, the world's most populous nations. For example, East Asia has seen its share of exports grow significantly (representing 4% of total exports in 1990 and 11% in 2004), while other regions of the world have hardly increased their export participation or have stayed at a poor economic level (sub-Saharan African countries, south Asia, the Middle East, and North Africa). The situation in sub-Saharan Africa and in south Asia is particularly alarming, with 50.9% and 40.4% of the employed population earning less than US$ 1.25 per day respectively (World Bank, 2010).

Agricultural areas have a high level of informal economies, yet contribute upwards of 40% of the global workforce (ILO and FAO, 2011). Informal economies often equate to a paralegal “underground” economy with appalling working conditions and no social security. Child labour is a serious matter of additional concern, given that in some countries of sub-Saharan Africa more than one in three children (69 Million) are workers (Togo, the Niger, Guinea-Bissau, Cameroon, the Central African Republic, and Chad) (UNICEF, 2011). Furthermore, there are important gaps in labour standards, such as in collective bargaining coverage rates (ILO, 2005). Despite some improvement in the reduction of poverty and the number of working poor, developing countries are still locked into the difficult political choice between economic growth and dependency.

3. Employment conditions and health inequities

This section outlines the main employment arrangements and their effects on health-related outcomes.

3.1 Full-time permanent employment

Definition

Although no consensus has been reached as to a definition of employment status worldwide, full-time permanent work generally means jobs in which a full-time, permanent employee works at least 35 hours per week with fringe benefits. Since the 1980s, full-time jobs with a permanent contract have become less frequent and there has been an increase in part-time jobs, in non-permanent jobs and self-employment worldwide.

In high-income countries, the highest proportion of permanent employees can be found in Luxembourg, Denmark, Austria, the Netherlands, Sweden and Germany (about 80%) while the lowest proportion can be found in Greece (43%) and Spain (54%) (Goudswaard & Andries, 2002). Even though low income countries represent the majority of the global population, data on working people in these countries are lacking. In many poor countries, labour regulations for both permanent and temporary workers are almost non-existent.

Impact on health and health inequities

The field of occupational health has provided many studies on the health problems of workers in permanent employment arrangements. In many instances permanent employment indicates longer exposure to workplace risk factors. For example according to a study on employment conditions and health in the EU "... overall, permanent employment was associated with high levels of ... health problems (fatigue, backache and muscular pains) and moderate levels of stress", with high levels of absenteeism. The EU statistics show that 31.6% of full-time permanent workers suffered backache and for women this risk appeared to be greater (Benach et al., 2000).

3.2 Unemployment

Definition

Unemployment is the state in which individuals above a specified age, who are actively seeking a paying job during a reference period, remain involuntarily unemployed. Despite the strong growth of the global economy since the beginning of the 21st century, the global unemployment rate increased in the same time period (Table 3) (ILO, 2007). Available information shows that the highest unemployment rates were concentrated in the Middle East and North Africa, sub-Saharan Africa, Latin America and the Caribbean.

Table 3: Unemployment rate and employment to population ratio by region in 1996 and 2006.

	Unemployment rate (%)		Employment-to-population ratio (%)	
	1996	2006	1996	2006
World	6.1	6.3	62.6	61.4
Latin America and the Caribbean	7.9	8.0	58.5	60.3
East Asia	3.7	3.6	75.1	71.6
South-East Asia	3.7	6.6	67.5	66.1
South Asia	4.4	5.2	58.4	56.5
Middle East and North Africa	13.0	12.2	44.9	47.3
Sub-Saharan Africa	9.2	9.8	68.8	67.0
Industrialized economies	7.8	6.2	55.9	56.7

Source: "Global Employment Trends Brief, January 2007. ILO and "Global Employment Trends Model, 2006", ILO.

Globally, women and young people of both sexes are the two groups most likely to be unemployed. Women are more unemployed than men (6.6% and 6.1%, respectively). In general, the unemployment rate is closely associated with lower education level. Workers who had only primary school education are more than three times as likely to be unemployed than those who had tertiary education (ILO, 2007).

Impact on health and health inequities

The devastating health consequences of unemployment have been well demonstrated by research since the 1930s. Research has shown that regardless of development status of the country, high levels of unemployment, at both the national and community levels are correlated with poor physical and, in particular, mental health (Dooley, Fielding & Levi, 1996). In parts of Africa for example, malnutrition and other health effects of extreme poverty result from labour market exclusion, among other factors. A study of the EU-15 countries has identified unemployment as one of the ten most important contributors to the total burden of disease in the 1990s (Diderichsen, Dahlgren & Vågerö, 1997).

The health impact of unemployment tends to show a different pattern by gender. Evidence (Dooley, Fielding & Levi, 1996; Mullahy & Sindelar, 1996) demonstrates that unemployment correlates with deteriorated health for wives and with child abuse, and poor health behaviours of the unemployed man may perpetuate a vicious cycle of poor health. For women, unemployment is associated with higher levels of mental health problems such as anxiety and depression (Khlat, Sermet & Le Pape, 2004). The long tradition of the male-dominated work environment may also have a negative impact on the mental health of female workers. However, in developing countries, it is difficult to rely on empirical investigation based on gender-sensitive official data (Gilmore, McKee & Rose, 2002).

Since unemployment tends to hit already deprived groups harder than their wealthier counterparts, there is a need for research into social class, gender, and ethnic inequities, in relation to the health effects of unemployment. Research is also needed to explain the power-related social mechanisms and how and why they have unequal consequences (Hammarstrom & Janlert, 2005). However, the general lack of quality data still hinders scientific investigations in lower income regions (Gilmore, McKee & Rose, 2002).

In both wealthy and low income countries, there is a need for policy frameworks that actively promote full employment. In industrialized countries, changes in macroeconomic policy, social security and unemployment benefits have increased financial and other burdens on the unemployed, the hidden unemployed (e.g. discouraged job seekers, older workers and women), and the under-employed (i.e. those seeking more hours or more regular work). In poor countries without extensive unemployment insurance, the extent of unemployment is often poorly recorded. Moreover, under-employment is extensive and often disguised by minimal forms of self-employment in the informal sector.

3.3 Precarious employment

Definition and dimensions

Although there is no consensus on a precise definition of precarious employment, it can be described along four main dimensions which include high job insecurity, low wage level, lack of or limited social benefits, and powerlessness. The term “precarious employment” represents a continuum of conditions ranging from the "standard" full-time permanent contract with the accompanying social benefits, to the worst conditions in each dimension that often lack benefits in a quantifiable form (Benach & Muntaner, 2007). Given this spectrum, the concept of “working poor” is defined as “those who work and belong to poor households” developed by the International Labour Organization (ILO) (Majid, 2001). Additionally, for a number of EU countries, the concept of employees with precarious employment is defined as “those who have both temporary contracts and low wages” (OECD, 2002; Ramos Díaz, 2004).

Results from the ILO, using the Key Indicators of the Labour Market (KILM) dataset, show that in 2003 poor countries such as Plurinational State of Bolivia, Haiti and Nigeria had high proportions of working poor - 16.8%, 32.7% and 78.2% respectively - and that the highest levels were mainly located in very poor sub-Saharan African countries such as Sierra Leone (81.5%), Liberia (83.7%) and Uganda (87.8%) (ILO, 2007). Globally, the working poor constitute 550 million people, around 25% of the employed labour force in all low income countries; an estimated 330 million, or 60%, are women (ILO, 2003; 2006a). While the situation is considerably better in most OECD and EU countries, precarious forms of labour are prevalent, especially part-time work and non-permanent contracts (Parent-Thirion et al., 2007). Temporary jobs are disproportionately held by younger workers, women, and those employed in low-skill occupations, agriculture and small firms. Temporary jobs tend to pay less than permanent jobs and often offer less access to paid vacations, paid sick leave, unemployment insurance, pension and other fringe benefits, as well as less access to training (OECD, 2002).

Impact on health and health inequities

The health impact of flexible, temporary jobs and other kinds of precarious employment can be just as devastating for workers as that of unemployment (Muntaner et al., 2010). Moreover, the effects of precarious employment may be detrimental not only to the health of the worker but also to the health and well-being of the family members and dependents that rely on income from the worker (Benach & Muntaner, 2007; Benach et al., 2000).

In industrialized countries, government responses to these issues have usually been belated and fragmented. Policy interventions have generally involved: amending occupational health and safety and minimum labour standard laws, codes, and guidance material; adding contractual obligations (e.g. occupational health and safety provisions in government tender standards); strategic enforcement campaigns; industry-specific packages (e.g. tripartite agreements dealing with small builders and subcontractors in the construction industry); and the establishment of (often union-backed) roving safety representatives (e.g. the Swedish regional safety representatives system) (Walters, 2006). In most developing countries, limited legislation, shortfalls in regulatory resources, weak or repressed unions, and a political climate that is not conducive to enforcement inhibit the implementation of basic standards, let alone recognition of the difficulties associated with precarious labour (Balzano, 2004; Baumecker & de Faria, 2006).

3.4 Informal employment

Definition and dimensions

The ILO (1993) defines the informal sector employment as " ... based mostly on casual employment, kinship or personal and social relations rather than contractual arrangements with formal guarantees." Other scholars emphasize the illegal nature of informal employment defining it as "substantial volume of economic production of goods or services, which mostly involves quasi-legal business and illegal or criminal activities" (Thomas, 2001). It is typically associated with three main areas: small-scale enterprise with an employer; domestic business with unpaid employment; and self-supportive operations. Being outside the legal structure, firms in the informal economy rely largely on trust, the extent to which social norms are respected, and the strength of social ties. In rural areas, most informal economic production is concentrated in subsistence farming. In urban settings, informal production is mainly carried out on streets and in small firms, most of which are home-based or family-owned enterprises (ILO, 2006a; Akinboade, 2005). The extent and overall economic contribution of labour in the informal economy is challenging to measure, exactly because of its informal nature.

Over the past two decades, the size of the informal economy has increased worldwide along with globalization of the world economy (Benach, Muntaner & Santana, 2007). According to the Confederation of Free Trade Unions (ICFTU), a quarter of the world's working population work informally, and this labour accounts for 35% of global GDP. The informal economy is dramatically prevalent in low- to middle- income countries: 55% in Latin America in non-agricultural areas, 45-85% in Asia, and nearly 80% in Africa. In addition, in developing countries, women are over-represented,

involving two-thirds of the actively working female population (Benach & Muntaner, 2010). In the EU, 30% of workers are in the informal sector (ICFTU & Anti-Slavery, 2003; ILO, 2003). Work in the informal economy - characterized by low levels of skill and productivity, low or irregular incomes, and largely dependent on the enforcement of workers' health and safety laws and regulations by the state - is more hazardous than in formal firms (ILO, 2003).

Impact on health and health inequities

Workers with informal jobs are disadvantaged compared to formally hired workers in several respects that separately or together affect their health and safety. In informal economy settings, occupational hazards are commonly observed due to exposure to toxic chemicals, excessive noise, poor sanitation, high workload, pesticides, violence and sexual assault (Oliveira, 2006). Informal workers also reported receiving less training and supervision than formal workers and limited access to protective equipment. Other factors associated with the informal economy and informal jobs are a low standard of housing and sanitation and inappropriate management of waste or toxic substances that can affect the environment and health. The available literature on occupational health and safety in the informal economy is scarce with most studies being descriptive rather than quantitative, which limits the conclusions that can be drawn and generalization of results (Da Silva, Fassa & Kriebel, 2006; Santana & Loomis, 2004).

Although an informal economy exists within industrialized countries, informal employment is a predominant feature of developing countries, where it has grown rapidly to account for over 25% of the workforce, especially among women (Cooke, 2006). The essential problem for research on health inequities in the informal economy is the fact that both workers and employment practices remain very difficult to monitor. Moreover, the existence of a substantial informal sector erodes the regulatory protection of the formal sector because of the absence of universal minimum labour standards.

3.5 Child labour

Definition and dimensions

UNICEF defines a child labourer as any child below 12 years of age working in any type of economic activity, or those from 12 to 14 years of age engaged in occupational duties not considered “light work” (UNICEF, 2006). The ILO Worst Forms of Child Labour Convention delineated more specifically the types of work that are unacceptable for children. These involve slavery or compulsory labour, prostitution, pornography, human trafficking, war, drug dealing or trafficking, or any illicit activity (ILO, 1999). Although in certain areas the majority of indigenous and tribal children work as child labourers, it remains poorly documented due to lack of available data. Most studies that bring specific country data give approximate numbers, which are imprecise and difficult to compare (ILO, 2003).

Estimates from UNICEF reveal that child labour in industrialized countries involved about 2.5 million children under the age of 15 in 2000. In low income countries, however, child labour varied

from 4% in Timor-Leste to 67% in the Niger. Togo (63%) and Burkina Faso (57%) also show high rates of child labour and this is similar in other African countries, such as Sierra Leone, Ghana, and Chad. Male children were more likely to be in the labour market than females in the majority of countries (ILO, 2006). Regional accounting of child labour is presented in Table 4.

Table 4: Child labour according to world regions and activity in 2000 and 2004 (absolute number in millions and percentages).

Region	Children Population (Million)		Economically Active Children (Million)		Activity (percentage)	
	2000	2004	2000	2004	2000	2004
Asia and Pacific	655.1	650.0	127.3	122.3	19.4	18.8
Latin America / Caribbean	108.1	111.0	17.4	5.7	16.1	5.1
Sub-Saharan Africa	166.8	186.8	48.0	49.3	28.8	26.4
Other Regions	269.3	258.8	18.3	13.4	6.8	5.2
World	1199.3	1206.6	211.0	190.7	17.6	15.8

Source: Statistical Information and Monitoring Programme on Child Labour (SIMPOC) as cited in International Labour Office (Geneva Office). The end of child labour: Within reach, Global Report under the Follow-up to the ILO Declaration on Fundamental Principles and Rights at Work. International Labour Conference, 95th Session 2006, Report I, (B). 2006.

Impact on health and health inequities

The hazardous nature and environment of child labour may crucially affect children's health, both mental and physical, as well as their schooling and safety. Child labour may also directly compromise growth, and result in stunting of a child's physical and mental development (Dantas, 2005; Duyar & Ozener, 2005; Fogel, 2003; Hawamdeh & Spencer, 2002; Yamanaka & Ashworth, 2002), which can be regarded as a biological manifestation of social injustice. Furthermore, extreme workloads can lead to musculoskeletal symptoms among children (Ayala & Rondón, 2004; Huk-Wieliczuk, 2005). The health effects of child labour may appear later in adulthood, such as those related to self-perceived health and reduced height, and alcohol and drug abuse (Dantas, 2005; Duyar & Ozener, 2005; Fogel, 2003; Forster, Tannhauser & Barros, 1996; Hawamdeh & Spencer, 2002, 2003; Huk-Wieliczuk, 2005; Kassouf, Mckee, & Mossialos, 2001; Yamanaka & Ashworth, 2002).

Child labour is most prevalent in conjunction with precarious employment (temporary, seasonal and home-based work) and large numbers of child labourers are found in high-risk

industries such as farming/agriculturesomething that has caused governments to reconsider their child labour laws (U.S. General Accounting Office, 2000; Kruse & Mahony, 2000). Since child labour is largely a response to poverty, the establishment of minimum wages that ensure a decent standard of living and the provision of food for attending school programmes represent alternative policy interventions.

3.6 Slavery and bonded labour

Definition and dimensions

Slavery and bonded labour was defined as the "status or condition of a person over whom any or all of the powers attaching to the right of ownership were exercised" at the League of Nations Slavery Convention in 1926. The ILO convention (ILO, 1930) defines forced or compulsory labour as "all work or service, which is exacted from any person under the menace of any penalty and for which the said person has not offered himself voluntarily." Bonded labour is defined in broad terms as a system under which a debtor enters into an agreement with the creditor to provide his own work, either without wages or for less than the minimum wage (Srivastava, 2005; ILO, 2001).

The ILO estimates that of the 12.3 million people who are victims of forced labour, the vast majority - 77% - reside in the Asia and Pacific regions, followed by Latin America and the Caribbean (11%). The remaining victims are distributed throughout sub-Saharan Africa (5%); industrialized economies (3%); the Middle East and North Africa, and transition economies (2% each) (Belser, Cock & Mehran, 2005).

Human trafficking is the major force behind the large numbers of forced labourers distributed worldwide, particularly affecting women, children, and migrants. Globally, roughly 2.4 million people (19% of total forced labour) are victims of trafficking. About 60% of all global trafficking takes place in Asia and Pacific regions, followed by industrialized economies (10%) and Latin America and Caribbean (10%) (Belser, Cock & Mehran, 2005). Bonded labour ensnares those who are least able to work their way out of it: women, children, and migrants. With some 5.7 million children in forced or bonded labour, 1.2 million are victims of trafficking, 300,000 are involved in fighting forces, 1.8 million in prostitution and pornography, and 600,000 in illicit activities such as drug trafficking. On average, women and girls constitute 56% of victims of forced economic exploitations (Belser, Cock & Mehran, 2005). This dimension needs greater public health attention not just because of the sheer scale of the problem but also for its known association with gross violations of human rights and the creation of dramatic health inequities.

Impact on health and health inequities

Slavery and bonded labour are frequently associated with various health problems or risks due to deplorable living conditions, physical and mental trauma, and inaccessibility of health care and other social supports. Outside the workplace, economic disparity, malnutrition and food insecurity, poor working conditions, and a lack of social support prevent access to health care, compensation and rehabilitation. Empirical evidence of the adverse effects that this situation creates

for workers' and their dependents' health is documented in the form of physical violence and mental trauma, perilous working conditions, the absence of welfare measures, and the reinforcing of cultural barriers that exacerbate these impacts of slavery and forced labour (Fassa, 2003; WHO, 2002).

While the clandestine nature of forced labour makes its health effects difficult to assess, the violation of human rights and the health inequities it entails merit close attention. The combination of poverty, unscrupulous labour agents, and regulatory corruption enable forced labour to continue. Thus, global health inequities related to slavery/bondage labourers could be reduced by providing and enforcing effective legislation at both international and national levels.

4. Working conditions and health inequities

This section describes workplace exposures and risk factors. The links between working conditions and health inequities are considered through three topics: occupational injuries, occupational hazards, and psychosocial occupational stressors.

4.1 Working conditions

Workers may be exposed to physical, chemical, biological, and social hazards at their job sites. Working conditions involve psychosocial relations, management and control, job satisfaction, the tasks performed by workers, and the technology being used. Achieving a proper working environment is important as it enhances quality of working life, economic status, and health; yet work-sites face challenges in fully providing decent work environments. In hazardous workplaces more than half of workers may be exposed to high levels of occupational hazards (Hogstedt, Wegman & Kjellstrom, 2007). In the last two decades, important economic and technological developments have helped to reduce some occupational health problems, mainly in industrialized countries. Conversely in developing countries, where the majority of the world's working population lives, exposures to occupational hazards have increased (WHO, 1995; Hogstedt, Wegman & Kjellstrom, 2007). It is estimated that around one-fourth of the workforce in developed countries and more than three-fourths in developing countries are exposed to physical hazards, particularly in some high-risk sectors such as mining, manufacturing and construction (WHO, 1995). Indeed, the growing industrialization of developing countries, transport of chemical substances and materials, changes in the work organization, and increasing exploitation of the work force, are leading to new epidemics of occupational injuries and work-related diseases.

Occupational health risks vary significantly according to many national and community level factors, including employment conditions and social characteristics of populations such as age, gender, or race distributions. Working condition inequalities also are related to contract and occupational status and the level of information regarding workplace risks. Almost 20% of workers with no contract, temporary contract or in a manual occupation are not well informed about workplace risks as compared to about 12% among permanent and white-collar workers (Parent-Thirion et al., 2007). This lack of information is a root cause of fatalities among workers.

The exposure to occupational risk factors shows a gender-related pattern due to the characteristics of gendered division of labour. Women are more likely to be exposed to work-related hazards if they work at informal workplaces, as street vendors, or in sex work. In poor countries, while men are more exposed to chemical solvents, women are exposed to more pesticides (Neubert et al., 2001; WHO, 2005). In wealthy countries, women are at greater risk of infection, violence, and musculoskeletal disorders than men (WHO, 2002; Aiken et al., 2002). Occupational health problems vary according to a country's culture, political system, and economy. In particular, the level of industrialization, labour union strength, and the legal protection of workers is crucial to workplace health and safety. Working conditions are also related to employment conditions including labour contracts, and the level of information regarding workplace risks.

4.2 Impact on health and health inequities

Occupational injuries

Work-related injuries (accidents and diseases) have a profound effect on the health of the working population. The impact entails an enormous and unnecessary financial burden and suffering for workers' families and communities, and a substantial loss for industry and national economies. The leading occupational causes of death are unintentional injuries_(41%), followed by chronic obstructive pulmonary disease (COPD) (40%), and cancer of the trachea, bronchus or lung (13%). Fatal and non-fatal occupational injuries together produce a loss of about 10.5 million disability-adjusted life years (DALYs): about 3.5 years of healthy life lost per 1,000 workers every year globally. This is responsible for 8.8% of the global burden of mortality (Concha-Barrientos et al., 2005). The global annual number of fatal injuries is estimated at approximately 350 000, meaning that every day 970 workers die as a result of accidents due to their working conditions. Total work-related deaths, including injuries but also caused by cancers, cardiovascular disease, and communicable diseases, are estimated at about 2 million annually. This enormous burden of disease is unequally distributed. Industrialized countries have the lowest rates: fatality rates in Sweden and the United Kingdom of Great Britain and Northern Ireland are 1.9 and 0.8 per 100 000 workers, respectively, while in Mozambique and Kenya the fatality rate is 21.6 per 100 000 workers, and in the Plurinational State of Bolivia the rate is 21.9 (Hämäläinen, Takala & Leena, 2007).

Workers suffering long-term disability may also lose important skills and thus find it harder to continue in the work for which they had been trained, or even find future work at all (Benach and Muntaner, 2010).

Occupational hazards

Millions of workers in high-, middle- and low-income countries are regularly exposed to thousands of chemicals, hundreds of biological factors and dozens of physical conditions with significant consequences for their health. Individual or combined exposures to these hazards contribute to the appearance of millions of occupational injuries, diseases, and stress reactions, as well as job dissatisfaction and absence of well-being (WHO, 1995; Hogstedt, Wegman & Kjellstrom, 2007). Metal poisoning, solvent damage to the central nervous system and liver, pesticide poisoning,

dermal and respiratory allergies, cancers and reproductive disorders are among the health effects of such exposures. Cancers of the lung, bladder, skin, liver, hematopoietic tissue, bone and soft connective tissue are the most common health problems resulting from occupational carcinogenic exposures. The use of asbestos, a very hazardous material used for insulation, has been severely restricted in industrialized countries but is still widely used in low income countries. Currently, about 125 million people in the world are exposed to asbestos at the workplace, and at least 90 000 people die each year from asbestos-related lung cancer, mesothelioma and asbestosis (WHO, 2006). Physical and mechanical hazards produced by unshielded machinery and unsafe structures like noise, vibration, ionizing and non-ionizing radiations and microclimatic conditions are also known to affect health (Hogstedt, Wegman & Kjellstrom, 2007). For example, noise-induced hearing loss is one of the most prevalent occupational diseases. Hearing loss due to occupational noise (19%) and COPD due to occupational agents (19%) are among the leading causes of loss of healthy years (DALYs). Males experienced almost five times greater loss of DALYs than females.

Many work-related health problems are regarded as being no different between men and women. However work-related diseases in women are in many cases related to different experiences due to gender segregation in the workplace or differing biological sensitivity. For example, women workers suffer more than men from work-related musculoskeletal disorders, especially neck and upper shoulder disorders (Kauppinen, et al., 2003; Basu & Sidh, 2008). Working women around the world are exposed to a myriad of occupational risk factors such as chemicals, heavy metals, solvents, pesticides, and heavy physical work (Kauppinen, 2003; Figa-Talamanca, 2006), which can have serious impacts on their reproductive health such as stillbirth, or birth of underweight or premature babies. Occupational health issues related to hazards and risk factors in the workplace therefore have to take into account these gender differences (Kauppinen, et al., 2003).

Psychosocial occupational stressors

A substantial body of research has linked sources of stress in the workplace to a variety of illnesses and injuries, especially cardiovascular disease (CVD) (Belkic et al., 2004; Kivimaki et al., 2006). Key characteristics of the industrial assembly-line approach to job design, whether implemented in blue-collar or white-collar settings, are high workload demands over long hours, combined with low employee control or autonomy (known as "job strain") (Karasek & Theorell, 1990). Among men, the impact of job strain on CVD is more consistent and stronger among blue-collar workers than among men in jobs with higher socioeconomic position (SEP) (Theorell et al., 1998). Similar interactions were observed with effort-reward imbalance and SEP for CVD (Kuper et al., 2002).

Work stressors also increase the risk of common psychological disorders, such as depression and anxiety (Stansfeld & Candy, 2006), musculoskeletal disorders (Rugulies & Krause, 2005), and acute injuries (Clarke, Sloane & Aiken, 2002). Evidence suggests that job stressors such as high job demands, low job control, low social support, few rest break opportunities (Bongers, Kremer & ter Laak, 2002), and job strain (Rugulies & Krause, 2005) contribute to the development of upper extremity and low back musculoskeletal disorders, after taking into account physical job demands. More recently, researchers have been investigating the health effects of job insecurity and

downsizing (Vahtera et al., 2004). Long work hours have been associated with a wide variety of health effects, including work accidents and injuries, musculoskeletal disorders, fatigue, psychological ill-health, unhealthy behaviors, and CVD (Caruso et al., 2004). Workplace trends in high income countries such as the growth of job insecurity, contingent (temporary and part-time) work, and new systems of work organization, appear to be causing increasing work stress (Kompier, 2006). In developing countries, there has been a rapid increase in the prevalence of hypertension, while in industrialized countries, the recent decrease in hypertension prevalence is being reversed (Hajjar, Kotchen & Kotchen, 2006). These data suggest the need for greater efforts to document the health effects of work stress, to assess trends, and to undertake greater efforts to reduce and prevent work stress.

Health problems related to occupational stress tend to vary according to sex. Generally, the labour market is divided into male dominated and female dominated jobs owing to a considerable gender segregation and discrimination. Women are more likely to hold marginal jobs characterized by less job security, lower salaries, and lower job authority. A growing body of evidence has indicated different gender patterns in psychosocial health. Although a review study (Repetti, Matthews & Waldron, 1989) supported the beneficial effect of employment for women's physical and mental health, more recent empirical studies (WHO, 1994; Ludermir & Lewis, 2005) found that the increased work intensity and less authority of female workers is related to mental illness such as anxiety and depression. As many gender studies do not take social class into account it is difficult to draw conclusions on the importance of work-related factors.

5. Future research and policy recommendations

Around the world, too many people are in unhealthy employment and working conditions. Policies aimed at alleviating these situations are insufficient. These regulatory failures keep many workers, especially in developing countries, in a state of economic deprivation, disorganization, and powerlessness. In addition, evidence on the effectiveness of some current interventions that have been promoted internationally (e.g. under the umbrella of corporate social responsibility) is ambiguous at best (Blowfield, 2007). Fundamental questions need to be asked about how employment conditions, and policy settings to support them, best serve the long-term health and well-being of the global community. More detailed conclusions and recommendations as well as examples of interventions and case studies are found in the full EMCONET report (Benach et al., 2007).

5.1 Future research: filling gaps in knowledge

Reducing health inequities related to employment and working environments is an overarching agenda. These health inequities generally prevail in society but they are mostly socially "invisible", neglected or unknown. The review of current information shows it to be insufficient for effective public health action. Much more applied research is essential to strengthen the evidence base, especially in middle- and low-income countries. Empirical evidence concerning the impact of

employment relations on health inequities is particularly scarce for poor countries, small size firms, and rural settings. A future research agenda is suggested as follows:

1. There is not enough reliable data on employment relations from international and national health information systems, especially among low and middle-income countries. Comparable data on health inequities from both informal economies and forced labour are needed to bridge knowledge gaps due to a lack of proactive measures to address this social problem.

2. There is a need for the establishment of research programmes and adequate surveillance information systems by governments and health agencies to collect public health data associated with basic employment conditions and all forms of precarious employment and work. The data collected should include the specificities of each context, focusing in production chains to identify the role of international corporations, the role of the State, and health and social protection coverage.

3. There is a lack of theoretical and empirical work on mechanisms and explanations linking employment conditions to poor health outcomes. Studies of employment dimensions should be stratified when possible by social class, sex, age, ethnicity, and migration status.

4. There is a need for more evaluation of the health impact of employment policies and other employment interventions.

5.2 Policy implications

While interventions on employment conditions need to be conducted at the organizational and job level, "upstream" action on employment and working conditions (especially through labour market regulations, social policies and workplace standards) is expected to be more effective in reducing health inequities and should be the key priority focus for action. Leaving the health consequences of employment conditions as an afterthought or "downstream" consideration in trade, business practices, or public health interventions, will perpetuate the existing health inequities caused by unfair employment and lack of decent working conditions. General strategies combining policies at different entry points (power relations, employment, working conditions, and ill-health workers) need to be specified and adapted for the context of each territory (international, country/region, urban/rural/local areas), condition and population.

Efforts to reduce social inequities in health should be understood both in general, as a part of broad global and local integrated economic and social policies, and in particular, of specific public health and occupational programmes and interventions. Examples of interventions include universal access to public education, legislation on a minimum living wage, income redistribution through a progressive tax system and social services, the avoidance of wage, gender, racial and ethnic gaps and other forms of discrimination, the protection of the right to organize and collective bargaining.

The health sector should assume its role in the achievement of health equity for workers and their families. It can do so by engaging in health-related discussions about economic development

models, labour market policies, or regulations on employment and working conditions, evidence of their impacts on the health of workers and their families.

International institutions, governments and political parties, unions, and civil society associations favoring fair employment relations are key actors to implement effective policies leading to the reduction of employment-related health inequities. Nevertheless, a crucial issue to consider is the need to expand the participation of workers and unions, as well as the participation of social movements based on social class, gender, race, ethnicity, migration, or other social relations affecting employment conditions.

Given the relative lack of available information on the effectiveness of labour market interventions in the reducing health inequities, it is crucial to identify actions based on the soundest theoretical frameworks, following the realistic approach used in this study. The development of information systems that include health and health equity among workers is needed, as well as follow-up on the impact of policies and programmes to mitigate and reduce health inequities among workers. There is also an urgent need to conduct short-, mid- and long-term evaluation and monitoring of policies and interventions, especially in low income countries, small firms, and rural settings. Training and education on the links between employment relations and health inequities is urgently needed in public health studies and research programmes. Special emphasis is needed on workers' health and employment conditions, directed both at health professionals and workers. There is also a pressing need to develop communication and dissemination campaigns among the general population concerning employment and working conditions as key social determinants of health inequities.

A framework for employment-related policies reducing health inequities

This framework proposes the formulation of effective policies to reduce health inequities arising from employment and working conditions. For each of the four main points below, the most effective level (international, national/regional, and local), type of employment dimension, and actor involved need to be identified.

1. **Changes in power relations**, especially related to labour market conditions and social policies, which can occur between the main political and economic actors in society:

International regulatory agencies could influence governments to put more emphasis on full-time permanent employment and the adoption of fair employment policies. For example, the United Nations, the ILO and other international agencies should have the leadership and power to influence the adoption of fair employment practices among member countries. This agenda includes legislation, effective enforcement of laws against slavery and bonded labour, as well as development of international campaigns to raise awareness about sex traffic victims. Furthermore, the role and participation of unions, social movements and grassroots community groups is crucial. Unions can generalize collectively negotiated protections (nationally and internationally) and, as evidence from low income countries attests, community action can provide important impetus for government

measures. It is important to provide incentives for unionization and collective bargaining, as well as supporting the collective organization of informal workers.

2. **Changes in employment conditions** in order to reduce exposures and vulnerabilities:

There is a need to strengthen public capacity for regulation and control regarding employment conditions. Full-time employment policies should be promoted to reduce the health inequities associated with unemployment, precarious employment and informal work. Economic development policies and programs should be promoted, particularly in middle- and low-income countries, taking into account the role of formal job posts in assuring social sustainability and unemployment reduction. Government has to lead national industrial policies devoted to full-time employment and enforcement of fair employment standards. Universal education is necessary to eliminate child labour. Also, anti-slavery/bonded labour enforcement controls intended to eliminate slavery and human trafficking, and support for land reform in poor countries, can potentially reduce slavery which is most common in areas of rural land conflicts.

3. **Actions to modify working conditions** such as health-related workplace material hazards, behaviour changes, and psychosocial factors:

Governments and firms must provide workers with the tools to participate in the analysis, evaluation and modification of health-damaging work exposures. The actions needed to modify working conditions refer to standards and regulations such as those in the occupational health guidelines. Unions play a fundamental role in reducing employment and work-related health inequities through collectively negotiated international or national protections. Social movements and grassroots community activities can provide impetus for responsive government measures (e.g. living wage campaigns in targeted cities in the USA). Health equity concerns among workers should be a matter of public health, meaning that health equity needs to be promoted and operationally guaranteed to working people independent of their conditions of employment. The strategy and model of primary health care has a capacity and a responsibility to reach the working sector with a spectrum of preventive, curative and rehabilitative interventions, with safety and health care as integral components of working conditions. This would maximize universal coverage of health care, including occupational health and safety programmes integrated in primary health care, especially family health care programmes extended to the workplace.

4. **Different types of interventions on employment and working conditions** that may reduce the unequal consequences of ill-health:

Governments should ensure that workers' employment and working conditions do not generate health inequities, in addition to reducing or eliminating their associated health risks. These social and health policies should include universal access to health care, safe working conditions, an adequate compensation and benefit system (e.g. living wage) regardless of the employment conditions (e.g. temporary contracts), as well as specialized medical and social services for injured workers.

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8 Challenging inequity through health systems

Lucy Gilson, Jane Doherty and Rene Loewenson

1. Introduction

Health systems can promote population health and health equity, independent of other influences, but only where there is sustained political and social action. This is the primary conclusion from the work of the *Health Systems Knowledge Network* (KN), which, in 2006-7, synthesized evidence around the national-level health system actions that address the social determinants of health and tackle the root causes of health inequity (Gilson et al., 2007). The network had particular, but not exclusive, concern for the situation of low- and middle-income countries.

The key value underlying the KN's analysis is that health is a fundamental social right of all citizens: this drives the ethical imperative to preserve and protect the population's health. The challenge is to establish the conditions in which people can exercise their entitlement to health care, participate in the decisions that affect their lives, and demand accountability from the people and institutions whose duty it is to take steps to fulfil those rights. An equal challenge is to establish the living conditions that will enable people to protect and promote their health. Health systems are important in overcoming these challenges both because they encompass "all the activities whose primary purpose is to promote, restore, or maintain health" (WHO, 2000), and are a vital part of the social fabric of any society. These systems not only produce health care and health, but also shape wider societal norms and values (Gilson, 2003).

The task of synthesizing evidence about health system impacts on health inequity was taxing, given the breadth of relevant issues, the complexity of the processes involved and the diversity of the evidence base. The KN developed a multi-component strategy that included commissioning literature reviews and specific case studies, and drawing on the tacit knowledge of the fifteen KN members and a wider pool of reviewers.[1] Although the KN was relatively successful in achieving some diversity in the evidence it used, English-language evidence predominates. Some areas of evidence remain contested (such as the role of the private sector in addressing health inequity) or are still tentative (for example, in relation to effective human resource interventions to promote equity).

As the KN concluded its work in 2008, a range of evidence has also emerged subsequently that is not fully reviewed in this chapter. There is, in particular, a large volume range of recent evidence on primary health care and on national health insurance and achieving universal coverage that is not reviewed. For example, two recent World Health Reports are not referenced: the 2008 report on Primary Health Care (WHO, 2008) and the 2010 report on Universal Coverage (WHO, 2010) (note also the various activities of the Joint Learning Network for Universal Health Coverage[2]). However, the recommendations of the KN are not expected to conflict with this new evidence.

Notwithstanding these limitations, the evidence collated provides a coherent set of messages on how health systems impact health equity, what sorts of broad or macro-level interventions result in more positive impacts, and what actions assist in designing and implementing these interventions effectively. Three foundational principles for action are clear and remain as pertinent as ever:

- Health system development is influenced, but not fully determined, by context. Equitable health systems have broad features in common that can be nurtured by context-sensitive strategies for health system transformation.

- Placing health equity as the central goal of health systems requires substantial re-orientation of health systems through re-directing policy and transforming institutions (with respect to organizational norms, rules, and values). This in turn requires active management of the policy development and implementation process, and needs to be based on wider political and policy commitment to social equity.

- Despite the increasingly plural nature of health systems (especially with respect to health care provision), the public sector has the primary role in working towards health equity and should be strengthened to achieve this goal.

[1] The KN final report is available at the CSDH website http://www.who.int/social_determinants/themes/healthsystems/en/index.html and at http://www.wits.ac.za/academic/health/publichealth/chp/collaboration/10489/hskn.html, which also has the background working papers and case studies.

[2] See: http://www.jointlearningnetwork.org/

The following sections of this chapter outline the evidence demonstrating how health systems are a social determinant of health and health inequity and then present evidence-based proposals in the key areas of interrelated action.

2. Why do health systems matter in redressing health inequity?

2.1 Broad features of health systems can promote population health and health equity

Cross-national analyses show that health systems, or particular elements within them, can and do promote population health, independent of other influences (Mackenbach, 1996; Robinson & Wharrad, 2001; Anand & Barnighausen, 2004; Cutler, Deaton & Lieras-Muney, 2006; Bokhari, Gai & Gottret, 2007). This positive impact is particularly clear where the primary health care (PHC) approach is applied as its organizational strategy and underlying philosophy (Box 1). The PHC approach recognizes the need to tackle the broader social and political determinants of health, and involves wide-ranging action to promote health equity (PAHO, 2007).

Box 2: Elements of the PHC approach as a strategy and philosophy for organizing health systems

- Focuses on improving population health and generating health equity
- Supports and enables intersectoral action to address other social determinants of health
- Supports participation by communities, and especially socially marginalized groups, in health and health care decision-making
- Gives priority to families and communities as the basis for planning and action
- Provides comprehensive, integrated and appropriate health care, that emphasises health promotion and prevention and assures first contact care
- Brings about greater equity in access to health services
- Has sound legal, institutional, organizational foundations with adequate and sustainable financial, human and technological resources

Source: PAHO, 2007

Figure 18: The health system as a social determinant of health: opportunities for positive intervention.

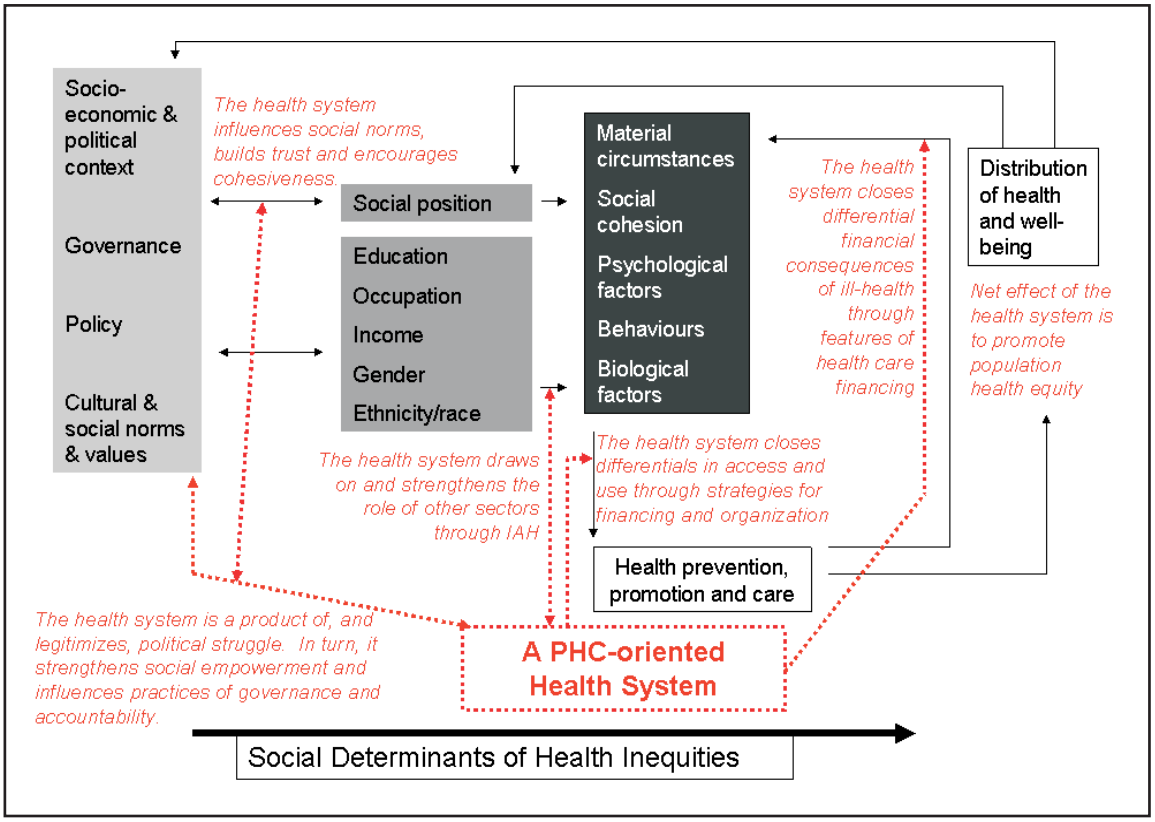

Figure 18 outlines the ways in which health systems influence the distribution of health and well-being, drawing on the framework adopted by the Commission on Social Determinants of Health (CSDH) (See Chapter 1). The solid arrows show how health inequity results from an inequitable distribution of power, whereas the dotted arrows show how a progressive health system can mitigate these effects. Specifically, the figure shows that PHC-oriented health systems seek, first, to promote population health equity through intersectoral action for health (IAH).

> Such action is a recognized relationship between part or parts of the health sector with part or parts of another sector which has been formed to take action on an issue to achieve health outcomes (or intermediate health outcomes) in a way that is more effective, efficient or sustainable than could be achieved by the health sector acting alone (WHO, 1997).

IAH is particularly effective in tackling physical and social environments (many of which are interrelated), thereby addressing differential exposure and vulnerability to ill-health.

Reviews of the available empirical evidence on IAH specifically conclude that such policies will result in greater health equity because they do not require the individual behavioural changes that

are themselves particularly influenced by material wealth, education or the social connectedness of individuals (Arblaster et al., 1996; Health Disparities Task Group, 2004; Starfield, 2006a). Sri Lankan experience, for example, illustrates how different government sectors work together, and with civil society organizations (CSOs), in efforts to control vector-borne diseases (Perera, 2007).

A second feature of PHC-oriented systems is their investment in strategies of social empowerment (which can have direct influences over the vicious cycle of social stratification and health inequity).

> Social empowerment is people's ability to act through collective participation by strengthening their organizational capacities, challenging power inequities and achieving outcomes on many reciprocal levels in different domains: including psychological empowerment, household relations,... transformed institutions, greater access to resources, open governance and increasingly equitable community conditions (Wallerstein, 1992).

Taking many forms, social empowerment interventions commonly engage people collectively through participatory processes in identifying health needs and strengthening capabilities to address them. These interventions are important in promoting health equity because the paths through which social stratification generates health inequity and differential consequences are underpinned by the relative powerlessness of socially marginalized groups, including women, certain ethnic and indigenous groups, people with disabilities, people of atypical sexual orientation, the elderly and young people outside stable long-term partnerships (London, 2003; Marmot, 2006).

A growing range of studies using experimental or quasi-experimental designs in low- and middle-income countries (LMICs) clearly demonstrate the potential of such interventions to generate health and health equity gains (Eng, Briscoe & Cunningham, 1990; Manandhar et al., 2004; Malhotra *et al,*. 2005; Pronyk et al., 2006). As a systematic narrative literature review of relevant empirical studies concludes (Wallerstein, 2006), interventions that strengthen empowerment:

- promote better health through individual empowerment outcomes and action on the social determinants of health, or by encouraging greater health care use;
- can address health inequity by generating preferential gains for socially disadvantaged groups, either by impacting on structural factors or by being implemented with these groups; and
- have resulted, for women specifically, in greater psychological empowerment and autonomy, and substantially affected a range of health outcomes, when most closely integrated with the economic, education and/or political sectors.

The third feature of PHC-oriented health systems highlighted in Figure 18 is that, through their financing and organizational arrangements, they seek to tackle differential access, use and experience of health care. Through preventive care, they contribute to action on differential exposure and vulnerability. These health *care* oriented features of the health system are discussed in the next section.

2.2 The specific design of health care financing and provision can promote health and health equity

Health care financing and provision strategies shape the patterns of ***health care access, use and experience,*** as shown in Figure 18 (Dixon *et al.,* 2003; Gilson, 2007a; Palmer, 2008). Uniquely among the social determinants of health, these strategies generate differential consequences that contribute to or moderate health inequity. Health care financing strategies, for example, influence the patterns of ***impoverishment*** that result from ill health and health care use (Russell 2004; McIntyre *et al.,* 2006; van Doorslaer *et al.,* 2006). At the same time, health care provision strategies, and particularly the provision of preventive care, can modify the translation of differential exposure and vulnerability into health inequity. Through both pathways - financing and provision the health care system feeds back into social stratification.

Redistributive health care financing and provision allow a transfer of resources from wealthier to poorer groups, contributing to broad social development goals by closing the relative gap in living standards between the poor and the rich (Mackintosh, 2007). This potential of health care depends on how much the richer and poorer population groups *pay for* health care relative to how much they *benefit from* it (that is, what share of public spending they capture through use). In redistributive systems the rich may still use more health services than the poor, but the relative balance of payment *and* use across the two groups allow a transfer of resources from the rich to the poor. In health care systems that go one step further and become actively pro-poor, the poor use services to a greater extent than the rich and capture the larger share of the total health care subsidy (Mackintosh, 2007). Such health systems allocate their resources disproportionately to the poor in response to their greater need. Available cross-national evidence (Box 3) shows the redistributive potential of many health care systems, and specifically of public spending, even in the poorest settings.

Box 3: Health care financing and utilization patterns

Overall financing and utilization patterns

In high income countries, these are generally redistributive in that:

- the rich either pay a higher proportion (or proportionately only slightly less) of their income for health care than the poor, and the poor generally use health services at least in proportion to their need (van Doorslaer et al., 2000).

Public health expenditure only

In Asia:

- expenditure is redistributive in ten out of eleven countries, while four achieve a pro-poor, or even, distribution of benefits (O'Donnell et al., 2007).

In Latin America:

- expenditure is either proportionally distributed across rich and poor groups or weighted towards the poor, in five out of seven countries (PAHO, 2001).

In Africa:

- greater levels of subsidy are offered to the poor than to wealthier groups (Chu, Davoodi & Gupta, 2004).

The potential for redistributive health care to offer health equity gains is, moreover, indicated by evidence that the same level of public health care spending generates larger mortality reductions among the poor than the non-poor (Gupta, Verhoeven & Tiongson, 2003; Houweling et al., 2005). So, even where the poor receive less of the public spending subsidy than the rich, they may still secure relatively greater health gains than wealthier groups.

In terms of health care delivery, the PHC approach specifically requires the provision of comprehensive, integrated and appropriate health care which places *referral* services within a framework that recognizes the key role of primary level care in navigating their use by patients. Primary care itself makes an important contribution to improving health in countries of all income levels (Box 4).

Apart from increasing health, the evidence points to the health *equity* impacts of primary care, specifically with respect to the access and redistribution gains for socially marginalized groups, and especially when combined with other elements of the primary health care approach (Reyes *et al.*, 1997; Perry et al., 1998; Bhuiya *et al.*, 2001; Mackenbach, 2003; Starfield, 2006a). This is not surprising; epidemiological evidence shows that lower income groups not only have more illness but also more co-morbidity than richer groups, and suffer more from the consequences of illness severity. In addition, morbidity tends to cluster in particularly vulnerable groups rather than being randomly distributed in the population (Starfield, 2006b). Primary care can, therefore, reduce health inequity because it allows for the early detection and treatment of illness, offers patient-focused care for a range of illnesses and effectively addresses those illnesses that disproportionately affect poorer groups (Health Disparities Task Group, 2004; Starfield, 2006a). Further, as lower income groups have better access to primary care than other services, higher income groups capture a lower proportion of public expenditure on primary health care compared to total public expenditure (O'Donnell et al., 2007).

> By placing family and community needs at their centre, and being sensitive to the acceptability of health care, PHC-oriented systems also have the potential to promote an intercultural approach to health care, working with indigenous health systems to enable access by socially marginalized groups (Vega-Romero & Torres-Tovar, 2007).

Box 4: Evidence that primary level care promotes health

Studies in industrialized countries (Starfield, Shi & Macinko, 2005) show that:

- population health is better in geographic areas which have more primary care physicians;
- individuals who receive care from primary care physicians are healthier; and
- there is an association between the special features of primary level care, such as embodiment of the principles of a patient and population focus, and improved health in the individuals who receive these services.

Cross-country analysis also shows that industrialized countries with stronger primary level services have populations with better health.

Evidence from low- and middle-income countries demonstrate similar successes (Doherty & Govender, 2004; De Maeseneer *et al.*, 2007; Macinko *et al.*, 2006). In Costa Rica, for example, following the strengthening of primary care, national infant mortality rates fell substantially as did child and adult mortality, independent of improvements in other health determinants (Starfield, 2006a; PAHO, 2007).

2.3 Health systems can influence the broader social and political context

The bi-directional nature of the arrow between "the social and political context" and the health system in Figure 1 points to the potential of PHC-oriented health systems to influence the wider context. All health systems both reflect existing patterns of social inequality and provide a site from which to contest them (Mackintosh, 2001). As a major national employer, for example, public health systems influence their employees' lives, and specifically those of women (George, 2007), through workforce structures and practices. Health systems can also contribute to social cohesion by empowering socially marginalized groups and enabling dialogue between different groups within society (De Maeseneer et al., 2007), even in fragile states (Ranson *et al.*, 2007). Health systems may even be influential in building and sustaining societal and political support for governments that promote health equity (Laurell, 2007; Perera, 2007).

2.4 Some health systems fail to address inequity

All too often, health systems fail to realize their positive potential (e.g. China: Meng, 2007; USA: Dubowitz et al., 2007) and may even perpetuate injustice and social stratification, for the following reasons:

- Few health systems have a strong primary health care orientation (Vega-Romero & Torres-Tovar, 2007) and most make only limited attempts to address differential exposure and vulnerability through intersectoral action and social empowerment (Baez & Barron, 2006; Wallerstein, 2006). Social action, meanwhile, often excludes socially marginalized population groups (Goetz & Gaventa, 2001; Loewenson, 2003).

- In many LMICs, higher income groups make greater use of public health care than poorer groups (Gwatkin, Bhuiya & Victora, 2004; Sahn & Younger, 2000). The main access barriers, which disproportionately affect women and other groups suffering from discrimination, include the costs of seeking care; lack of information and knowledge; lack of voice or empowerment; inaccessible and poor quality services; and unresponsive service providers (Palmer, 2008).

- The norms and practices embedded within health systems often work against heath equity. Socially marginalized groups often experience health care as demeaning and exclusionary as a result of poor quality interpersonal care. There is some evidence that these problems increase the probability of worse outcomes (particularly in relation to chronic care), lower self-reported health status and the denial of dignity and patients' rights (Gilson, 2007a; Govender & Penn-Kekana, 2007). Gender discrimination within the workforce also specifically contributes to gender inequities, for example, by generating gaps in the services needed by women; failing to support the critically important community-based activities undertaken by women; and interpersonal interactions that challenge patient dignity and autonomy (George, 2007; Govender & Penn-Kekana, 2007).

Illness and out-of-pocket payments for health care push poor people into poverty or worsen their existing poverty (Russell, 2004; Xu *et al.*, 2003; McIntyre *et al.*, 2006; van Doorslaer et al., 2006). Not surprisingly, high levels of private spending (including out-of-pocket spending) undermine the redistributive impact of health care in many LMICs (Meng, 2007).

Such failures have become entrenched by the macro-economic policies and neo-liberal health sector reforms that have dominated health system development in many countries over the last decades. Commercialization and some aspects of globalization have undermined the capacities of LMIC health systems to address health inequity. This can clearly be seen in the impoverishing cost burdens that result from charging fees for public health services, a neo-liberal reform associated with commercialization (Mackintosh & Koivusalo, 2005), and the international migration of scarce human resources, a defining characteristic of globalization (Padarath *et al.*, 2003). These forces have also closed down opportunities within health systems for the engagement with civil society that is important for social empowerment (Cardelle, 1998).

The implementation of neo-liberal health reforms has been driven by a combination of international agencies, commercial actors and the higher income and medical groups whose power they enhance (Bond & Dor, 2003; Homedes & Ugalde, 2005). Indeed, even though new global health initiatives, such as the Global Fund for AIDS, TB and Malaria, or the US President's Emergency Fund for AIDS Relief, have brought enormous levels of new funding to health systems within LMICs (US$ 8.9 billion in 2006 for HIV/AIDS alone), there is concern that their vertically managed programmes will once again undermine the chances of achieving health systems oriented toward population health and rather exacerbate health inequity (Garret, 2007; Hanefeld *et al.*, 2007).

3. What actions are needed to operationalize the features of health systems that address the social determinants of health inequity?

As Figure 18 illustrates, the main features of health systems oriented to population health and health equity are:

- health care financing and provision arrangements that aim at universal coverage and redistribute resources towards poorer groups with greater health needs;
- intersectoral action to promote population health;
- practices and mechanisms for involving population groups and CSOs (particularly those working with socially disadvantaged and marginalized groups) in decisions and actions that identify, address and allocate resources to health needs; and
- revitalization of the comprehensive primary health care approach as a strategy that reinforces and integrates these and other health equity-promoting features.

Operationalizing and strengthening each of these features requires specific and deliberate actions.

1. *Building up universal coverage*

Cross-national and country level health economic analyses (WHO, 2006a; Mackintosh, 2007; McIntyre, 2007; Mills, 2007) suggest that redistributive health care systems share five common features:

(i) Health system development is guided by the goal of universal coverage

In universal systems everyone within a country can access the same range of services on the basis of need and pays for these services on the basis of their income. Such systems enable the rich (and relatively healthy) to cross-subsidize the use of health care by the poor (and relatively sick).

However, deliberate efforts are always needed to ensure that socially marginalized groups really do have access to effective health services. These must include efforts to widen geographic access by investing in public primary and secondary level infrastructure in under-served areas, reducing transport cost barriers, and improving the referral linkages between primary and secondary levels (Tangcharoensathien et al., 2007). This will, in turn, require re-allocation of the available tax funding between populations and areas relative to need (McIntyre et al., 2006). It is also important to make public services more acceptable, particularly for women and marginalized groups. Relevant interventions include those encouraging a greater client-centred approach to service delivery and enabling patient and social empowerment (Gilson, 2007a; Govender & Penn-Kekana, 2007).

(ii) Public funding plays a central role

The evidence is clear that the core foundation of redistributive health care systems is tax-based and often requires mandatory health insurance funding. Tax funding is needed to subsidize fully or partially the costs of care provided to groups such as the informally or self-employed who are difficult to reach through mandatory insurance schemes (Wagstaff, 2007).

(iii) No fees or only minimal fees are charged for public services

Out-of-pocket payments, including user fees, generate utilization inequities and impoverish women, lower income and socially marginalized groups (Lagarde & Palmer, 2006). More re-distributive health care systems often charge only minimal fees for public services (O'Donnell et al., 2005).

(iv) Services are comprehensive

A fairly comprehensive set of services (or one that is consciously expanded over time) is necessary to improve access, offer financial protection to poorer groups and enhance overall redistribution. However, it is important to encourage re-allocation of resources to, and significant strengthening of, primary care provision, and to ensure that hospital services are strengthened in

ways that enhance their benefits for poorer groups (Figueras *et al.*, 2004; de Maeseneer et al., 2007; O'Donnell et al., 2007).

(v) The private sector complements the public sector

In low-income settings, a range of informal and non-profit private providers, including traditional healers, are an important source of care, including for poorer groups (Palmer, 2008). Experience from middle-income settings also indicates that for-profit private providers can sometimes play important health system roles, where adequate managerial capacity allows effective contracting arrangements (Siddiqi, Masud & Sabri, 2006). In addition, some argue that private insurance may service the extra demands of richer groups, for example, by allowing the voluntary purchase of additional care, including amenity facilities, and thereby relieve the public sector of this pressure (Wagstaff, 2007).

However, great caution should be taken in extending private voluntary insurance where it does not yet exist, as it commonly introduces distortions that undermine equity and sustainability. For example, despite recent successes in improving health status indicators (Victora et al., 2011), Brazil is grappling with this very problem. Indeed, it is always essential to identify the policy and regulatory action needed to ensure that the private sector contributes to, rather than undermines, the redistributive function of the health care system (WHO, 2006a). Given the limited evidence base on the impacts of for-profit -private care on health equity and sustainability, it is therefore worrying that the World Bank and its International Finance Corporation are currently promoting the for-private profit health care sector (including private voluntary insurance) as a strategy for meeting the health care needs of poor populations in Africa, and are encouraging external funders as well as governments to subsidise for-profit activities (International Finance Corporation, 2007; Preker, Zweifel & Schellekens, 2010).

Achieving universal coverage will inevitably be a long-term goal for most countries, and the set of feasible policy actions necessary to move towards it will vary between settings and across time frames, as summarized in Table 5.

2. *Mobilizing intersectoral relationships*

Because of their explicit commitment to population health, ministers of health and health managers can play a central role in initiating and monitoring intersectoral action in any setting, including low-income and conflict-affected countries. However, as intersectoral action for health (IAH) is time-consuming and resource-intensive, it is important to make strategic choices about when and how to intervene. It is often possible to catalyse action by other sectors or take advantage of opportunities for intersectoral action which do not have equity as a stated goal. Although IAH is generally easier to implement at local levels, action at a national level (such as tobacco and alcohol taxation) may better address some of the structural causes of ill-health that most affect socially disadvantaged groups (Gilson, Doherty, Loewenson & Francis, 2007).

Table 5: Moving towards universal coverage

	Strategies
First steps, low-income countries and post-conflict settings	• ***Mobilize extra resources for health care:*** for example, by re-prioritizing health care within government allocations, widening the tax base and improving tax collection, tackling corruption and securing increased international assistance.
Subsequent steps, all contexts (including post-conflict settings)	• ***Reduce out-of-pocket payments*** by removing public sector user fees and developing innovative ways to limit other health care costs (such as drug and transport costs); • ***Widen geographical access to comprehensive services*** by investing in public primary and secondary services in currently under-served areas and strengthening referral linkages (strengthening maternal care will offer particular benefits for women); • ***Re-allocate government resources between geographical areas*** taking account of population health needs and all available funding sources; • ***Improve the acceptability and quality of public sector health care*** through development of innovative strategies; and • ***Enhance technical efficiency*** (especially in relation to pharmaceuticals).
Also, in low-income countries:	• **Test strategies to work with non-state providers** in low-income populations to extend access and improve quality, providing that they do not reinforce inequity and stigmatization; and • ***Test community-based health insurance*** (or insurance schemes dedicated to particular population groups) as a mechanism for protecting poorer groups against catastrophic payment levels, recognizing that the potential for cross-subsidization is always limited within poor communities
Also, in middle-income countries (including some transitional countries), take action over time to:	• ***Expand pre-payment funding*** through a combination of tax funding and mandatory health insurance (ensuring income-related insurance contributions and limiting the tax deductibility of insurance contributions for higher income groups); • ***Widen the benefit/service package*** provided, including to poorer groups, over time; • ***Reduce fragmentation and segmentation*** within the health care system by pooling funds and harmonizing contribution levels and benefit packages between population groups; • ***Where relevant, experiment cautiously with risk-equalization mechanisms*** to ensure equitable resource allocation between financing schemes; • ***Consider carefully if and how to strengthen purchasing strategies,*** such as contracting arrangements, to leverage performance improvements and cost containment, particularly in relation to private health care providers; and • ***Regulate private insurance,*** if it already exists, to prevent distortions in the overall system that undermine equity, and ensure that it acts primarily as top-up insurance for the more wealthy.

Source: Gilson, Doherty, Loewenson & Francis, 2007.

IAH is always a complex political process, involving diverse groups in wide-ranging activities. Contextual factors, such as a low political priority for health concerns, poor economic growth and government budget cuts, or government funding structures that hinder interaction across sectors, often act as obstacles. However, contextual factors can also provide opportunities for IAH; for example, where social values support action on these determinants (Perera, 2007) or where governments as a whole, perhaps having been brought into power to implement social equity policies (Laurell, 2007), embrace the concept of the social determinants of health. Consequently, *how* IAH interventions are developed and implemented matters as much as *what* is done**.** The available experience (Public Health Agency of Canada & *Health Systems Knowledge Network,* 2007) suggests that, to leverage intersectoral action, dynamic health leaders and officials at every level of the health system should:

- **make the case for intersectoral action**, using sound epidemiological and other evidence, to convince other sectors to participate;
- **take the strategic needs of other sectors into account and clarify the roles of health officials**, framing objectives in ways that are commonly understood and sharing responsibilities and rewards (rather than taking prime responsibility for all the stages of developing, implementing and evaluating initiatives);
- **set explicit goals and objectives** that give a clear mandate, are clearly linked to activities and yield visible results that help build morale as well as provide a good basis for evaluation;
- **build trust-based teams**, drawn from actors in different sectors, levels of government and parts of civil society, who together combine the range of skills to develop, implement and evaluate IAH initiatives, and manage complex communication and negotiation processes; and
- **build relationships with local or national political leaders and the media** to garner wider political and social support for particular IAH initiatives and for IAH in general.

Additional action at higher levels can enable and sustain local IAH initiatives. As first steps in any context, ministers of health and senior officials should strive to establish organizational arrangements that allow for on-going dialogue across sectors and secure dedicated budgets and performance incentives for participation in IAH, including appropriate accountability frameworks and relevant skills training. Achieving these steps will require, in particular, securing the support of central finance officials by making a persuasive case for how IAH can address the particular economic and budgetary policy concerns of the treasury department. Health officials may also need to lead wider political action to offset opposition from powerful actors threatened by specific IAH initiatives, such as the opposition of tobacco companies to anti-smoking campaigns and legislation. In politically supportive contexts, ministers of health and senior officials should seek support for national policy frameworks that work towards institutionalizing IAH by making health equity the central goal. Such frameworks should also place mandatory requirements on government ministries to conduct health

equity impact assessments or participate in intersectoral action. In these contexts, it may be more appropriate for cabinet or inter-ministerial committees to drive IAH, although the ministry of health will always play an important role.

3. *Facilitating social empowerment*

It is not guaranteed that strategies that strengthen social power will have positive health equity impacts. Their outcomes depend on historical and socio-political contexts, the nature of social institutions and implementation practices (Wallerstein, 2006). Strategies for social empowerment must, therefore, be context-specific and take account of the nature of the relationships between the state and civil society and the values and norms that underpin policy. Stable, egalitarian socio-political contexts, and social conditions that promote collective claims to social rights, facilitate social participation (Laurell, 2007; Perera, 2007). Also important for health are organized and capable social networks and civil society organizations, sustained contact between population groups and health workers, an adequately resourced local health system, and incentives for collective action (Goetz & Gaventa, 2001; Loewenson, Ruisike & Zulu, 2004; Baez & Barron, 2006; Vega-Romero & Torres-Tovar, 2007).

As a potential first step towards social empowerment, *social mobilization* strategies encompass activities aimed at increasing social awareness of health and health systems, strengthening health literacy, and enhancing social capacities to take health actions. Social mobilization can improve the performance of health systems and population health outcomes, especially in relation to health promotion and public health activities (Gilson, Doherty, Loewenson & Francis, 2007). Social mobilization may also be linked to efforts to hold health authorities accountable (Table 6).

Strategies to address the social determinants of health call for more direct forms of participation in decision-making, and greater control over the resources for health, particularly by relatively powerless groups who also bear the greatest burden of health problems in every society. For example, accountability strategies are more likely to strengthen *social empowerment* when directed towards health policy and management decisions, and when disadvantaged and marginalized groups participate in decision-making (Murthy, Klugman & Weller, 2005).

The range of strategies required by different actors to move from social mobilization to *social empowerment* are summarized in Table 7. Social empowerment always takes time, needs resources and must be sensitive to local contexts. It cannot therefore be reduced to a set of "tools" that can be applied independently of context. Indeed, it is always important to **recognize and make explicit the links to political values, systems and leadership** needed for social empowerment, and **to make the linkages across sectors**, and particularly with local government and civil society, that facilitate social roles in health.

Table 6: Accountability strategies

Accountability mechanisms initiated within health systems	Accountability mechanisms initiated within civil society or by other sectors
To build answerability	
• Consultations with stakeholders on specific policies • Permanent or time-bound stakeholder forums for policy formulation and monitoring of implementation • Placing advertisements in the media and holding public hearings • Target-setting	• Right-to-information campaigns • Right-to-information laws • Citizen monitoring of health expenditure and quality • Mortality audits • Joint health information surveys
To strengthen enforceability	
• Institutionalizing access to decision-making through, for example, clinic committees • Local-level management • Service charters • Health system quality assurance and monitoring systems • Professional self-regulation	• Creation of task forces, user groups and community lobbies • Consumer protection laws, consumer forums and public interest litigation • Women's health groups supporting enforcement of women-friendly health services • Patients' rights charters promoting rights and responsibility • Ombudsman centres

Sources: George, 2003; Murthy, Klugman & Weller, 2005.

4. *Revitalize PHC*

Past experience around primary health care (PHC) has shown both promise and disappointment. Internationally, there have been calls to revitalize the approach and its implementation, building on the inspiration that PHC continues to generate among health personnel and the general public (PAHO, 2007).

Social empowerment and redistributive health care are each integral components of a PHC-based health system (PAHO, 2007). Additional actions necessary to revitalize the PHC approach and so capture the health and health equity gains that it can deliver, include:

Table 7: Strategies enabling social empowerment

Central and local government:

- Provide statutory rights to information to the public
- Recognize, support and fund mechanisms for direct participation by population groups (as in Brazil and Cuba)

Health officials:

- Orient, train and reward health professionals to facilitate social mobilization
- Recognize, support and fund mechanisms for direct participation by communities, such as district and clinic boards or committees
- Use participatory processes in planning and resource allocation, and make planning processes accessible to public monitoring (as in Brazil)
- Establish a mix of legal, media, organizational and communication strategies so that partnerships between ministries of health and CSOs: are governed by clear agreements; benefit from uninterrupted financing and staffing; and are subject to regular and timely monitoring and evaluation by implementing partners

Civil society organizations and population groups:

- Bring population information and preferences into monitoring, lobbying and planning
- Monitor the performance of health systems against social priorities (for example through report cards, as in India)
- Draw attention to needs and inequities in resource allocation, including proposing alternative budget allocation priorities (e.g. youth, child and gender "friendly" budgets)
- Provide special mechanisms to engage marginal groups (such as "citizen juries" and participatory "well-being assessments")
- Support the development of social capacities for engaging with bureaucracies and authorities through popular education work, building skills in lobbying and negotiation and support for publications
- Engage with formal local and national political leaders to strengthen political support for social action (e.g. by strengthening links between civil society and parliamentarians)

Source: Goetz & Gaventa, 2001; Loewenson, 2003; Baez & Barron 2006; Chebundo, 2007; Labra & Giovanela, 2007; Ochoa & Visual, 2007; Rusike, 2007.

- **strengthening the local level** (sometimes called the district health system) as the foundation of the health system (Grodos & Tonglet, 2002) and the focal point for the wider action needed to address the social determinants of health inequity (Rachlis, 1999);
- **adequately funding the local level and PHC**, within the framework of universal coverage;
- **recognizing and tapping local-level opportunities for partnership** between multidisciplinary teams of local public health professionals, CSOs and local political and community leaders, (Connor, 2000), including working through community health workers;
- **providing the primary care level with infrastructural and logistical support**, especially in terms of medicines, technology and transport systems, and move towards integration of vertical services whenever possible (de Maeseneer et al., 2007; PAHO, 2007);
- **ensuring the availability of local health personnel** with the necessary resources, values base and skills (Gilson, 2007b; Govender & Penn-Kekana, 2007) to take action on health inequity and work with disadvantaged and marginalized populations (Macinko et al., 2006; Peres *et al.*, 2006); and
- **strengthening local health management** by training and motivating managers and by establishing local information systems that support action on health inequity (De Savigny *et al.*, 2004; Perks, Toole & Phouthonsy, 2006).

4. What political and institutional processes are necessary to initiate and sustain health system transformation?

Addressing health inequity is not simply about making appropriate policy choices: politics always affect health. Political parties with egalitarian ideologies are more likely to implement the redistributive social policies that are positively associated with health outcomes (Navarro et al., 2006). However, policy choices are subject to challenge in every setting, particularly from those with completely different agendas and those who fear a loss of power, status or income. Good intentions and policies are therefore generally not enough to promote health equity, even within a supportive

political context (Chetty, 2007). Everywhere, political action is needed to introduce and sustain health system change (WHO, 2006a; 2006b; Mackintosh, 2007; Mills, 2007; PAHO, 2007) and progressive policy actors need to think strategically about the processes of policy development and implementation (Buse et al., 2006; Stein et al., 2006).

1. *Build coalitions of support for policy change*

National policy actors working for equity-promoting transformation commonly include individuals working from a government base (such as ministers of health and senior officials), CSOs (such as groups with particular concerns, e.g. women's issues or HIV/AIDS), researchers and academics, and progressive health professional organizations. Although these different groups can advance policy change when working alone, experience shows that they are generally more effective when working in alliance (Kwon & Tchoe, 2005; Tangcharoensathien et al., 2007). They also need to build wider coalitions that engage other potentially powerful actors who have their own circles of influence (such as public sector health managers, health professionals and trade unions, and other politicians and parliamentarians), as well as take action to offset policy opposition.

The first step in building coalitions is to **map the key actors' positions** on health equity issues and policies, and to consider the contextual influences over them. This mapping provides the basis for four further steps:

- **raising the public visibility of inequities** and the voice of the socially disadvantaged (using wide-ranging evidence to focus attention on a policy problem and legitimize a policy solution (Tangcharoensathien et al., 2007);
- **creating new supporters** through introducing evidence so that problems and policies are brought alive in ways that other actors can understand and accept;
- **mobilizing support** from important political constituencies and other actors (Ridde, 2006; Theobald *et al.*, 2005);
- **tackling policy opposition** by applying a broad range of strategies and tactics to counter opponents' positions or their power to oppose (Figueras *et al.*, 2004; Glassman *et al.*, 1999); and
- **building regional networks** to enhance the capacity and motivation to drive forward necessary policy change (Chebundo, 2007).

2. *Strengthen policy implementation to address health inequity*

Experience highlights the critical importance of strengthening public sector planning and management with an eye on health equity goals. More specifically, ministers of health and senior civil servants should seek to:

- **secure the legislative and funding base** for new policies, including constitutional rights to health or health care as well as specific legislation, and the processes to enable collective claims on these rights by marginalized groups (Figueras et al., 2004; Laurell, 2007);
- **establish clear health equity goals** to guide implementation and enable an equity-based evaluation (Gwatkin, Bhuiya & Victora, 2004);
- **implement new interventions first in disadvantaged areas and with marginalized populations**, taking care to strengthen their capacity to use and benefit from the programmes (Laurell, 2007; Mooney & Houston, 2004); and
- **learn through doing** by monitoring and evaluating the experiences of implementation (Gilson, 2007b; Gwatkin, Bhuiya & Victora, 2004).

3. *Empower public managers to lead sustained institutional change*

Sustaining the implementation of policies aimed at transforming health systems also requires action at a deeper level: in particular, to challenge the factors underpinning resistance to change and to integrate new policies into practice. This requires that ministers of health, senior civil servants and CSOs continue to encourage the re-framing of public sector organizational culture in ways that build and consolidate the norms and values which sustain health system transformation.

Although the evidence is limited, experience (Mannion, Davies & Marshall, 2005; Morgan, Land & Baser, 2005; Simmons & Shiffman, 2006; Gilson, 2007b) suggests that public sector managers can be empowered to lead such change through:

- **mentoring processes** that nurture the values and skills for such leadership;
- **policy frameworks that enable a balance of local autonomy and central direction** in particular areas of decision-making, such as human resource management, as well as engagement with actors outside government structures; and
- **supportive leadership** from senior officials and ministers of health.

Wider social processes initiated by CSOs, politicians or parliamentarians can support public sector managers in this role (Klugman, 2003; Musuka & Chingombe, 2007). Such processes can, for example, hold them accountable to the principle of health equity, or challenge the wider socio-cultural norms embedded within health systems that act against health equity (such as gender-based norms and other forms of prejudice).

5. The role of international actors

International agents and interests have significant influence over the development paths of national health systems, and have often impeded the decisions and actions necessary to promote equity. Macro-economic policy recommendations either advised or imposed by the International Monetary Fund, such as public sector salary spending ceilings, have, for example, encouraged vertical funding through global health initiatives and constrained the coherent development of public health systems (Ooms et al., 2008). Given this experience, it is important for such agencies to guard against interventions that result in unintended adverse consequences, as well as to act on the basis of evidence and make clear the values and principles that motivate action (Lister, 2007). In addition, international actors should adopt three strategies to support national health systems:

- **work with and respect national decision-making** and institutions (Ranson et al., 2007);
- **provide support to strengthen the health equity orientation** of national health systems (Hanefeld et al., 2007); and
- **increase funding flows** for health systems, especially to fragile states and low-income countries (de Maeseneer et al., 2007; Ranson et al., 2007).

Lastly, international actors should make the case for providing international assistance to support national health system action on health inequity, for example, by linking such transformation to achievement of the Millennium Development Goals.

6. Research required to support the development of health systems that challenge health inequity

6.1 Priority research questions

Review of the evidence available for synthesis by this KN (Gilson, Doherty & Loewenson, 2007) indicates that, for the future, priority research questions in this area are:

- How can overarching features of health care financing and provision that impact positively on health equity be implemented more effectively?
- What health care approaches and interventions address the access barriers of marginalized and vulnerable groups, and how can they be implemented more effectively?
- What forms and processes of engagement leverage intersectoral action for health equity across government agencies and with civil society organizations?

- What community level innovations best enable social empowerment and with what forms of health system support?
- How can implementation of the primary health care approach to health system development be strengthened?
- What are the impacts of the private sector (especially the for-profit component) on the strategies identified above, especially with respect to health equity and sustainability?
- What forms of political action are most effective in initiating and sustaining health system changes that address health inequity?
- What institutional changes within health systems are needed to sustain action to address health inequity, and what managerial processes enable their implementation?

6.2 Issues to be encompassed in research

As well as addressing the specific questions above, research needs to encompass the following issues:

6.2.1 ***Consideration of how to conduct research in ways that will contribute to sustaining the political and social action needed to institutionalize the necessary changes within health systems.*** *Participatory action research (PAR)* - led by groups at community level, CSOs and health workers themselves - is important, as it allows for the focus to be on strategies to address the challenges participants face in their own lives (Chambers, 1997; Loewenson et al., 2011). Such research is itself empowering, can generate evidence to support social accountability for health equity, support implementation of new interventions and generate evidence to share with others about those interventions. PAR has been found useful in enhancing knowledge of disorders with an environmental etiology, reducing adverse health outcomes through innovative intervention strategies and policies, and raising the profile of community perceptions and concerns in public health programming (e.g. O'Fallen & Dearry, 2002; Walker & LaMontagne 2004; Loewenson et al., 2011).

6.2.2 ***Investigation of the nature of, and how to counter, opposition to equity-promoting change***. *Such opposition* is likely to come from those whose profits, status and power are threatened. Research in this area will include better understanding of the values and norms within any society that can provide the basis for framing policy messages to persuade and mobilize support for change.

6.2.3 ***Securing support for equity-promoting changes.*** To bring about equity-promoting health system change it will be necessary to secure the support of powerful groups such as national politicians and civil servants, health professional bodies and the leaders and staff of international agencies, as well as to influence the media and public opinion. Different types of research are likely to be needed to persuade different actors. Some actors may be persuaded by statistical analyses, for example, and others by the richly contextualized experiences derived from case study work (Gilson, Doherty & Loewenson, 2007). R*aising the visibility of the experience of socially marginalized groups is*

also important. This can be done through routinely disaggregating household survey data by population markers of vulnerability, or more detailed inquiry of **approaches that have been successful in tackling barriers in accessing health care.**

Future health policy and systems research on the priority issues already identified therefore needs to encompass:

- cross-national econometric and epidemiological analyses that use a combination of existing household and health systems data sets from a range of LMICs;
- rigorous synthesis of existing case study material (drawn from country or local levels, and with special efforts made to draw in evidence presented in languages other than English) that draw out commonalities and differences in experience;
- more in-depth, single- and multi-country case studies that are more theoretically based and adequately contextualize experience, so to allow learning by other countries/areas;
- impact evaluations combined with case study work, to generate evidence on the impacts of new interventions on equity, document the processes through which new interventions are implemented and analyse the ways in which implementation strategies explain equity impacts; and
- multi-country intervention and process assessments that allow consideration of the varying influence of context over the implementation processes and impacts of equity-oriented health system interventions.

6.3 Changing the focus of health research

Taking forward work on these research priorities will require important changes in the overall focus and approach to health research. At one level, this means addressing the current imbalance identified by the 2000 Global Forum for Health Research, whereby 90% of research resources are applied to the health problems of 10% of the world's (highest income) population (*Global Forum for Health Research*, 2000). At another level, this requires tackling the institutional under-funding and fragile nature of health research organizations and universities in developing countries, and the related out-migration of scientists (Loewenson, 2004). It will also need:

- new incentives and frameworks to encourage researchers to support participatory action research led by marginalized and vulnerable groups, and health workers, as well as research undertaken in multidisciplinary teams;
- new approaches to research synthesis that are appropriate for use with health policy and systems research evidence;
- stronger national household survey and information systems, as well as the development of health systems data sets, to allow cross-national analysis as well as disaggregation of data by marginalized groups; and

- capacity development strategies to build health policy analysis and the other social science expertise necessary to conduct this range of research, especially with respect to identifying salient contextual and other explanatory factors.

7. Conclusion

This chapter presents the case for health systems as a site of action through which to address the social determinants of health and tackle health inequity. It summarizes a wide range of evidence that addresses sets of issues not typical to health systems debates combining, for example, discussion of health financing and organizational issues, a dominant strand of previous health reform debates, with that of intersectoral action for health and social empowerment. Interestingly, recently published evidence from Brazil shows how that country's considerable progress towards the Millennium Development Goals can be attributed to exactly such features (Victora et al., 2011). Important elements were the government's commitment to addressing the social determinants of health and implementing a comprehensive national health system, and "a strong emphasis on health as a political right, together with a high level of engagement by civil society in that quest"(Kleinert & Horton, 2011).

The breadth of coverage of different issues in this chapter is a strength from which it highlights and outlines six areas of action needed in every context to lever positive cycles of health system change that build their own momentum towards health equity. These areas of action are:

- health care financing and provision arrangements that aim at universal coverage and are re-distributive of welfare;
- leadership, processes and mechanisms that leverage intersectoral action;
- practices that enable social empowerment;
- revitalization of the primary health care approach;
- strengthening of political action within national policy development and implementation processes; and
- reorientation of the roles of international agencies.

New research is required to address gaps and weaknesses in the current knowledge base, with a focus on how to conduct this research in ways that help to bring about sustained change. Participatory action research strategies led by socially marginalized groups and health workers are an important approach towards social empowerment. Research must also persuade powerful societal groups to take action on health inequity.

Crucially, therefore, the chapter emphasises that bringing about the necessary changes within health systems requires a combination of technical analysis and political action. Technical analysis helps to identify which features of health systems to re-design, nurture or protect. Ultimately, however, p***olitical commitment and action*** is needed to confront again and again the powerful actors, institutional constraints and socio-cultural norms that act as brakes on health systems development in the interests of health equity.

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9 Reducing health inequities through public health programmes

Erik Blas and Anand Sivasankara Kurup

1. Introduction

The preceding chapters have described a theoretical framework of analysis of social determinants of health, as defined by the Commission on Social Determinants of Health (CSDH) (Chapter 1); the Knowledge Networks (KNs) have explored different determinants and their contribution to inequities in health outcomes (Chapters 2-9). They have proposed how societies need to change in order to reduce these inequities. Some of the proposed changes are profound, touching on the basic values of societies and how they are organized.

The Priority Public Health Conditions Knowledge Network (PPHC KN) has taken a different approach by examining the impact of social determinants on specific health conditions. Public health programmes traditionally address population health through measures to prevent and control health problems; it is also important that they identify the structural and intermediate determinants that lead to ill health, and to propose and promote appropriate policy change. By viewing the interaction of social determinants and health outcomes from a classic public health perspective, the PPHC KN provides a contribution which complements the work of the other knowledge networks of the Commission.

A total of 16 global WHO public health programmes participated in the work of the PPHC KN in order to build on epidemiological studies and analyses of the impact of disease control programmes, and to explore options and opportunities for expanding the definitions and practices that constitute public health interventions. The 16 programmes covered: alcoholrelated disorders, cardiovascular diseases, child health, diabetes, food safety, HIV, maternal health, malaria, mental health, neglected tropical diseases, nutrition, oral health, sexual and reproductive health, tobacco and health, tuberculosis, and violence and injuries.

In addition to the work of these programmes, through collaboration with the Special Programmes for Human Reproduction[1] and Tropical Diseases,[2] and the Alliance for Health Policy and Systems Research, a number of case studies were commissioned to examine experiences of implementing programmes to address social determinants of health.

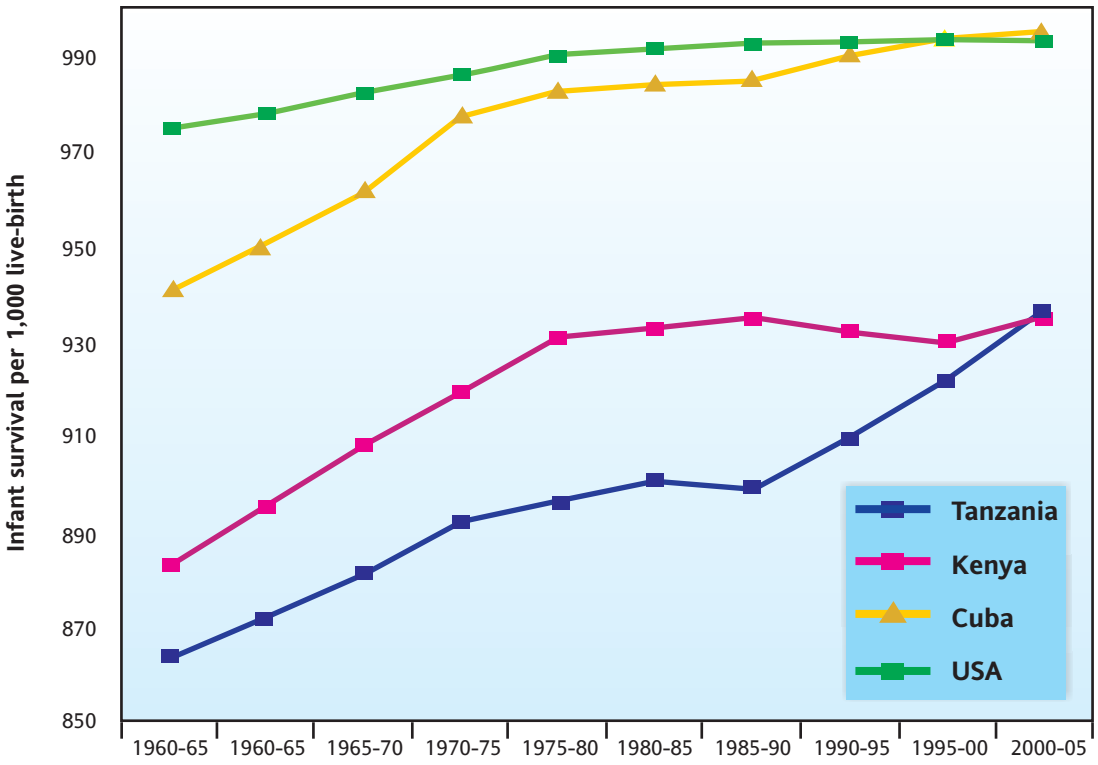
2. Global targets and public health programmes

Infant mortality is often used as an indicator of population health and social and economic development. Comparison of the infant survival rates of two pairs of neighbouring countries over five decades reveals an interesting picture (Figure 19). The wealthier of the pairs, i.e. Kenya and the United States of America, followed capitalist development models while the poorer, Cuba and the United Republic of Tanzania, followed socialist models with emphasis on solidarity and equity. Over the 50 years shown in the graph, the rates in poorer neighbours caught up with and surpassed those in the richer. However, it was not a straight path. The three developing countries, Cuba, Kenya and the United Republic of Tanzania, experienced a slow-down during the 1980s, during which period a severe economic embargo was imposed on Cuba, and Structural Adjustment Programmes (SAPs) were imposed on Kenya and the United Republic of Tanzania. The SAPs put conditionalities on development loans, prescribing rolling-back of government by reducing the direct role of the state in providing services and in the economy in general, thereby increasing reliance on the market and private sector. At the end of the 1980s the devastating impact of the SAPs on social development was finally acknowledged and they were relaxed (Blas, 2005). Improvements in infant survival in the United Republic of Tanzania quickly followed, possibly finally benefiting from the investments made in primary health care through human and physical resources in the late 1970s and early 1980s. In Kenya, however, there was no improvement and in fact a decline in infant survival occurred. The increased infant mortality rate in Kenya has been attributed to an effect of the HIV epidemic (Hill et al., 2001); however, the United Republic of Tanzania has a comparable level of HIV prevalence (Bariagaber, 2001). The explanation is likely more complex and involves a combination of factors including increasing poverty, higher birth rate, and less access to clean water (African Population

[1] Special Programme of Research, Development and Research Training in Human Reproduction; http://www.who.int/hrp/about_us/en/

[2] Special Programme for Research and Training in Tropical Diseases; http://apps.who.int/tdr/svc/about

Figure 19: Number of infants per 1,000 live-births surviving their first birthday in two pairs of neighbouring countries (Data from World Population Prospects 2010 and earlier revisions)

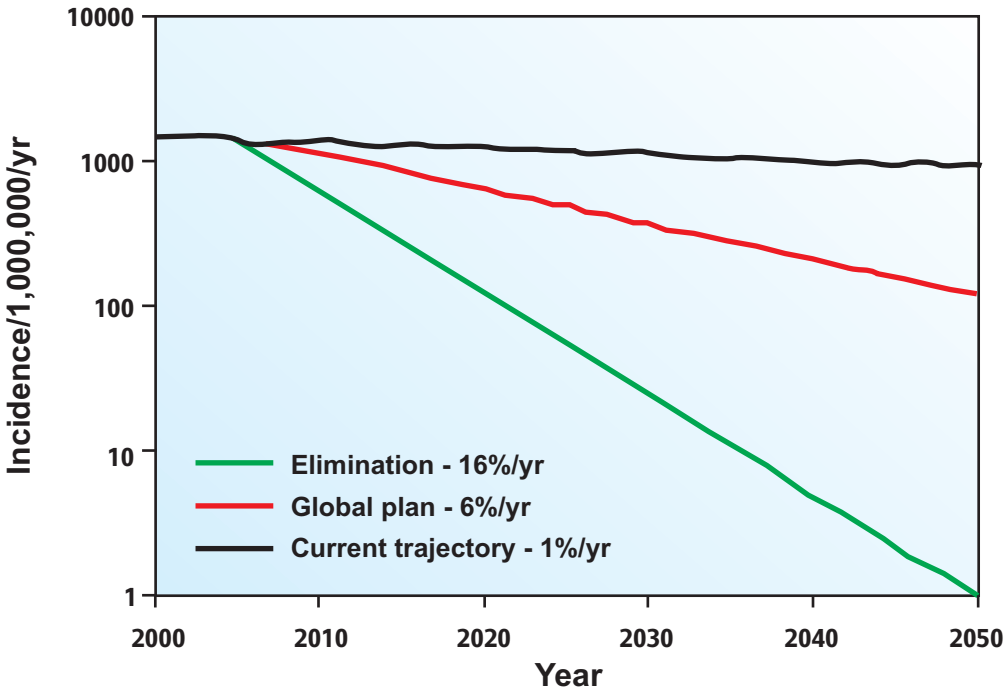


Health and Research Center, 2006). Further, the proportion of urban Kenyan children fully immunized dropped from 76% in 1993 to 48% ten years later (Fosto et al., 2007), which may indicate less access to, and use of, health care services.

Global and national targets have been key drivers of public health programmes for decades. Some of these targets can be seen as process targets, such as immunization coverage, others are outcome-based, such as reduction in disease incidence or prevalence. Often, the process targets are not met or are only met after lengthy delays. Simple explanations for lack of success may be offered, e.g. the country is poor, its infrastructure is in shambles, it is neglected by the international donor community, and so on. However, as illustrated by the infant survival examples above, the explanations could be more complex, linked to the political economy and wider social factors.

If the process targets, such as targets for access or coverage, cannot be met, it would hardly be surprising that outcome targets are not met either. On the other hand, there are situations where the process targets are met - but where the modelled or expected outcome does not materialize. One case in point concerns tuberculosis (TB) control. Global and national TB control programmes have made commendable progress towards achieving process targets on case detection, treatment coverage and cure - yet, the observed decline in incidence is only one tenth of the expected decline on reaching the process targets, as predicted by epidemiological modelling (Figure 20).

Figure 20: Prospects for TB elimination (Dye et al., 2009)



3. Scope of the PPHC KN activities

The PPHC KN examined a range of priority public health conditions and through the lens of the PPHC conceptual framework. Recognizing the complex influences and feedback loops that exist between the different elements of the framework, and in view of the chosen starting point, the work was arranged according to the following five broad hierarchical levels, closely resembling those proposed by Whitehead and Dahlgren (2006):

- *Socio-economic context and position*, embracing the two most upstream, i.e., structural elements of the CSDH framework
- *Differential exposure* from the physical and social environment that pose threats to health
- *Differential vulnerability*, covering the factors that make some population groups particularly vulnerable to environmental exposures
- *Differential outcome of health care service* dealing with the individual's treatment experience in health care services
- *Differential consequences* corresponding to distribution of health and well-being in the CSDH framework and feeding back into both context and position

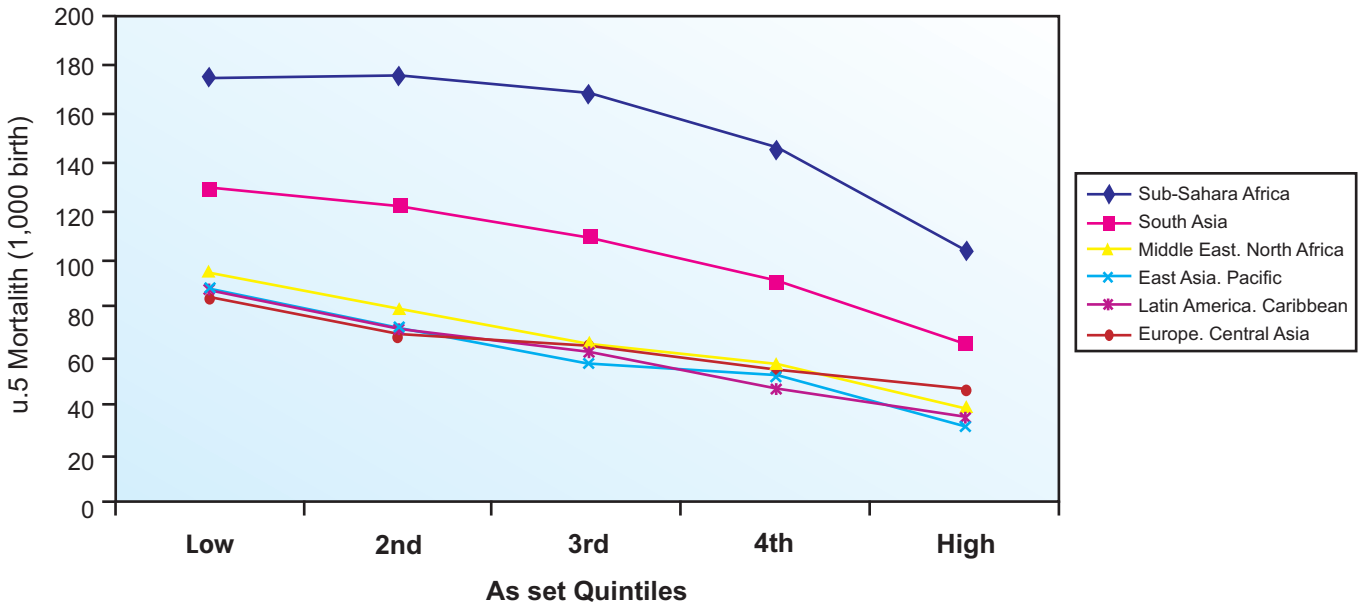
At each of the five levels, the PPHC KN aimed to identify and document the relevant social determinants in terms of pathways, magnitude and social gradients; promising entry points for intervention; potential side-effects of eventual change; possible sources of resistance to change; and what has been tried and what lessons were learned. The programmes worked individually as well as collectively and it quickly became apparent that several of the social determinants are common to many of the public health conditions analyzed, thus indicating potential for synergetic action.

4. Level, pattern, and intervention strategy

For all of the health conditions analyzed, available data show clear social gradients within populations. However, the steepness and the shape of the gradients vary not only with condition, but also for the same condition across populations and time. The most comprehensive database, which allows comparison across countries and geographic regions, is the Demographic and Health Surveys (DHS).

Data computed by Gwatkin and colleagues (2007) revealed marked social gradients in under-five mortality for all regions (Figure 21). Two regions, sub-Saharan Africa and south Asia, stand out with much higher under-five mortality rates than the other regions. With the exception of the highest quintile in south Asia, all quintiles of these two regions are worse off than the lowest quintile in any other region. The other four regions have remarkably similar overall levels and gradients despite

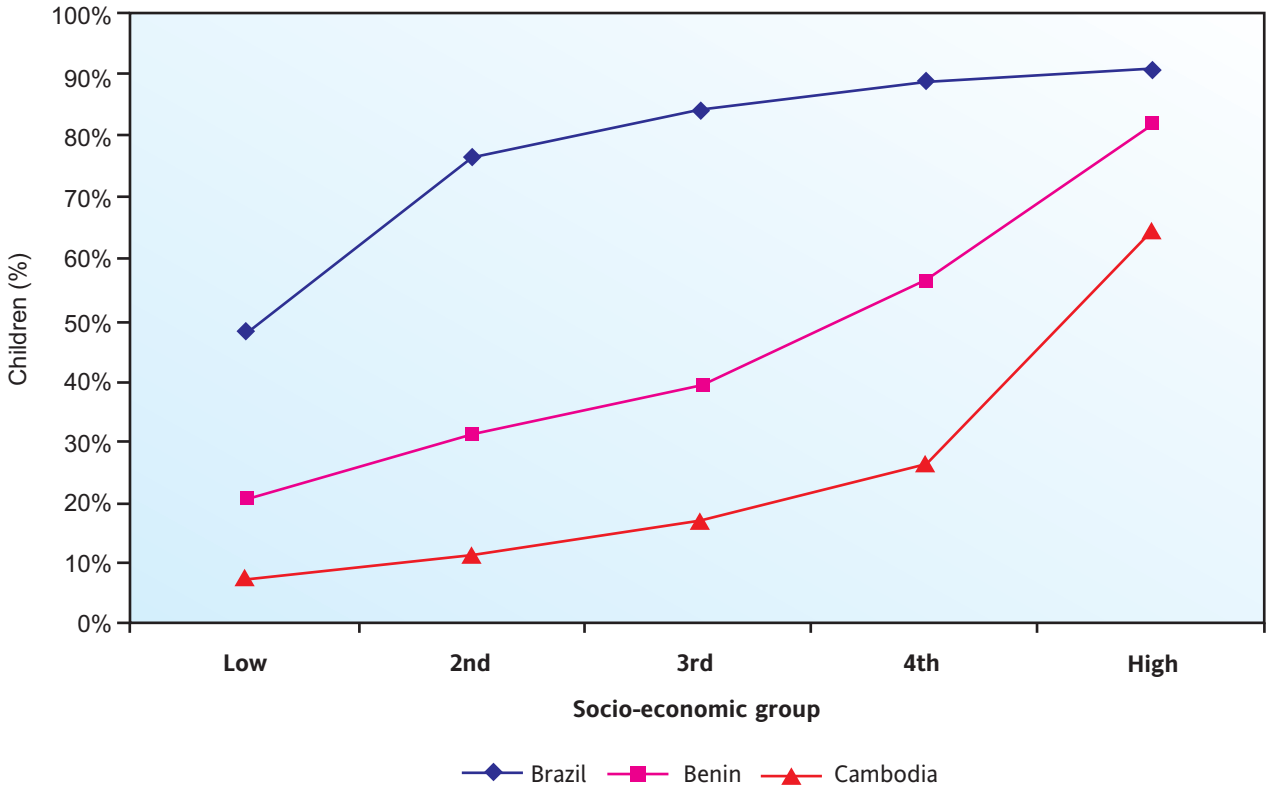
Figure 21: Social gradients in under-five mortality rate by asset quintile and region (Data from Gwatkin et al., 2007)



different levels of economic development. Notably, while the mortality in the four regions is lower, the gradients across asset quintiles persist. The lowest low/high ratio, 1.69, is seen in sub-Saharan Africa while the highest, 2.88, is in South Asia. This could indicate that under-five mortality decreases with economic development only to a particular threshold level, and that inequity persists independent of the general level of economic development and is shaped by other factors.

Three fundamentally different shapes of the social gradient with respect to the use of child survival interventions are illustrated in Figure 22. The gradient for Benin is almost linear with a progressive correlation between socioeconomic group and use of interventions, indicating that services are generally available but that access is determined by economic capacity. Comparably, in Cambodia the use for all but the highest socioeconomic group is much lower and the gradient is less steep for the lowest four quintiles. This could indicate that services are available only in particular localities and at high cost. The situation in Brazil is different, with the gap in utilization between the highest and second-lowest socioeconomic quintiles only about 10%, suggesting that services are generally available and economically accessible. However, between the second-lowest and the lowest quintiles there is a 30% drop in utilization, hinting that there are additional determinants with a compounding effect.

Figure 22: Proportion of children receiving six or more child survival interventions (data from Victora et al., 2005)



The situation of noncommunicable diseases in many low- and middle-income countries is complex, with either changing direction of the social gradient or gradients having a less uniform pattern. Cardiovascular disease (CVD) and its risk factors were originally more common in the upper socioeconomic groups of industrialized populations (Stamler et al., 1993) but the direction of the association has gradually changed over the last five decades so that currently CVD is more common in lower socioeconomic groups (Morgenstern, 1980; Mackenbach et al., 1997; Kunst , Gisks & Mackenbach,1998). While CVD trends are declining in high-income countries due to effective implementation of prevention and control measures, the impact of urbanization and mechanization has resulted in rising levels of CVD in low- and middle-income countries. People tend to move away from rural diets rich in vegetables to urban diets rich in calories and fat, and mechanization reduces physical activity. The result is a rising prevalence of overweight and other cardiovascular risk factors in developing countries, as well as a shift from higher to lower socioeconomic groups, mirroring high-income countries (Ezzati et al., 2005).

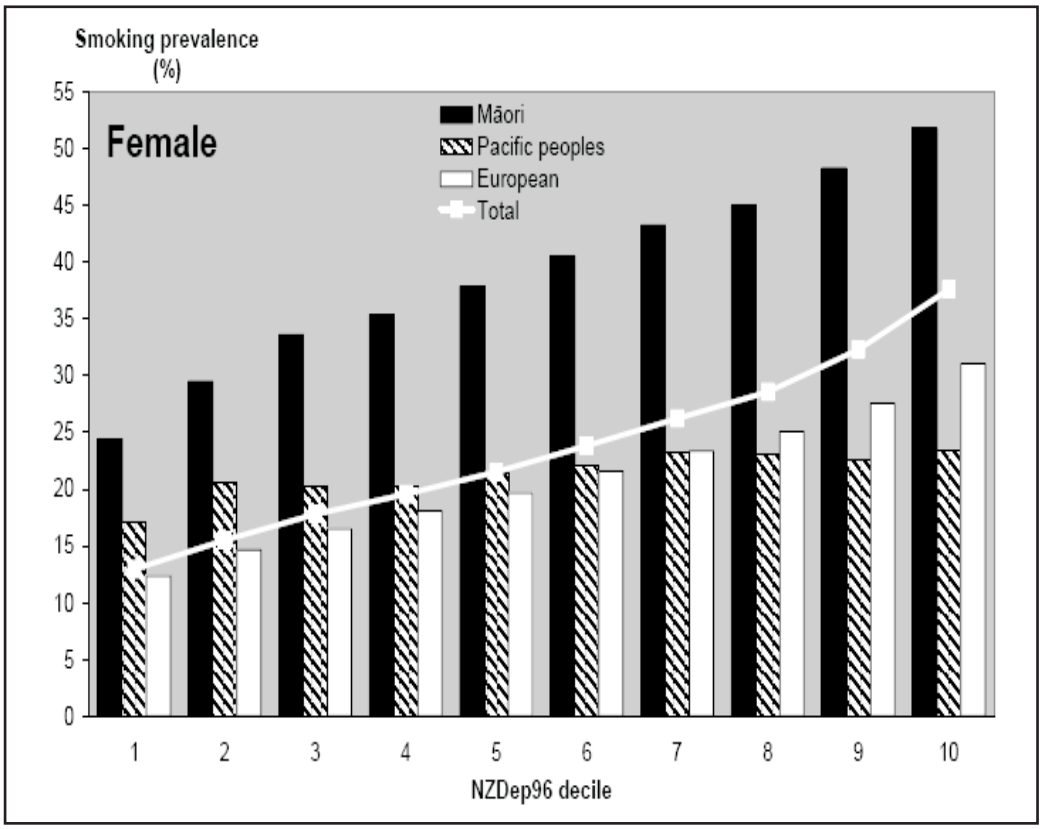
Similar situations can be found for type 2 diabetes. In most high-income countries the prevalence and incidence is inversely related to socioeconomic position, with the highest prevalence in the lowest socioeconomic strata (Whitford, Griffin & Prevost, 2003; Evans et al., 2000; Larranaga et al., 2005; Connolly et al., 2000; Kumari, Head & Marmot, 2004; Robbins et al., 2001) However, examples from low- and middle-income countries, e.g. urban China (Xu et al., 2006), urban and rural Bangladesh (Abu Sayeed et al., 1997), and urban Egypt (Herman et al., 1995) suggest that there may be a different relationship between diabetes and socioeconomic status as measured by income, education, and occupation. Underlying the distribution of type 2 diabetes by socioeconomic status (SES) is the distribution of obesity. Generally, it has been found that in more developed economies obesity is associated with lower SES, while in less developed economies it is associated with higher SES. This was found, for example, in a comparison of childhood obesity in the Russian Federation, China and the USA (Wang, 2001). However, there is evidence that the picture is changing rapidly with the total energy content of food increasing faster in the lower- compared to the higher-income quintiles (Popkin & Gordon-Larsen, 2004). Such transition can take place rapidly, even within two decades, first affecting the more wealthy residents of urban areas and then affecting the poor (Prentice, 2006).

Evidence of social inequality in oral health is overwhelming at a global level, and at all ages from childhood (Petersen et al., 2005; Kwan & Petersen, 2010). However, the World Health Survey 2003 (WHO, 2007b) shows a varied picture across regions and countries. In Africa and Asia, people with higher incomes report fewer oral health problems than those with lower incomes. In the Americas this pattern is reversed with those on higher incomes reporting more problems. A similar pattern was also found in Morocco, Pakistan, Hungary and the Russian Federation with 50% in the high-income quintile reporting oral health problems.

Social gradients at high levels of aggregation frequently show near straight-line correlation between outcomes and socioeconomic determinants, as illustrated in Figure 21. However, because of the changing directions of CVD and diabetes as well as the less uniform picture in the case of oral health, this may not always be the situation at national, population or sub-national levels.

A major European review of tobacco control and inequity found that "an individual's smoking trajectory is related to the accumulation of social disadvantage over the entire life course" (Kunst, Giskes & Mackenbach, 2004). A study on tobacco use in New Zealand revealed that a marked social gradient exists for tobacco use among Maori women, with a less marked gradient for women from European ethnic groups, and no gradient for women from Pacific ethnic groups (Figure 23). This indicates an amplifying effect of being poor and Maori and that poverty in itself may not be an absolute determinant of smoking prevalence.

Figure 23: Tobacco smoking prevalence by ethnicity and deprivation index (10 = highest deprivation) in New Zealand (Ministry of Health New Zealand, 2001)



As these studies show, no single blueprint for an intervention strategy will address all possible permutations of patterns and circumstances. A prime task of public health programmes is to support the generation of knowledge on the causes of ill-health of populations and translate this into proposals for action, based on a package of individual interventions deemed appropriate for specific circumstances and patterns of gradients.

A comprehensive social determinants strategy must consider the political dimension at all levels. Inequity is intrinsically related to power relations and control of resources. Attempting to reduce inequities in public health inevitably means confronting the more powerful to benefit the less powerful, whether at the greater societal or the individual health clinic level. Comprehensive intervention strategies therefore need to include approaches for dealing with resistance and opposition.

Implementing such action may be the responsibility of public health programmes, the wider health sector or sectors beyond health. The upstream levels of the PPHC framework, i.e. context and position, differential exposure, and differential vulnerability, can be usefully considered in relation to the classification of structured interventions suggested by Blankenship and colleagues (2000):

- Interventions that acknowledge health as a function of social, economic and political power and resources, and, as such, seek to manipulate power and resources to promote public health.
- Interventions based on the assumption that health problems result from the lack of or, conversely, the excessive availability of products, tools, behaviours, or settings, and, as such seek to influence their availability
- Interventions that recognize the health of a society and of its members as partially determined by its values, cultures and beliefs, or of subgroups within it, and, as such seek to alter the social norms.

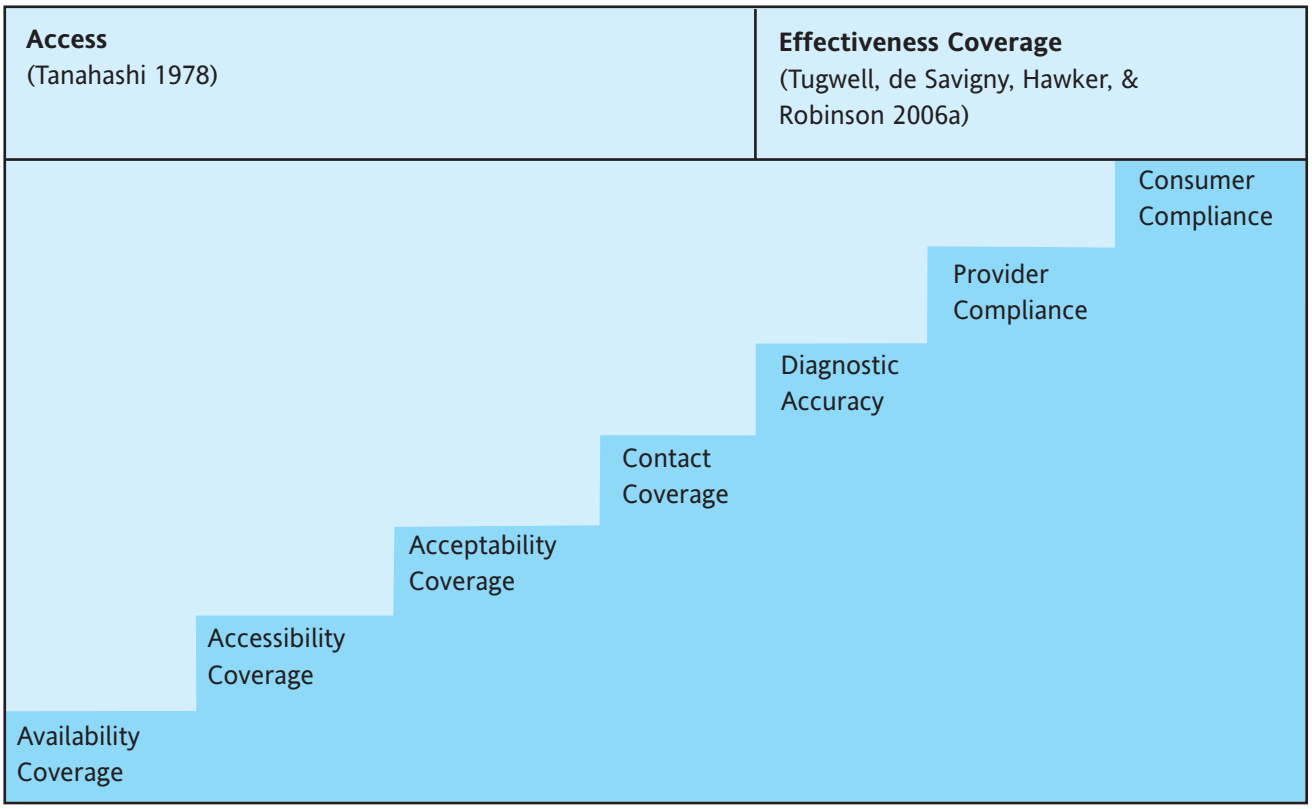
Table 8 shows a representation of two intervention frameworks dealing with access to, and provision and use of health care services (Tanahashi, 1978; Tugwell et al., 2006b). The Tanahashi framework proposes a four step staircase that a prospective user of health care needs to climb before an effective contact with the health service is established. Once the contact is established there are still, according to Tugwell, three additional steps before a successful outcome is achieved. The obstacles to climbing each of these seven steps depend on a combination of service provision factors and social determinants related to the user. Tugwell suggests that poorer people have a greater reduction in benefit at each step than the less poor (Tugwell et al., 2006a).

5. Individual programme action

5.1 Communicable disease programmes

Neglected tropical diseases (NTD). This group of diseases imposes a major burden of morbidity and mortality in marginalized population segments and communities, mainly in developing countries. The inequity issues found to be particularly important in relation to these diseases include: water and sanitation; housing and clustering; environment; migration, disasters and

Table 8: Two complementary frameworks for viewing obstacles to achieving effective and equitable outcome of health-care interventions



conflicts; socio-cultural factors and gender; and poverty. Disease control efforts are often driven by available remedies for single or groups of "tool-ready" diseases. By using social determinants as analytical vantage points, however, an emerging pattern of new clusters of NTDs was identified. From this perspective, alternative entry points can be envisaged for interventions and new "prevention-ready" clusters of NTDs defined. Furthermore, when the diseases are grouped in this way, cost-effectiveness may improve. Table 9 shows the potential of this approach, through the addition of a social determinants dimension to existing disease control strategies (Aagaard-Hansen & Chaignat, 2010).

Tuberculosis (TB). HIV, malnutrition, smoking, diabetes, alcohol abuse and indoor air pollution all increase vulnerability to TB. The relative importance of each varies across regions and countries. Current efforts by most TB programmes focus on people who have already developed active TB disease, whereas engagement in primary prevention across these areas would be required to achieve a significant reduction of the TB burden. Support is also needed for actions aimed to address their social determinants in the general population, such as poverty, social inequality, basic education, and

Table 9: Standard strategies and additions to give a stronger social determinants of health (SDH) and equity focus for neglected tropical diseases control programme

Level of PPHC Framework	Standard strategies	Additions to give a stronger SDH focus
Context and position		Target economic and social development projects to NTD endemic areas. Support disadvantaged populations' **right to be heard** and exert political influence.
Differential exposure	Environmental control for soil-transmitted helminthiasis and cholera. Vector control for Chagas disease, dengue, dracunculiasis, African trypanosomiasis, and leishmaniasis.	Address socio-cultural factors and norms. Support systematic health impact assessments of development projects, in particular those involving water resource schemes.
Differential vulnerability	Mass drug administration for lymphatic filariasis, onchocerciasis, schistosomiasis, soil-transmitted helminthiasis, and trachoma.	Target comprehensive "preventive packages", including water, sanitation and household-related factors to populations with particular heavy burden of several NTDs. Improve access to affordable health care Target special health care programmes to migrant populations, including labour, nomadic, as well as those displaced by natural disasters and conflicts.
Differential outcome (*Of health care service*)	Surgery for buruli ulcer. Individual drug treatment for African trypanosomiasis and leishmaniasis.	Reduce stigmatization by health care providers.
Differential consequences		Address negative socio-cultural factors and norms related to disease outcome.

living conditions. National TB programmes are normally responsible for the elements of TB control that are concerned with clinical care and support, and with some aspects of secondary prevention. More active efforts to address the social determinants of TB would imply that TB control programmes are not solely responsible for TB control. Alternatively, the scope of action and responsibility of national TB control programmes would need to be redefined, making it a broader and more multisectoral construct. This extension of scope is likely to meet resistance from programme staff and health ministries who argue that, while it is the "real long-term solution", the need now is to prioritize the short-term treatment and care approach, even if it will not necessarily lead to achievement of the long-term TB elimination targets. However, it is clear that effective and sustainable TB control can only be achieved through diagnostic and curative TB services combined with primary prevention through tackling risk factors and social determinants (Lönnroth et al., 2010).

5.2 Noncommunicable diseases programmes

The available evidence strongly indicates an increased risk for poor oral health, cardiovascular diseases, mental health disorders, and type 2 diabetes, in conditions of social disadvantage. As would be expected, a gradient of impact exists across SES strata.

Oral health. Measures that focus only on downstream factors such as lifestyle and behavioural influences may have limited success in reducing oral health inequities. It is important to tackle root causes by focusing on upstream factors that produce poor oral health and create inequities. This might best be achieved through linking oral health programmes with broader development initiatives addressing inequity in income, employment, environment, educational attainment, housing, etc. (Kwan & Petersen, 2010).

Cardiovascular disease and mental health. Both CVD and mental health policy and programme development will benefit from the explicit recognition of equity as a driving principle, implying a need to change from an individual-focused medical model to a population health model. This will require integration of social determinants approaches across programmes. Many managerial and organizational issues need to be addressed to make this a reality. At the outset, dedicated financial resources and appropriately trained personnel need to be identified within programmes to deal with social determinants across promotion, prevention and management areas of work in an integrated fashion. At the country level, policy dialogue and public debate will be essential to deal with the intersectoral collaboration and social, economic, political change processes required for effective and equitable prevention and control. Capacity strengthening is required to enable managers and policy makers to competently address the complex challenges related to policy dialogue and public debate for addressing the social gradient of non-communicable diseases (Mendis & Banerjee, 2010; Patel et al., 2010).

Type 2 diabetes. Most epidemiological work on the causes of type 2 diabetes and its complications tends to focus on the identification of personal risk factors, such as lifestyle and physical and biochemical characteristics. Sometimes personal measures of social and economic status are considered, but they are often ignored (either entirely or through "controlling" them out in the statistical analysis). While the paradigm of risk factor epidemiology for diabetes and other chronic diseases has had success in adding to knowledge on a certain level of disease causation, and in feeding directly into some highly effective preventive interventions, it has also been widely criticized for ignoring the wider environment within which risk factors arise. The challenge to public programmes concerned with the prevention of diabetes, its complications and consequences, is to develop and evaluate ways of addressing the underlying structural factors that render individuals vulnerable (Unwin, Whiting & Roglic, 2010). Table 10 points to possible additions to diabetes programmes that would give them a stronger social determinants focus.

5.3 Population-based programmes

Child health. Improving the health and nutrition of children requires an understanding of the multiple levels of social determination of inequity. There are many potential entry points for intervention calling for different sectors to contribute to child health (Table 11). The contribution of

Table 10: Standard strategies and additions to give a stronger social determinants of health (SDH) and equity focus for type 2 diabetes programmes

Level of PPHC Framework	Standard strategies	Additions to give a stronger SDH focus
Context and position		Change the ways in which industrialization, urbanization and global trade operate. Reduce social stratification.
Differential exposure		Change social norms regarding desirable body size. Design urban infrastructures to promote physical activity and local food environments so that they promote healthy food options. Create environments that inhibit tobacco sales and consumption.
Differential vulnerability	Encourage individuals to become more physically active and reduce their consumption of energy-dense and high-salt food.	Improve access to and reduce or remove the patient-borne costs of health care, monitoring materials and insulin for diabetes and the ability of people to manage their own care. Encourage disadvantaged people to give up smoking. Use knowledge of gene profiles to identify those at high risk. Improve the early-life experiences of those who are currently disadvantaged.
Differential outcome (*of health care service*)	Reduce incidence of complications and mortality by improving blood pressure and blood glucose control.	Remove obstacles to clinic attendance. Improve diabetes care for the elderly.
Differential consequences		Reduce loss of income in people with diabetes. Reduce the costs of diabetes care that are borne by people with diabetes and their families.

each sector constitutes only part of the solution which involves many actors working together in a mutually supportive fashion. Health services and programmes often play a causal role in inequities in child health due to inaction, for instance lack of proactive measures to address the health needs of the poor, or failure to engage other sectors and actors, as well as a pro-rich bias through user fees and provider attitudes (Barros et al., 2010).

Sexual and reproductive health, and maternal health. Empowerment of women through effective access to quality educational opportunities for girls has the potential to decrease unwanted pregnancy and disease and to increase maternal health. It has also been linked to overall long-term

Table 11: Standard strategies and additions to give a stronger social determinants of health (SDH) and equity focus for child health programmes

Level of PPHC Framework	**Standard strategies** *Integrated Management of Childhood Illness (IMCI)*	**Additions to give a stronger SDH focus**
Context and position		Promote laws that regulate availability of breast-milk substitutes, food fortification with micronutrients, maternity and paternity leave. Provide universal coverage of health services. Promote human rights, preferential treatment, e.g., for minorities, girls, universal women's education.
Differential exposure		Develop and enforce standards for advertising of specific products, e.g., infant foods and reversal of the burden of proof, e.g., with respect to foods marketed for children. Portraying of positive norms through counter advertisements, promotion of early child development, role modeling, etc.
Differential vulnerability	Health education and prioritizing burden of disease. Counselling on: feeding, care seeking, and compliance with health workers' advice.	Budget health services and interventions according to burden of disease and inequity. Dedicate MCH services near to where disadvantaged population groups reside. Work with community and religious leaders, etc. to change health damaging norms and practices of vulnerable population groups.
Differential outcome (*of health care service*)	Quality improvement; free drugs; provider supervision; giving first dose in a health facility	Offer incentives for staff to practice in remote areas. Improve the user-friendliness of services, e.g. local language. Provide fee exemptions and voucher systems conditionally linked to client adherence.
Differential consequences		Provide nutritional rehabilitation and child development interventions for malnourished children.

health benefits for women and children. Changes in legislation which liberalize access to contraception and safe induced abortion services are paramount (Malarcher, Olson & Hearst, 2010). However, appropriate legislation alone does not lead to dramatic improvement in maternal health and pregnancy outcomes. It needs to be followed by expansion of service availability, quality improvement and provision of mass, as well as targeted, information.

Access to and provision of optimal abortion techniques should be a priority public responsibility. Harm minimization strategies - the removal of penalties for a woman who has decided to have an illegal abortion, and rather is steered towards less unsafe methods and followed up to ensure treatment of complications - provide for alternative programmes that are simple to mount and are effective (Malarcher, Olson & Hearst, 2010).

Health systems should, as a minimum, ensure that providers have the necessary knowledge, skills, equipment and infrastructure to do their jobs. In addition, facilities should have adequate numbers of staff, with both providers and supervisors having a clear understanding of job responsibilities and what behaviours are acceptable. Provider discrimination and personal biases are of particular concern with respect to rights of women and adolescents to confidentiality and autonomy in health care. It is crucial to limit the discretion of providers and to ensure that they know and comply with the official policy, procedures and standards.

Improving pregnancy outcomes depends on access to skilled birth attendants. Access is constrained in many countries by poor distribution of health workforce and facilities, leaving rural and remote areas underserved. This needs to be addressed at the overall sectoral resource allocation level as well as by, for instance, providing funding for local authorities based on effective coverage targets and performance. But availability of antenatal and delivery services is not enough. Financial, gender and cultural barriers still deter many poor women from using safe delivery services, and such barriers should be completely removed (Malarcher, Olson and Hearst, 2010). One approach to addressing the needs of particularly vulnerable groups is to create dedicated quality services and/or facilities to accommodate social, cultural, or linguistic needs. Another approach is provision of "door step" family planning services supported by primary health care clinics close to where people live. This has been found efficient in increasing the overall use of family planning methods as well as in reducing the social gradients in uptake and use (Malarcher, Olson & Hearst, 2010).

5.4 Risk-factor based programmes

Alcohol-related disorders. From the perspective of public health policy, there are several opportunities for interventions along the causal pathways between social determinants and alcohol-attributable health outcomes that could reduce health disparities. However, ideologies of free market and freedom of choice limit the ability of governments to control the marketing of alcohol and the context of drinking it. An international consensus that alcohol is not an ordinary commodity to be marketed without restrictions is required for governments to act to reduce alcohol-related harm and inequities in health outcomes. There are further political and ideological barriers to supporting measures, such as taxation, that would effectively reduce inequities. An argument used against increased alcohol taxation is that it is unfair to poor people to confiscate a higher proportion of their income and deny a pleasure that is available to the rich. However, the discriminatory effect of alcohol taxation could be neutralized by earmarking the tax receipts for purposes that benefit the poor (Schmidt et al., 2010). Table 12 proposes how an alcohol programme could be modified to have a stronger social determinants focus.

Food safety. Risk analysis for food safety decision-making encompasses three interacting activities: 1) quantitative risk assessment, i.e. the magnitude of the risk and the factors that control it; 2) risk communication - a social and psychological process that involves dialogue between the involved/affected parties regarding the risk; and 3) risk management that combines science, politics, economics and other relevant social factors to arrive at a decision on what to do about the risk. However, food safety systems applied in many high-income countries are sophisticated constructs that are often out of reach of low-income countries. In many low-income countries, food insecurity,

Table 12: Standard strategies and additions to give a stronger social determinants of health focus for alcohol programmes

Level of PPHC Framework	Standard strategies	Additions to give a stronger SDH focus
Context and position		Enhance and protect the ability of governments to act to reduce alcohol problems. Increase taxes and use revenues to benefit the poorest.
Differential exposure	Zoning; marketing and licensing; and hours of sale.	Regulate license production, import and sale and enforce market controls to minimize markets for unregulated alcohol. Graduate taxes to disfavour the most harmful products. Shape norms and place of alcohol in the culture of the society.
Differential vulnerability	Information; school education campaigns; early detection and brief interventions for problem drinkers	Address not only low SES groups but also indigenous populations, minorities, criminal services, etc. Enhance access to service for groups subject to cumulative disadvantage. Make the drinking context safer for those who drink alcohol.
Differential outcome (*Of health care service*)	Self-help groups; civil society	
Differential consequences	General social services; civil society	

political instability, communicable diseases, natural disasters and other major socio-political concerns dominate government agendas and news media, and the importance of food safety is often not adequately acknowledged. As a result, food safety infrastructures are frequently under-resourced and deficient. In such circumstances efforts should focus on the weak links that are important determinants of inequities related to foodborne hazards, through (i) controlling zoonotic agents in animal and poultry reservoirs; (ii) improving informal food vending and the safety of foods sold in the street; (iii) promoting food safety assurance and management in small and less developed businesses; and finally (iv) ensuring that differences in standards between domestic and international markets do not result in inequities in local access to safe food. (Jouve, Aagaard-Hansen & Aidara-Kane, 2010).

Violence and injury. Virtually all of the progress in preventing violence and injury has come from acting directly on the social environment. However, much of the evidence that addressing social

determinants can reduce injury comes from high-income settings and there is a need to develop and test social determinant-based interventions in low- and middle-income settings. Nevertheless, a few examples show the way forward. Multilevel interventions restricting the opening hours of bars and limiting access to firearms can significantly reduce homicide when restrictions are enforced by authorities who target those parts of a city where most homicides take place. Incorporating safety features into road design has proven effective also in poorer environments, e.g. through inexpensive speed bumps in pedestrian crash hot spots alongside the main roads.

Early childhood interventions appear to be effective when they target low socioeconomic neighbourhoods, e.g. based on home visitation combined with parental education. Tenant-based rental voucher programmes allowing poorer families to move to better housing and neighbourhoods have been shown to improve household safety and reduce the risk of victimization due to violence and exposure to violence. Evaluations of long-term effects of home visitation have found the intervention particularly effective for low-income unmarried mothers, reducing a wide range of negative outcomes for mother and child including child abuse and neglect, and criminal behaviour. In violence and injury prevention, the nature of the implementation, i.e. explicitly targeting along lines of socioeconomic determinants, is as important as the intervention itself (Roberts & Meddings, 2010).

Tobacco and health. Mobilizing support for population-based interventions that address the social determinants of tobacco use requires multisectoral discussion. Much of the policy action for tobacco control falls outside the direct reach of the health sector, yet it plays a vital role in the advocacy and partnerships that affect change. At the global level, the UN Ad Hoc Interagency Task Force on Tobacco Control presents one such opportunity, providing a forum to advocate for the integration of tobacco control strategies into ongoing and future initiatives of the other agencies. The Task Force also presents a channel for beginning the dialogue on institutionalizing "health over profit" as a core value of development assistance, international aid and trade agreements. Multisectoral networks at country level could serve as vehicles for the health sector to proactively advocate and engage with other political actors for integrated approaches to reducing health inequities. Efforts to prevent and control tobacco consumption among disadvantaged groups are not likely to succeed without an integrated approach that seeks to reduce the underlying social inequalities. Financial barriers are among the most critical in denying disadvantaged individuals access to tobacco prevention and cessation services. Making cessation services accessible, e.g. by subsidizing nicotine replacement therapies and other cessation aids within the primary health care system, are important strategies in this regard. To enhance compliance, training in smoking cessation should be a core competence area for all health care workers (David et al., 2010).

6. Synergies

Each of the 16 participating programmes is unique, with good reasons for its particular strategic approaches. However, there is also a substantial area of common ground, particularly

regarding the social determinants that shape disease patterns and social gradients. There may therefore be useful opportunities for joint approaches to addressing disease prevention and control with an enhanced focus on the common social determinants.

6.1 Common determinants and entry points

Detailed analysis of the findings for each of the public health conditions revealed that a limited number of social determinants occurred on the pathways of the majority of the conditions and that there would be considerable gains if these were targeted through focused collective action for change (Blas & Sivasankara Kurup, 2010). Table 13 lists these major determinants with potential entry points through which most of the common determinants could be addressed.

6.2 Collective action

The priority public health conditions will not be brought under better control or become more equitable without effective interventions on core social determinants outside the health system. While health care services deal to a large extent with the symptoms of health problems originating elsewhere, public health programmes have the responsibility to analyze and address not only how health services are provided but also how and why ill-health and inequitable distribution of health occur in the population. This goes far beyond providing medical interventions and is much more comprehensive than, for instance, targeting the most vulnerable groups and applying pro-poor strategies. Taking a social determinants and health equity approach for public health programmes means acting at all of the five levels of the PPHC framework, and while they cannot be responsible for all the required interventions, they can play pivotal roles in engaging partners and activating the key sectors which have a more direct responsibility to intervene. Some public health programmes may have significant power, but individually most are not able to influence the forces that shape social determinants - almost irrespective of which level of the PPHC framework is considered. Speaking with one voice and acting together will increase the chances of success. The following discussion outlines possible action at the key entry points identified in Table 13.

Socioeconomic context and position

Interventions at this level will potentially have profound effects on determinants further downstream. Most of the interventions at this level are not the responsibility of single agencies or sectors and health does not have a formal or customary seat at the negotiating table. However, even though a wide range of agencies are normally involved, action is usually in the hands of professionals from a limited number of disciplines, notably economists and lawyers. Such professionals may not fully understand the needs of and impact on public health, and they may have other success criteria than how health is distributed in the population. Public health programmes individually and collectively can define and express their needs and propose solutions. There are several possible avenues for this. The formal route could be through the representation of ministries of health or WHO at high level forums where the interests of public health can be defended and influence exercised. This has happened increasingly over the past decade but in many countries there is still a very long way to go. Informal routes include working with media, civil societies and individual

Table 13: Social determinants occurring on the pathways of half or more of the 14 conditions[1] reviewed by the PPHC KN and three promising entry points for collective action at each level

Level of the PPHC framework	**Major Social Determinant involved** *Numbers in brackets indicate the number of conditions in whose pathways the determinant occurs.*	**Promising Entry Points for collective action**
Socio-economic context and position	Gender**;** [**12**]; rapid demographic change, including aging population [**11**]; social status, inequality [**10**]; globalization and urbanization [**8**]; minority situation and social exclusion	Define, institutionalize, protect and enforce rights; and empower communities to exercise them. Redistribute and regulate power and resources within and between countries. Capitalize on positive and counteract negative effects of modernization and global integration.
Differential Exposure	Social norms; [**12**]; community settings and infrastructures [**11**]; unhealthy/harmful consumables [**9**]; natural and man-made disasters [**7**]	Social institutions - norm-setters and keepers, including civil society, professional or consumer organizations, and local government structures. Community infrastructure development (roads, transport, water, sanitation, waste management, electricity, etc.), including planning, budgeting, financing, contracting. Availability of and access to products for consumption, including: diversity, security, safety and marketing.
Differential Vulnerability	Poverty and unemployment [**10**]; hard to reach populations[**10**]; health care seeking and low access to health care [**9**]; low education and knowledge [**8**]; tobacco use and substance abuse [**8**]; low access to and use of health products [**7**]	Empowerment (social, structural and economic opportunities, education). Reach-out and compensation (target, subsidize, health services and products). Tobacco use and substance abuse (including alcohol).
Differential Outcome [of health care service**]**	Poor quality and discriminatory treatment and care services [**11**]; limited patient interaction and adherence [**10**]	Medical / treatment procedures. Provider payment methods and incentives, e.g., to change the power dynamic of the provider-client relationship. Compensate (target/dedicate).
Differential Consequences	Social, educational, employment and financial consequences [**10**]; social exclusion and stigma [**9**]; exclusion from insurance [**9**]	Coping - compensate and empower (referral, psycho-social support, social welfare, rehabilitation, etc.). Defining, institutionalizing, and protecting rights. Social and physical access (transport, institutions, work places, etc.).

[1] Child health, malaria and nutrition programmes together did the analysis covering a general child health condition. HIV programme participated only in the first half of the work of the PPHC KN on the identification of social determinants.

champions to shape the public debate and thereby influence the formulation of laws, policies and agreements.

Very few public health programmes have been successful in steering public debates even though specific diseases frequently attract intense media interest. Often the debate takes on a life of its own with the media focusing on single or alarming cases rather than public health relevance, and pushing public health programmes into a defensive position rather than taking the centre stage and showing a way forward. The focus of the public debate readily makes its way onto political agendas and from there influences the work of the economists and lawyers. More skillful use of media hooks might be a way of persuading ministers of finance, parliamentarians, and other policy makers.

Proposed actions for public health programmes

- Provide setting-specific, timely and relevant evidence, at global, national and sub-national levels, on the relationship between determinants and outcomes (magnitudes and distribution).

- Undertake health impact assessments, research and analyses, individually and jointly with other health programmes nationally and internationally; provide examples of good practices; and review and propose policy options.

- Advocate, lobby, promote, and support action groups to trigger public debate and convince politicians, regulators and law-makers, including the health sector's own, to address the social determinants and to integrate health and health equity into economic and social strategies and plans, as well as the curricula of key professions.

Differential exposure

At this level health programmes do not normally play a direct intervening role - rather they function through other sectors, organizations or groups which do not always have health in focus or understand the health implications of their interventions. The three key entry points to address differential exposure call for three different groups of interventions.

The first group of interventions concerns the *social norms* to which populations, groups and individuals are exposed. Such norms are generally deeply rooted in cultures and circumstances. To shape or modify detrimental norms and promote norms conducive for public health will usually require action from multiple actors and multilevel strategies at the levels of context and position, exposure and vulnerability. Public health programmes can collectively play a pivotal role in recognizing the health implications of social norms, and identifying those that are supportive and those that have detrimental effects on population health.

The second group is much more tangible as it concerns the *physical environment* in which people are born, live, work and die. The analysis showed that many factors are shared and that there is an amplifying effect when multiple exposures act at the same time.

The third group of interventions relates to availability of *products for consumption* with good or bad effects on population health. While it links directly to the modernization and global integration group of interventions at the context level, interventions at this level would focus more directly on the individual products and their availability.

Proposed actions for public health programmes

- Provide lead role to generate evidence, identify and advocate appropriate interventions to address social norms.
- Work with and support civil society groups and public opinion-makers to focus debate and action at the three entry points. Influence the health sector and its ministry to shift some attention upstream to politics and policies that affect good and ill health.
- Direct and active participation of public health programmes, e.g. in community education, regulation, infrastructure planning and design, tax-design, advertising.

Differential vulnerability

This level is not new territory to many condition-specific public health programmes. However, for all programmes there is still considerable room for expansion both in terms of direct intervention and in terms of collaboration with other programmes and players to seek out the population groups that are most vulnerable to exposure and the effect of context and position determinants. The involvement of health programmes at this level goes far beyond providing evidence and advocacy. The analyses of the individual conditions show the amplifying effect of clustering of disadvantage and that five major groups of determinants are shared by at least half of the public health conditions studied (Table 13). It follows that collective interventions to address the situation of population groups would be a more useful approach than focusing only on the specific concerns of individual programmes, and that implementation should begin in disadvantaged areas and with the most disadvantaged populations.

At the first entry point, a series of interventions can be envisaged that aim at *empowering* vulnerable population groups. This could include advocating that city planning occur to break or reduce the clustering of disadvantage, e.g. to avoid massive concentrations of poverty in slums or ghettos. The success of such interventions would be greatly enhanced by prior or simultaneous interventions at the context, position and exposure levels - otherwise they will be difficult to scale-up and sustain. The second entry point requires interventions to *improve access* to and *encourage use* of health and social services and healthy products, including food, micronutrients, toothpaste, condoms, and contraceptives. The third entry point is about how public health programmes and services are delivered or *reach vulnerable populations*. Given the clustering of disadvantages, prevalence of co-conditions and the fact that several conditions are also determinants of other conditions, a concerted effort is needed to reach the vulnerable populations.

Proposed actions for public health programmes

- Individually and collectively take the lead to identify vulnerable populations and groups and specific causes of differential vulnerability. Work with other sectors, including NGOs to encourage them to address the social determinants causing differential vulnerability.
- Work with communities to ensure that health delivery systems are in line with cultural and social contexts and to sensitize the vulnerable populations to the health benefits of programme activities.
- Take the lead to work with health system/service providers and other programmes to increase reach and reduce barriers for the vulnerable populations' access to health services - preventive, curative and rehabilitative.

Differential outcome of health care service

Health care services are generally provided by health care institutions and units responsible for a wide range of clinical services, often defined by level of referral and ruled by their own procedures and dynamics. Health systems are always governed by politics, values and economic perspectives. These translate into how health care services are provided and how providers are paid and rewarded. This may or may not be conducive to equitable health outcomes.

The first entry point addresses *patient adherence*, including the ability to effectively use services, and calls for two types of intervention: (a) to simplify and adjust *medical and administrative procedures* so that these become easier to follow, particularly for less educated people; those in adverse social, economic or family situations; and people who feel alienated by "systems", uniformed staff and schedules; and (b) to provide *group or individual support* for guidance through the health care system and adherence to follow-up treatment and procedures.

The second entry point addresses *provider compliance*, i.e. attitudes and practices that inhibit equitable outcomes. Interventions must work on several fronts at the same time and become part of the normal routines of the health system. This will include addressing the professions from school-bench to clinic, enforcing the rights of patients for decent treatment regardless of their backgrounds and situations, and finally to modify the way the health system's management and incentive structures operate so that they work in support of, and not against, improving equity in health outcomes.

The third entry point is to provide *dedicated health services* designed for the needs of defined populations that have insurmountable difficulties in accessing and using regular services. This could be relevant when none of the above interventions work, including at the three top-levels of the PPHC framework or when the time horizons for getting them to do so are unacceptably long.

Proposed actions for public health programmes

- Take the lead to identify the sources and causes of differential outcomes to treatment and care within health care services.
- Act together to review and influence priority-setting and service provision approaches, financing and organization within the health care system and to revive primary health care.
- Work with media, public opinion makers, and action groups to create awareness of and demand for "fair" health care.

Differential consequences

Few public health programmes are actively engaged with the differential consequences of their particular conditions despite identified effects, particularly to the position and vulnerability levels. One reason for low engagement could be that it represents an interface between programmes, health-care services and other sectors - leaving it for special "disability" programmes, charity organizations, or probably in most cases to the individuals and families suffering from the consequences, to find their own solutions and ways through the systems.

The three entry points at this level relate to compensation and empowerment, rights, and social and physical access. Interventions related to *compensation and empowerment* could include enhancing ability to engage in income generating activities or provision of social welfare as well as participating in peer support networks. However, the focus should not be exclusively on the individual but also on how their immediate dependents, in particular children, are affected by the consequences of the health outcome. The rights entry point would work through two routes, i.e. *public environment, attitudes and behaviours* as well as *regulatory/legislative* mechanisms. Finally, the access entry point would require interventions to improve *physical access* to work places, public transport etc., as well as reducing social and financial barriers of access to education.

Proposed actions for public health programmes

- Individually and collectively take the lead to analyze and identify likely differential consequences of the public health conditions and the resulting needs.
- Develop or strengthen standard referral and follow-up procedures in health and across the social systems.
- Collectively work with patient groups as well as with other sectors, including NGOs, media, production, insurance, etc. to encourage and facilitate appropriate responses by them.

6.3 Surveillance and monitoring

Knowledge and information are key strategic components of the collective policy action proposed above. This requires data and appropriate analysis. However, outside a limited number of developed countries and a few surveys, there is little data available to link outcomes with social characteristics of populations. Even large prevalence surveys do not routinely collect information on the social background of those surveyed. Notable exceptions include DHS, Multiple Indicator Cluster Survey (MICS), and the Global Health Survey (DHS and MICS focus on child and to some extent women's health). While surveys and other research might be useful for supporting international and national policy and decision-making, their sample frames often make them less useful for programme management at national and district levels. Service data rarely provides information on the social background of patients, not to mention those that are not able to access the services due exactly to social determinants. And there is hardly any systematic information available on the differential services received and consequences experienced by those who do access the services.

While for most conditions evidence has had to be patched together from a variety of sources, the assembled pictures and trends are clear in that there are social gradients at play for all conditions. As discussed, the situation is often very complex. In order to provide specific rather than general recommendations for policy options and effective action, it is required that:

- Population survey designs be amended to capture a wider range of social determinants, cover more conditions and in particular to provide information on those who do not reach health services.
- Service data collection procedures and formats be designed to link social determinants, including context, position, exposure, and vulnerability with treatment outcome and consequences of treatment.
- Data are collected, processed and presented to show gradients rather than only ratios, e.g. between the richest and the poorest.
- It is acknowledged that not all the data on association between social determinants and population health lend themselves well to statistical analysis and that a combination of statistical and narrative presentations might prove to be the best evidence for informing policy.
- Resources be set aside to undertake epidemiological, social, and service research to cover data gaps and look for answers to "why" and "how" in addition to the usual "what" and "how much" questions. This would require recognition of multi-disciplinary research and nurturing capabilities to conduct it with high quality.

A number of concerns were raised by the individual programmes with respect to measurements and evidence, focusing on four main issues:

- Because of the many different determinants at play, often at the same time, working in

different directions and along multiple pathways, differentials and variances tend to get ***lost in aggregation*** so that, e.g. national and international data are inconclusive or of limited use to guide practical action and intervention.

- The focal nature of some conditions or the small general populations, e.g. at district or sub-district levels, pose a challenge of ***small numbers*** where routine information systems are not geared for capturing the data or where the numbers are insufficient to provide statistical power in the analysis.

- Intervening at the level of social determinants may have unforeseen ***adverse side-effects***. An added challenge for social determinants interventions is that these side-effects might show up outside the immediate sphere of interest of the intervening public health programme or the health sector as a whole.

- ***Trends*** often start being noticed only at a late stage by the health system, i.e. only when they are firmly manifested as growing numbers in the clinics, thus several opportunities and years of potentially effective counteraction might be missed.

7. Conclusions

The implications for national and international public health programmes of taking up a social determinants approach are numerous and potentially very significant. There is still hesitation among some control programmes to move beyond administering known or incrementally improved health technologies. There can be several reasons for this. First, often staff, especially at the senior level, have biological/medical-based training rather than a social approach to health. Second, during the past two decades, health has crept up the political agenda, which has increasingly played out in the public media. The prominence of popularity polls fosters short-term and frequently simplistic thinking rather than visions for the longer term and addressing controversial issues, such as organization of societies, social and health systems. Third, and as a result of the second, funds are allocated with a view to generating immediate measurable effects, often on a limited range of narrowly defined indicators. Internationally, the past decade has seen a remarkable growth in number and size of single purpose and health commodity focused global initiatives established outside, but heavily influencing the thinking and direction, of public health programmes.

While these new health initiatives have no doubt had a positive effect on the suffering of a large number of individuals, the effect on population health and on health equity in particular is more questionable. How health is distributed within a population is a matter of both fairness and the dynamics of population health. Further, addressing health predominantly at the remedial level contributes to both the escalating costs of health care as well as dissatisfaction with health care services. Several public health programmes are increasingly realizing that to halt growing global epidemics of communicable as well as non-communicable diseases, or to achieve and sustain global health targets, technologies alone will not suffice. Each programme needs to:

- As a matter of priority, develop **information systems** to provide insight into condition-specific distribution of health in populations. Here, it will be important that the focus is at the national and local level, rather than just at an international or academic level.

- Strengthen **country programme capacity to analyze** the equity gradient and patterns as well as pathways for each specific condition and country

- **Develop and test a range of intervention packages** that are relevant to each condition and different patterns of social gradients.

- Strengthen **country programme capacity to choose and apply** those interventions and approaches that are most appropriate to their specific circumstances.

- **Advocate** for the inclusion of social determinants approaches.

Particular opportunities for collaboration include:

- Compare information and identify social determinants that are shared along the pathways of the individual conditions.

- Demand from the general health information systems that they provide information pertinent to achieving equity goals for the social determinants that appear on the pathways of the majority of public health conditions.

- Try collectively to influence how health care services in general are provided and health systems are designed and function, rather than attempting to compensate individually.

- Develop, test and implement common intervention packages targeting circumstances and needs of the endemic and/or particular population groups vulnerable to a range of conditions.

- Raise awareness among the media, politicians, and donors that while it is essential to provide health care, unless the social determinants are addressed upstream, significant and lasting improvement in the health of populations will not be achieved.

In conclusion, and in order to take a social determinants approach forward, the competence-base of most conditions-specific public health programmes needs to be adjusted. In the short term this can be done through changing managerial incentives, including how performance is measured and valued. Cross-cutting issues and collaboration between programmes tend to become lost in measurements and therefore to be under-valued. Few health programmes and organizations are currently structured, informed, or equipped to support a social determinants approach to population health, in particular with respect to influencing the required political processes that are to take place across sectors, at cabinet and parliament level as well in the public arena.

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10 Measuring the social determinants of health: theoretical and empirical challenges

Josiane Bonnefoy, Antony Morgan, Emma Doohan, Jennie Popay, Johan Mackenbach and Michael P. Kelly

1. Introduction

This chapter summarizes part of the work that the Measurement and Evidence Knowledge Network (MEKN)[1] undertook for the Commission on the Social Determinants of Health (CSDH). It focuses on the important theoretical and empirical challenges of producing an evidence base to support the development and implementation of policies aiming to address the social determinants of health (SDH) and the inequities that flow from them (Bonnefoy et al., 2007; Kelly et al., 2007).

The approach of this chapter is scientific, but the problems with which the science concerns itself are not just interesting scientific challenges. They are politically contested. The CSDH had a specific commitment to equity and to taking action to reduce socially determined health inequities. Equity is normative; it is based on a value judgment. The value of equity is not a universal one in spite of being located in a discourse of human rights the right to good health. The MEKN has identified ways of confronting the difficulties and finding workable solutions. However, in the final analysis the technical solutions described below will not be effective without political will to challenge the social bases of inequity.

[1] The core members of the Measurement and Evidence Knowledge Network were (in alphabetical order): Josiane Bonnefoy (Co-chair), Francisco Espejo, Mark Exworthy, Tanja Houweling, Gao Jun, Ichiro Kawachi, Michael P Kelly (Co-chair), Johan Mackenbach, Antony Morgan, Landon Myer, Thelma Narayan, Jennie Popay, Sarah Simpson, and Peter Tugwell.

2. Conceptual and theoretical issues

2.1 Causal relationship between social determinants and health outcomes

At the outset of its work the CSDH produced a conceptual framework (Solar & Irwin, 2007). The premise upon which the conceptual framework was based is causation. The social determinants are in a causal relationship with health and illness outcomes. The first issue which this chapter therefore explores is cause.

To describe social determinants of health is to use the language of causation and to shift the emphasis from a focus on the purely biological causes of disease to a broader set of social, economic and political causes (Solar & Irwin, 2007). The precise ways in which the social determinants of health operate have been an area of considerable research interest. Much is known. It is clear that at population and individual level poor health is linked to social and economic disadvantage (Kelly et al., 2009). The unequal distribution of the social and economic determinants of health such as income, employment, education, housing and environment produce inequities in health (Graham, 2000). The determinants are systematically associated with social disadvantage and marginalization (Braveman, 2003).

While the general relationship between social factors and health is well established (Wilkinson & Marmot, 1999; Solar & Irwin, 2007), the relationship is not precisely understood in causal terms (Shaw et al., 1999). Consequently, the policy imperatives necessary to reduce inequities in health are not easily deduced from the known data. In the long run it will be important to develop better understandings of the causal pathways at the centre of the CSDH conceptual framework (Solar & Irwin, 2007) and indeed to develop them in such a way that they are viewed as being equally important as the biological ones with respect to the diseases to which they apply (Blas et al., 2008). Nonetheless, some progress is possible.

2.2 Causal pathways at two levels

It is misleading to construct biological and social causes as alternatives. They are not, and in fact work together and in tandem (Kelly et al., 2009). Real pathological changes in the individual human body occur. The origins of the pathology might be viral, bacterial, genetic, radiological, traumatic, social or behavioural or some combination of these. At the social or population level, the patterns of inequities in health *also* have causes. This patterning requires explanation. The social level of patterning of health is a reality in itself, as toxic as any virus. Both the individual level pathologies *and* their patterning have causes. There are two sets of causal pathways, one to the individual and one to the societal patterns of disease. Both are in part socially determined (Kelly et al., 2009).

2.3 Theories to explain the causal relationship

At least four groups of theories have been proposed to explain inequities in health and its relation to social determinants. The *materialist/structuralist* theory proposes that inadequacy in individual income levels leads to a lack of resources to cope with stressors of life and thus produces ill

health (Goldberg et al., 2003; Frohlich et al., 2001; Macintyre, 1997). The *psycho-social* model proposes that discrimination based on one's place in the social hierarchy causes stressors of various kinds which lead to a neuroendocrine response that produces disease (Karasek, 1996; Siegrist & Marmot, 2004; Evans & Stoddart, 2003; Goldberg et al., 2003). The *social production of health* model is based on the premise that capitalist priorities for accumulating wealth, power, and prestige and material assets are achieved at the cost of the disadvantaged (Davey Smith et al., 2002; Lynch et al., 2000; Marmot, 2006; Shaw et al., 2005). The *eco-social* theory brings together psycho-social and social production of health models, and looks at how social and physical environments interact with biology and how individuals "embody" aspects of the contexts in which they live and work (Goldberg et al., 2003; Krieger, 2001). It builds on the "collective lifestyles" approach and a neo-Weberian theory that lifestyle choices are influenced by life chances defined by the environment in which people liPve (Frohlich et al., 2001; Cockerham, 1997).

2.4 Causal factors of health inequity

We do not here consider all the relative strengths and weaknesses of the arguments above, although in general none of them sufficiently disentangle the individual and social level causal pathways. What these arguments do however, is help to map the range of factors, all intrinsic to the CSDH conceptual framework (Solar & Irwin, 2007). This provides some of the necessary and the sufficient social level conditions involved in causation. These include:

- Poverty
- Hunger
- Occupational exposure to hazards
- Occupational experience of relations at work
- The social and economic effects of aging
- The social and economic effects of illness
- The experience of gender relations
- The experience of ethnic relations including direct experience of racism
- Home circumstances
- The degree and ability to exert self efficacy especially through disposable income
- Dietary intake
- Habitual behaviours relating to food, alcohol, tobacco and exercise
- Position now and in the past in the life-course

- The accumulated deficits associated with particular life-courses
- Schooling
- Marital status
- Socioeconomic status.

These are the pathways through which the social world impacts directly on life experiences and exerts direct effects on the human body, so they are important parts of any causal explanation. They are also potentially measurable and therefore part of the empirical effort on which the evidence base can be built. These factors are in turn linked to macro variables like the class system, the housing stock, the education system, the operation of markets in goods and labour, and so on (Solar & Irwin, 2007). Conceptually what is required is clarity about the levels at which these factors operate and interact with each other. Social and behavioural factors can have individual level outcomes *and* social level outcomes. Likewise individual pathogens or indeed salutogenic factors (Antonovsky, 1987) can have individual *and* social level outcomes. It is important to conceptualize the linkages and the crossovers, the impact of risk and protective factors, the importance of life-course influences and the dynamic nature of inequities (Morgan et al, 2010; Kelly et al, 2010). This helps resolve some of the complexities which have prevented the development of tools and techniques for integrating equity considerations into policy and programme design or into the collection of data and evidence (Oxman et al., 2006).

2.5 Differential effects of health improvements

Having argued that cause operates at two levels, individual and social, a further clarification is required between the causes of population level health improvement and population level inequities in health. The factors which lead to general health improvement improvements in the environment, good sanitation and clean water, better nutrition, high levels of immunization, good housing do not necessarily have any impact on relative health inequities. This is because the determinants of good health are not necessarily the same as the determinants of inequities in health (Graham & Kelly, 2004). It is necessary to distinguish therefore between the causes of health improvement and the causes of health inequities. Inequities are linked to social disadvantage. If generalized health improvement is not linked to lessening social disadvantage, while everybody's health overall may be improving (although at different rates across the social spectrum) inequities may remain. The reason for this is that factors which improve overall health have differential effects on the population, with the better off always benefiting disproportionately when universal interventions are applied (Kelly et al., 2007). There are four elements involved in this - differential implementation of supposedly universal interventions; differential responses in the different population groups; differential effectiveness of that intervention; and differential vulnerability to the health effects of the determinant intervened upon. Sometimes there is a catching up effect with the less well off making up ground later, but a differential remains (Antonovsky, 1967; Victora et al., 2000). It may be argued that the widening relative differential does not matter as everyone is benefiting absolutely to some degree, so the relative differential is not a reason not to carry out universal general health

improvement. It is important however not to define universal and targeted approaches as simple alternatives. Hybrid policies which contain elements of, for example, universal actions with targeted follow through, will sometimes be the most appropriate way to tackle problems of inequities.

2.6 The "causes of the causes" of inequity

The "causes of the causes" of inequities are located in the divisions of labour within and between societies, the life-course and environments of individuals, and the interaction between them (NICE, 2007; Kelly, 2006). To understand the causes of the causes requires a model of causation that traverses a number of levels of analysis which academic disciplines traditionally keep separate. Some of the observed patterns manifested in mortality and morbidity data are accounted for genetically and by other biological mechanisms. But other processes are at work at the population and individual levels and they are amenable to causal analysis involving pathways from the social to the biological and from the biological to the social. The concern is not inequities in health *per se*, but inequities in mortality and morbidity.

The level, or levels, of analysis need to be identified (Kelly, Charlton & Hanlon, 1993). This means examining the evidence, and regardless of its disciplinary provenance, assessing whether the *dynamics* of what is described could plausibly work at a physical, societal, organizational, community or individual level. In other words, to what degree is the supposed action based on biological, social or technical plausibility? To what extent is it possible to ascertain time periods and the chronology in the evidence? Are the purported relationships logically possible in chronological terms? Do certain events precede others? What dynamic processes are described in terms of the component parts of social systems? This is particularly important in multifactorial explanations, where the sequencing of events may be hidden or at least difficult to discern, and where multifactorial explanations are often no explanations at all but mere agglomerations of factors (Brownson et al., 2003).

3. Defining population structure and social differentiation

3.1 Axes of social differences

There are key axes of social differences in populations class, status, education, occupation, income/assets, gender, ethnicity, race, caste, tribe, religion, national origin, sexual orientation, age and residence (Kelly, 2010). These axes are the building blocks of differences in health and in health inequities and the basis of empirical measurement. As well as the conventional tools of social epidemiology, the kinds of population and social structure descriptions which modern mapping and computer based accounts of populations permit should be pressed into service wherever possible (Burrows & Gane, 2006) to help illuminate social structure. This also allows for clear descriptions of the social structure to be made. This description will be in sociological, geographical and economic terms.

One of the key conceptual principles is not only to acknowledge and to identify the different axes of social difference (Graham & Kelly, 2004) but also to recognize that these dimensions overlap (Davey Smith et al., 2000). Within the axes of differentiation (like gender), different aspects interplay and intersect as well (like income access to power and prestige) (Bartley et al., 2000). Therefore, it is important not to treat the axes of differentiation individually because these factors intersect, interact, overlap and cluster together in their effects. The specific health impacts will be mediated by proximal factors like specific exposures, the nature of specific illnesses and injuries, and their social significance in different cultural contexts (Whitehead et al., 2000). Some of these axes of social difference may also change relatively to and independently of each other. They vary in their salience in different societies with different modes of production or political systems.

3.2 Implications for health interventions

The points discussed above are of considerable importance because it is clear that different segments of the population respond very differently to identical public health interventions. The practical implication of this is that interventions should be targeted and tailored and universal interventions nuanced appropriately. The causes and the dynamics whereby different groups respond differentially to health initiatives and the ways in which health damaging effects operate need to be specified theoretically and in any intervention (NICE, 2007). This means that we need to anticipate a wide range of responses to policies across and within societies, by virtue of the nature of the variation in populations. Ethnicity, race, gender, sexuality, age, area, religion and national origins represent linked but separate dimensions of inequity. The interaction and synergy between them is not well described in the literature. Consequently, there is little in the extant evidence about the relationships between these different dimensions and the ways they interact to produce health effects (Graham & Kelly, 2004).

3.3 Impact on life chances

What these different and variable axes of differentiation have in common is that they result in differences in life chances. These differences in life chances are literal: there are marked social differences in the chances of living a healthy life. This has been most systematically captured in occupation-based measures of socioeconomic position but differences in people's health experiences and their patterns of mortality are also observed across other axes of social differentiation. It is an important challenge to develop measures of inequality that embrace all these axes. If, as the evidence suggests, dimensions of disadvantage interlock and intersect and take a cumulative toll on health, these dimensions need to be summed in order both to map and to understand the health penalty of social inequality.

4. The nature of health inequity

There are conventionally three different ways in which health inequities are described: health disadvantage, health gaps and health gradients (for a full discussion of this see Graham, 2004a; 2004b; 2005; and Graham & Kelly, 2004).

4.1 Health disadvantage

Health disadvantage simply focuses on differences, acknowledging that there are differences between distinct segments of the population, or between societies.

4.2 Health gaps

The health gaps approach focuses on the differences between the worst off and everybody else, often assuming that those who are not the worst off enjoy uniformly good health. Conceptually, narrowing health gaps means raising the health of the poorest, fastest. It requires both improving the health of the poorest and doing so at a rate which outstrips that of the wider population. It is an important policy goal. It focuses attention on the fact that overall gains in health have been at the cost of persisting and widening inequalities between socioeconomic groups and areas. It facilitates target setting. It provides clear criteria for monitoring and evaluation. An effective policy is one which achieves both an absolute and a relative improvement in the health of the poorest groups (or in their social conditions and in the prevalence of risk factors).

Nonetheless, an important policy goal is to approach the health gap by preventing people getting poor as a result of illnesses and therefore being tracked down to the lower extreme of the health gradient (van Doorslaer et al., 2006). This is primarily a policy sphere which concerns the health care system through universalizing access to health care and by eliminating out-of-pocket health expenditures. Where the health gap is both large and the population numbers in the extreme circumstances are high, a process of prioritizing action by beginning with the most disadvantaged would be the immediate concern. However, focusing on health gaps can limit the policy vision.

4.3 Health gradients

The health gradient approach relates to the health differences across the whole spectrum of the population, acknowledging a systematically patterned gradient in health inequities. The penalties of inequities in health affect the whole social hierarchy and usually increase from the top to the bottom. So while in some circumstances targeting policy or interventions towards the most disadvantaged groups may be the best and most appropriate action, a whole gradient approach is also necessary. This holistic approach to the question of health equity, which embraces the whole of the socioeconomic gradient within societies or populations, is based on the assumption that an effective policy is one that meets two criteria: (a) improvements in health (or a positive change in its underlying determinants) for all socioeconomic groups up to the highest, and (b) a rate of improvement which increases at each step down the socioeconomic ladder. In other words, a differential rate of improvement is required: greatest for the poorest groups, with the rate of gain progressively decreasing for higher socioeconomic groups. It locates the causes of health inequity, not in the disadvantaged circumstances and health-damaging behaviours of the poorest groups, but in the systematic differences in life chances, living standards and lifestyles associated with people's unequal positions in the socioeconomic hierarchy (Graham & Kelly, 2004). Thus it sits firmly within a population level explanation.

Shape of health gradients. High-income countries like the United Kingdom of Great Britain and Northern Ireland and the United States of America tend to have gradients which are linear from top to bottom. When analyzing low- and middle-income country inequality patterns it is important to be aware that gradients can have different shapes. This can be a critical factor when selecting the social policy approach to reach different populations. These differences are well-illustrated by Victora's evaluation of coverage of preventive child-survival interventions in low income countries of Africa, Asia and Latin America (Victora et al., 2005). In this study, the distribution of children according to the number of preventive interventions they received was analyzed in relation to the socioeconomic group they belonged to, identifying three inequity patterns: linear, top and bottom.

The "linear inequity" corresponds to the classic gradient situation, although the steepness of the gradient may vary. The "top inequity" pattern corresponds to countries where the great majority does not receive interventions and a disproportion of benefits is concentrated in the higher socioeconomic groups. Finally, the "bottom inequity" pattern is found where most children do have access to interventions, but there is a clear group which lags behind. In their study, Cambodia and Eritrea are examples of top inequity, while Brazil and Nicaragua showed a bottom inequity pattern, which is a common feature in many Latin American countries (Victora et al., 2005).

4.4 Influence of cultural context

Concepts used in the analysis of health inequities are not context free, so context must also be taken into account in building the conceptual structure. This is an epistemological consideration. It is important to tease out the degree to which the cultural context has generated the conceptual structure of the original studies and their subsequent interpretation. For example, literatures on health inequities generated in Western Europe, Australia, New Zealand, Canada and the United States reflect the specific concerns of those societies. These preoccupations reflect the history, culture and politics of those societies and the dominant academic discourses in them. The concepts associated with the social determinants are not universal (for example, class, status and religion mean different things in different societies). Some caution is required, especially when applying concepts that originated in high income societies to low- and middle-income ones.

5. Measuring the magnitude of health inequities

The conceptual distinctions made in the first section of this chapter are amenable to measurement, although it is not always a straightforward task. In this section some of the ways in which these concepts can be measured are considered.

5.1 Indices of health inequities

When the purpose of the analysis is to determine whether the magnitude of health inequities has changed over time, or differs between or within countries, the tabulated data needs to be summarized in one or more indices.

Table 14 outlines the most commonly used summary indices of the magnitude of health inequities and Table 15 summarizes their main advantages and disadvantages. The choice of whether to use absolute or relative measures can affect the assessment of whether a health inequity exists and its magnitude. Sometimes a disparity on the relative scale (i.e. the rate ratio of a health outcome between a low and a high socioeconomic status (SES) group) may not appear to be a disparity on the absolute scale (i.e. the rate difference between the two groups). It is critical that researchers and policy-makers are clear about which type of measure they are using.

We recommend, where possible, using both relative and absolute measures of health inequities (i.e. both rate ratios and rate differences comparing two contrasting groups) to ensure that inequities are identified. Other more sophisticated measures can also be used to gain more insight into the patterns of health inequities, e.g. Gini coefficient or concentration index (Alleyne et al., 2002; Schneider et al., 2002; 2005). Regression-based measures have been developed to take the "gradient" nature of health inequalities into account. Some measures also consider the distribution of the population over socioeconomic groups. This sometimes leads to interesting insights, for instance when the size of relatively disadvantaged groups has diminished over time so that the population health impact has also diminished, perhaps despite rising relative and/or absolute differences between groups.

The best measure will depend on its fitness for purpose. In the early 1990s Wagstaff, Paci & van Doorslaer (1991) warned researchers and policy-makers that conclusions on health inequalities depended on the measure chosen. Since then there have been numerous works revising different measures, broadening the range of measures, and incorporating measures beyond the classical epidemiological ones (Regidor, 2004a; 2004b)

Given the diversity of advantages and disadvantages, it is recommended to use more than one index to depict the multidimensional nature of health inequities, as well as selecting the indices based on the objective pursued. Ideally complementary indices should be used. Furthermore, just as there are no "correct" measures, neither are there "correct" reference groups (Harper & Lynch, 2006). This is another decision to make together with the summary index/indices. Fitness for purpose also includes the final audience. Sophisticated measures may only be appropriate within a research context, and simpler measures may be more appropriate for addressing policy-makers.

5.2 Sources of health data

The basic instruments of any health monitoring system are vital statistics, censuses, population-based surveys and health records. These are found in all countries although they differ greatly in their coverage, quality, frequency and timeliness.

Vital statistics. Vital statistical registries are core instruments of a health monitoring system, providing continuous information on births and deaths by age and sex, and cause of death. *Birth registrie*s provide indicators such as birth weight, delivery assistance, teenage fertility, and health relevant indicators like mother's education. *Death registries* give useful information on sex, age,

Table 14: Overview of summary indices of the magnitude of health inequities

Summary index description		Summary index (with example of an interpretation)	
		On the *absolute* occurrence of health problems	**On the *relative* occurrence of health problems**
Indices that compare two contrasting groups	*Compare extreme groups*	**Rate difference** e.g. the absolute difference in mortality between professionals and unskilled manual workers	**Rate ratio** idem, but the *proportional* mortality difference
	Compare broad groups	**Rate difference** e.g. the absolute difference in mortality between non-manual and manual classes	**Rate ratio** idem, but the *proportional* mortality difference
Regression-based indices that take into account all groups separately	*Based on absolute SES*	**Absolute effect index** e.g. the absolute increase in health associated with an income increase of US$ 1000	**Relative effect index** idem, but the *proportional* increase in health
	Based on relative SES	**Slope index of inequity (SII)** e.g. the health difference between the top and bottom of the income hierarchy	**Relative index of inequity (RII)** idem, but the *proportional* health difference
Total impact indices that explicitly take into account population distributions	*The PAR perspective* *(equality by levelling up)*	**Population attributable risk (PAR)** e.g. the total number of cases that would be avoided if everyone had tertiary education	**PAR (%)** idem, but as a *proportion* of all cases (of death, disease, etc.) in the total population
	The ID perspective	**Index of dissimilarity (ID)** e.g. the total number of cases to be redistributed between groups in order to obtain the same average rate for all groups	**ID (%)** idem, but as a *proportion* of all cases (of death, disease, etc.) in the total population

Source: (Kunst et al., 2001.)

Table 15: Advantages and disadvantages of summary indices most frequently used to measure health inequalities

Summary index	Advantages	Disadvantages
1. Rate ratio of highest versus lowest socioeconomic status groups 2. Rate difference between highest versus lowest socioeconomic status groups	Easy to calculate and to interpret.	Only takes into account extreme groups, ignoring inequalities within groups or between intermediate groups.
3. Regression-based relative effect index	Takes into account all social groups and allows the inclusion of other variables in the model.	More complex to calculate and needs statistical packages to do so. Needs verifying regression assumptions.
4. Population-attributable risk (percent) 5. Population-attributable risk (absolute)	Easy to calculate and to interpret. Takes into account the variation between groups as well as the population size.	It does not consent association between SES and group morbidity and mortality.
6. Regression-based population-attributable risk (percent) 7. Regression-based population-attributable risk (absolute)	Consents association between SES and group morbidity and mortality of the whole social gradient.	Requires statistical packages and statistical knowledge to interpret it.
8. Index of dissimilarity (percent) 9. Index of dissimilarity (absolute)	Easy to calculate and to interpret.	It does not take into account the health variable and the SES variable. The distribution assumption is not applicable to morbidity or mortality.
10. Relative index of inequality 11. Slope index of inequality	Takes into account the population size and the relative groups' SES. Sensitive to the population average health status.	Requires statistical packages and statistical knowledge to interpret it.
12. Gini coefficient and Lorenz curve	Comprises data from all groups; it does not need population SES stratification.	It does not take into account the socioeconomic dimension. On its own, it does not provide information on the way inequality is distributed.
13. Concentration index and concentration curve	Includes the social dimension in the analysis and uses information from the whole population.	Geographic and trend analysis varies little when analysing morbidity or mortality over 15 years old. On its own, this index does not discriminate the way in which inequality is distributed.

Source: Schneider et al., 2002.

education, occupation and residence. In the case of infants under one year old, information on the mother and father is collected in most countries.

Censuses. Population and housing censuses are a rich source of data, providing useful information on most stratifiers (age, sex, education, occupation, ethnicity, residence) though by and large they do not gather information on health or income. Although they are not the optimum for monitoring mortality, in many low- and middle-income countries (LMIC) with vital registries coverage below 90%, censuses are an essential instrument in measuring mortality, especially infant and child mortality (Vapattanawong et al., 2007), and even maternal mortality in some countries (Stanton et al., 2001).

Population-based surveys. Population-based surveys including health interview surveys, epidemiological studies, longitudinal studies and small area studies can provide information for monitoring health outcomes and health equity. In many LMICs such surveys are conducted at regular intervals to examine trends in health and, like censuses, they are a useful source when vital registries lack appropriate coverage. There is a wide range of them and the best known are: the *Demographic and Health Surveys* (from ORC Macro), the *Multiple Indicator Cluster Survey* (UNICEF), the *World Health Surveys* (WHO), the *Demographic Surveillance Systems* (INDEPTH) and the *Core Welfare Indicators Questionnaire* (World Bank). These surveys provide information on recent illness episodes in relation to access to care, maternal and child health practices, health knowledge, sexual behaviour, anthropometric measures, and biological testing for HIV, anaemia and malaria. In many countries they also represent the main source of data on mortality; some of them even provide information on causes of death through verbal autopsies (a method of ascertaining a probable cause of death by interviewing the relatives of the deceased) (Soleman, Chandramohan & Shibuya, 2006; 2005; Setel et al., 2005; Korenromp, 2003).

In addition, in most countries there are routine multipurpose household surveys which contain health modules. These include *Living Measurement Standards Surveys*, *Integrated Household Surveys*, and household income and expenditure and consumption surveys.

Multipurpose household surveys are being increasingly used to monitor health inequities since the data from their health module (e.g. self-reported health status, out-of-pocket health expenditure, access and utilization of health services) may be analysed according to diverse equity stratifiers. The added value of such surveys is that they provide information on individuals and populations outside the institutional registries, e.g. the population outside the labour force, children who have never enrolled in school or those who have abandoned the formal educational system, people who do not access health services, among others.

Health records. There is a range of routine data such as disease surveillance (e.g. notifiable conditions), health care utilization registries, health services statistics and administrative records, which provide information for monitoring health status (e.g. nutritional status) and health outcomes (e.g. morbidity and mortality) by social determinants. However, these records only provide information on individuals who seek health care. Furthermore, in some LMICs these records are often poor and incomplete.

5.3 Measuring equity stratifiers

Equity stratifiers describe group differentiations in societies. Their interaction with other determinants is clearly illustrated in the CSDH conceptual framework (see Figure 1, Chapter 1). The main groups of equity stratifiers are:

- Socioeconomic stratifiers: education, occupation, income (consumption/expenditure, wealth/assets)
- Gender
- Ethnic groups: ethnic, racial, tribal, caste, religious and national origin groups
- Place of residence: urban versus rural, developed versus developing regions (Braveman, 1998).

Measurement and classification of these main social and economic stratifiers is far from straightforward, both in high income countries (HIC) and in LMICs.

Education. Educational level *is* the stratifier most frequently used as a proxy of social and economic advantages/disadvantages in society. It can be measured by means of a hierarchical classification of the population, ranging from the absence of formal education to the highest completed educational level. A distinction can be made between at least four broad categories: none, elementary, secondary, and tertiary education (UNESCO, 1997). In LMICs it is also highly recommended to distinguish between complete and incomplete educational levels, given their differential impact on health outcomes and health equity.

Education is normally measured in two ways: *years of schooling* and *educational level*. Moreover, in LMICs illiteracy is also a necessary indicator; it is recommended to gather data on illiteracy in age-specific and/or gender-specific terms. Education seems the most straightforward of the socioeconomic variables. However, it is highly interactive with other variables like income, occupation, gender, age, ethnicity and place of residence. For example, *gender* affects the educational level attained in the first place and it is also interactive with income since at the same educational level women and men do not usually receive the same income. On the other hand, *age* should be considered as a confounding factor: younger populations are expected to have more education than older ones since the highest level of education is constantly increasing. This reveals the dynamic nature of education: while its absolute value increases, its relative value decreases and new generations require greater education for similar occupations.

Occupation. There are several ways to classify people by occupation. The main approach in many European countries is the "class structural" approach. Distinctions are made between people who have structurally different positions in the labour market and who, as a result, differ in terms of income, privileges, life styles and characteristics like voting behaviour. The resulting groups of people are usually referred to as "occupational classes" or "social classes".

However in many LMICs "occupation", as collected in vital statistics or censuses, is not an adequate stratifier. First, the question is not usually asked consistently and hence the data are unreliable. Second, in LMICs occupation is highly dependent on working conditions: the same occupation might have quite different income levels and health effects depending on whether the person works in the formal or in the informal sector. Thirdly, there are significant levels of under- and non-paid employment (e.g. unpaid family workers). Finally, there are high levels of economic inactivity, particularly in the female population. Nevertheless in LMICs occupation may be used as a measure of vulnerability by identifying the unemployed, workers without social insurance, the informally employed, child labour, young people who do not work or study, among others.

Income. The income level of a person can be used in two ways: to indicate the socioeconomic status of the income recipient, with higher personal income indicating a better labour market position, or to indicate access to scarce material resources, where measurement of household equivalent income is more appropriate. Income level is quite a complex variable to determine and may be measured in different ways: *income per se*, *consumption/expenditure*, or *wealth/assets*.

Although household income is used more often than household expenditure, Braveman (1998) argues that household expenditure is a more suitable measure of socioeconomic status in "subsistence or barter economies, or in economies where a considerable proportion of the population is employed in the informal sector." Likewise, Dachs (2002) stresses that total household expenditure per capita is considered to be "less biased, less prone to seasonal variations, particularly in rural areas, and is considered a better indicator of household economic status overall."

On the other hand, Wagstaff and Waters (2005) consider that measuring expenditure is problematic since it is difficult to assess the value of durables or self production. They argue in favour of using consumption, which includes the sum of food or articles produced by the household as well as those bought or given by others. However, though there are multipurpose household surveys which collect, value and add this information to the autonomous household *income per se* (e.g. *Encuesta de Caracterización Socioeconómica* [Socioeconomic Characterization Survey] in Chile), Székely and Hilgert (1999) draw attention to the fact that in LMICs income still has the additional drawback of under-declaration in the richer sectors of society, thus underestimating inequity.

The Wealth Index (Rutstein & Johnson, 2004), introduced by the Demographic and Health Surveys, provides an important alternative to standard measures (such as income, education and occupation) for measuring social inequalities in health in LMICs. The asset index is calculated using easy-to-collect data on a household's ownership of selected assets, ranging from a fan to televisions, bicycles or a car, materials used for housing construction such as flooring material, types of drinking water source and sanitation facilities, and other context specific characteristics related to wealth status.

The above concepts may be expressed in terms of quintiles or deciles, which classify the population by aggregating households into groups of equal number according to the household equivalent per capita autonomous income, expenditure, consumption or wealth/assets.

Information on income level is also aggregated around the *poverty/indigence lines* which may be defined in absolute or relative terms. In most LMICs poverty is measured in *absolute* terms, i.e. the level necessary to cover feeding and non-feeding needs. On the contrary, in HICs it is frequently use as a relative poverty line, usually equivalent to 50 percent of the nation's median income.

However, it is important to acknowledge that appropriateness of the measure chosen is context specific. No single measure can be applied universally in the study of social inequalities in health, especially in countries with large disparities in wealth and economic opportunities. Policy-makers and researchers interested in developing monitoring systems to examine social inequalities in health need to think carefully about the most appropriate measures of socioeconomic position in their country or region.

Finally, income and health show a peculiar bidirectional relation since while income constitutes a key determinant of health, illness as well may impoverish people, particularly in countries with low access to health care or even in middle-income countries with partial coverage where catastrophic illnesses may represent a huge burden on even better-off families (van Doorslaer et al., 2006).

Gender. Gender is highly interactive with other equity stratifiers such as education, occupation, income, ethnicity or place of residence. Gender analysis presupposes distinguishing between sexes when collecting, processing and disseminating data. However, since gender is a socially constructed and relational concept, analyzing by gender means more than distinguishing the data between men and women or boys and girls. It means incorporating issues relative to gender power relations, e.g. violence by intimate partners or unpaid work and using indicators that illustrate the equity relationship between both genders. One such instrument is the Gender Parity Index (GPI), developed by UNESCO, which gives the "ratio of female-to-male value of a given indicator. A GPI of 1 indicates parity between sexes; a GPI that varies between 0 and 1 means a disparity in favour of boys; a GPI greater than 1 indicates a disparity in favour of girls" (UNESCO, 2006). In education, for instance, we could assess literacy in terms of the ratio between literate women and literate men.

Ethnicity/race/caste/tribe/religion. Ethnic groups, race, caste, tribe and religion are also stratifiers that reveal inequities in health (Anderson et al., 2006; Montenegro & Stephens, 2006; Ohenjo et al., 2006; Stephens et al., 2006). These stratifiers show enormous variety across the world, ranging from indigenous and Afro-Latino populations in Latin America and the Caribbean; Hill Tribes and Muslim minorities in East Asia and the Pacific; Berbers in the Middle East and Northern Africa; populations other than the dominant tribe in sub-Saharan Africa; lower castes and tribes in South Asia; Roma in Eastern Europe (Lewis & Lockheed, 2006). At first sight, ethnicity might seem a simple issue to identify. Nonetheless there are problems of under representation and differences within and between the groups that need to be properly addressed in the data sources. There are two main criteria for identifying ethnicity: *self-identification* and *language*. In some cases, self-identification has problems of under representation, especially among young people since the degree of ethnic awareness may vary between generations (ECLAC, 2006). It is also potentially unstable in repeated surveys.

Language is considered a key predictor of indigenous health (Montenegro & Stephens, 2006). When using language as a marker, besides identifying the use of the native language, it is also important to assess whether people are *monolingual* or *bilingual, since this is a key issue in determining access to and utilization of health services* (ECLAC, 2006). Likewise, it is also relevant to distinguish between dominant (primary and secondary) and not dominant groups, e.g. tribes (Moyo 2004; Wirth et al., 2006).

Finally, a significant issue to take into account is that for rural and remote populations it is not ethnicity itself which is the most relevant factor. For instance, in some cases the evidence demonstrates that "land", i.e. dispossession from their land, is a key social determinant. Experiences in Uganda showed a reduction from 59% to 18% in the under-5 mortality rate of Twa families who were given land (Balenger et al., 2005). When people lose their land it adversely affects their family food supply and their herbal pharmacopoeia. For example, forest people like Pygmies elaborate compounds against diseases like malaria, guinea worm, jaundice, diarrhoea, toothache and helminthiasis (Ohenjo et al., 2006). Moreover, dispossession weakens their traditional culture which usually acts as a protective factor. This frequently goes hand-in-hand with increasing discrimination, marginalization and poverty, and the greater health risks of being transient labour.

Furthermore, access and utilization of health care have additional dimensions to be taken into account, e.g. identity cards, language barriers, culturally appropriate care services, distance and location of health care facilities, among others.

In sum, ethnicity is a complex concept. Monitoring SDH and health equity requires acknowledging its multidimensional character, paying particular attention to the historical context, the social dynamics inherent in its respective definitions and the interrelationships with other social stratifiers and within the ethnicity category itself.

Place of residence. Besides representing the classic rural/urban distinction, place of residence also implies administrative units (villages, municipalities, provinces, regions or states) and geoclimatic areas. Disaggregation is needed not only in the interest of following up inequities as such, but also to allow decision-making at the local level. Recently, geographic software programmes have enhanced our ability to carry out *spatial analysis*. This allows research on the influences of climatic parameters (e.g. rainfall, aridity, farming systems, length of growing season, the stability of malaria transmission) and geographic parameters (population density, urban proximity, coastal proximity, distance to roads) to explain differences in health outcomes like child mortality. The use of these diverse geographic variables has the potential to go beyond the traditional urban/rural dichotomy towards analysis based on an "urban/rural continuum" (Balk et al., 2003).

5.4 Data collection on equity stratifiers

Low- and middle-income countries urgently need to collect information on the key equity stratifiers examined above, and in a consistent manner within the country so that data are comparable. This requires programmes oriented towards improving the production, dissemination and utilization of vital and health statistics in policy-making. The aim should be to support countries

to improve coverage (including representation of diverse groups and non-registration); quality (consistency, sampling and estimation methods, and statistical techniques); timeliness; frequency; geographical disaggregation; stratifiers collected; and accessibility of micro databases.

Although many international agencies have developed data collection instruments as well as databases on which most LMICs are highly dependent, there is a need for better coordination among them; greater standardization of definitions, indicators and sources, between countries and agencies as well as among the different agencies; and increasing incorporation of social determinants of health and equity dimensions in these databases.

In middle- and high-income countries there is a need for regular and consistent collection of key information relating to social determinants, health outcomes and health determinants. We propose the development of "multilevel surveillance systems" of health inequities which routinely collect information on social determinants, health outcomes and relevant health determinants in a coherent fashion. The term "multilevel" refers to the "layered" nature of social determinants health.

6. Using the evidence and information

6.1 Assembling the multifaceted evidence base

For effective policy interventions to occur, the data generated by the sources discussed above needs to be combined with other forms of evidence. Generating evidence for effective action involves bringing together knowledge which is useful both in formulating policy and in understanding how best to implement it. However, it must be linked to a clear question. Whitehead and colleagues (2004) identify this multifaceted evidence base as the "jigsaw" required to build a coherent picture of the most effective policies, the most appropriate interventions and the most cost-effective solutions. This jigsaw recognizes that evidence is produced for different purposes, including mobilizing political will, getting buy-in from the public, demonstrating success, predicting outcomes and monitoring progress. In general terms, the evaluation framework proposed by Wimbush and Watson (2000) is helpful in making explicit the specific needs and perspectives of a full range of stakeholders involved in the development and implementation of programmes aiming to address the SDH. The framework helps to determine the types of question to be asked and the appropriate methods to answer them.

6.2 Asking the right questions

The questions asked by various stakeholders will differ. For example, policy makers and strategic planners are more interested in higher-level questions of what works (questions of effectiveness) and what are the best buys (questions of cost-effectiveness), in order to be able to make decisions about the most efficient and effective deployment of resources. In relation to the social determinants, they may also ask additional questions such as "What are the benefits of investing in a social determinants approach?"; "Is there a particular social factor that will have the

biggest impact on reducing health inequities?"; or "What is the relative impact of implementing macro-level policies compared with efforts that can be made by local practitioners?". *Impact evaluations* of this sort need to be large scale and take account of the long term nature of social interventions, measuring a range of short-, medium- and long-term outcomes.

On the other hand, practitioners who are responsible for the operation and running of community projects need to understand the practicalities of implementing interventions in real life situations. They might ask "What are the biggest barriers to implementation and how can these barriers be overcome?" or "What are the best ways of building effective partnerships to take action on the SDH?". These are *process evaluations*.

In addition, the population likely to benefit from the service or programme will be concerned with the quality of service provision, the extent to which it meets their needs, and the extent to which the process has been participatory or consultative. These are *experience evaluations*.

6.3 Achieving methodological diversity

By nature, addressing SDH involves a wide range of stakeholders and actions which cut across sectors. Generating the evidence required to build the knowledge base about the most effective ways of taking action is also a multidisciplinary concern. In collating the evidence base, researchers will draw upon work from sociological, psychological, anthropological and medical traditions, to name but some.

Getting the questions right will help to ensure that various sources can be brought together in such a way as to create the "evidence jigsaw" described by Whitehead and colleagues (2004), which helps policy-makers to take appropriate action on the SDH based on the best available evidence. By drawing on a broad range of evidence (including quantitative and qualitative research, grey literature, case studies) we are more likely to be able to find out not only what works to address the social determinants of health, but also how and in what circumstances.

The MEKN recommends that policy-makers, researchers and practitioners assess the appropriateness of particular methods and evaluation techniques in their own country contexts. There are many standard text books to help them in this task.

However, with respect to policy-making, the five types of evidence put forward by Whitehead and colleagues (2004) are recommended as a useful starting point. These are:

- **Observational evidence** showing the existence of a problem. This is most useful when the intervention choice to tackle the issue is fairly obvious. However this type of evidence becomes more complicated when there are multiple causes of the problem.

- **Narrative accounts** of the impacts of policies from the household perspective. These might include a combination of descriptive studies and qualitative studies exploring why one course of action was chosen over another.

- **Controlled evaluations**. Whitehead helps to dispel the myth that controlled experiments are inappropriate by identifying examples of studies that have had a direct effect on policy-making.

- **Natural policy experiments**. Petticrew and colleagues (2005) put forward solid arguments for the use of "natural experiments" as a source of evidence for both investigating the determinants of health inequities and for identifying effective interventions. Such "experiments" may overcome the barriers of executing randomized control trials in the field of social determinants and can offer "good enough" evidence on how best to act to tackle health inequities.

- **Historical evidence**. Evidence from the past can be influential in the process of policy-making. Whitehead and colleagues (2005) give the example of the Rowntree Poverty Surveys of 1901 and onwards which painted a vivid picture of life in the slums of Britain's industrial cities. This was shocking to the general public, changed attitudes to poverty and underpinned the building of the post-war welfare system.

6.4 Assessing the quality of diverse evidence

Assessing the quality of the diverse evidence base is important. Expanding the scope of "admissible" evidence in the field of the social determinants does not mean sacrificing rigour (Kawachi, 2005). It is important that all knowledge used to generate evidence should be assessed for quality, particularly making clear any biases that might affect the knowledge used. The methodological task is then to find a means of evaluating research from whatever tradition it comes, according to agreed criteria of acceptability, and regardless of its theoretical or methodological origins. To that purpose, all studies attempting to answer questions about the SDH should adhere to the following criteria:

- Reporting of what the researchers did, why and how they did it (*transparency*)

- Applying a consistent and comprehensive approach (*systematicity*)

- Assessing how applicable the study is to different populations and in different contexts (*relevance*) (Swann et al., 2003).

6.5 Attribution of effects and outcomes

A final key dimension for generating evidence for policy and practice is the question of attribution. It is linked to, but is conceptually separate from, the way in which the social determinants' causal pathways operate. This is the relation between the intervention, the action or the policy on the one hand, and the outcome on the other. It is linked to the causal pathways of the social determinants because an accurate understanding of the proximal and distal causes of health inequity will in due course demonstrate the links between the social and the biological.

The critical problem is that in much of the social determinants approach to policy and interventions, the causal chain is assumed to exist rather than being demonstrated. There are two important contributions which help to articulate these relationships, both of which originated in the attempt to understand better the process and methods of evaluating complex interventions, particularly community interventions. These are the work of Weiss (1995) and Pawson (2006). Weiss (1995) contributed the idea of theories of change and Pawson (2006) developed the idea of programme theory.

7. Evidence synthesis and action

Creating evidence-based guidance is one way of helping to prioritize actions to address the social determinants and improve the standards of professionals working in this area. This process involves two main stages: synthesizing the available evidence and then turning that evidence into prioritized recommendations, i.e. evidence-based guidance. There are a number of national and international organizations who are engaged in one or both of these tasks (see for example www.cochrane.org ; www.campbell.org ; www.cdc.gov ; www.nice.org.uk ; http://eppi.ioe.ac.uk/cms).

Countries should judge the relevance of products like these and assess whether they can use and/or adapt them to develop effective programmes for action in their own country contexts.

7.1 Hierarchies of evidence

One of the key and controversial questions related to evidence synthesis is how to use hierarchies of evidence. The idea of a single hierarchy of evidence is a powerful one. It is based on the straightforward premise that only the best evidence should be used to determine whether a clinical intervention is effective. At the top of the hierarchy sit meta-analyses of randomized controlled trials, systematic reviews of the randomized controlled trials and randomized controlled trials themselves. Then in descending order come non-randomized trials, case-control studies, cohort studies, controlled before and after studies, interrupted time series studies and correlation studies. Non-analytic studies, expert opinion and formal consensus are at the bottom. There is no place for qualitative or theoretical evidence in such a hierarchy. The principle is that the further up the hierarchy, the greater the chance of eliminating bias. The focus on bias relates to the internal validity of the evidence, meaning the degree of certainty about the evidence presented and conclusions drawn from it. The principle is sound where the question is one of clinical effectiveness. The development of this method as a way of determining the efficacy and the effectiveness of clinical interventions has been an important milestone in the foundation and development of evidence-based medicine.

In public health and with SDH, clinical trials are seldom either available or appropriate. The range of evidence that needs to be considered is extensive and the questions that the research has sought to answer are much broader than just those of clinical effectiveness. We argue that taking an evidence based approach does *not* mean relying on, or privileging, only one kind of method, such as

the randomized trial, it does *not* mean that there is only one hierarchy of evidence, and it does *not* mean an epistemological commitment to objectivity above subjective positions or methods.

We argue for multiple methods, diverse epistemologies and a broad range of data. We argue that no single approach to the generation of evidence or data is to be favoured over others. Appraisal of evidence should be on the basis of whether the research method used is appropriate for the research question being asked and the knowledge being collected, and the extent to which in terms of its own methodological canon it is considered to be well executed.

"Fitness for purpose". Agreed hierarchies for dealing with the full range of evidence do not presently exist. Because of this we use the term "fitness for purpose". This means determining the answer to several questions. First, has the research question been spelled out clearly, or if not, has a hypothesis been specified or the relationship between two variables clarified? Second, is the chosen method going to answer the question? Is the tool the right one for the task in hand? This is vital. Often research methods are chosen by researchers on the basis of philosophical predilection rather than fitness for purpose. Third, the appraiser of the evidence needs to turn their mind to the idea of the fatal flaw. In a randomized controlled trial for example, if the researchers and the subjects were not blind to the random allocation and if an intention to treat analysis had not been carried out, there would be serious concerns about the level of bias that might creep into the results. The absence of random allocation and intention to treat are fatal flaws in design.

It is difficult to be as prescriptive with other forms of evidence, but in determining fitness for purpose the appraiser should consider what sort of flaw would lead to serious doubts about the reliability of the data and consideration of the strong possibility of bias. In a qualitative investigation if the author does not report how the respondents were recruited, how they were chosen as informants and how the particular extracts of the conversations with key informants were selected and on what grounds, there would be good reason to suppose that the possibility of bias was high. These would constitute fatal flaws.

7.2 Synthesizing complex and diverse data

The questions decision-makers ask are complex; questions that go beyond "What works?" and include "When?", "How?" and "Why?", as well as "For which people in which circumstances?" Often the answers to these questions are located in a variety of research and non-research sources, and some of the answers may come from unpublished as well as published materials. Review and synthesis offer a way of understanding and using these diverse sources of evidence.

7.3 Systematic reviews of effectiveness

A systematic review has an explicit, transparent and therefore reproducible method, less open to research bias or subjectivity than, for instance, a literature review. A systematic review generally has to meet the following criteria:

- Has a review protocol to guide the review process
- Has a comprehensive pre-defined literature searching strategy
- Includes a critical appraisal of studies and grading of evidence
- Has explicit (transparent) inclusion and exclusion criteria
- Has an explicit (transparent) method of data extraction and statistical analysis (Pope, Mays & Popay, 2007).

7.4 Evidence synthesis

Evidence synthesis is the point at which findings from the review process are combined and conclusions are drawn. **It** entails organizing and summarizing relevant evidence from a range of selected studies and then finding some way of bringing it together. There are three broad techniques for synthesizing evidence: quantitative synthesis, qualitative or interpretative synthesis, and mixed approaches which incorporate diverse evidence to inform policy- and management decision-making, including the combination of separate syntheses (Pope, Mays & Popay, 2007).

Quantitative methods of synthesis all involve the conversion of data, whether qualitative or quantitative, into quantitative (i.e. numerical) form. This can then be used either for simple counts or more sophisticated statistical analyses, as well as for use in logical (Boolean) analysis. The danger however is that the depth and meaning of the original research can be easily lost.

There are six main quantitative approaches: content analysis, quantitative case survey, cross-design synthesis, Bayesian approaches, meta-analysis, and qualitative comparative analysis (see Pope, Mays & Popay**,** 2007).

Qualitative research takes on a number of forms and is guided by a range of theoretical perspectives: phenomenology, hermeneutics, ethno-methodology, grounded theory, etc. The different theoretical perspectives draw on different disciplines and approaches to research such as anthropology, sociology, social policy, political science, psychology, history and economics. Studies tend to be small and are not concerned with wide statistical applicability but with conceptual and theoretical development and the explanation of phenomena. Data produced from such studies tend to be contextually rich and provide analytical depth.

Mixed approaches to evidence synthesis are able to accommodate diverse evidence: quantitative and qualitative, research and non-research, etc. They can be less codified and make fewer pre-specified demands on the reviewer. While this gives flexibility and freedom, it demands high levels of skills to produce a robust, transparent piece of research. Moreover, the newness of the methodologies and shortage of good case studies means that these methods are to some extent still in development.

There are three main mixed approaches:

- Thematic analysis. Identification and tabulation of main, recurrent or most important issues or themes in a body of literature.
- Realist synthesis. Testing the causal mechanisms or theories of change which underlie an intervention or programme.
- Narrative synthesis. Juxtaposition of findings from a diverse range of studies along with some integration or interpretation where evidence allows (see Pope, Mays & Popay, 2007).

7.5 Turning evidence into guidance for action

An essential part of producing evidence-based guidance is the distillation of the most important findings from the scientific evidence base into a set of implementable actions. This involves assessing the strength of the evidence (the degree of certainty about "what works"); its generalizability and transferability; whether change is realistic; whether the actions identified are amenable to change in the long, medium or short term; whether it is cost effective; and what impact it will have on health inequities (NICE, 2009).

In middle-income countries evidence-based guidance is largely generated by national academics interacting with ministries of health (or other ministries), with a subsidiary role played by WHO, United Nations Children's Fund (UNICEF) and other international (but not bilateral) agencies. In low-income countries this role is primarily played by WHO, UNICEF, the World Bank or bilateral agencies that invest in programmes of their choice. Thus the development of evidence based guidance may depend on who is paying for implementation, and on their specific priorities. This may also affect equity if an organization prefers to direct its funds to a particular area, regardless of whether or not this is the most equitable approach (Victora, personal communication, 2007).

Robust, evidence-based guidance on the scale of the United Kingdom National Institute for Health and Clinical Excellence (NICE) or the US Centers for Disease Control and Prevention (CDC) may not be available and/or it may not be appropriate to attempt to produce such guidance. Stakeholders could use guidance from sources such as NICE or CDC and adapt it to their own country context. Such guidance is normally freely available on the internet.[1]

[1] Stakeholders may find it more relevant to use the less formal approaches to gathering and assessing evidence. These are outlined in Chapter 9 on *Learning from Practice* of the MEKN Final Report (Kelly et al., 2007).

8. Conclusions

The fact that health inequity is socially determined is one of the most important problems and challenges for global health policy. In due course, it may become possible to describe precisely the causal pathways involved in the links between the relevant social factors and human biology. This will allow policy to be targeted with a precision we lack today. It will also help to create ways to bring the macro social and economic determinants of health into the policy foreground.

Although the causal pathways cannot yet be described precisely, this should not and must not be an excuse for inaction. Much is known about the social factors which affect health. What is known is not universal in its applicability. It must therefore be read through a lens which deals with its salience, meaning and relevance in particular local contexts. It must also be "equity proofed", i.e. a policy or programme needs to identify, assess and address its potential health equity impacts so as to maximize the potential health equity outcomes and minimize any potential harm.

As the work of the Measurement and Evidence Knowledge Network demonstrates, it is possible to describe comprehensively what can be known and how it can be interpreted. It is also clear how it can be linked to policy and what can be done to get those policies, as well as the guidance which may be derived from them, implemented and monitored.

The social determinants of health inequities is truly a field which is extensive in its coverage, diverse in its ways of formulating the problem, full of good ideas, and replete with suggestions as to what might be done to help to improve things, along with various political solutions. And yet the problem of health inequity remains stubbornly ubiquitous in spite of all these efforts. The world remains an unequal place in which the damaging effects of inequity itself and the health consequences of those inequities remain as sharp as ever. In spite of all this knowledge it sometimes seems that we are powerless in the face of the problem. The MEKN has taken a pragmatic approach by showing how it is possible to begin to marshal evidence in such a way that it may be effective. While the work reported by this Knowledge Network will not solve all these problems, the establishment of the CSDH by WHO and the scientific work it has sponsored marked an important watershed. Likewise, although the guidance developed by this Network will not provide solutions to all the scientific and methodological problems, the work undertaken by the Commission and the methodological thinking which has informed it has helped to map the territory. No doubt the map will improve and in due course the methodological questions will be better defined and formulated than the current authors have been able to do so far.

The work developed by this Knowledge Network is a starting point which intellectually establishes the case that an evidence-based approach is the one most likely to offer the hope of success, that the evidence comes in many shapes and forms, and that we must become better at synthesizing and appraising that evidence. We must move well beyond sterile debates about the superiority of particular disciplinary or epistemological positions and the world of political power needs to be engaged in ways that will be effective and will produce the necessary changes.

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11 The way forward: acting on the evidence and filling knowledge gaps

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Greater equity in the health status of populations, within and between countries, should be regarded as a key measure of how we, as a civilized society, are making progress.

Margaret Chan, WHO Director General

1. Introduction

The chapters in this book bring together a synthesis of global evidence that demonstrates the significance of broader determinants (e.g. social, economic, and political) on health outcomes and health equity. The evidence stresses the importance of action on these determinants to achieve better health for all and improve health equity, and points to what actions should be taken. As stated by the Commission on Social Determinants of Health Report (CSDH, 2008), inequalities in health reflect disparities in daily living conditions and in access to power, resources, and societal participation. This report majored on the *fact* that social justice, economic systems and political arrangements are the principal macro, or social, determinants of health and disease within and between societies. This was a profound shift scientifically, because the report makes clear that economic systems, political processes, social structures and legal arrangements can be as toxic to populations as any viral or bacterial pandemic. Moreover, the consequences of these macro determinants of health are not in any sense random or evenly spread. Quite the contrary; the patterning of health inequities across the globe within and between societies is associated with

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systematic inequalities in access to the social, economic, political and cultural resources and systems necessary to promote health or prevent disease. For some people, these systems are health enhancing while for others, they are lethal. Improving the understanding of the causal pathways of health inequities globally and locally, and informing action to reduce them, requires new directions in our thinking about these matters.

Policies and interventions in and particularly outside the health sector (e.g., housing, education, transportation, and employment) provide opportunities to improve health outcomes and reduce inequities in health within and across populations (Bambra et al., 2008). The evidence gathered through the Knowledge Networks on key areas described in the previous chapters suggests that much can be done to address the causes of inequities and ultimately reduce those that exist. This chapter provides a summary of what the evidence shows and ways in which different actors can work together to move forward to address social determinants of health (SDH) and thereby reduce health inequities.

2. What does the evidence tell us?

Inequities in health arise because of the circumstances in which people grow, live, work and age and the systems put in place to deal with illness (CSDH, 2008). The conditions of these environments are shaped by political, social and economic forces and vary around the world. Unequal distribution of power and wealth contribute to such things as differential access to health care, resources and opportunities associated with better health outcomes. For instance, socioeconomic inequalities in early childhood are a key source of inequities in many health outcomes and mortality in adolescence and throughout adulthood (Chapter 5). Childhood experiences or exposures determine educational attainment and income attainment later in life which are clearly linked to health outcomes (Feinstein, 1993; Bradley & Corwyn, 2002; Brooks-Gunn, Duncan & Mariato, 1997; Sirin, 2005).

Gender inequities affect health norms and practices, exposures and vulnerabilities to health problems and ways in which health systems and research respond. Women in almost all societies have fewer land rights, less wealth and are often viewed as less capable or able than men (Chapter 3; Fazio 2004; Wagner, Ford & Ford, 1986). They are subjected to restrictions on their mobility, sexuality, and reproductive capacity as well as physical or sexual violence. Women often have poor nutrition in terms of quantity and quality of food and employed in lower-paid, less desirable jobs while bearing a disproportionate share of domestic duties (Leslie, 1991; Chapters 2 & 3).

The environment in which people live and work has a great impact on health outcomes and in creating health inequities. Individuals living in urban areas are subject to environmental hazards such as air and water pollution, crime, lack of living space and sanitation and solid-waste management (Chapter 6). Unhealthy living conditions compromise early child development and can increase the risk of communicable and noncommunicable disease and injuries. Additionally, particularly in low-

and middle-income countries, urbanization is often associated with a large informal employment sector which lacks proper regulations of working conditions, work hours and a minimum wage (Chapter 6). Poor working conditions can be found in all countries and contribute to increased risk of injury and poor health through exposure to toxic chemicals, excessive noise, poor sanitation, violence and sexual assault (Chapter 7). Psychosocial relations, management and control, and job satisfaction are also important determinants of health across countries. Contract and occupational status, stress from the workplace, or lack of control or autonomy over one's job are linked to various illnesses and injuries, including cardiovascular disease, musculoskeletal conditions and psychological disorders (Chapter 7).

Despite major differences in living standards around the globe, there is substantial agreement among researchers on the basic or underlying social determinants that shape disease patterns and social gradients in low-, middle- and high-income countries (Wilkinson & Marmot, 2003; Bartley, 2005; Benach et al., 2000; Diderichsen, Evans & Whitehead, 2001; Donkin, Goldblatt & Lynch, 2002; Iyer, Sen & Östlin, 2008; Wagstaff, 2000; Graham, 2007). This commonality in the "causes of the causes" implies substantial opportunities for intersectoral approaches that address disease prevention and health promotion through a focus on the underlying social determinants.

2.1 Addressing the underlying causes of health and health inequity

To address inequities in health, the Commission on Social Determinants of Health made three overarching recommendations (CSDH, 2008):

1. Improve daily living conditions, including the circumstances in which people are born, grow, live, work and age;

2. Tackle the inequitable distribution of power, money and resources; and

3. Measure and understand the problem and assess the impact of action.

Entry points for policies and programmes addressing health inequities

Based on the CSDH conceptual framework presented in Chapter 1, there are different potential entry points for interventions and polices directed towards addressing health inequities. Gender-biased values and discrimination affect people's daily lives as well as key determinants of health through inequalities in such areas as nutrition, decision-making power, employment, political voice, access to health services and allocation of resources, such as education and income. A fundamental approach to addressing gender-based inequity is to change gendered norms and values about the relative worth or importance of girls versus boys and men versus women through the creation, implementation and enforcement of formal agreements, codes and laws that enforce women's rights to full and equal participation throughout society (Chapter 3).

Policy interventions targeting structural factors are also important to address issues that undermine healthy child development such as poverty, inequality in material resources (e.g. housing,

child care and nutritious foods), lack of employment and/or social and economic support available to families, and gender discrimination. Beneficial policy responses to promote and support positive and equitable child development focus on providing social and economic support for families (e.g. universal access to parenting and caregiver support, quality childcare, nutrition, social protection and basic education) (Chapter 5).

To address issues related to urbanization, improved governance[1] coupled with increasing social capital and empowerment of marginalized communities, is considered a pre-condition for success in improving urban settings (Chapter 6). Healthy urban governance policies empower local residents to gain a greater share of decision-making to improve their living environment and work towards building healthier cities.

2.2 Understanding and addressing the socioeconomic gradient is key to improving equity

Many of the chapters describe clear and consistent gradients, or patterns of inequity, in access to and security of key health resources (e.g. education, income, employment, housing, and access to health services) based on an individual or group's socioeconomic status or position in society. These patterns are evidenced in health outcomes such as mortality rates, child and adult developmental outcomes and life expectancy. Similar gradients exist for all priority public health issues identified by the Commission through the Knowledge Network on Public Health Priorities[2] (Chapter 9), although the steepness and shape of the gradients varied across populations and time (Chapters 5, 9 & 10). Unless researchers, policy-makers and the media move beyond looking at national averages or aggregate health outcomes, health inequity and its economic, social and political causes will remain invisible (Whitehead, 2009).

The extent and depth of inequity varies from region to region within countries, but also between countries. A focus on improving population averages can potentially increase inequity unless specific measures are taken to extend improve health in all population groups simultaneously. As described in Chapter 10, narrowing health gaps means raising the health of the poorest, fastest; that is, improving the health of the poorest and doing so at a rate which outstrips that of the wider population. For groups historically excluded from access to services for geographic, economic, ethno-cultural or other reasons, programmes targeting their specific requirements are needed to achieve pro-health equity outcomes. A rigorous understanding of the distribution of health outcomes and opportunities across socioeconomic groups is an essential tool for policy-makers to appropriately and effectively tailor interventions that address patterns of health inequity.

[1] The confluence of governmental and non-state actors in setting forth policy and programme directions

[2] Alcohol-related disorders; cardiovascular disease; child health; diabetes; food safety; HIV; maternal health; malaria; mental health; neglected tropical diseases; nutrition; oral health; sexual and reproductive health; tobacco and health; tuberculosis; and violence and injuries

Box 5: Common themes

The evidence presented across chapters highlights these common themes:

- **Power relations:** Power imbalances are identified as generators of inequities such as gender discrimination, social stratification, or unequal employment relations. In order to address this issue, participation and empowerment policies are recommended at all levels. Components of such policies could include ensuring autonomy in decision-making (chapter 3), enhancement of communities' ability to act (chapter 6); transfer of real power and resources to support lay people to be involved (chapter 4); enhancement of social capacities for action; and strengthening health literacy (chapter 8).
- **Education:** Basic education is a key action to address SDH. In addition to basic education, improvements in girls' education and the expansion of secondary education are priorities.
- **Early childhood development (ECD) policies**: Support for universal access to quality ECD services with more direct public expenditure, guaranteeing parents' adequate time balance between work and home, and integrating ECD services into existing primary health care systems**.**
- **Social protection:** Universal and progressively tax-funded (when possible) social protection policies (e.g. health insurance, income maintenance and other services to address social and income inequality) should be available for individuals unable to attain or sustain livelihoods at a level necessary for their physical, mental and social well-being.
- **Basic services and infrastructure:** Ensure universal access to clean water, sanitation and sewage, solid waste disposal, housing and other services in order to address SDH.

Some issues where recommendations diverged include:

- **Microcredit:** Although microcredit can be an important tool to address health inequalities, evidence on its effectiveness is mixed.
- **Conditional cash transfers: There is some evidence that** cash transfers can improve health, but the evidence is inconclusive and the conditionality of transfers may stigmatize and disempower individuals and/or groups. One possible solution is to focus on "conditions" at the community rather than individual or household levels in an effort to minimize stigmatization and/or exclusion (chapter 4).

3. Policy options

The effort to reduce social inequalities in health consists of broad globally and locally integrated policies and of specific public health and occupational programmes and interventions (Chapter 7). Actions taken across government can improve population health, particularly for the most vulnerable groups.

Because there are many entry points for intervention, most calling for the contribution of multiple sectors, a policy approach to reduce health inequities is more complex than traditional efforts taken by policy-makers in the field of health. It requires consideration of non-biological causes of ill health, implementing policies not commonly addressed, and engaging multiple stakeholders in policy processes (WHO, 2007b). A comprehensive overview of the evidence points to several policy options for different sectors and mechanisms to tackle root causes of health inequities. Possible options for intervention and key movers are outlined by sector in Table 16.

4. Working together to ensure progress in policy, programmes and research

A. Empowerment

Empowering individuals and communities, especially those who are marginalized, to improve social conditions that affect their health is integral for positively improving health outcomes and health equity. Public health interventions are most effective when target communities and groups are involved in all aspects of policy and programme development, implementation and evaluation (Sen, Östlin & George, 2007; Östlin et al., 2007; A/Rahman et al., 1996). Their involvement in both the research process and programme and policy development increases the likelihood that policies and actions are informed, appropriate, acceptable and effective (Blas et al., 2008).

Chapter 3 emphasizes that empowerment is critical to fostering transformation of vulnerabilities related to gender. The empowerment of women and women's organizations allows them to collectively press for greater accountability for gender equality and equity. Individual empowerment fosters transformation of gendered vulnerabilities through means such as providing positive alternatives that support individuals and communities to take action against social norms that perpetuate gender inequities (Chapter 3). As described in Chapter 6, a strong community facilitates social capital which can generate the conditions necessary for mutual support and care; the mechanisms required for communities and groups to exert effective pressure to influence policy structures; and a firm base for urban health equity interventions and programmes that build stronger communities. Chapter 8 proposes that social empowerment generated by primary health care-oriented systems can have direct influence over vicious cycles of social stratification and health inequity by giving power to otherwise socially marginalized groups, such as ethnic and indigenous groups and people with disabilities. For this reason, a need exists not only for participatory research on the experiences of people most severely affected by the social determinants of health inequities, but also for research on how most effectively to involve them in the design and implementation of

Table 16: Possible entry points, key movers and interventions for each knowledge network

Sector	Entry Points/Key Movers	Possible Interventions
Globalization and Trade (Chapter 2)	**Entry Point** Socioeconomic & political context Policy **Key Movers** Legislative bodies Multilateral agencies Labour organizations Social welfare departments	Policies that generate livelihoods for all people, providing stable incomes at a level necessary for their physical, mental and social well-being and complementary social policies that ensure social protection for those unable to attain or sustain such a livelihood. Legislated and enforced core labour standards. Policies to provide all women with access to child care, free of charge or at minimal cost, through direct public expenditure by national governments and development assistance providers. Expansion of social protection policies such as health insurance using universal, progressively tax-funded means when possible, and not tied to employment. Trade policies that ensure that national health and SDH priorities are not negatively affected, including governments' full use of trade treaty flexibilities governing intellectual property rights and caution in making liberalization commitments in service sectors important to health equity. Debt cancellation for low income countries that take account of "odious debts" using internationally agreed upon legal definitions.
Gender (Chapter 3)	**Entry Point** Gender, cultural and societal norms and values Social policy **Key Movers** Legislative bodies Multilateral agencies Civil Society Researchers	Comprehensive policies that support the balance between work and family commitments for women and girls who function as the 'shock absorbers' for families, economies and societies through their responsibilities in caring for household members. Create, implement and enforce formal international and regional agreements, codes and laws to change norms and practices that directly harm women's health (e.g. violate women's right to health). Reduce the health risks of being women or men by tackling gendered-exposures and vulnerabilities – tackle social biases that generate differentials in health related risks and outcomes. Transform gendered politics within health systems by improving awareness and handling of women's problems as both producers and consumers of health care, improving women's access to health care, and making health systems more accountable to women – develop skills, capacities and capabilities among health professionals at all levels of the health system to understand and apply gender perspectives in their work. Action to improve the evidence base for policies by changing gender imbalances in both the content and the processes of health research – women should be included in clinical trials and other health studies in appropriate numbers and the data generated from such research should be analysed using gender-sensitive tools and methods. Action to make organizations at all levels function more effectively to mainstream gender equality and equity, and empower women by creating supportive structures, incentives, and accountability mechanisms – gender mainstreaming in government and non-government organizations has to be owned institutionally, funded adequately, and implemented effectively.

Social Exclusion (Chapter 4)	**Entry Point** Cultural and societal norms and values Social policy **Key Movers** Multilateral agencies Donor agencies Legislative bodies Community Groups Researchers	Development of ways to fund universal systems of social protection and essential services free at point of use in low- and middle-income countries. Greater emphasis in the design of conditional transfer programmes based on evidence – higher levels of cash transfers; more attention to quality and sustainability of services; focus on conditions at community rather than individual/household levels; involve communities in programme design and delivery; and embed in universal welfare systems. Action to protect and promote human rights and full and equal inclusion – provision of universal access to living standards which are socially acceptable to all members of a society. Promote full and equal inclusion for all groups while respecting cultural diversity – ensure that human rights are met and protected. Reverse exclusionary processes – increase efforts to promote more egalitarian relationships between countries and regions, support the extension and protection of human rights, and require and support others to reverse exclusionary processes and promote positive inclusion including genuine community empowerment. Create and maintain the conditions required for genuine delegation of power and control to people who are the targets of policy.
Early Childhood Development (Chapter 5)	**Entry Point** Policy **Key Movers** Legislative bodies Social welfare departments Community Groups Researchers	Local, regional, national and international policies that incorporate the science of early child development. Combine the agenda for child survival and health with the agenda to improve early child development. Use an inter-ministerial policy framework for ECD that clearly articulates the roles and responsibilities of each sector and how they will collaborate. Build upon established child survival and health programmes to make ECD programmes accessible through existing platforms, such as the health care system. Integrate ECD policy elements into the agendas of each sector to ensure that they are considered routinely in sectoral decision-making. Develop strategies for adapting effective local programmes for the national context that preserve the features that have been key to local success. Initiate government, NGO, and community action on social determinants of ECD at all levels, especially at the level of the residential and relational community. Organize strategies at the local level to provide families and children with effective delivery of ECD services – to improve safety, cohesion and efficacy of residential environments; and to increase the capacity of local and relational communities to better the lives of children.

Urbanization (Chapter 6)	**Entry Point** Governance **Key Movers** Community Groups Legislative bodies Planning and development, transportation departments Water sector	Organization and empowerment of communities to enhance their capabilities to act, including education and deliberations with people concerning their own environment, risks, rights, responsibilities and capabilities. Promotion of healthy communities through policies that provide safe drinking water and sanitation, improved energy supply and air pollution control and healthy housing. Promotion of good nutrition, physical activity and creation of safer and healthier workplaces. Policies and action against urban violence and substance abuse. Assess institutions and create opportunities to build alliances and ensure intersectoral collaboration. Monitoring and evaluation of process and impacts from the early stages of all programmes/policies. Organizing and financing more equitable health systems within urban settings. Policies that promote social cohesion within urban communities by providing opportunities to build social capital.[1]
Employment and Working Conditions (Chapter 7)	**Entry Point** Policy Social position Occupation **Key Movers** Labour organizations Multilateral agencies Private business Legislative bodies	Changes in power relations, especially related to labour market conditions and social policies, which can occur between the main political and economic actors in society – international regulatory agencies could influence governments to put more emphasis on full-time permanent employment and the adoption of fair employment policies. Changes in employment conditions in order to reduce exposures and vulnerabilities – strengthen public capacity for regulation and control regarding employment conditions. Actions to modify working conditions such as health-related workplace material hazards, behaviour changes, and psychosocial factors. Different types of interventions on employment and working conditions that may reduce the unequal consequences of ill-health – social and health policies should include universal access to health care, safe working conditions, an adequate compensation and benefit system (e.g. living wage), regardless of the employment conditions as well as specialized medical and social services for injured workers. Adoption and effective implementation of the International Labour Organization's four core labour standards that address free association, collective bargaining, elimination of economic discrimination by gender, and the elimination of forced labour.

[1] The process of developing shared values, shared challenges and equal opportunities within a community, allowing communities and citizens to compensate for weak and dysfunctional government structures (Chapter 6).

Health Systems (Chapter 8)	**Entry Point** Healthcare system **Key Movers** Health care providers Patient groups Civil society Community groups Legislative bodies	Revitalize and promote a primary health care approach that provides patient-focused care for a range of illnesses and effectively address illnesses disproportionately affecting poorer groups; tackle differential access, use and experience of health care through their financing and organizational arrangements; and contribute to action on differential exposure and vulnerability through preventive care. Health care financing and provision arrangements that aim at universal coverage and redistribute resources towards poorer groups with greater health needs. Leadership, processes and mechanisms that leverage intersectoral action[1] to promote population health. Practices that enable social empowerment[2] among population groups and civil society organizations to be involved in decisions and actions that identify, address and allocate resources to health needs. Strengthen political action within national policy development and implementation processes.
Public Health Programmes (Chapter 9)	**Entry Point** Healthcare system **Key Movers** Researchers Community groups Health care providers Legislative bodies Healthcare system	Support generation of knowledge on the causes of ill-health and translate these into proposals for action based on a package of individual interventions deemed appropriate for specific circumstances and patterns of gradients. Engage partners in key sectors that have a more direct responsibility to intervene in addressing the determinants of poor health and health inequities. Collaborate with other partners to identify and help population groups that are most exposed to risk factors and vulnerable to poor health outcomes.
Measurement and Evaluation (Chapter 10)	**Entry Point** Ministries of health Academic and research institutions **Key Movers** Legislative bodies Researchers Practitioners	Acknowledge multidimensional character of SDH and health equity, paying particular attention to historical context, social dynamisms inherent in its respective definitions and the interrelationships with other social stratifiers. Use a variety of inequality indices, pursuant to the relevant objective, to depict the multi-dimensional nature of health inequalities. Social inequalities in health should be evaluated according to the most appropriate measures of socioeconomic position in the country or region. Both relative and absolute measures of health inequalities (i.e. both rate ratios and rate differences comparing two contrasting groups) should be used to ensure that inequalities are identified. Multiple methods, diverse epistemologies and a broad range of data should be used – appraisal of evidence should be based on whether the research method used is appropriate for the research question and the knowledge being collected, and the extent to which in terms of its own methodological canon it is considered to be well executed.

[1] Recognized relationship between part or parts of the health sector with part or parts of another sector which has been formed to take action on an issue to achieve health outcomes (or intermediate health outcomes) in a way that is more effective, efficient or sustainable than could be achieved by the health sector acting alone (WHO, 1997).

[2] People's ability to act through collective participation by strengthening their organizational capacities, challenging power inequities and achieving outcomes on many reciprocal levels in different domains (Wallerstein, 1992).

interventions. Chapter 9 argues that empowering women through effective access to quality educational opportunities for girls has potential long-term benefits for both women and children.

Genuine engagement must involve a transfer of real power with resources dedicated to support the involvement of lay people. As Chapter 4 states, without support, community activists can be blamed by their communities for failing to deliver real change and held accountable by professionals for the communities they represent. Policy changes can address this issue but they must acknowledge the change in power balance and address the resistance this shift might lead to within professional groups and the organizations in which they work (Blas et al., 2008). Moreover, Chapter 8 recommends for social empowerment strategies to be context specific and take account of the nature of the relationships between the state and civil society and the values and norms that underpin policy.

B. Governments

Action by governments can reduce health inequity by ensuring the provision of basic services, redistributing resources, and protecting and promoting human rights such as health care, education, sanitation and safe water, and the right to a decent standard of living (Blas et al., 2008). Within the health sector, governments can directly influence the degree to which public health programmes are mandated to act on broader determinants of health (Blas et al., 2008). Analyses show that many opportunities exist to adjust the design and coordinated implementation of public health initiatives to enhance health equity when a social determinants approach is adopted. This can include extending access to poor and other marginalized sub-populations and directly addressing the conditions that put them at higher risk of disease. Governments can mitigate negative health impacts by expanding social protection policies such as universal health insurance not tied to employment (Chapter 2).

Governments can establish and maintain legislative and regulatory frameworks, including financial regulation, to influence the action of others and their own. For example, governments can ensure that national health and SDH priorities are not negatively affected by trade policy choices (Chapter 2). National policy frameworks offer a mechanism for ensuring the success of multisectoral action on social determinants. National regulatory and legislative frameworks have also been shown to have substantial positive effects on gender equity. Examples of alternative policy interventions for governments include the establishment of minimum wages that ensure a decent standard of living, universal minimum labour standards that support the regulatory protection of the formal sector and school feeding programmes for improving school attendance (Chapter 7).

Governments can monitor the health status of different population groups, health outcomes of social inequalities, and effects and progress of action to reduce inequities. The findings can then be used to inform current and future programmes and policies to tackle inequities. Additionally, as pointed out in Chapter 2, an important issue in governmental action is ensuring that policy-makers, specifically those in the health sector, have the necessary expertise and resources to consider the health impacts of issues outside the health sector (e.g., macroeconomic policy and trade) and develop the necessary evidence base in order to contribute to policy discussions on topics relevant to health.

C. Civil society organizations

A dynamic and engaged civil society makes valuable contributions towards reducing health inequities. Civil society organizations (CSOs) can be powerful drivers for positive political, social, and economic changes that affect health equity (Blas et al., 2008).

The evidence encourages CSOs to be assertive in demanding government and community collaborative actions on social determinants at all levels but especially at the level of the residential and relational community. These groups have an established role in working to reverse exclusionary processes at global, national and local levels through advocacy; monitoring the impact of policies and action; mobilizing community action for change; providing technical support and training to improve governance systems; providing channels for negotiation and giving a voice to the most disadvantaged sections of society (Chapter 4).

For example, women's organizations have helped to generate new and compelling evidence of gender inequity and inequalities in health, develop innovative programmes, facilitate political mobilization, and demand accountability from governments and the intergovernmental system (Chapter 3). Chapter 5 proposes that civil society groups are well positioned to advocate on behalf of children to ensure that governments and international agencies adopt polices that positively benefit children's well-being and development. Furthermore, as highlighted in Chapter 4, CSOs can act as pressure groups to change repressive or discriminating policies, legislations and programmes, delivering services to support economic and human development.

The evidence encourages national governments to support civil society activity as a way to tackle inequities in the social determinants of health. Such support can be consistent with the normal role of government in setting regulatory frameworks for civil society and could include: recognition of the political legitimacy of civil society and a community's voice; involvement of civil society in all its forms in policy development, implementation, and monitoring and evaluation; ratification and implementation of legal protection for civil society organizations; design of policies that transfer real power to people; resourcing of policy implementation to support community empowerment; and reform of professional education to give greater status to lay and indigenous knowledge.

D. Bilateral and multilateral agencies

Bilateral and multilateral agencies, along with other international donors, have an important role to play in supporting community engagement in policy-making and actions that promote equity and do no harm. It is of critical importance for international agencies to work with nations and countries to avoid interventions that result in unintended adverse consequences.

Multilateral agencies have the ability to influence agendas and take action. Chapter 8 emphasizes the importance for international agencies to act on the basis of evidence and make clear the values and principles that motivate action. An example is to create alternatives to the patent system for encouraging research on diseases that disproportionately affect low-income countries (Chapter 2). To reverse socially exclusionary processes, multilateral agencies and donors can develop ways for universal systems of social protection and essential services free at point of use to be funded

in low- and middle-income countries (Chapter 4). Organizations can set an example and promote good practice in their relationships with CSOs and communities. As suggested in Chapter 4, they can provide financial incentives for governments to work effectively with communities and CSOs, while simplifying regulations for grants so that smaller community and voluntary groups can access funds.

4.1 Mechanisms to address SDH

A. Intersectoral action

Addressing SDH requires an intersectoral, multidisciplinary approach, respective to the complex causal pathways of inequities (Petticrew et al., 2009). While elusive in practice, intersectoral action across government departments is key in promoting health as a priority in policy agendas. Chapter 5 suggests that intersectoral coordination can be achieved through the creation of an interministerial policy framework for early childhood development that clearly delineates the roles and responsibilities of each sector and how they will collaborate. Ministers of health and health managers can play a central role in initiating and monitoring intersectoral action. Health officials can also contribute to wider political action to offset opposition from powerful actors threatened by Intersectoral Action for Health (IAH) initiatives, such as the opposition of tobacco companies to anti-smoking campaigns and legislation (Chapter 9). IAH is particularly effective in tackling physical and social environments (many of which are interrelated), thereby addressing differential exposure and vulnerability to ill-health (Chapter 9). For example, addressing the social determinants of neglected tropical diseases through intersectoral action (Aagaard-Hansen & Chaignat, 2010) is essential to reduce the exposure and vulnerability of poor populations, mostly from low- and middle-income countries, affected by those diseases (Box 6).

B. Health impact assessments

Another approach to addressing disparities is Health Impact Assessments (HIA). HIAs are used to assess the potential health impacts both positive and negative of existing and proposed policies, programmes and projects within and outside of the health sector. An equity focus in HIA emphasizes the importance of evaluating the impact distribution and whether they are inequitable within a population in terms of characteristics such as gender, occupational status, ethnic background, wealth and other markers of socio-economic status (Harris-Roxas, Simpson & Harris, 2004). HIA is also a mechanism for facilitating community participation in decision-making. The Gothenburg consensus paper, which clarifies concepts and identifies an approach for carrying out HIA, emphasizes the need for participation to underpin the assessment process in order to maintain values of democracy, transparency and equity (European Centre of Health Policy, 1999). Through the use of HIA, recommendations are produced for decision-makers and stakeholders with the aim of maximizing positive health effects, minimizing negative health effects or understanding how to manage risks, and engaging all sectors to consider health impacts and the determinants of health in their deliberations (Harris et al., 2007).

Box 6: Addressing social determinants of neglected tropical diseases (NTDs) through intersectoral action

Action 1: ***Addressing water, sanitation and household-related factors (the "preventive package").*** The analysis shows overwhelming evidence of how the intermediary social determinants of accessibility to water and sanitation, and housing and clustering determine NTDs. Consequently, there is a need to address these risk factors in endemic communities to provide sustainable prevention for clusters of NTDs.

Action 2: Reducing environmental risk factors. Environmental factors are essential determinants for many of the NTDs. These factors are often introduced by humans, either directly or indirectly. Planning based on health impact assessments for new projects and mitigating revisions of existing schemes are needed in order to control NTDs.

Action 3: Improving health of migrating populations. Migration encompasses the movements of nomads, labour migrants, people subjected to forced resettlement and refugees from natural disasters or armed conflict. Their movements influence exposure and vulnerability to some NTDs, and access to health care systems is reduced. The particular NTD issues that relate to these groups should be addressed in ways that are tailored to local conditions (patterns of morbidity, mobility, environmental and sociocultural factors).

Action 4: Reducing inequity due to sociocultural factors and gender. Sociocultural factors, which are often closely linked to gender roles, interact with NTDs in various ways. In some cases NTDs incur added burdens due to stigma, isolation and other negative consequences. These factors may also reduce the acceptability of health services, leading to differential health care outcomes. There are unexplored potential advantages in addressing these issues from a multi-disease perspective.

Action 5: Reducing poverty in NTD-endemic populations. Poverty emerges as the single most conspicuous social determinant for NTDs; partly as a structural root cause for the intermediary social determinants and partly as an important consequence of NTDs, either directly (leading to catastrophic health expenditure) or indirectly (due to loss of productivity). Consequently, poverty should be addressed both in general poverty alleviation programmes and more particularly by ensuring affordable treatment.

Action 6: Setting up risk assessment and surveillance systems. NTDs are characterized by complex combinations of environmental and social determinants. Pockets of multi-endemic population groups are likely to "disappear" within statistical averages and must be identified in order to address inequity and direct curative or preventive interventions to NTD hot spots. Cross-disciplinary risk assessment and surveillance systems should be established based on combinations of epidemiological, environmental and social data, providing not only early warnings for epidemics, but also evidence for long-term planning under more stable conditions.

5. Evidence gaps

Evidence on social determinants, health systems and health outcomes is rapidly increasing, yet there are still many gaps in the research. Evidence gaps affect the level of detail, the ability to make generalizations and discuss a potential fit within different contexts, and in many cases, the ability to target recommendations at the appropriate level of action, whether local, national or global (WHO, 2007a). The predominant focus of most non-biomedical health research is on risk factors. The social context that frames the distribution and modifies the effect of these risk factors is often neglected or is only seen as contextualizing individual risk (Östlin et al., 2010).

There are five key areas where evidence is lacking:

1. Lack of disaggregated data and primary studies for many themes;
2. Under-reporting of experiments and experiences;
3. Inadequate contextualization of experience;
4. Limited documentation of successful policy interventions where impact on health equity is demonstrated (i.e., across social gradient or specific disadvantaged and marginalized groups); and
5. Limited or no synthesis, particularly incorporating low- and middle-income country experiences and community-level innovation.

For example, existing evidence on health inequities stemming from employment and working conditions is insufficient for effective public health action because these inequities are mostly invisible, neglected or unknown. Empirical evidence concerning the impact of employment relations on health inequities is particularly scarce for low-income countries, small size firms, and rural settings (Chapter 7). Studies of employment dimensions are also not typically stratified by social class, sex, age, ethnicity, and migration status.

Current evidence on approaches to integrate health and social outcomes could be greatly improved by reporting on the impact interventions have on health equity (Petticrew et al., 2009). There is a key evidence gap around the positive and negative outcomes of community empowerment initiatives. Evidence on the effectiveness of some internationally-promoted interventions is ambiguous (Chapter 4). For example, conditional cash transfers are widely accepted even in the absence of evidence about the added value or potentially negative consequence of conditionality. Additionally, primary studies often neglect to collect, analyse and present data on differential effects of interventions addressing social determinants of health within populations even when the data are available (Chapter 10).

6. Priorities for future research

The aim of health equity research is to generate policy and enhance research competency. With this in mind, four areas are identified as top priorities for new research (Östlin et al., 2010).

1. Global factors and processes that affect health equity;
2. Structures and processes that differentially affect people's chances to be healthy within a given society;
3. Health system factors that affect health equity; and
4. Policy interventions to reduce health inequities in the determinants of health and health care (i.e. how to influence 1-3 effectively).

The next section discusses topics and types of studies that fall within the purview of these priorities, followed by ways to enhance research policies and processes.

6.1 Topics and types of studies for future research

Topics for further research and evidence gathering can be organized into three broad groups: (1) new studies reflecting current hot topics or new approaches; (2) better or more rigorous synthesis to use as inputs to policy and decision making; and (3) investigation of ways to push for alternatives to "business as usual" (WHO 2007a). Specifically, the chapters identify the following priority topics for additional research: impacts of consumer boycotts, civil society mobilization campaigns and evaluation of specific government responses to improving working conditions, labour rights and gender equity in low- and middle-income country export factories or zones (Chapter 2); approaches to mandate corporate social responsibility through international and national legislation and regulation (Chapter 4); effects of environments, from the most proximal (i.e. the family) to the most distal (i.e. the global environment), on biological embedding and early childhood development (Chapter 5); participatory and community based interventions to address social determinants in urban settings (Chapter 6); projections of climate change impacts, socio-economic pattern of impacts on people and ways to adapt to climate change in urban areas (Chapter 6); links and pathways that create employment dimensions leading to poor health outcomes (Chapter 7); epidemiological, social and operational research to understand the "why" of health inequities and "how" to address those (Chapter 9); and the intersection of the two axes of the health gradient (e.g. health inequities and degree of social inequality in each society or stratification) (Chapter 10).

The chapters also recommend conducting different types of studies: analyses of available country experiences of processes to bring about and sustain policy (particularly equity-oriented) changes (Chapter 8) and the design and synthesis of case studies to draw out lessons for other contexts and consider how these contexts may impact on the delivery, uptake and effectiveness of interventions (Petticrew et al., 2009).

6.2 Ways to enhance research policies and processes

As further research is crucial to identifying and understanding present and future inequities as well as where to act, it is essential to broaden the focus of research by adopting methodologies and research strategies that:

- go beyond the behavioural and other individual determinants of illness;
- examine the intersections among different social hierarchies (e.g. socioeconomic status and gender) and their cumulative impacts on health status and health inequities;
- examine the connections between proximal and structural (distal) determinants of ill health, which are often poorly conceptualized and integrated into research;
- consider the dynamic nature of equity in different country contexts, which would introduce a temporal dimension in accordance with the dynamic nature of both social structures and public policies;
- describe the institutions and processes that influence the allocation of resources related to health and its social determinants;
- focus on how the global context affects choices about resource allocation at national and sub-national levels; and
- ensure involvement of populations with the least amount of power.

Specific recommendations for adding to knowledge on fundamental or cross-cutting issues include further developing theoretical frameworks; investigating biological or social interfaces (e.g., the extent and nature of sex-specific needs in health conditions that affect women and health) (Chapter 3); and documenting costs and effectiveness of interventions incorporating an equity perspective (e.g., early childhood programmes in low income countries) (Chapter 5).

6.3 Norms, standards and methods for better research

Although much is already known about the causal pathways of disease, the empirical evidence must continue to be refined, including the availability of enhanced disaggregation of population health data (Blas et al, 2008). The equity perspective highlights the need to facilitate greater disaggregation by equity-stratifiers (e.g., income, sex, race, age, region, occupation, education, etc. or some combination). This step is important to provide a picture of the social patterning of processes and outcomes within routine information systems and health programmes. An example of a good practice described in Chapter 3 is Sweden's annual confirms its commitment to gender equality during the Annual Statement of Government Policy. Since 1994, there has been a requirement to integrate a gender equality perspective in all aspects of government policy. One of the main measures that have been taken under this policy is to disaggregate all official statistics by sex.

It is important to acknowledge that appropriateness of the measures chosen to study inequity is context specific. No single measure can be applied universally in the study of social inequalities in health, especially in countries with large disparities in wealth and economic opportunities. Monitoring SDH and health equity requires particular attention to the historical context, the social dynamisms inherent in its respective definitions and the interrelationships with other social stratifiers (Chapter 10). For example, simply looking at data disaggregated by sex only allows the investigator to describe whether there is a difference between men and women and how big the difference is. Gender analysis is necessary to be able to understand and explain the differences or lack thereof (Chapter 3). Rigorous analysis means incorporating issues relative to gender power relations (e.g. violence by intimate partners or unpaid work) and using indicators that illustrate the power relationship between both genders.

Chapter 5 emphasizes the importance of creating a global measurement system to monitor early childhood development. However, the absence of methods (including a set of global health equity indicators) and international mechanisms to monitor global health inequities, hamper efforts to monitor and evaluate progress on addressing the social determinants of health as well as the impact of past global actions on health equity. Clear benchmarks are essential to understand whether or not a shift in inequity has occurred. Moreover, developments in methodology are needed to evaluate the effect of the diverse actions recommended across the chapters (Blas et al., 2008).

Additionally, much evidence on social determinants of health is unused. Some of the evidence documenting inequities and the relationship between social determinants of health and health outcomes is qualitative and is not considered by some researchers and policy makers to be rigorous (Chapter 10). However, this is not the case; it is essential that researchers and policy-makers alike recognize the value of both qualitative and quantitative evidence, generated using a variety of methodologies and disciplines. Current study designs are limited for evaluating natural policy experiments. Additionally, research that gives an authentic voice to the people who are most disadvantaged in health social and political terms should be supported.

Guidance and capacity building on how to translate results including the knowledge and research synthesized in this book into practice. This requires strategies on how to make research and findings from research more accessible to various audiences.

Recommendations to strengthen research processes include:

- The democratization of research involving lay people in the research process from funding allocation, through question generation and study design to the dissemination of results
- Taking an approach which considers the whole of the gradient in health equity in a society and not only the most disadvantaged groups
- Increased collection and synthesis of data disaggregated by socioeconomic status and other social stratifiers

- Negotiating access to data from other sectors, such as education, justice, housing and environment, and linking these data together
- Measuring, monitoring and evaluating the effects of policies and programmes on inequities
- Identifying what types of measures to monitor equity are valid and meaningful
- Applying more rigorous and theoretically-grounded single and multiple country case studies of interventions
- Improving methods for synthesizing evidence for action gathered using a variety of methodologies, at different levels and in different contexts.

7. Conclusion

The evidence synthesized throughout the book reinforces the fundamental impact of social determinants on health outcomes and in creating health inequities. There are many options for policies and interventions to improve health outcomes while improving health equity. Across the knowledge networks, there are common actions that were identified as key to reducing inequities in health related to social determinants increase universal access to public education, establish a minimum living wage, improve social protection, and reduce discrimination based on gender, race, ethnicity, etc. Whatever the entry point, action should involve multiple sectors while clearly outlining each sector's responsibility and employing careful intersectoral and intrasectoral coordination. Additionally, attention should be paid to social gradients when addressing inequalities to avoid intentionally or unintentionally increasing inequities. The shape of social gradients varies within and across countries, which is an important consideration to make when determining which policy option to take. Policies should improve health for all socioeconomic groups and at rate of improvement that increases at each step down the socioeconomic ladder. Narrowing health gaps requires improving the health of the poorest at a rate that is faster than the rate of the wider population. Effective policies are necessary to achieve both an absolute and a relative improvement in the health of the poorest group.

The report by the Commission on Social Determinants of Health represents a watershed moment in public health. It marks the first systematic and truly comprehensive attempt to draw together data and evidence on social determinants that is pluralistic and diverse methodologically, empirically and theoretically. It is a rallying cry for political action in support of the action against those elements which do so much damage to human health, and it is an important signpost for action political and scientific.

Recently, WHO convened a global conference in Rio de Janeiro, Brazil to build support for the implementation of action on social determinants of health. The conference provided a global platform for dialogue on how to implement the recommendations from the Commission's report on

SDH. At the conclusion of the conference, 125 participating Member States adopted the Rio Political Declaration on Social Determinants of Health pledging to work towards reducing health inequities by taking action across five core areas related to the evidence synthesized across this book: 1) Adopt better governance for health and development; 2) Promote participation in policy-making and implementation; 3) Further re-orient the health sector towards reducing health inequities; 4) Strengthen global governance and collaboration; and 5) Monitor progress and increase accountability (WHO, 2011).

The evidence compels action and the momentum generated by the Rio Declaration confirms that it is imperative for *all* to act to reduce health inequities.

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