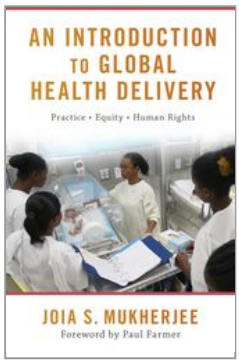

An Introduction to Global Health Delivery
Joia S. Mukherjee

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Social Forces and Their Impact on Health

Joia S. Mukherjee

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Abstract and Keywords

This chapter focuses on the social determinants of health. The phrase—the social determinants of health—is used to describe the factors and forces in society that cause ill health and premature death. To achieve health equity, it is important to understand the impact of social determinants and work to mitigate their adverse health effects. The practice of social medicine uses a biosocial approach that merges biomedical science with social analysis to design programs that strive for health equity. Because of the historical and geopolitical forces that have shaped global inequities, social medicine and a biosocial approach are important in global health and health equity and are addressed in this chapter.

Keywords: social determinants of health, social medicine, structural violence, choice vs. agency, biosocial analysis

Key Points

- The social determinants of health are risk factors for ill health that are rooted in the political, historical, and social context of society. They include things like poverty, income inequality, food insecurity, gender inequality, and racism.
- The term *structural violence* refers to the architecture of society that creates inequality and that arises from factors such as institutionalized racism, discrimination, and neoliberal policies.
- People constrained by structural violence have less ability (also called *agency*) to fulfill their potential.

• To achieve health equity, social determinants must be understood and addressed.

• Proximity to suffering and giving care to individuals is a way to understand the impact of social forces on health.

• Health education campaigns that focus on an individual's behavior often do not recognize the impact of adverse social forces on the ability of a person to adopt healthy behaviors.

• A biosocial analysis moves beyond the biomedical to include the analysis of and attention to social forces that influence health.

Introduction

In medical school, students are taught about the causal link between genetics and diseases such as cystic fibrosis or muscular dystrophy.[1] Medical research proved that the microbe, the human immunodeficiency virus (HIV), causes AIDS.[2] **(p.108)** Epidemiological studies demonstrate a strong linkage between behaviors such as smoking and lung cancer. Yet the social context in which an individual lives is often more critical to one's health than genetics, infections, or behaviors.[3] Around the world, insufficient food, for example, is related to a host of illnesses from tuberculosis (TB) to anemia.[4] Living without access to clean water dooms many to diarrheal disease and death from dehydration.[5] Discrimination based on race, gender, or ethnicity excludes large portions of people from the resources needed to maintain a healthy life, including jobs, housing, and medical care.[6]

In this chapter, the concept of the *social determinants of health* is introduced. The importance of analyzing and addressing the social forces on individuals as well as local, national, and international levels when designing global health delivery systems is emphasized. The association between social forces and health outcomes is reviewed. The concept of a biosocial analysis to advance the practice of social medicine as an important principle in global health and achieving health equity is also outlined.

Social Forces and Health

The social forces that impact health are collectively known as the social determinants of health.[7] The linkage between social forces and health is deeply rooted in the fields of medicine, nursing, and public health.[8],[9] In 2008, the World Health Organization (WHO) held a conference that urged the analysis of social forces as they impact health. The WHO defines the social determinants of health as:

> [T]he unequal distribution of power, income, goods, and services, globally and nationally, the consequent unfairness in the immediate, visible circumstances of peoples lives—their access to healthcare, schools, and

education, their conditions of work and leisure, their homes, communities, towns, or cities—and their chances of leading a flourishing life.[10]

An impoverished social environment where people lack human rights, particularly social and economic rights, is associated with poor health outcomes (Table 5.1). From the right to food to the right to housing, paying attention to the social determinants of health is a cornerstone of a human rights approach to global health.

Table 5.1 Examples of the linkage between the social determinants of health, human rights, risks for disease, and disease states.

Social Determinant	Related Human Right	Risk for Disease	Associated Disease or Condition
Poverty	Food Security (ICESCR – Article 11)	Malnutrition Impaired immunity Anemia Lack of brain growth	Variety of infectious diseases
Overcrowding Poor Housing	Shelter (ICESCR – Article 11)	Inadequate ventilation Indoor cooking fires Lack of access to housing, employment, and social services	Tuberculosis Chronic lung disease Exposure to elements Mental health Malnutrition

Social Determinant	Related Human Right	Risk for Disease	Associated Disease or Condition
Racism	IESCR ICCRP	Violence Rape Lack of access of housing, employment, and social services	Depression Disability Death Incarceration Sexually transmitted infections Mental health Exposure to elements Malnutrition
Gender Inequality	Equal Protection (ICESCR – Article 3) (ICCRP – Article 3)	Violence Rape Early pregnancy	Depression Disability Death Sexually transmitted infections Unwanted pregnancies

This table displays the connection between human rights, social determinants of health, and disease or illness. When delivering care, it is important to understand the external political and social forces that influence a person.

ICCRP, International Covenant on Civil and Political Rights; *IESCR*, International Covenant on Economic, Social and Cultural Rights.

The field of *social medicine* is the study of social forces and their impact on health. It is also the practice of addressing social determinants as part of medical care.[11] The father of modern medicine and of social medicine is Rudolf Virchow,[12] a 19th-century physician. His was one of the most prominent early voices linking social forces with health outcomes.[13] In 1848, Virchow **(p.109)** investigated a typhus epidemic (a bacterial disease carried by body lice) in Upper Silesia (now northern Germany). In Virchow's famous work, *Report on the Typhus Outbreak of Upper Silesia,* he wrote about the link between social factors such as lack of access to food, education, employment, as well as political

isolation with the spread of disease.[14] He called what he saw an “artificial epidemic,” **(p.110)** one that spread due to social disruption rather than simply due to the microbe itself.[14],[15] In his journal documenting his time in Upper Silesia, Virchow wrote, “Medicine is a social science, and politics (is) nothing but medicine on a grand scale.”[8] Virchow became an activist for social change. He was involved in progressive politics in favor of the social inclusion of the poor for much of his life. Other health professionals who connected sickness and suffering with the need for social and political change include Steven Biko, Dr. Salvador Allende, and Dr. Ernesto Che Guevara.[16] Many more have linked politics and advocacy with health, such as Dr. Gro Harlem Brundtland, former Prime Minister of Norway and former Director-General of the WHO[17]; Nurse Clara Barton who founded the Red Cross after witnessing the casualties of US Civil war. Dr. Julius Richmond,[18] a pediatrician and former US Surgeon General helped found Head Start and took on the tobacco industry. Dr. Jack Geiger[19] founded the nongovernmental organization (NGO) Physicians for Human Rights. Nurse Lillian Wald campaigned for suffrage, racial integration and helped to found the National Association for the Advancement of Colored People (NAACP). She is considered the founder of community health nursing.[20]

While the term *social determinants of health* is widely used, it is a mistake to think that these issues are determined or fixed. Rather, active social forces, often rooted in history, continue into the modern era through political and social means. The term “structural violence” was first used by Johan Galtung to describe social structures that cause harm to people by decreasing their ability to achieve their rights.[21] While Galtung wrote about conflict, Dr. Paul Farmer used the term “structural violence” to describe the social forces that create and perpetuate ill health, suffering, and premature death.[22] Structural violence includes poverty, racism, and gender inequality. These forces directly impact who lives and who dies. Structural violence is inherently political and is fundamentally about resources and power.[23] For example, apartheid in South Africa denied millions access to housing, jobs, schools, and medical care. It was associated with significantly poorer health outcomes among black Africans.[24] Widespread housing discrimination in the United States[25] resulted in impoverishment of black communities for generations,[26] which has long-term health impacts.

Across the world, disparities within countries result in suffering and death: the Brazilian favela versus the gated community in Rio,[27] the Beacon Hill mansions of Boston versus the housing projects of Roxbury (Figure 5.1A, B),[28] and the suburbs of Mumbai versus its sprawling slums.[29] Such disparities also exist when one compares wealthy countries with impoverished ones: the life expectancy of Sierra Leone is 50 years compared to 82 years in Norway.[30] These disparities demand us to focus beyond the microbe or gene, beyond **(p.111)** individual behaviors, and beyond the biomedical model of causation to consider the social forces that impact health. For those on the front lines of care

provision, it is impossible to attend to illness without understanding structural violence and the lack of human rights that impact health outcomes and health equity. **(p.112)**

The Economic Determinants of Health

The correlation of mortality with social class and income has been documented throughout in the world in a variety of studies.[31],[32] Sir Michael Marmot, a British epidemiologist and prominent voice in the study of the social determinants of health, was an investigator in the famous Whitehall study.[33] The study, published in 1984, was carried out in England and followed more than 17,000 civil servants over a period of 10 years. Marmot documented a threefold higher rate of mortality among those in the lowest employment grade of the civil service as compared with those in the highest grade (Figure 5.2).

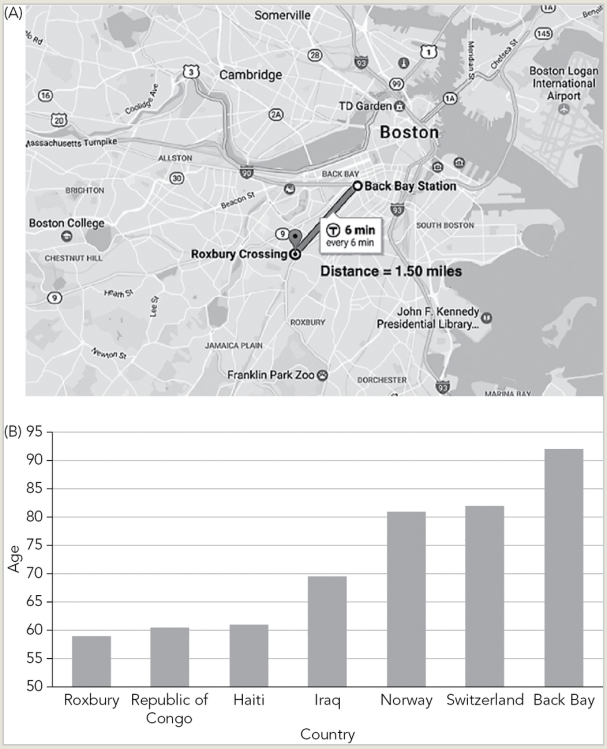

Figure 5.1 Comparison of life expectancy between Boston neighborhoods. (A) Distance between Roxbury (low income) and Back Bay (high income), Google maps. (B) Life expectancy in Roxbury, Back Bay, and selected countries.

Compiled with data from: WorldBank Database and http://www.societyhealth.vcu.edu/media/society-health/pdf/PMReport_Boston.pdf.

In a later paper, Marmot provides a useful framing to consider the ways in which income impacts health.[31] First, he reasoned that an individual's income determines his or her capacity to attain the material necessities of life such as food and shelter. The lack of these material necessities results in sickness and death. The clearest example is death due to starvation. On a global scale, acute malnutrition accounts for 10 percent of all child deaths (Figure 5.3).[34] As recently as 2015, nearly half of all deaths in children under five are attributable to malnutrition.[35] In impoverished countries, the most vulnerable lack the material means for survival, spending more than 50 percent of their daily income on food alone (Figure 5.4).[36],[37]

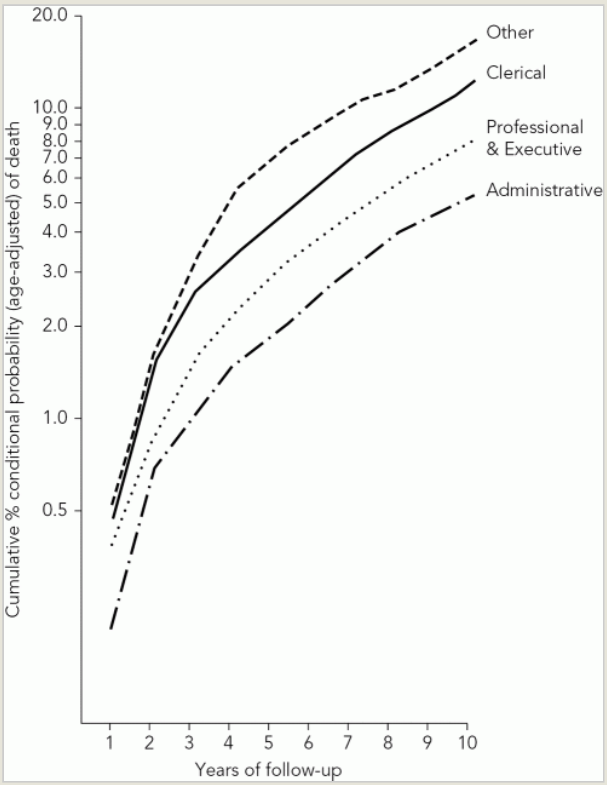

Figure 5.2 The Whitehall II study; cumulative conditional probability of death from all causes (age-adjusted) in 10 years, according to civil service grade.

Source: Marmot MG, Stansfeld S, Patel C, et al. Health inequalities among British civil servants: The Whitehall II study. *Lancet*. 1991;337(8754):1387–1393.

The second way that income impacts health, according to Marmot, is at the macroeconomic level—that is, the relationship between health and the gross domestic product (GDP) of a country. Wealthier countries have infrastructure within the public commons that supports the attainment of health. For example, health care is publicly provided in England and Canada through a national network of providers, hospitals, and clinics.[38],[39] Wealthier countries also support investments in public goods such as municipal water and sanitation systems, which have direct health benefits. Haiti, for example, has no municipal water supply.[40] Water is largely collected from open and unprotected sources such as rivers and streams. Due to the lack of public infrastructure, when United Nations peacekeeping forces dumped their untreated sewage into the Artibonite River, the source of water for hundreds of thousands of Haitians, a cholera epidemic started.[41] Thousands of people with neither access to treated, municipal water nor the means to purchase water got sick and died of cholera.[42] When cases of cholera reached the neighboring Dominican Republic, a country with municipal water systems and sanitation, the epidemic was rapidly controlled.[43]

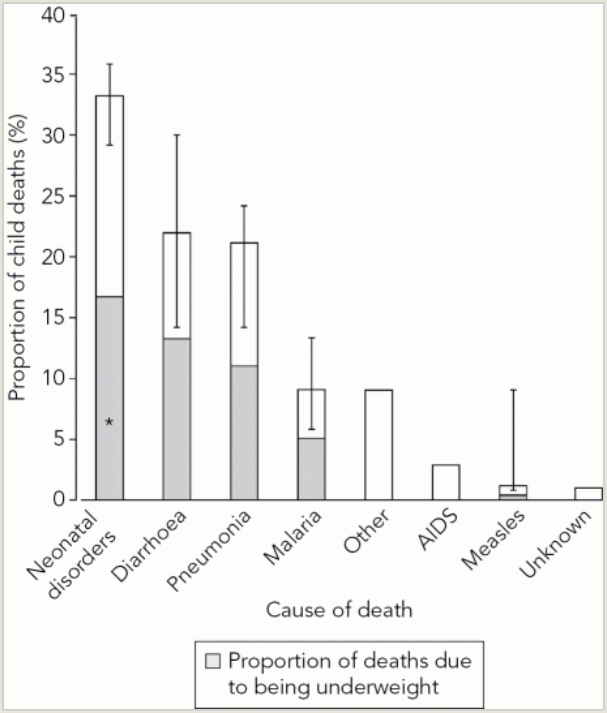

Figure 5.3 Graph shows the distribution of child deaths by cause. It also highlights the importance of underlying malnutrition in child mortality.

Source: Black RE, Morris SS, Bryce J. Where and why are 10 million children dying every year? *Lancet*. 2003;361(9376):2226–2234.

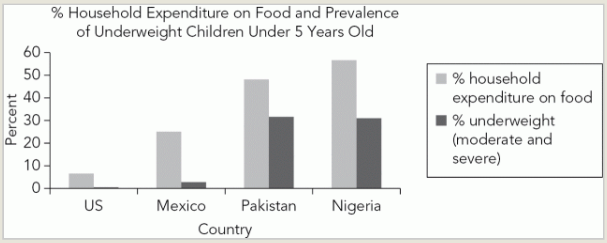

Figure 5.4 Percent of household expenditure on food and prevalence of underweight in children under five in selected countries. Percent of household expenditure on food increases with impoverishment. The inability to buy food is an important factor in child health.

Source: https://www.statista.com/statistics/189227/percent-of-disposable-income-spent-on-food-at-home-2009/ and World Bank 2012/2013. Retrieved Feb 27, 2017.

The third linkage between economics and health proposed by Marmot is the relationship between income inequality and mortality. Even in wealthy countries, income inequality represents an additional set of concerns. The Whitehall study showed that even with stable employment and relatively homogeneous ethnicity, men had a dramatically different life expectancy based on social class.[44] **(p.113)** Men from the lower social classes suffered premature mortality as compared with those from the highest social class. He found that the clustering of risk within social strata is often more important than an individual's risks or behavior.[45] Communities with lower socioeconomic status have been shown in a variety of studies to have higher rates of accidents, drug use, depression, and anxiety compared to those from higher socioeconomic groups.[46],[47] While much of this may seem obvious, understanding and addressing social class and income inequality **(p.114) (p. 115)** is critical when designing systems of care. It is also important for providers to understand the stresses and prevailing forces against which an individual or community may struggle to achieve health.

Racism, Gender Inequality, and Discrimination

Discrimination based on race, gender, ethnicity, sexual orientation, and other factors has deep historical roots that are perpetuated by active discriminatory policies and unconscious bias. Active discrimination and structural violence compound the stress of income inequality and result in social exclusion from the resources necessary to achieve the right to health. Discrimination impacts health outcomes in a myriad of ways from increasing the risk of ill health to causing poorer health outcomes once a person falls ill.

In the United States, racial discrimination results in poverty and illness. One salient example of increased risk for disease based on racially motivated policies in the United States was the "Planned Shrinkage" policy of Mayor John Lindsay in New York City in the 1970s.[48] Mayor Lindsay removed essential services from poor, mostly African-American communities in an effort to encourage them to move elsewhere. In 1975 and 1976, after "Planned Shrinkage" removed fire brigades, a series of fires in African-American neighborhoods forced many to abandon their homes and move in with family, neighbors, or to become homeless. The overcrowding caused by the policies of Mayor Lindsay correlated with the rise of TB in New York among African-Americans in the 1970s.[49] There are many other case studies of structural violence and health risk. Poverty is often a direct result of discrimination that ranges from unequal access to education to unfair housing policies to wage inequality.[50] In addition, people living in communities that face oppression may have greater exposure to environmental toxins[51] or may be living in overcrowded conditions.[52] Structural

violence stems from institutionalized racism and discrimination and is propagated through neoliberal policies.

In the United States, a person's postal Zip Code is a more important correlate of life expectancy than any biologic factors.[53] An example of the impact of social determinants of life and death is the landmark article "Eight Americas: Investigating Mortality Disparities across Races, Counties, and Race-Counties in the United States."[53] In this article, population data from 1997–2001 was analyzed and showed up to a 33-year difference in life expectancy between Americans stratified by county, gender, and race: a subgroup of Asian women from Bergen County, New Jersey (a wealthy area), lived longest, with an average life expectancy of 91 years; a subgroup of Native American men from several very poor counties in South Dakota had an average life expectancy of 58 years. Social, historical, and political factors such as genocide, slavery, Jim Crow laws, mass **(p.116)** incarceration, racism, exclusion from health care, and violence track along lines of Zip Codes and result in shorter lifespans.[53]

Discriminatory policies often result in a lack of public health investment in marginalized communities.[54],[55] Once a person from a group that is discriminated against falls ill, he or she may face barriers to accessing care, such as a lack of money for transportation to the clinic or a lack of job flexibility for taking time off to seek care.[56],[57] Facilities in poorer communities or communities of color may not have adequate equipment or resources to perform diagnostic tests.[58],[59] Discrimination also results in poor health outcomes due to bias among health providers. For example, studies have shown racial bias in the treatment of pain among African-Americans.[60] This not only results in increased suffering but is also associated with delays in the diagnosis of serious illness.[61] Similarly, gender bias and sexist views of women's pain has been shown to be associated with delayed treatment and poor outcomes.[62] Language can also be a barrier to accessing care. Studies have shown that non–English-speaking patients have better outcomes if competent interpretation services exist.[63],[64]

Choice and Agency

Often, poor outcomes caused by poverty, classism, racism, and sexism are ascribed to bad behavior, cultural differences, or ignorance. Dr. Paul Farmer calls these attributions "immodest claim[s] of causality."[65] To claim that ignorance or an individual's behavior causes an illness is to arrogantly ignore the social factors linked to ill health. Immodest claims of causality are apparent in many health policies that misallocate responsibility for ill health to the person suffering an illness rather than to the systems or structures that oppress people. In disregarding structural violence, many health programs are created to promote behavior change among the poor as a way to improve health. For example, studies have shown that African-American women present with more advanced breast cancer.[66] A behavior change program would ascribe this difference to a lack of knowledge among women of color about the benefits of

mammography and would therefore focus on educating these women about the benefits of mammograms and encouraging them to come forward for screening. The immodest claim of causality here is that a lack of knowledge about the benefits of mammography is the main reason for a woman's presentation of advanced breast cancer. Culture and choice are also frequently blamed for the lack of uptake of health services. In truth, many studies have documented that the cause of low mammogram coverage among this population is the lack of access to mammography machines, lack of health insurance coverage for mammography, and the inability of some women to take time off for health care.[67] While individual choice, knowledge, and culture are **(p.117)** undoubtedly important elements in the lives of all individuals and communities, it is important to understand how real choice is constrained by social determinants and structural violence.

To understand the limits of ascribing a lack of knowledge, cultural beliefs, or poor choices to the health outcomes of the poor, it is helpful to discuss the concept of agency. *Agency* is a term first described by Jurgen Habermas.[68] Habermas, a German sociologist and philosopher, describes agency as a person's ability to use all of his or her capabilities.[68] That ability, he reasoned, is enabled by adequate resources such as a healthy body, a paying job, or sufficient food. For example, a person may be given the choice of taking a day off without pay if sick. However, if the person depends on a daily wage, he would not have the agency to make this choice. In his famous book *Development as Freedom*,[69] Nobel Prize–winning economist Dr. Amartya Sen addresses the interplay between social and economic freedom and development. Sen acknowledges that agency is central to being truly free but is often severely socially constrained. He writes:

> The freedom of agency that we individually have is inescapably qualified and constrained by the social, political, and economic opportunities that are available to us. There is a deep complementarity between individual agency and social arrangements. It is important to give simultaneous recognition to the centrality of individual freedom and to the force of social influences on the extent and reach of individual freedom.[69]

Box 5.1 Agency and AIDS

HIV prevention provides an ideal example of how choice is constrained by a lack of agency due to poverty. Much of the early HIV epidemic response focused on information, education, and communication (IEC) messages for children to delay the onset of sexual intercourse. In 1994, HIV peaked in Uganda. In the rural Masaka district, the prevalence of HIV among pregnant women was as high as 33 percent.[1] Globally, there was no effective treatment for HIV. The life expectancy for those infected was about 2 years,

and many children were orphans.[2] UNICEF called children aged 5–15 were considered the "window of hope"[3] in that IEC campaigns targeting this group before the onset of sexual activity could change the trajectory of the epidemic. Programs used the child-to-child model to train children between the ages of 11 and 14 years to teach their peers about HIV[3]: what the disease was, how it was transmitted, and how it could be prevented.

In one such program, after several days of interactive and lively discussions that included demonstrations of how to put condoms on plantains, many were optimistic about this strategy: what could go wrong? The children were asked to come up with a list of the top five risks factors they had for HIV. They would use the five risk factors to design a curriculum of songs and drama about HIV prevention for their peers. When they listed their top five risk factors, however, all of the children, across many schools, listed the top risk factor as poverty. When they were asked why, they explained, "School is not free, I am already an orphan. If some man will pay my school fees and wants to play sex with me, it is a choice I have to make. If I don't continue school, I will be forced to become a servant, live family to family, I will certainly contract AIDS. If I learn to read, learn my maths, I can sell things in the market, maybe continue school."[4]

Exaggeration of an individual's agency is common in development projects that lack an understanding that structural violence constrains the life of the impoverished. For example, many malnutrition programs around the world do not consider the root cause of child malnutrition to be a lack of food.[70] Rather, they claim that the root of child malnutrition is based on the mother's ignorant food choices. Because of this claim of causality, many malnutrition programs involve weighing young children and then educating their mothers about the appropriate food to give.[71],[72] Yet if one visits the family's home and talks to the mother, it is generally apparent that the root cause of malnutrition is, tragically and simply, a lack of food and a lack of money to purchase food.[73],[74] In wealthy countries, agency is also manipulated by social forces. For example, it is known that habits and behaviors (like smoking and diet) adversely impact health. Yet social forces such as the marketing of cigarettes in African-American neighborhoods[75] or the lack of access to fresh fruits and vegetables in the Navajo Nation[76] result in disproportionate morbidity and mortality related to seemingly modifiable factors.[77] Meanwhile, many public health programs continue to focus significant attention on what are called *information, education, and communication* (IEC) campaigns that seek to modify behavior.[78]

(p.118) The vignette in Box 5.1 painfully describes the connection between choice and agency. Undoubtedly, access to vital information is important, but poverty constrains choice, often in a brutal fashion. The children in this vignette were forced into accepting money for sex because they did not have true agency

to fulfill their potential nor the right to education. When IEC campaigns proceed without understanding the structural violence that traps people in poverty, agency is exaggerated, as is the notion of real choice.

(p.119) A Biosocial Analysis

How do we move from exaggerating agency to understanding and mitigating structural violence?[79] This linkage is a cornerstone of social medicine. A *Biosocial analysis* was documented by Virchow and most recently promoted by Dr. Paul Farmer.[80] There is no clear formula to evaluate or remediate the impact of the social determinants of health. However, the biosocial approach to global health is an approach in which the health provider attempts to understand the patient's experiences, including the social forces present in the life of the person—hunger, violence, and joblessness, as well as the impact of the illness in the context of his or her daily life. A biosocial analysis also necessitates a deep political, social, and historical understanding of the community. This requires reading and understanding the history and politics of a place, listening deeply to the affected, and spending time in the community. Central to the biosocial approach is the notion of *accompaniment*. The idea of accompaniment is described by Father Gustavo Gutierrez, a Peruvian priest and father of liberation theology, as walking with a person on their journey.[81,82] When caregivers accompany a person with an illness, they directly witness the everyday challenges and barriers faced by their patients. By understanding these challenges and barriers, the caregiver can address the forces at work.

The Social History

Clinicians are taught to ask for and record what is called a *social history*.[83] Unfortunately, the social history is commonly focused solely on biomedical risk factors—such as tobacco, drug, and alcohol use. The movement to practice social medicine has highlighted the need to deepen this social history to include the social context of the patient and his or her community. In 2014, Behforouz et al. proposed an expanded social history that promotes a deeper understanding of the structural barriers faced by patients.[83]

More recently, the Social Medicine Consortium, an international collaboration of social medicine practitioners,[84] drafted a statement on the need to bring social medicine into clinical training. The statement reads:

> We have participated in and been complicit with broken health systems whose principles and systems don't lead to healthier communities. We have heard the voices of patients throughout the world whose tragic stories of sickness plead for more just, equitable health systems and care. We have witnessed politics that tolerate xenophobia, racism, sexism, and unregulated capitalism without any accountability. **(p.120)**

> We have observed economic and social systems that routinely fail to affirm the dignity of all humans and ignore the tremendous assets of all communities. We have trained in educational systems that acknowledge very little or none of this. We refuse to stand by and let this happen. *Social Medicine is our response.*

The Social Medicine Consortium further defines social medicine as an approach that integrates the following principles[84]:

1. Understanding and applying the social determinants of health, social epidemiology, and social sciences approaches to patient care
2. An advocacy and equity agenda that treats health as a human right
3. An approach that is both interdisciplinary and multisectoral across the health system
4. Deep understanding of local and global contexts, ensuring that the local context informs and leads the global movement
5. The voice and vote of patients, families, and communities

A biosocial analysis and the practice of social medicine is needed not only for the appropriate care for the individual patient. It also should inform the design of systems to meet the needs of populations, understand the difficulties faced by patients and providers, and analyze barriers at the political and community levels.[82],[85] Social forces are ever-present vectors often pushing—with historical, political, and economic weight—against achieving health equity. However, social forces are remediable through social and political action. Social movements serve to increase the visibility of marginalized groups, fight against the violation of rights, and overturn unjust practices. Movements are critical in the fight for rights and justice.[86]

Mitigating Adverse Social Determinants

In the practice of global health, addressing social determinants can seem like a daunting task. Yet both civil society and government can change the social context. One of the most famous examples of civil society engagement is the struggle for the right to water that took place in Cochabamba, Bolivia, from 1999 to 2002.[87] In the 1980s and 1990s, Bolivia was under extreme budgetary stress due to the terms of the structural adjustment policies (SAPs) imposed by the World Bank and the International Monetary Fund (IMF). In 1999, under pressure from these institutions, the government leased the rights to the public water system to a multinational consortium led by the American corporation Bechtel.[87] Under **(p.121)** the guise of increasing access to clean water, the Bechtel-led consortium, called Aguas del Tunari, raised the price of water by more than 40 percent.[88] A civil society group called the Coalition for the Defense of Water and Life led demonstrations against the privatization.[87] The protests lasted many months and were supported by campaigns across the country and through media and letter-writing campaigns around the world. Under pressure

from activists, the Bolivian government granted control of Cochabamba's water to the grassroots coalition in 2002.[87]

In the United States, there are also examples of how political action pushed back the social forces of ill health. Recent struggles such as the civil society protests against the Keystone XL and Dakota Access pipelines are examples of the ongoing work needed to assure the right to water and a clean environment.[89] The long and successful Disability Rights movement sought to end discrimination based on physical disability and increase accessibility for all. The work of activists led to the passage of the Americans with Disabilities Act of 1990, which required nondiscriminatory housing, education practices, and accommodations in all facilities for people with disabilities.[90]

Governments have an important role to play in mitigating inequitable social forces and assisting the most vulnerable (Table 5.2). Local, national, and international programs that address social determinants such as food security, housing, and discrimination can have a profound impact on health. Nutritional programs in many settings are an important example of mitigating the impact of the structural violence that produces hunger, malnutrition, and death. In Massachusetts, for example, in 2014 an estimated 363,000 children faced food insecurity.[91] When it was recognized that the lack of school lunches in the summer time led to an increase in theft by adolescents, the NGO Project Bread extended school breakfast and lunch programs into the summer months to protect these children from hunger.[91]

Table 5.2 Examples of three government programs to protect against malnutrition.

Country	Program	Beneficiary	Explicit Relationship with Health
US	Special Supplemental Nutrition Program for Women, Infants and Children (WIC)[1]	Low-income, nutritionally at-risk women, infants, and children	Allocates funds for nutritious foods, nutrition education, and screens and refers for other health services
Mexico	Prospera[2]	Low-income women and children	Conditional cash transfer program encourages mothers to bring children to clinics for routine services and nutrition counselling

Country	Program	Beneficiary	Explicit Relationship with Health
Kenya	NMK Njaa Marufuku Kenya[3]	National school feeding program	Provides 1 hot meal of corn and legumes to children in school

(1) USDA Special Supplemental Nutrition Program for Women, Infants and Children https://www.fns.usda.gov/wic/women-infants-and-children-wic

(2) Prospera programa de inclusion social https://www.gob.mx/prospera

(3) NMK school feeding in Kenya http://socialprotection.org/programme/njaa-marufuku-kenya-nmk%E2%80%94school-feeding-programme

Conclusion

The mandate of global health is the delivery of care to address the burden of disease and achieve equitable outcomes while developing strong, interdisciplinary systems that achieve the right to health for the long term. In order to achieve this, it is critical to understand and address the social determinants of health. This requires a biosocial analysis and concerted action to change some of the fundamental social forces that result in ill health. Throughout this chapter, the importance of considering the social determinants of health for both individuals and populations is discussed. Social determinants are often connected to human rights. The impacts of income, social class, and discrimination on health are **(p.122)** elucidated. The chapter emphasizes that people must have both the choice and the agency to make healthy decisions. The biosocial approach and the practice of social medicine help to analyze and holistically address health. Social movements play an important role in highlighting injustice and changing adverse social factors that impact health.

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