Global Health: Where to Now?

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The recently evolving global financial crisis reveals both the fragile state of the global economy and the major long-term implications of an increasingly unfair global economy for global health and human flourishing. We are also at a critical juncture in world history in relation to understanding and endeavoring to counteract the adverse effects of modern life on climate change and our natural environment. If the growing world-wide interest and apparent commitment to global health and environmental security are to have a significant impact it will be necessary for us be deeply introspective about our value system and reconsider what needs to be done to ensure long-term and secure human flourishing in an interdependent world. It is proposed that belief in endless economic growth and emphasis on an entirely medicalized approach to health needs to be replaced by a vision of healthy human life that is achievable and sustainable for a greater proportion of the world's population.

INTRODUCTION

Improvement in human health world-wide is one of the major challenges for the 21st century. Advances in biological knowledge and its application over the past 50 years have surpassed all previous theoretical and technological achievements. As a result medicine and health care have been transformed, with major increments in longevity and health for many.[1] Yet, despite these advances and vast expansion of the global economy we now face new and almost insurmountable health threats that are intimately linked to poverty. [2]

Hope in the 1970s that infectious diseases had been conquered is now ironically being reversed by the renewed spread of old infectious diseases (for example tuberculosis and malaria – including multi-drug resistant strains), and emergence of many new ones (for example HIV, SARS and most recently H1N1 flu).

The 2003 epidemic of severe acute respiratory syndrome (SARS) [3] is a small-scale example of the new, acute, rapidly fatal infectious diseases that may, like the 1918–1919 flu epidemic, sweep through the world with accompanying profound social and economic implications. Population growth, adverse living conditions and increasingly close contact between humans and other species provides the context for cross species shifts of organisms and emergence of avian flu and other new diseases. Arguably these are the most serious global threats to the health of humankind in the 21st century [4] and will take their greatest toll in developing countries, and among disadvantaged groups in privileged societies.[5]

Chronic diseases of lifestyle are also on the upsurge, affecting both the affluent and lower/middle classes globally. [6]

On the Threshold of a New Era

We are also now on the threshold of a new therapeutic era. Advances in genomics, genome-related biotechnology and nanotechnology hold the hope of transforming medicine and health care in the next few decades. While the hope is that such advances will improve health globally,[7] many obstacles will need to be overcome to achieve desired goals and the risk that such advances will only be available to those with resources should not be underestimated. Inappropriate and unwise use of the new power of genome-related biotechnologies, like other forms of power, may thus be harnessed to benefit only a privileged minority and increase inequities in global health.[8] Consider also that we have not yet wisely applied already proven drugs and vaccines, or our accumulated impressive knowledge to improve the health of people across the world.

It is necessary to step back from these magnificent medical advances and the optimism we have for progress in treating individual patients and reflect on the overall state of health in the world today. We then need to consider a range of potential scenarios for global health and examine what could be done to ensure progress towards the best of these possibilities.

TRENDS IN GLOBAL HEALTH

Disparities in wealth and health within and between nations continue to widen inexorably (the world is more inequitable than 50 years ago), billions of people live in degrading poverty with little if any access to health care and susceptible to the ravages of malnutrition. In addition interpersonal human violence seems to be on the increase

At the beginning of the 21st century life expectancy, patterns of diseases and causes of death differ markedly across the world. Patterns of disease have changed at differing rates across the world with infectious diseases of diminishing importance in many countries while of great importance in others. As a result life expectancy at birth ranges from well over 70 years (and rising) in highly industrialized countries to below 50 years (and falling) in many poor countries. In sub-Saharan Africa gains in life expectancy achieved during the first half of the 20th century are rapidly being reversed by the HIV/AIDS pandemic.

Changes in patterns of disease are also taking place in wealthy countries. Reduction in the frequency of infectious diseases is combined with excessive consumption of salty and high calorie food and less exercise as a result of improved transportation. This is leading to growing morbidity and early deaths from diabetes, stroke and cardiovascular diseases. [6] Wide disparities in health and life expectancy across the globe are also observed within wealthy countries.[9] These features illustrate the degree to which many of the contradictory aspects of global health are part of a wider syndrome connected to inequality concerning the structures and values of our societies.[10]

The problem of tuberculosis illustrates the paradox of how advances in scientific knowledge and the ability to cure individual patients have not been accompanied by public health gains. While in the 1970s there was hope of eradicating tuberculosis from the world at a price that was easily affordable,

tuberculosis is now becoming a multi-drug resistant disease that is too expensive to treat (up to 100 x the cost of treating patients with sensitive strains) except in affluent countries. The risk of this is even greater today than when this threat was first considered over a decade ago as XDR TB spreads in South Africa and elsewhere. [11] These developments are not the result of lack of knowledge but rather an example of lack of wisdom in the application of knowledge and failure to appreciate the complex links between social and economic aspects of life and health/disease.

Other examples of the gap between scientific advances and improvement in public health include increasing drug resistance of many other organisms; the inexorable increasing incidence of lung cancer (one of the few malignancies for which the main cause is definitively known and which can be prevented), - especially in developing countries that have been targeted by tobacco companies - and the emergence of dozens of new infectious diseases since the 1970s.

Understanding why we have failed to improve health at the world population level requires insight into the state of our world at the beginning of a new millennium, and appreciation that improving health globally will require new ways of thinking and innovative action.

UNDERSTANDING THE WORLD AS AN UNSTABLE COMPLEX GLOBAL SYSTEM

It has been argued in detail elsewhere that the world in the early 21st century is characterized by instability in many social domains - economics, social life, the ecological system and the political domain. [12] In brief, the global economic system is collapsing on itself – massive fraudulent financial losses have severely jeopardized the lives and health of billions. Medicine seems to have lost its way as a caring social function, as health care becomes increasingly focused on those who can pay, and neglected diseases of poverty relentlessly undermine the lives of many. Global security is failing due to an outdated focus on weapons as means of protection, and neglect of the potential of infectious diseases and spreading social disruption to cause havoc with the security of all. The quality of our ecological environment is rapidly eroding due to consumption patterns that are unsustainable. Within a few hundred years humankind has moved from being subdued by the forces of nature, through learning to live with and control nature, to an era in which destruction of our natural environment and animal species seriously threatens future life on our planet. Underlying these processes is the rapidity and extent of change in a complex global system and lack of visionary global leadership for a highly challenging new millennium.

THE GLOBAL POLITICAL ECONOMY AND HEALTH

In order to understand the forces influencing health and medical care we need to appreciate that modern medical practice is pursued within the context of a world increasingly influenced by powerful social and cultural forces. Globalization, a widely used term meaning different things to different people, is characterized by such generally accepted features as changing perceptions of time and physical space, and diffusion of ideas, culture, and values at an escalating pace on a global

scale. While economics is the most commonly used framework for debate, globalization is a complex concept that goes beyond economics to include social, cultural, and ecological dimensions. It is not a new phenomenon, but the outcome of a long interwoven economic and political history, involving a wide range of actors, with both beneficial and adverse effects on human well-being, although critics can argue that, as with population growth the adverse effects of globalization are now becoming starkly apparent.

Positive manifestations of progress associated with globalization include advances in science and technology, increased longevity, enhanced economic growth, greater freedom and prosperity for many, improvements in the speed and cost of communications and transport, and popularization of the concept of human rights.

Negative effects include widening economic disparities between rich and poor within and between nations, and increases in both absolute and relative poverty. At the beginning of the twentieth century, the wealthiest 20 percent of the world's population were nine times richer than the poorest 20 percent. This ratio has grown progressively to thirty times by 1960, sixty times by 1990, and to over seventy-four times by 1997. World debt grew from $0.5 trillion in 1980, to $1.9 trillion in 1994, $ 2.2 trillion in 1997 and $ 5.69 trillion in 2006.[13] The way in which debt is created and sustained, and its relationship to the arms trade has been a major factor in perpetuating and intensifying poverty and ill health. Most countries that were required by the World Bank to pursue structural adjustment programs are in greater debt than ever before. Third-world debt, although accounting for only a small proportion of total world debt, has reached exorbitant levels relative to income in the third world. These countries cannot repay their debts.

The evolving complex web of material, institutional, and ideological forces, and the power of massive multinational corporations in a globalizing world have profound implications for the accumulation of capital and for the way in which resources are controlled. In 1970, 70 percent of all money that changed hands on a daily basis was payment for work, while speculative financial transactions accounted for only 30 percent. By 1998, when daily speculative exchanges amounted to $1,500 billion daily, these proportions had changed to 5 percent and 95 percent respectively. Such a striking shift in the distribution of money arguably reflects devaluation of the lives and work of most people in the world.

The shift in locus of economic power from the nation state to global corporations is altering the balance of power in the world. Boundaries between states and between foreign and domestic policies are being blurred, in the process undermining small states' control over their economies and threatening their ability to provide for their citizens. Economic disparities have become so marked and adverse effects so apparent, that significant incompatibility has arisen between neo-liberal economic policies and the goals of democracy. In addition to progressive widening of the economic divide between nations, and growing external control by money lenders over the economies of small countries through debt, trade, and markets that are increasingly global, other powerful forces, for example, feminization of labor, more part-time employment, and exploitation of

cheap labor in developing countries, are creating new patterns of inclusion and exclusion.

Sub-Saharan Africa has suffered serious adverse affects from globalization. This region now has three million displaced people, fourteen million AIDS orphans, 475 million Africans living on less than the equivalent of $2 per day, while hunger afflicts 40 million people. The devastation resulting from HIV/AIDS in Africa needs to be seen in the context of three hundred years of slavery (from 1441 until 1870), seventy-five years of colonialism (from 1885 until 1960), and the Cold War (from the 1960s until 1991), that successively debilitated the sub-continent. Excitement and pride that came with independence in the 1960s turned to despair under the rule of tyrants in the 1970s. By the 1990s, many viewed African countries as "political and economic infernos."[14] The United States retreat from Africa after the Cold war, in addition to the continuing extraction of resources, including skilled labor, diamonds, and oil, perpetuates centuries of exploitation. Sub-Saharan Africa's debt of $275.6 billion that can never be repaid, results in annual interest charges that cancel out the $21.2 billion annual aid donation to Africa, cripples health services, and stultifies development. The fact that third world debt is a small component of total world debt and that in sub-Saharan Africa four times as much is spent on debt repayment each year than on health and education combined, make insistence on debt repayment the modern equivalent of slavery.

We need to acknowledge the extent to which the so-called developed world has been instrumental in contributing to such deprivation, as described by Thomas Pogge. [15] It must be conceded that corruption and bad government in developing countries contribute significantly to their misery and poor health. Much less openly discussed is the complicity of powerful nations in supporting leaders who are despots and kleptocrats, by legitimizing their right to sell their countries' natural resources, spend profligately on themselves and incur national debts that their impoverished citizens must repay.

At the beginning of the twenty first century, the world is thus characterized by widening disparities in economic and health status (between countries and even within wealthy countries where the size of the underclass is growing), and by suffering, conflict and alienation associated with pervasive social forces. Erosion of the economies of poor countries, under the impact of the neo-liberal economic policies driving globalization, has obstructed the introduction of effective forms of modern medicine and prevented achievement of widespread access to even basic health care for billions of people.[16]

The emergence of new diseases such as AIDS, that afflict predominantly those marginalized by poverty (80 percent of HIV positive persons live in the poorest countries in the world), has been attributed to the social and environmental niches created by the nature of the global political economy and its ideology. Failure to appreciate such associations will result not only in inability to control such diseases as HIV/AIDS (as for tuberculosis in the past), but more importantly, will probably favor the emergence of new infectious diseases in the future. The changes in demography resulting from urbanization, migration, travel, multiple small scale wars, ethnic conflict, displacement of

people and refugees, and close contact between animals and humans, facilitates the emergence and spread of diseases from which no-one should feel immune.

Comparative Health-care Expenditure

Since the 1960s major advances in medicine and technology have been associated with escalating expenditure on health care - most of this in highly industrialized countries. Annual per capita expenditure on health care ranges from over $6000 in the US (17 percent GDP) down to less than $10 in the poorest countries in Africa (< 3 percent GDP). Half the worlds' population lives in countries that cannot afford annual per capita health expenditures of more than $5-10, and many people do not have access to even basic drugs.

The World Health Organization has estimated that in 1995 the annual per capita cost of providing a basic package of public health and essential clinical services in a low-income country was $15. In most such countries health care expenditure is typically less than $10. Even though some parasitic diseases (e.g. onchocerciasis, schistosomiasis and lymphatic filariasis) could be controlled by mass treatment campaigns using inexpensive drugs, the infrastructure required to provide such coverage is inadequate. Effective treatment of diseases such as tuberculosis, malaria and HIV/AIDS, as well as prevention of HIV transmission requires more complex infrastructures than can be afforded on current health care budgets in poor countries.

In the 1990s, 89 percent of annual world expenditure on health care was spent on 16 percent of the world's population who bear 7 percent of the global burden of disease (in DALYs) and 90 percent of medical research expenditure was on health problems accounting for only 10 percent of the global burden of disease, and this has not changed much over the past two decades.

These are examples of global injustice that should be intolerable if there were genuine commitment to universal human rights, human dignity and to improving health at the level of whole populations. Vaccine development programs and drug donation programs for poor countries, admirably promoted and supported by some pharmaceutical companies, and major foundations in the industrialized world are necessary but insufficient responses to such injustices. Human progress and meaningful advances in poor countries with consequent modest increments in economic status and improved living conditions, combined with effective basic health care delivery systems, offer the potential for significantly improving global health.

Military Expenditure and Foreign Aid

Of over 140 million war deaths since 1500, 110 million were in the 20th century. Civilian deaths accounted for eighty percent of more than 20 million war deaths since WW II. Industrialized countries spend on average 5.3 percent of GNP on the military (global military expenditure in 2007 amounted to US$ 1.339 trillion) but about 0.3 percent on economic aid to developing countries.[17] Between 1998 and 2007 world military expenditure increased by 45 percent.[18]

There have been close links between the arms trade and economic aid, with a considerable proportion of foreign development aid repatriated to donor countries through arms sales. This link has contributed significantly to the escalating number of wars, conflict and widespread torture since the Second World War. In 1980 there were about 22 million refugees worldwide. By the early 1990s this figure had almost doubled although by 2006 it had apparently declined to just over 20 million. Such displacement of people and total disruption of social life has profound adverse effects on life and health, and refugee camps are often hot spots for epidemics.

Some Other Comparative Expenditures

The estimated cost of providing basic education for all in the world in the late 1990s was estimated at $6 billion, and the cost of providing access to reproductive health services for all women in the developing countries $12 billion. These costs are small in comparison with global military spending at $780 billion in the late 1990s (two thirds of its level in 1985 at the peak of the Cold War), $50 billion spent on cigarettes in Europe, $105 billion spent on alcoholic drinks in Europe, $500 billion spent on narcotic drugs in the world. In the USA pharmaceutical companies have spent more than $11 billion each year promoting and marketing drugs.[18] The annual budget of the WHO in 1990 was equivalent to 2.5 hours of global military expenditure. Most recently up to $17 trillion dollars have been raised world wide to rescue financial institutions from their fraudulent activities that led to the currently evolving global financial disaster, while it has not been possible to raise the $750 billion required to achieve the Millennium Development Goals!

Responsibility for Global Health

The facts and interpretations offered above are not intended to imply that the wealthy, productive and fortunate in the world should bear the whole burden of the blame for the complex series of historical developments that polarize the world. Political realities within developing countries, including corruption, ruthless dictatorships, ostentatious expenditure by elites and under-investment in education and health, have contributed greatly to the suffering of billions. However, it is vital for privileged people to have insight into the extent to which these deficiencies in many developing countries have been facilitated by the policies of wealthy nations in pursuit of their own interests (characterized by ongoing extraction of natural and human resources). Insight into how favored lives are sustained by overt and covert exploitation of unseen others could allow those of us who live comfortable lives anywhere in the world to appreciate that we do not have a monopoly of entitlement to the benefits of progress.

PROGNOSIS FOR IMPROVED GLOBAL HEALTH

It is suggested that there are three possible scenarios for the future of global health.[19] The first and most likely is ongoing wide disparities with improvements

in health being achieved predominantly for the wealthy. A second possible scenario would result in some improvement in health for many more people (through the efforts of the Millennium Development Goals, Global Fund etc) but with wide disparities still affecting several billion, in particular as achievement of even these modest goals has been set back by several decades by the global financial crisis. It is difficult not to conclude that the prognosis for global health is poor given such impediments as our paradigm of thinking, the development myth, the paradox and defects of foreign aid, acquiescence to poverty and our ignoring of the upstream factors sustaining poverty. A final possible, but less likely achievable goal, would be considerable improvement in global health for all through a visionary approach to a fairer global economy.

A VISION FOR THE FUTURE IN A CHANGING WORLD

There is a great need to go beyond the simplistic idea that the health of individuals is merely about making more of modern medical treatments more widely accessible to more people. This is what could be called the medicalization of health. When this value system is applied to global health the goal becomes to increase access to whatever medical treatments are available – so, for example, we have a Global Fund focused on making drug therapy available to all who suffer from HIV/AIDS, Malaria and Tuberculosis – with little attention to their living conditions - lack of food, housing, clean water etc - that drive the spread of such diseases, [20] or to the basic primary health care services required for integrated and effective care.

In essence this view of health coming out of the "barrel of technology or pharmaceuticals" is embodied in the latest Institute of Medicine report on America's commitment to global health.[21] This IOM report makes it clear at the outset that it does not address the profound population health implications of food security, clean water, sanitary measures, gender discrimination, or universal access to basic health care. The focus is on American foreign aid for HIV/AIDS and other infectious diseases with attention drawn to those aspects of health that can be classified medically and treated with medications. It is regressive that a report of this nature from a prestigious institution fails to examine the social determinants of health and disease at a time when the WHO is just beginning to do so - many decades later than it should have done! [22]

This is just one of many examples of the medicalization of global health, increasingly associated with the monetarization of medicine. It neither reveals insight into how more technology and drugs do not necessarily improve health, nor into how the global economy is structured to maintain the wealth and health care (often wastefully provided) of those with resources while extracting human and material resources from poor countries and ensuring that they lead impoverished lives with little health care other than that provided by poor governments and generous philanthropy.

Perpetuation of this medicalized (and moneterized) view of global health while ignoring powerful upstream forces that profoundly shape the health of whole populations [23] hardly does justice to human intelligence or to the so-called

"vital interest in, or commitment to, global health." We should admit that we live in a world undergoing entropy.

Genuine interest in global health would extend to understanding our relationship with nature and developing a long term view of human flourishing on a scale that would reflect insight into the need for the new complex goal of "developing sustainability" in place of the worn out and failing agenda for sustainable development focused only on economic growth. [24]

In a world in which money is abundant and we have so much knowledge, that could be used to widely improve human flourishing we need to be as innovative socially as we are scientifically. Unless we can face up to the reality of the future and what is required to deal with this intelligently we are doomed to perpetuate old solutions (that do not work) for new problems which we do indeed have the ability to address constructively. The future is not what it used to be! It must surely be clear (especially as the global economic crisis deepens) that the solution to global health must lie in reconstructing a fairer global economic system that could allow appropriate social development, improved living conditions and basic health care provision globally.[25]

As the limits of medicine and how political and economic forces shape health care are increasingly recognized, it also becomes necessary to question personal and social meanings of illness and what it means to seek help from our communities and those they empower to provide health care. [26] Many countries consider access to basic health care as a basic human right that nation states should be committed to providing for their citizens. Some form of equitable health care is provided in all western European nations and in Canada. Regrettably the example of medical care as a marketable commodity (albeit with considerable state assistance for the poor and the aged) set by the USA is being widely mimicked. Such privatization of medical care, aided and abetted by structural adjustment programs promoted by the policies of the International Monetary Fund and the World Bank have adversely affected health in many poor countries.

Acknowledging the need for universal access to a basic health care package could allow new relationships to be forged between physicians, patients and society. The moral power and potential impact on global health of such action if exemplary leadership is provided by the USA under the new Obama administration should not be underestimated.

What can individual physicians and professional associations do to improve the conditions described above? [27] First, we have an obligation to know about and understand the impact of the global forces described on health. Second, we should become more introspective about our privileged lives. Third, we should appreciate that our personal skills, developed on the basis of labor and investment by previous generations, represents social capital and involve social obligations for us. Fourth, we should become a force in coupling excellent treatment of individual patients to national programs that improve public health within nations. Finally, we need to locate our activities within the global context described above and promote new ways of thinking about local and international activities that have the potential to improve well-being and health at the global level. Diagnosis is usually easier than effective treatment, but if physicians,

scholars and other influential groups were to accept these responsibilities there would be some hope of moving beyond the present impasse towards healthier and better lives for all.

THE WAY FORWARD: CHALLENGING BUT POSSIBLE

A starting point for change is to acknowledge the harm of the current global economic order, and to place greater emphasis on dealing with the social determinants of health and disease in whole populations. To do this effectively will require addressing the upstream causes of the wealth and health divide, and this can only be achieved if the political will can be mustered to "develop sustainability." This is a tough call as it challenges the complacency of those who live privileged lives and thus requires moral imagination and courageous leadership.[28] As we have noted previously [16] there is no shortage of resources to improve health globally – only a lack of political will to organize our lives and health care systems to enable more people globally to lead good lives in peace. The challenge is enormous and it will take considerable scholarly research and political advocacy to advance this complex new global agenda.

CONCLUSION

Changing the paradigm within which we live from 20th to 21st century thinking and acting is *the* challenge. A framework that combines understanding of global interdependence with enlightened long-term self-interest has the potential to produce a broad spectrum of beneficial outcomes, especially in the area of global health. An extended public debate, promoted by building capacity for this process through a multi-disciplinary approach to ethics in education and daily life, together with knowledge and utilization of the political sites for action could be the driving forces for such change.

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