Challenges for Reducing Inequities in Health and Healthcare for the 21st Century

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Abstract

Human life expectancy during the time of the Roman Empire was approximately twenty-eight years. In 1990, global life expectancy had increased to sixty-five years. The advances in life expectancy in the twentieth century were remarkable by any standard. Although many factors contributed to this enhanced life expectancy, including medical technologies, by far the largest proportion of the increase occurred as a consequence of economic growth, rising living standards and nutrition. Despite the large improvements in terms of life expectancy, significant health variations still remain between countries and across different socioeconomic classes within countries. As the twentieth century proceeded, a growing dichotomy existed between those who are healthy and have access to medical care and those who are not healthy and do not have access to such services. Moreover, evidence shows that such inequities in health and healthcare are increasing. The present paper will analyze the dynamics of shifts in health profile during the early period of the last century and describe the major determinants of inequities in health and healthcare at the international level. Challenges facing the reduction in inequalities in health and healthcare will be discussed.

The health status of the World and its major risk factors

Human life expectancy during the time of the Roman Empire was approximately twenty-eight years. In 1900, life expectancy had been extended only nine years, to an average of thirty-seven years throughout the globe. In 1990, it had increased and reached sixty-five years, an increase of twenty-eight years during the twentieth century. Global life expectancy increased faster in the last 40 years than it did in the preceding 4,000 years [1]. Such advances were remarkable by any standard, especially in developed nations, and they were mainly attributable to control of infectious diseases. The last years of the nineteenth century and the first of the twentieth corresponded to the "golden age of medicine" to describe a radical transformation of medical knowledge, practices and policies. During this period of time, researchers identified microbes as the specific causes of major diseases and went on to develop therapeutic measures to destroy them in those who were infected. This era is typically associated with the "conquest" of epidemic infectious diseases [2].

Although medical care surely contributed to this enhanced life expectancy, there is evidence that its effect on health was quite limited. The largest proportion of the increased life expectancy occurred as a consequence of economic growth, better living standards and improved nutrition, as demonstrated by McKeown in its very famous project in the field of historical epidemiological in England and Wales [3]. In other words, major health improvements of the last century in developed nations were driven by broader social, economic and environmental determinants of health, rather than medical technologies [4].

At the present time, the global health community faces a series of major challenges with regard to mortality and morbidity worldwide, especially because developing nations

face the same health problems that developed nations defeated in the last century. According to the World Health Report 2000, a single risk factor as underweight is responsible for almost one tenth of global attributable Disability Adjusted Life Years (DALYs) [5]. It is clear that despite the notable health achievements of the last century, to reach Alma Ata's goal of "Health for All for the year 2000", a strong global action should be taken to reduce malnutrition, especially in Africa, Southeastern Asia and Latin America. Such public health problem is an absolute global priority not only because it is the major obstacle to increased life expectancy, but also because it is the major determinant of global health inequities.

In sum, despite important public health successes of the last century, significant health variations remain between countries and within countries and such health gaps continue to increase over time. Not only health inequities are increasing, but also healthcare inequalities as well. The aims of the present paper are to discuss the major determinants of health and healthcare inequities at the global level and identify possible interventions for reducing them. First, inequities in health between countries and within countries will be analyzed. Then, we will examine variations in terms of health expenditure and access to healthcare across different countries and socioeconomic groups. Finally, we will discuss what needs to be done to reduce such inequities and prolong life expectancy in the 21th century.

Inequities in health

Health inequities between countries

Global health inequities are mainly driven by poverty. Research showed that there is a strong association between economic development in terms of per capita gross domestic product (GDP) and life expectancy between countries. In many low-income countries, over half of the population live in poverty and those who are not poor live in circumstances that contribute to poor health of the country as a whole [6]. This may seem to suggest that priority should be given to promoting economic growth so as to accumulate sufficient wealth to alleviate poverty in societies. However, there are important differences as developing countries with the same level of economic development may achieve quite different health outcomes. The outstanding health performance of Cuba, Costa Rica and Sri Lanka, for example, is not mainly driven by economic growth, but it is related to equitable investment in public health, education and social services buffering the poorest sectors of society [7]. In other words, the health of the poor and health inequities may vary according to social and political characteristics specific to place. Figure 1 shows the under-5 mortality rate in Ivory Coast (175/1,000 live births) with a GDP of U$ 1,490 compared to the same figure in Tajikistan (72/100,000 live births) with a smaller GDP per capita (U$ 1,170). Similarly, Brazil with a GDP per capita of U$ 7,360 has a much higher under-5 mortality rate (36/1,000 live births) than Bulgaria (16/1,000 live births) whose GDP per capita is US$ 6,890 [8].

[Insert Figure 1]

Not only disinvestment in health and education is a serious problem for the poor and a source of health inequities, but also income inequality as well. Developing nations such as Brazil, Mexico and Kenya have quite poor health indicators because of the high levels of income inequality. A study in Central America showed that income inequality has an independent effect on life expectancy when controlling for GDP per capita. As Figure 2 shows, countries such as Costa Rica and Panama with low-income inequality have a higher life expectancy than countries such as Guatemala and Nicaragua where income inequality are very high [9].

[Insert Figure 2]

Such relationship appears for countries that are in economic transition as well. Russia, for example, where income inequalities sharply increased after opening up the economy to the international market performs quite poorly in terms of life expectancy compared to other former Soviet bloc countries whose inequalities are lower [10].

Income inequality and disinvestment in health and social services have serious health consequences in developed nations as well. According to Wilkinson, in the developed world "rather than the richest, it is the countries where income differentials between rich and poor are smallest which have the highest average life expectancy. At a threshold of 8,000 – 10,000 $/per capita further increases of GNP per capita have little effect on life expectancy. In a very influential study, Wilkinson showed that the United

States, despite having one of the highest living standards in the world (the real GDP per capita was 24,680$ in 1993) has a lower life expectancy (76.1 years in 1993) than less affluent but more egalitarian countries such as the Netherlands (GDP, 17,340$; life expectancy, 77.5 years), Israel (GDP, $15,130; life expectancy 76.6) or Spain (GDP, $13.660; life expectancy 77.7 years). Moreover, societies with the smallest income differences between rich and poor, such as Sweden and Japan, tend to enjoy the highest life expectancy (78.3 and 79.6 years, respectively) [11]. A subsequent study claimed the relationship between income inequality and health vanished to a large extent when new studies with better data from different countries were available [12]. However, a more recent investigation of 22 wealthy nations found a very strong negative correlation between income inequality and health ($r=-0.860; p<0.001$) and confirmed Wilkinson's relative income hypothesis (Figure 3) [13].

[Insert Figure 3]

In the developed world, countries such as the US and UK that perform unexpectedly low in terms of life expectancy compared to other developed countries, are also characterized by disinvestment in a variety of human-related services that are dramatically important for the poor such as health and social services [14].

Unfortunately, in the era of globalization, income inequalities are sharply increasing with the richest countries becoming richer and the poorest countries remaining poor. At the same time, there is a general tendency to reduce public expenditures on health and social

services even in those countries that have traditionally invested an important percentage of GDP in such services [15].

Health inequities within countries

The effect of poverty on health can also be seen when analyzing inequalities across different social classes within the same country. Better health has been consistently associated with having more income, more years of education and a prestigious job, as well as living in neighbourhoods where a higher percentage of people have higher incomes and more education [16]. In developing countries, there are striking variations in terms of health between different segments of society. In South Africa, for example, infant mortality is five times higher among the black and whites [1]. A study conducted in Brazil demonstrated that there is a huge gap between under five mortality rates among the poorest income quartile (113.3/1,000 live births) and the richest income quartile (only 18.7/1,000 live births). Conversely, data from Vietnam and Pakistan showed that the under 5 mortality rates between richest and poorest income quintiles are quite similar (53/1,000 live births vs 47.4/1,000 live births and 160/1,000 live birth vs 145/1,000 live births respectively) [17]. Again, such different health gaps are associated with different national policies. In China, Chile and Russia, where economic reforms have been aggressively promoted, gaps in life expectancy are widening over time with disturbing evidence of the net deterioration of health among certain groups. On the other hand, in Bangladesh, strong pro-equity policies had the effect of decreasing child mortality rate of the most disadvantaged groups at the fastest rate [1].

Even in high income countries where there is little absolute poverty, there are important inequalities in health status that span the full socioeconomic spectrum. In a study of 300 000 men in the United States, mortality declined progressively across 12 categories of household income from less than $7,500 to more than $32,499 [18]. Research shows that not only are poorer people more likely to die prematurely or be sick than richer people, but also that an individual's standing in the social hierarchy is highly correlated with health [19]. This finding was first demonstrated by Marmot and colleagues who found that among males, age 40 and 64, the death rates was about three and a half times higher for those in clerical positions as for those in administrative grades. Interestingly enough, none of those studied were living in poverty and all had access to the British socialized health care system [20].

Inequities in Healthcare

Healthcare inequities between countries

As the twentieth century proceeded, a growing dichotomy existed between those who have access to healthcare and those who do not. Although the relationship between per capita health expenditure and life expectancy is quite weak [6], there is substantial concern about disparities in terms of public health expenditure between countries. Much of global expenditure for health is used in developed nations, while little is spent for poor countries where mortality and morbidity are higher. Health expenditure ranges from US$ 20 per capita in developing countries to US$ 2,470 per capita in developed countries. In the

poorest countries, where basic healthcare is strongly needed, governments invest a very small percentage of GDP in health. A study among six countries in Central America (Figure 4) showed that Guatemala and Nicaragua, with the poorest life expectancy at birth (65.3 and 68.8 respectively) were also those countries spending the lowest percentage of GDP per capita on health (2.3% and 3.8% respectively) [9].

[Insert Figure 4]

In 2002, the United Nations Population Fund (UNFPA) showed antenatal care differentials along various regions of the world. In forty-four developing countries studied, more than three-quarters of pregnant women visit a doctor, a nurse or a midwife. However, in South Asia and North Africa, where women mobility is more restricted, this figure is nearer one third. In the same continents, women are less likely to have skilled assistance at delivery and to have their children in a health facility [21]. Access to family planning is also a major concern for women living in poor nations. In Sub-Saharan Africa, contraceptive prevalence is only about 10%. In Pakistan, this figure is 9% [22].

Healthcare inequities within countries

There are not only remarkable differences between countries in terms of access to healthcare, but also the distribution of public health services within social strata is very unequal. First, in developing countries health expenditures are highly skewed toward the needs of the richest groups of society. As figure 5 shows, in Indonesia in 1990, only 12% of government spending for health was for services consumed by the poorest 20% households,

while the wealthiest 20% consumed 29% of the government subsidy in the health sector [23]. In India, around 32 of the benefit from public health services goes to the richest population quintile, compared with around 10 per cent to the poorest quintile [24].

[Insert Figure 5]

Also, the poorest in the developing nations are less likely to get the care they need. A study of a sample of eight developing countries found that poorer groups have lower probability of obtaining care when sick, are less likely to be seen by a doctor, and have a lower probability of receiving medicines when they are ill [25]. Another study found that in Asian and sub-Saharan African countries the poorest women were half as likely as the richest women to be assisted by a physician, nurse or midwife during delivery [21].

Unfortunately, in attempts to control costs, many developing countries are experimenting with market strategies. Much of healthcare reforms implemented have been driven by a set of technocratic principles that emphasizes efficiency and effectiveness and give little consideration to equity [26]. For poor people in developing countries issues of cost repeatedly arise. The introduction of user fees for primary health care services, sponsored by international financial institutions such as the World Bank, is a particularly serious problem. For poor families who are already highly vulnerable, the costs of a sudden illness is devastating, both because of lost income and because of the costs of treatment. While the actual treatment itself can be prohibitively expensive, in many cases there are other hidden costs that add to the overall financial burden of healthcare. There is evidence

that the introduction of user fees for health services is associated with reduced utilization of health clinics, especially among those groups who cannot afford to pay such services [27].

Not only the poor living in developing countries have problems of access to healthcare, but people living in industrialized countries as well. This is especially true in the United States, the less efficient and more inequitable healthcare system among wealthy nations. First, the US healthcare system is the most expensive in the world: in 1999 the United States spent 53 percent more on health care than any other OECD country spent [28]. Second, the system is highly unequal: in 1999 one out of every six Americans, 32 million adults under the age of 65 and more than 10 million children, remained uninsured [29]. Lack of health insurance, however, is not equally distributed across different social classes, but it is more likely to affect the poorest populations [30].

Challenges for reducing inequities in health and healthcare for the 21th Century

In summary, the challenge of improving health and reaching the goal that has been set by the World Health Organization in 1978 "Health for All by the Year 2000", needs some urgent actions. According to our analyses, inequities in health and healthcare seem the most plausible culprits for not having reached such goal. The life expectancy gap between developing and developed nations is due to risk factors such as malnutrition, poor housing, lack of water supplies and sanitation and unsafe sex. Such factors, however, are all strongly linked to poverty. As demonstrated by results on different levels of life expectancy between countries with similar GDP per capita, economic growth alone is not the solution to this problem. In order to eradicate poverty and reduce health inequalities worldwide is also necessary to re-invest in equitable public health and social services as well as to reduce or contain income inequality. Such measures may also have positive effects in terms of economic development. First, there is evidence that high levels of income inequality may reduce economic growth. Second, disinvestment in public health, education and social services, can also be detrimental to the economy because of the social and economic costs associated with increased levels of poverty (e.g. higher crime, lower social cohesion) [31].

With regard to inequities in healthcare services, to adjust imbalances between rich and poor countries as well as rich and poor populations urgent actions are strongly recommended. While a higher share of global expenditure on health must be spent for poor nations, developing countries need to operate a radical shift of emphasis from tertiary and quaternary healthcare activities for the wealthy to more cost-effective treatments and preventive measures for the poor. Moreover, given the high rates of infant and maternal mortality of many developing countries, that are also the most important determinants of global health inequalities, emphasis should be place on reproductive health services. Finally, user fees for primary healthcare should be immediately removed because of their potentially serious side effects in terms of equity.

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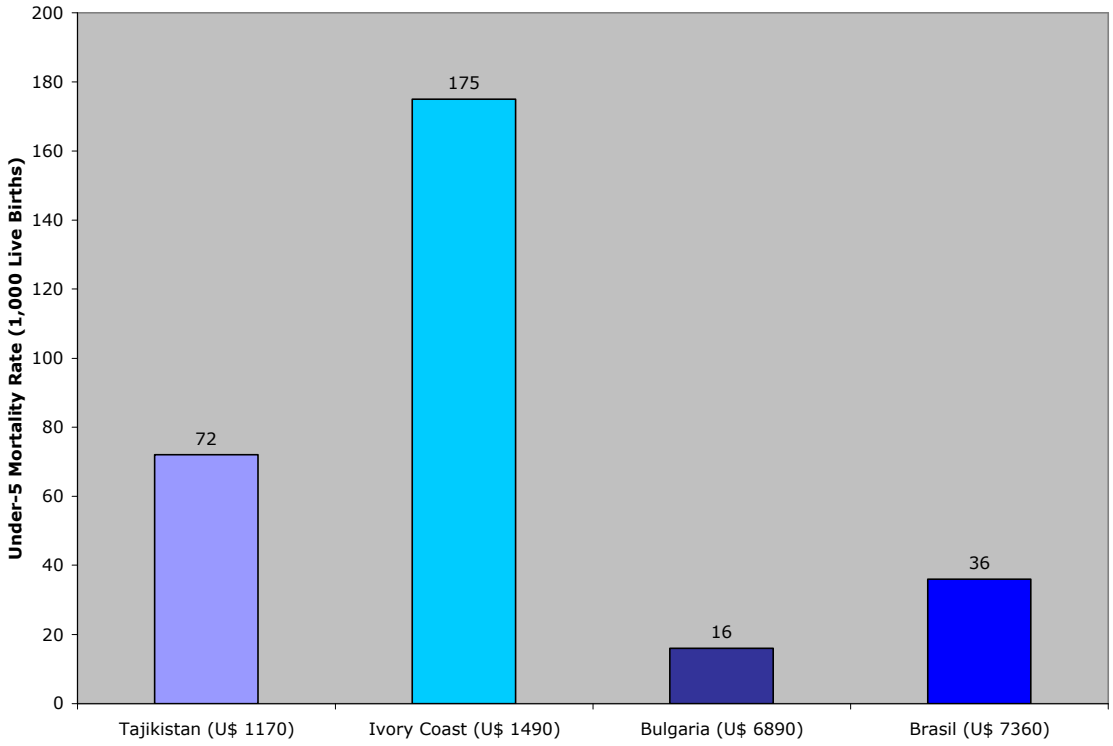
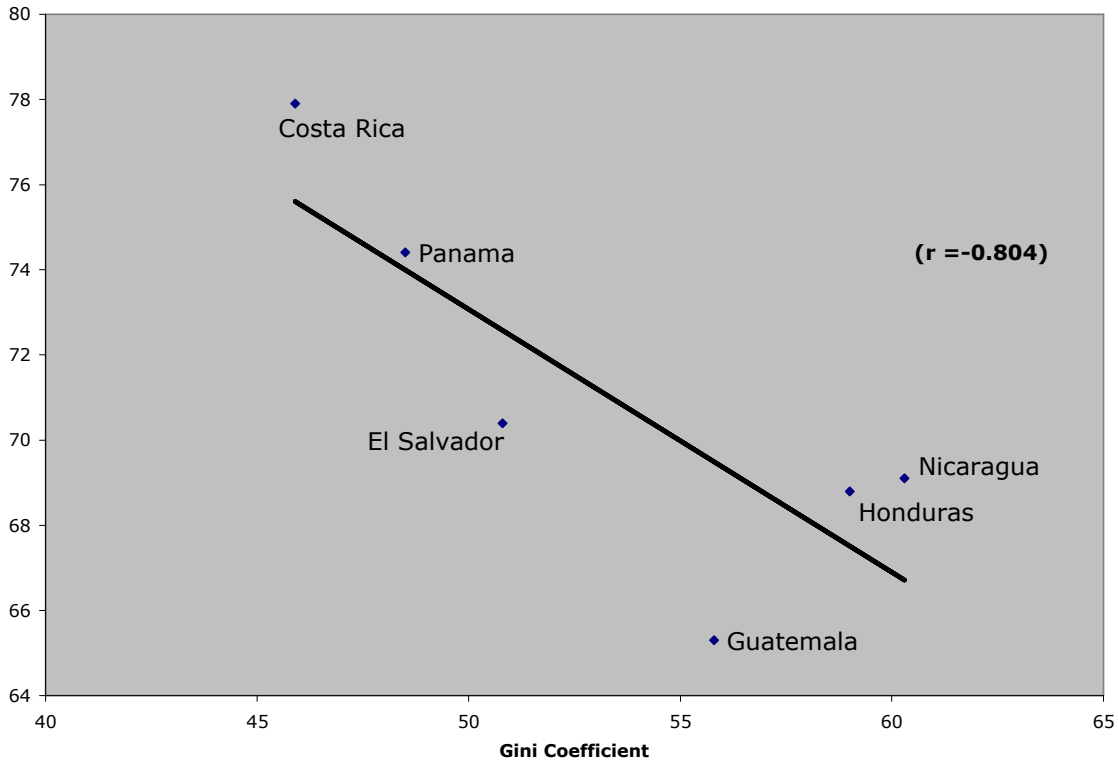
Figure 1: Under-5 mortality rate and GDP per capita in Tajikistan, Ivory Coast, Bulgaria and Brasil



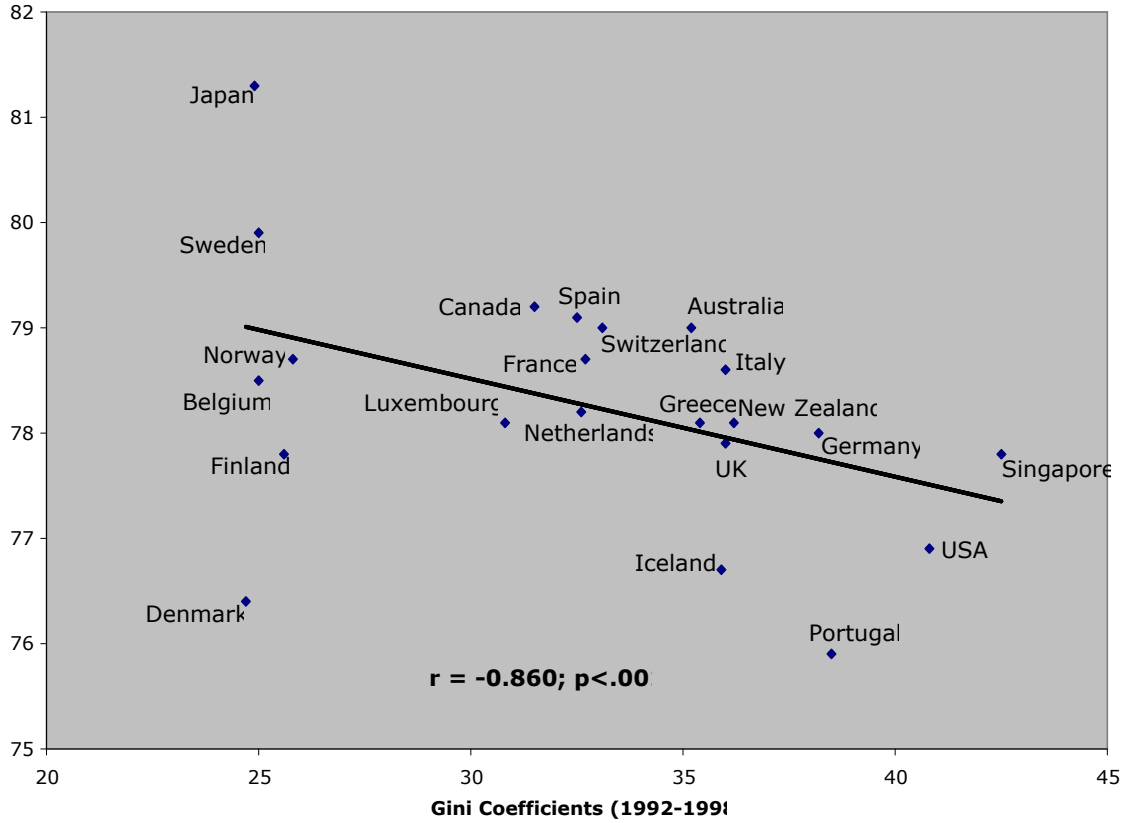
Source: Authors' elaboration of Human Development Indicators, 2003 (UNDP, 2003).

Figure 2: Income Inequality and Health across 6 countries of Central America.



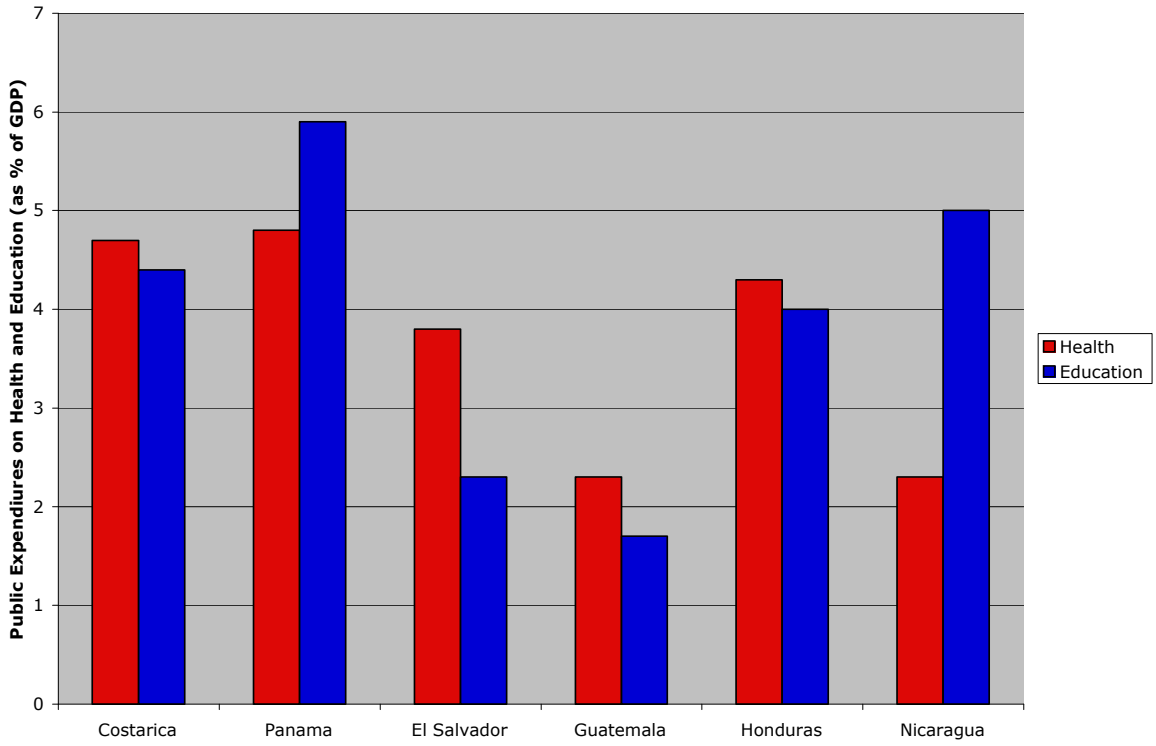
Source: De Vogli R. and Rescalli F. (2004) *Desigualdad Economica, Capital Social y Salud en America Central*. Paper presentation at the XII National Conference on Economic Sciences, March 3-6, 2004, Quetzaltenango (Guatemala).

Figure 4: Income inequality and life expectancy at birth among industrialized countries (n = 22).



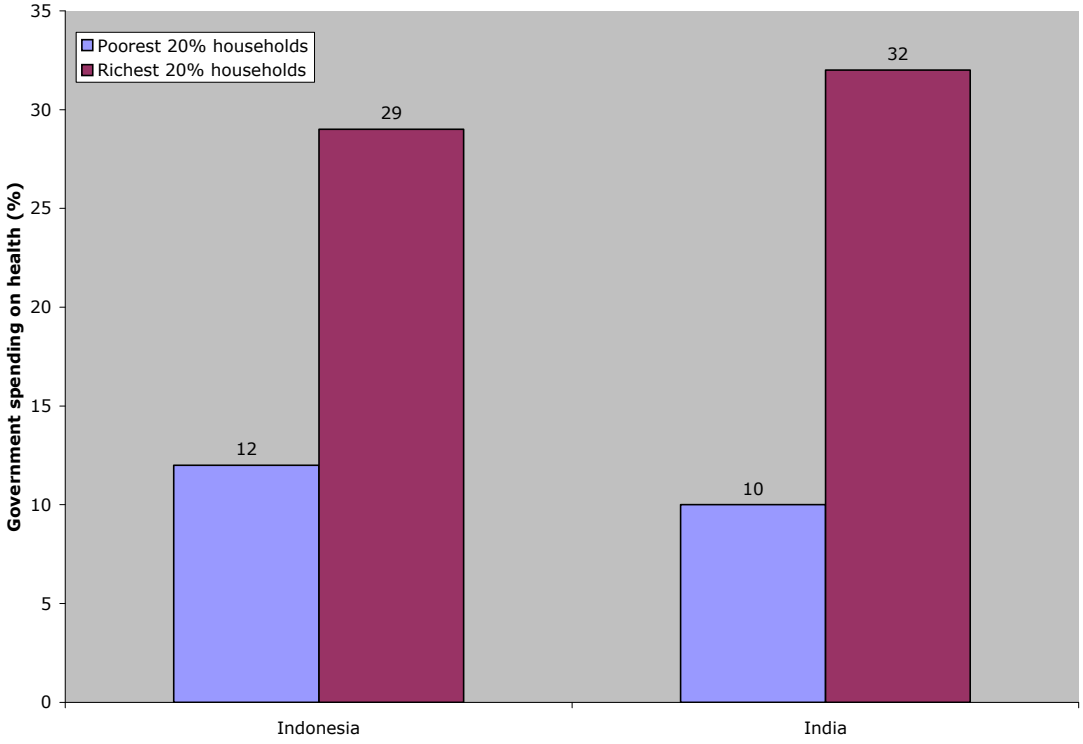
Source: De Vogli R et al. (2004) The relation between income inequality and life expectancy has not disappeared: evidence from Italy and 22 wealthy nations. Journal of Epidemiology and Community Health (in press).

Figure 4. Public Expenditure on Health and Education as percentage of Gross Domestic Product across 6 nations in Central America



Source: De Vogli R. and Rescalli F. (2004) *Desigualdad Economica, Capital Social y Salud en America Central*. Paper presentation at the XII National Conference on Economic Sciences, March 3-6, 2004, Quetzaltenango (Guatemala).

Figure 5. Government spending on health for the richest 20% households compared to the poorest 20% households in India and Indonesia



Source: Authors' elaboration of data from World Bank (1993) *World Development Report, 1993*. New York: Oxford University Press and Mahal, A. (2000) *Do the poor or the rich benefit more from government health services: the case of India*, in *Health/Nutrition/Population and Poverty Seminar Report*. 2000, The World Bank: Washington DC.