

Pearls of the Antilles? Public Health in Haiti and Cuba

Paul Farmer and Arachu Castro

Increasingly, the redefinition of health priorities has come to hold sway in Latin America, where assessing public health has become a treacherous exercise. This is not because it is impossible to evaluate the state of the region's health, nor is it because the admittedly enormous variation, both across and within nations, leads to analytic impasse. It is treacherous to comment on public health in Latin America because of the ideological minefields one has to traverse in order to do so.

In the past, such assessments may have been easier, and not because public health was then a more robust undertaking. Rather, there was formerly a consensus that the health of the poor was a cardinal indicator of how well the stewards of the public's well-being were doing their job. At this point, however, it is unclear even who the stewards of public health really are. Rudolph Virchow has been called the father of social medicine, and it was he who termed doctors "the natural attorneys of the poor." Doctors were supposed to defend the poor because the impact of their social condition—poverty—was embodied as preventable or treatable sickness. He also quantified this position in quite graphic modern-day epidemiological terms: "Medical statistics will be our standard of measurement; we will weigh life for life and see where the dead lie thicker, among the workers or among the privileged" (Rosen 1974:182; he quotes from Virchow's *Medicinische Reform*; see also Eisenberg 1984). In this chapter, we move from Virchow's insightful quantification to the critical examination of quantification of a different and even more troubling sort—the increasing weight of economic arguments in the AIDS pandemic and the unhealthy outcomes they engender in poor countries.

Cost-effectiveness and the health of the poor

As public health has become a larger enterprise, it has defined a turf of its own; as nation states have come into being in Latin America, they have defined national public-health agendas, increasingly with the assistance of experts from international institutions. The "welfare state" that we think of as

having been progressively built up, from the 1930s to the beginning of its decay in the 1980s, barely got a start in Latin America before debt, the cupidity of local strongmen, and the agenda-setting of First World economic advisers attempted to terminate it as a public responsibility. The health of the poor is now deemed less important than cost-containment of public health services, which too often calls for minimizing the drain on national budgets increasingly dedicated to the supposedly higher goals of debt service and privatization (see Kim, Millen, Irwin & Gershman 2000). Several reports in recent years have noted the literally deadly consequences of the shift in priorities from the epidemiology of disease to economic arguments that promote the non provision of services termed “not cost-effective,” without necessarily offering alternatives for those who need those services but are too poor to afford them (see Kim, Shakow, Castro, Vanderwerker & Farmer 2003). We have been reminded that “as with the economic well-being of individual households, good population health is a critical input into poverty reduction, economic growth, and long-term economic development at the scale of whole societies. This point is widely acknowledged by analysts and policy makers, but is greatly underestimated in its qualitative and quantitative significance, and in the investment allocations of many developing-country and donor governments” (WHO 2001b:21-22). Precisely these national and international investment allocations have been permeated by often misused cost-effectiveness arguments, which have contributed to long delays in the provision of comprehensive AIDS programs, including highly active antiretroviral therapy (HAART)—and, therefore, to increasing the magnitude of the HIV/AIDS pandemic.

Those struggling to promote the health of the poor are now in the defensive position of having to show that proposed interventions are both effective *and* inexpensive, regardless of gravity of the health problem in question. Aside local ministries of health, the largest financiers of public health in Latin America, except for Cuba, include the international financial institutions, such as the World Bank and, less directly, the International Monetary Fund (see case studies in Kim, Millen, Irwin & Gershman 2000). In some regards, this makes sense, given the undeniable association between economics and health (UNDP 1990; WHO 2001b; Castro and Farmer 2003b). But there is a dark side to the new accounting: such sources of funding for public health place us within a framework developed by economists working

within a paradigm in which market forces alone are expected to solve health and social problems—which is one of the ideological minefields. As efforts are made to determine whether or not an intervention is “cost-effective,” the destitute sick are often left out altogether. In the highly contested WHO’s *World Health Report 2000*, we read “cost-effectiveness by itself is relevant for achieving the best overall health, but not necessarily for the second health goal, that of reducing inequality” (WHO 2000a:55). But below, in the same page, an algorithm illustrates the “questions to ask in deciding what interventions to finance and provide.” For example, if an intervention is a public good but is considered not cost-effective, the algorithm points us to “do not provide.” If this intervention does not represent a public good, however defined, but has significant externalities, adequate demand, not a catastrophic cost, but the beneficiaries are poor and it is not cost-effective, we are again pointed to “do not provide” (WHO 2000a:55, adapted from Musgrove 1999). Are these economic arguments, promulgated by the maximum international health authority, curtailing the provision of comprehensive health care to the poor? ¹

As time has gone by, certain trends have become palpable within much of Latin America. Some have been favorable: vaccination and other interventions have lowered infant mortality. The Pan American Health Organization’s regional report, *Health in the Americas 2002*, highlights some of the improving health indices in the region (PAHO 2002). But even a cursory review of the *World Health Report 2002* reveals the wide gaps in health between countries in the region. Consider life expectancy, a standard assessment of a country’s health and overall attainment: in 2001, Cuba boasted a life expectancy of 76.9 years; Haiti’s populace, meanwhile, can expect to live only to age 50, down from 53 just one year earlier (WHO 2002:178-180). But in most of Latin America, we see that a shrinking commitment to public financing of health care and a push for its privatization have led to a widening gap in access to quality health care (López-Acuña 2000). These trends are registered even as the fruits of science become ever more readily translated into effective therapies. And that, in our view, is the central irony of public health in Latin America: national statistics continue to suggest improvement. But the poor are doing poorly. They are doing a bit better than in previous decades, but much less better than might be expected, if the fruits of science and technology were used wisely and equitably (see Castro and Farmer 2003a).

Since the 1980s, many reforms were introduced in Latin America into the financing of health systems, aiming to limit or reduce public spending, in order to address the requirements for fiscal adjustment – but also in search of mechanisms to compensate the losses of funds generated by the adverse macroeconomic conditions and the corruption and mismanagement of local and national governments. Much of the attention in terms of health financing was a shift to market-driven, managed care systems and increased dependency on user fees, leaving informal sector workers and the unemployed without adequate access to health care and bearing all the financial risk of becoming sick (Russell and Gilson 1997). These market inspired “innovations,” eagerly adopted by policy makers as part of health care reforms (Iriart, Merhy, Waitzkin 2001; Laurell 2001), have met with a groundswell of popular and political protest building against privatization and other recently introduced market reforms (Rylko-Bauer and Farmer 2002).² Since many of the health sector reforms occurred as part of broader macroeconomic reforms, most of the changes were introduced without any assessment of their potential impact on access to health care or utilization of any of the current guiding principles of health sector reform (PAHO, UNDP, and CARICOM 1999).

In this era of cost-containment of public spending and health systems reform, providing adequate health services for the destitute sick may prove to be a true challenge, especially since the advent of HIV/AIDS in the 1980s has been concomitant to the reduction of social spending throughout Latin America (Escobar 1995). With the transfer of the essential responsibilities of ministries of health to the private sector, many countries have documented a growing trend towards separating the functions of financing health care, covering health insurance, and delivering health services (PAHO 1996). The emergence of different public and private actors in health financing and service delivery, and greater demands for health care caused by emerging (such as HIV/AIDS or dengue) and persistent problems (such as tuberculosis and malaria) are presenting new challenges for health systems. The situation, however, is compounded by longstanding problems that include institutional inefficiency in the health sector, persisting inequities in coverage and access, as well as rising costs and poor quality of services (Barberia, Castro, Farmer, Farmer, Gusmão, Kim et al. 2002).

In attempting to address the HIV/AIDS pandemic, the region of Latin America and the Caribbean is facing a formidable challenge (Castro, Farmer, Kim, Levcovitz, López-Acuña, Mukherjee, et al. 2003). At this writing, 1.5 million are already living with HIV/AIDS in Central and South America and at least 420,000 in the Caribbean (UNAIDS 2002a). The Caribbean, with an adult HIV prevalence of 2.2 percent (UNAIDS 2001) has the second highest rate of HIV infection in the world (UNAIDS 2002a), second only to sub-Saharan Africa. Prevalence rates vary from country to country: in Haiti, adult prevalence of HIV/AIDS exceeds 6 percent, in the Dominican Republic it is 2.5, in Jamaica it is 1.2, while in Cuba the prevalence is less than 0.05 percent (UNAIDS 2002a). The associated state of Puerto Rico has one of the highest AIDS incidence rates in the United States (53.3 cases per 100,000) but has no data on prevalence of HIV (CDC 1997).

To date, the response of the affluent countries and their institutions—from aid agencies, non-governmental organizations, and the pharmaceutical industry—has been insufficient. The death toll and increasing HIV incidence in countries highly dependent on foreign aid are the most eloquent rebuke to contrary assessments. Until the first disbursements made by the Global Fund Against AIDS, Tuberculosis, and Malaria in 2003,³ the quasi-totality of AIDS assistance to the heavily burdened countries had consisted of the promotion of education and condom distribution to prevent HIV transmission. Many of those at greatest risk already know that HIV is a sexually transmitted pathogen and that condoms could prevent transmission: in Haiti, over 97 percent of the population knows of the existence of AIDS, and 62 percent of women and 81 percent of men know at least one way to prevent infection (Cayemittes, Placide, Barrère, Mariko & Sévère 2001). Their risk stems less from ignorance and more from the structural violence that millions of people endure in Latin America as a result of historic, political, and economic processes (see Farmer 1999; Farmer 2003a; Castro 2003).

Aid agencies have increasingly relied on economic evaluation analyses to allocate resources. Current economic evaluation approaches to public health include cost-benefit and cost-effectiveness analyses, both of which rely more on projections of the outcomes derived from investments in specific health interventions than on empirical data. Still, they inform budgeting and financial planning, help

assess the affordability of interventions, and help identify areas for improving efficiency of delivery of services and cost-savings (Gold, Siegel et al. 1996; Murray and Lopez 1996; Holtgrave 1998). Cost-benefit analyses measure the resources consumed by a particular intervention; only inputs are included in the equation. Most economic evaluations of health programs have relied on cost-effectiveness analyses (Holtgrave, Qualls et al. 1996), which do not only take into account the inputs, but go a step further by including health outcomes in the mathematical equation, measured in natural units such as “lives saved” or “infections averted.” Cost-effectiveness allows for comparisons between interventions, as they estimate the cost per unit of outcome produced. A specific type of cost-effectiveness analysis is cost-utility analysis, in which outcomes are measured in “generic units” such as disability-adjusted life years saved (DALYs) (Murray and Lopez 1996) or quality-adjusted life years (QALYs) gained; the goal is to choose the outcome which produces the “most health” per dollar spent. This type of analysis has been deemed most appropriate when an intervention has the potential to affect both the quality and quantity of life—when it influences both morbidity and mortality.

There are a fair number of papers asking and answering with confidence the question, “is it cost-effective to treat AIDS in poor countries?” These cost-effectiveness exercises, which usually conclude that to treat HIV disease in settings of great poverty is less cost-effective than preventing it, are based on scant data from the most affected continent. Our leading medical journals are devoid of reports of treatment projects in Africa but do contain arguments pitting prevention against treatment: “Data on the cost-effectiveness of HIV prevention in sub-Saharan Africa and on highly active antiretroviral therapy indicate that prevention is at least 28 times more cost effective than HAART” (Marseille, Hofmann, Kahn 2002:1851). Another self-proclaimed “systematic review of the evidence” concludes that the “most cost-effective interventions are for prevention of HIV/AIDS and treatment of tuberculosis, whereas HAART for adults, and home based care organised from health facilities, are the least cost effective” (Creese, Floyd, Alban, Guinness 2002). Yet these conclusions were based not on real experience but rather on other cost-effectiveness projections. Finally, what are we to make of papers arguing that one intervention (prevention among commercial sex workers) is far more cost-effective than another (prevention of

mother-to-child transmission or treatment) when such analyses are written as if Thailand and Tanzania, say, are experiencing comparable epidemics? (Jha, Nagelkerke, Ngugi, et al. 2001).

We argue that, with its many inherent underlying assumptions, the usefulness of economic analyses as a tool for policymakers and funders has been grossly overstated—creating another ideological minefield. By accepting that resources are limited to those presently available—one of the fundamental assumptions of economics—and by advocating the utilization of decision tools designed to measure specific interventions rather than comprehensive assessments of an entire health program, these types of approaches have curtailed potential investment in HIV/AIDS prevention and care. Few economic evaluations have challenged current assumptions about wealth misdistribution (see Attaran and Sachs 2001). Even fewer have sought to move beyond a narrow definition of outcomes to reformulate the mathematical equations and include such outcomes as the lower risk of transmission (Blower and Farmer 2003) or the social benefits derived from providing people living with HIV/AIDS with appropriate treatment—all of which are benefits with an impact at the household, community, and national level such as resuming work and care of children and relatives.

The omission of these social variables should not be overlooked given that the HIV/AIDS pandemic is a threat to economic development. A study conducted by the United Nations Development Program found that if the rising incidence of the disease is left unchecked, it will lead to a fall in gross domestic product and a decline in the level of domestic savings (Nicholls, McLean, Theodore, Henry, Camara et al. 2001). But it wasn't until July 2003 that the World Bank warned that "HIV/AIDS causes far greater long-term damage to national economies than *previously assumed*, for by killing mostly young adults, the disease is robbing the children of AIDS victims of one or both parents to love, raise and educate them, and so undermines the basis of economic growth over the long haul" (World Bank 2003a, in reference to Bell, Devarajan and Gersbach 2003; italics are ours). Furthermore, HIV/AIDS in the Americas could result in the creation of a "missing generation," as has already occurred in parts of sub-Saharan Africa; there, in some areas, much of the middle or working age population has died or is about to die from the disease, leaving children (often orphans) and the elderly as survivors. Without the working

age population there are fewer teachers, health workers, farmers, factory workers and others to propel development of the most affected countries. We believe that, if the goal is to improve the public's health, the use of cost-effectiveness analysis has room for improvement. If social variables were taken into account in the cost-effectiveness analysis of health interventions, providing comprehensive AIDS treatment would be more "cost-effective" than what has been published in the medical and public health literature.

Other studies have pointed out a number of problems with the use of economic evaluation as a decision-making tool. These problems include the lack of reliable country-specific data, the lack of consistency in the methods used, the limitation in the extrapolation of results from one setting to another, and the inherent trade-off between efficiency and equity in resource allocation (Kumaranayake and Watts 2001; Kaplan and Merson 2002; Brock 2003). For example, most cost-effectiveness calculations have not been recalculated as the cost of antiretrovirals—the major culprit in the unaffordability of comprehensive AIDS programs—began to drop (Farmer, Léandre, Mukherjee, Gupta, Tarter and Kim 2001). All these combined have resulted in the failure to invest in comprehensive AIDS programs in a timely fashion.

Health in the Pearls of the Antilles

Neighboring islands, Cuba and Haiti both claim to be "the Pearl of the Antilles," owing to the wealth they procured, under colonial rule, to Spain and France respectively. As Cuba's José Martí noted over a century ago, "Haiti is a land as peculiar as notable, and in its roots and constitution so different from Cuba, that only pure ignorance can find between them a reason for comparison, or argue with one with respect to the other" (Martí 1894). It is with fascination and a bit of dread that we turned to comparing public health and HIV/AIDS in these two countries, and the impact of the logic of cost-effectiveness in such diverse settings. We also explore the ideologies underpinning not only decisions taken locally, within Haiti and Cuba, but also those underpinning external commentaries on these two countries and the health of their populations. The impact of neoliberal economic ideology on health policy

is discerned in a number of rationing exercises, including those labeling certain interventions as not “cost-effective” and others as not “sustainable” or “appropriate” technology.

Before the Haitian slave revolt of 1791, Haiti was Cuba’s major competitor in the world sugar market. The success of the Haitian plantation-based sugar economy was dependent on fertile farmland, large French investments, and the abduction and importation of hundreds of thousands of slaves. The slave revolt led to independence in 1804 and secured freedom from an oppressive colonial system (Farmer 1994). But tensions between elite Haitians who favored the production of commodities for the international market and peasants who preferred to grow their own piece of land reintroduced the inequalities of the colonial system (Mintz 1985b). In the meantime, the breakdown of the sugar production in Haiti and in other French and British Caribbean colonies contributed to rapid expansion of Cuba’s market share, making it the world’s leading producer (Ferrer 2000). In 1868, Cuban landowners, both frustrated by the repatriation of profits from the booming sugar industry to Spain, and fearing the violence and economic devastation witnessed in the Haitian slave revolt, began to see the potential benefits of abolishing slavery to unite Cuban *criollos* with slaves in a fight for independence (Portuondo and Pichardo 1974). Cuba managed to shift its source of labor from slavery to proletarian work (Mintz 1985a), obtain independence in 1898, and maintain its position as a leader in the world sugar market. Since 1902 in Cuba and 1915 in Haiti, both countries were occupied by the United States until 1934, after which they remained several decades under the hegemony of their Northern neighbor (Domínguez 1978). The search for national sovereignty was epitomized in Cuba by the 1959 revolution, two years after Haiti had started to endure the bloody rule of the Duvaliers.

Over the past four decades, their paths towards development have diverged strikingly; this has been true of health care as well as economic and other social policies. While Cuba promoted the social and economic rights of its citizens, in particular the right to health care and education, Haiti succumbed to desperately increased inequalities and foreign debt. After a short period of democratic rule in Haiti in 1991, yet another coup d’état worsened living conditions and sunk the country’s already feeble economy. Although the international community promised a total estimated US\$ 800 million to the restored

democracy in 1994, most of this foreign aid has not reached Haiti's shores. In 2001, international financial institutions and major donor countries initiated a bilateral and multilateral aid embargo against the Government of Haiti (Farmer 2003b; Farmer and Castro 2003). The deteriorating effect of the aid embargo on the health of Haiti's population and on the crumbling of its health system has been documented (Farmer, Smith-Fawzi and Nevil 2003).

Haiti has the highest maternal mortality in the Americas; Cuba's is among the lowest. Haiti has the highest infant mortality rate in the Americas; Cuba, the lowest. The leading killers of young adults in Haiti are HIV and tuberculosis; Cuba has the lowest prevalence of HIV in the Americas, and remarkably little tuberculosis (PAHO 2002a). The Human Development Index 2003 gave Haiti the rank 150 out of 175 countries; Cuba ranked 52 (UNDP 2003a). Haiti is by all conventional criteria the poorest country in the Americas and one of the poorest in the world: per capita gross domestic product (GDP) was US\$460 in 2001 (UNDP 2003a); 67% of the population lives in poverty (PAHO 2002a); unemployment exceeds 70%; and fewer than one in 50 Haitians have regular employment (World Bank 1997). Political violence, among other afflictions of poverty, is endemic. Around 40 percent of the Haitian population has no access to health care; approximately 20 percent of the population uses the public sector, 20 percent the mixed public-private sector, and 20 percent the private sector (based on PAHO 2002). In Cuba, in contrast, GDP per capita in 2000 was estimated at \$1,475 (PAHO 2002:198); unemployment in 1998 at 7% (UNDP 2000); and access to public health care at 100% (PAHO 2002).

Health conditions in Haiti are among the worst in the world. All of Haiti's public health indices are poor, and it is not coincidental that Haiti has the highest incidence of HIV in the Americas. The history of Haiti's impoverishment—how it was generated and sustained—is important, though often forgotten (for an overview of Haiti's turbulent history, see Farmer 1994). The impact of poverty on public health is evident at any health center. Patients are sicker; they fall ill with tuberculosis, hypertension, malaria, dysentery, complications of HIV infection, all typically in an advanced state. The children are malnourished, and many of them will have severe protein-calorie malnutrition as well as an infection.

Some will have typhoid, measles, tetanus, or diphtheria.⁴ Some will have surgical emergencies: abscesses, infections in the chest cavity, fractures, gunshot and machete wounds.

As elsewhere in the world, infant mortality rates in Haiti fell fairly slowly but steadily over the course of the past few decades, but more recently some of these trends have been reversed and infant mortality now stands at 80.3 per 1,000 live births. Infant mortality in Haiti has actually risen since 1996, when it was 73.8 per 1,000 live births; PAHO attributes this rise to increasing poverty, the deterioration of the health system, and HIV/AIDS (PAHO 2002:338). Juvenile mortality rates, similarly, are the worst in the region, in large part because of malnutrition, low vaccination rates, and other by-blows of poverty. Maternal mortality rates are appalling. Even the low-end estimates (523 per 100,000 live births) are the worst in Latin America (PAHO 2002), and the only community-based survey, conducted around the town of Jacmel in southern Haiti in the 1980s, pegged the figure at 1,400 per 100,000 live births (Jean-Louis 1989). During that same period, “official” statistics reported much lower rates for Haiti, ranging from a maternal mortality rate of between 230-340 for the years 1980-1987 (UNDP 1990) to a higher estimate in the years that followed, 1987-1992, of 600 maternal deaths per 100,000 live births (World Bank 1994). As for food and water, again the story is grim. According to the World Bank, Haiti is the third hungriest country in the world (FAO 2000). The water story is even worse: in a recently developed “water poverty index,” Haiti was ranked in 147th place out of 147 countries surveyed (Sullivan, Meigh, Fediw 2002).

AIDS is a serious problem in Haiti. With an estimated 250,000 people living with HIV/AIDS (Global Fund 2002b), Haiti is perhaps the only country in the Americas in which HIV/AIDS stands as the number-one cause of all adult deaths (PAHO 2002a). Haiti was the first country after the United States to report AIDS cases. In the late 1970s, a number of previously healthy young Haitians presented with signs of immunosuppression, such as Kaposi’s sarcoma and unusual opportunistic infections. In this Haitian “outbreak”, 74 % of the men with opportunistic infections lived in the urban area of Port-au-Prince, of which 33% lived in one particular suburb, Carrefour, which was the centre for commercial sex workers (Pape and Liautaud 1983; Pape 2000). Dispelling erroneous beliefs that Haitians had spread HIV/AIDS from Africa to the United States, researchers discovered that none of these men had ever been to Africa,

but had either traveled to the United States or had contact with American men. Amid a great deal of controversy over the origin of HIV/AIDS in the Americas, researchers now believe that HIV/AIDS spread to Haiti through contact with North Americans, and not vice-versa. Male commercial sex workers, catering to a largely North American clientele, played a large role in the spread of HIV/AIDS within Haiti and the rest of the Caribbean region (Farmer 1992).

The Haitian HIV/AIDS epidemic has been described as “generalized,” since it affects women as much as or more than men (Pape 2000); is not confined to any clearly bounded groups; and has spread from urban areas to the farthest reaches of rural Haiti, such as the villages in which we work in the Central Plateau. HIV kills 30,000 Haitians each year, with an estimated cumulative number of 196,000 deaths, and 200,000 orphans (UNAIDS 2002b; Global Fund 2002a). HIV/AIDS has also aggravated an already severe tuberculosis epidemic. In one careful survey conducted in an urban slum in Port-au-Prince, fully 15% of all adults were found to be infected with HIV (Desormeaux, Johnson, Coberly et al. 1996; see also Farmer 1999). Stunningly, the rate of active and thus potentially infectious tuberculosis among these HIV-positive slum dwellers was 5,770 per 100,000 population. For Cuba, in 1999, the rate of active tuberculosis was 11 per 100,000 population (UNDP 2003b). In Haiti, between 15 to 45 percent of hospitalized patients in urban areas are infected with HIV; in TB sanatoria, the proportion is more than 50 percent (Pape 2000). It is estimated that around 1,000 people with AIDS in Haiti are on HAART, of which 400 are treated in Port-au-Prince and 600 in the Central Plateau (see Global Fund 2003).

In 1989, soon after AIDS was declared a priority disease in Haiti, the National Commission to Fight AIDS was appointed to coordinate efforts to fight HIV/AIDS, while the AIDS National Bureau was created with full-time personnel from the Ministry of Health (Global Fund 2002a). This Bureau was operational until the coup d'état of 1991, when all foreign aid stopped (Pape 2000). While in 1991 the allocation of the Ministry of Health was US\$ 6 million, after the resumption of foreign aid between the two embargoes the budget increased considerably, going up to US\$ 57 million in 1999—which represents about 10.5% of the public budget and between 0.8 and 1 percent of the GDP. The majority of the budget

of the Ministry of Health depended largely on foreign aid—which was 69 percent in 1996-97 (PAHO 2002).

In 1998, the Haitian Ministry of Health recognized health as a fundamental human right, while acknowledging the difficulties to meet these goals due to scarce human and financial resources (PAHO 2002). None withstanding the constrains, the AIDS National Bureau was reorganized in 2001, when the President of Haiti launched the five-year National Strategic Plan exercise (Global Fund 2002a). The year earlier, the Bank of Haiti had estimated that the country produced the same amount of goods and services that it did in 1980, while the population had increased by 75% over the same period (Banque de la République d'Haïti 2000). With a devolving economy, an international aid embargo, and the majority of international public health experts claiming that comprehensive AIDS care was unsustainable and not cost-effective in resource-poor settings, what was the Government of Haiti left to do? Was the existing political will enough to bring in external resources to fight HIV/AIDS?

Seeing the rest of Latin America through Haitian eyes is an instructive exercise. As in Haiti, the poor felt the impact of adverse trends before any others; their health suffered, often grievously. Haiti is often compared, and unfavorably, to the Dominican Republic. Neither country has much to boast about in terms of public health. The country sited on the other two-thirds of the island it shares with Haiti has poor health indices, if nowhere near as bad as those in Haiti. In 1999-2000, two thirds of Haitians lived below the national poverty line; meanwhile, on the eastern two-thirds of the island (1998 data), 25.8% of Dominicans lived in poverty (PAHO 2002a).

But what about Haiti's second-closest neighbor? One could not find a starker contrast within Latin America. There are some similarities in initial conditions: less than 100 miles apart, the two islands have identical climates. And like Haiti, Cuba has known major economic disruption in the past decade. In 1991, after loosing 85 percent of its foreign trade as a result of the dismantling of the former Soviet Union (ECLAC 1997, ECLAC 2001), Cuba entered an economic crisis, officially named the Special Period in the Time of Peace. The dependency on the Soviet Union had provided Cuba with a buffer against the U.S. economic blockade of the island that began in 1961. Although Cuba benefited greatly from its economic

ties with the Soviet Union, this dependency proved disastrous starting in 1989: no longer able to import petroleum products, foodstuffs, or medicines and distribute them at heavily subsidized prices, Cuba's economy spiraled into crisis. In addition, in 1992 the US Congress passed the Cuban Democracy Act, which restricts the sale of food, medicines, raw materials, and medical equipment to Cuba, and penalizes third countries that deliver drugs and other goods to this Caribbean island. The loss of foreign currency and the newly imposed restrictions resulted in relevant shortages of drugs and medical equipment (Castro, Togoeres, Barberia 2003).⁵

This was as severe a contraction as that faced by any Latin American economy. So what about the impact of such seismic rumblings on the health of the Cuban poor? Was the story the same as in Haiti, where economic turmoil led inevitably to immediate and adverse impacts on the health of the most exposed part of the population? The short answer: no. In fact, although much is made of the harm done by the U.S. embargo to Cuban medicine, the Cuban people remain healthy. This is due in large part to the structure of Cuba's economic, social, and public health systems (see Feinsilver 1993; Chomsky 2000; Barberia and Castro 2002): "Imagine a health care system that is universal, comprehensive, integrates alternative therapies, and provides care at no cost to the patient. Imagine that the practice of medicine does not involve a financial transaction between doctor and patient, hospital and patient, or clinic and patient. Imagine that medical training is free and that health care is not only considered a right, but a primary means of fostering the health and happiness of the community as a whole, as well as the individuals within it. This is medicine in Cuba" (Beinfeld 2001). State control of the economy has meant that the crisis, instead of hitting the poorest hardest, has been distributed far more equitably— something that would have been impossible in what others would consider a "model," and therefore capitalist, developing country economy.

Indicators such as infant mortality have actually *continued* to decline: in 1985 infant mortality was 15 per 1,000 live births, in 1990 it was 10.7, in 1995 it was 9.4, in 2000 it was 7.2 (MINSAP 2001). Data from the World Bank record Cuba's infant mortality as 6 per 1,000 live births, far below the 27 per 1,000 live births registered for Latin America and the Caribbean (World Bank 2003b). In fact, there was

little impact on overall morbidity and mortality trends during the Special Period, except for a rise in infectious diseases that had been deemed under control, such as tuberculosis (Marrero, Caminero, Rodríguez, Billo 2000).⁶ One reason for this—and there are no doubt several—is that health spending was increased during the economic crisis in order to shield the vulnerable from adverse health outcomes. Between 1990 and 1997, health spending rose in local currency in both absolute and relative terms, growing from 6.6 to 10.9 percent of federal outlays (Ministerio de Finanzas y Precios 1998). Spending in Cuban pesos increased despite the fact that medicines and other supplies cost significantly more than they had before the loss of Cuba's subsidized trade with the Soviet-bloc (while those manufactured only in the U.S. are simply unavailable, such as certain cancer treatments or replacement parts for medical devices)—the Cuban Ministry of Foreign Trade estimated \$45 million per year in excess health care costs due to the embargo (Ministerio de Comercio Exterior 1994).

Despite high prevalence rates of HIV/AIDS in the Caribbean, as of the end of 2002, Cuba had registered 4,517 HIV-positive cases since the beginning of the pandemic—of the 3,413 alive, 928 had been diagnosed with AIDS at that date (Pérez-Ávila 2003)—and boasts a low HIV-prevalence rate lower than 0.05% (UNAIDS 2002a). In 1983, although the etiology of the newly emerged disease was still unknown, Cuba created a National AIDS Commission, which recommended the costly destruction of its imported blood products and the prohibition to import new blood products. The National AIDS Commission, building on the already well-developed primary health care system, created an epidemiological surveillance system in each hospital to detect clinical manifestations of AIDS (Pérez-Ávila, Peña-Torres, Joanes-Fiol, Lantero-Abreu, Arazoza-Rodríguez, 1996).

At the end of 1985, the first Cuban HIV+ case was diagnosed at the Institute of Tropical Medicine (IPK) in Havana. The patient had served as *internacionalista* in Mozambique until 1977; his wife also tested positive. When the IPK reported these first two cases to the Viceminister of Epidemiology, the Cuban government assigned US\$ 2 million to import 34 ELISA kits that would allow conducting 750,000 HIV tests—and average of 400,000 blood donations per year (Pérez-Ávila 2003, personal communication). The imported ELISA kits were distributed throughout all the blood banks and

centers for hygiene and epidemiology of the country; by 1986, all blood donations were screened for HIV.⁷

In 1986, sexual contacts of people diagnosed with HIV were enrolled in the Partner Notification Program and tested for HIV every 3 months for a period of one year after the last sexual contact with the HIV+ patient (Hsieh, Chen, Lee, de Arazoza, 2001).⁸ While from 1986 until 1993 Cuba relied on controversial HIV sanatoria⁹ to contain the epidemic, this strategy has shifted to a combination of in-patient and ambulatory care (Castro, Farmer, Barberia 2002). Cuba is one of the few developing countries to guarantee comprehensive health care and treatment for all people living with HIV/AIDS. Since 1997, pregnant women who have HIV receive AZT to prevent mother-to-child transmission of the virus and breastmilk substitutes (González-Núñez, Díaz-Jidy, Pérez-Ávila 2000). Since 2001, all Cuban HIV+ patients who meet certain clinical criteria are eligible for HAART. As of August 2003, there are 1,072 AIDS patients enrolled (Pérez-Ávila 2003, personal communication). Their treatment consists of three domestically-produced generic antiretrovirals, which include several reverse transcriptase inhibitors and one protease inhibitor.¹⁰ Since 2001, there has been a decrease in the number of deaths from AIDS and in the incidence of opportunistic infections related to HIV/AIDS. This has resulted in a drop of the number of patients hospitalized at the IPK—from 90 per month in 2000 to 12 per month in 2001—even though there is an increased incidence of HIV (Pérez-Ávila 2002, personal communication).

Life and death and the logic of cost-effectiveness

What conclusions can be drawn from these comparisons? Aviva Chomsky minces no words in her commentary on Cuba's public health system and the "false assumptions" of economics and health it exposes: "Where mainstream studies argue that 'development' in standard terms—that is, an increasing GNP—is a prerequisite for improving the health status of a country's population, the Cuban example suggests that distribution of resources within a country is more important than the overall GNP in affecting health outcomes. Where mainstream approaches argue that *any* of the economic choices available to poor countries will require sacrifices in the area of health care for the poor, the Cuban

example shows that in fact there are economic options that distribute the sacrifices differently” (Chomsky 2000:332).¹¹ Which other country, other than Cuba, invested US\$ 2 million to contain the spread of HIV, when only two cases had been diagnosed? Is this measure a rebuke to the prioritization of cost-effectiveness to set public health priorities? Instead, we are asked to show that comprehensive AIDS care is “sustainable” in the hardest-hit communities, and that we demonstrate that they are “cost-effective” and a “ranking priority” in the face of other competing demands.

Some health economists suggest that a life-saving intervention that costs between two to three times the gross national product (GNP) per year-of-life saved represents a reasonable expenditure (Garber 2000). Even by this crude calculus, a three-drug HAART regimen at generic prices would prove a sound investment by any criteria, even in Haiti, as long as drugs are used correctly. Still, when Partners In Health sought funding for expansion of a pilot project in rural Haiti (Farmer, Léandre, Mukherjee, Claude, Nevil, Smith-Fawzi, et al. 2001) from a number of international agencies charged with responding to AIDS, all declined to support this effort on the grounds that the drug costs were too high to meet so-called sustainability criteria, given the profound poverty of Haiti. Pharmaceutical companies were approached for contributions or concessional prices, but referred Partners In Health back to the same international agencies that had already termed the project unsustainable. Ironically, a survey conducted by the Pan American Health Organization in 2001 showed that some antiretrovirals were more expensive in Haiti than in the United States (PAHO 2002b).¹²

We argue that it is not the treatment of the destitute sick that is unsustainable, but rather the ever-widening global outcome gap that prohibits the fruits of science from reaching those most in need of them. The destitute sick remind us that sacrosanct market mechanisms will not serve the interests of global health equity.¹³ It is difficult to support the assertion, widespread in international financial institutions, that the neoliberal economic policies now in favor will ever serve the interests of those living with HIV. Market utilitarianism is a strange beast, since it seems to permit all sorts of inefficiencies as long as they benefit the right people—namely, the privileged. But if the goal is to heal or to ease the suffering of the poor, there are enormous obstacles in the way of financing what was once felt to be a

public good (see Smith, Beaglehole, Woodward, Drager 2003). We wonder if the neoliberal agenda of the international financial institutions might have been driving up HIV risks while these institutions slap the hands of those who dare to treat the poor (Lurie, Hintzen, Lowe 1995). As an example, on June 28, 2001, the World Bank approved \$155 million to support programs to fight HIV/AIDS in the Caribbean.

Although acknowledging that “the Dominican Republic and Haiti together account for 85 percent of the total number of HIV/AIDS cases in the Caribbean,” Haiti was not included in this lending program (World Bank 2001). How can we envision an effective strategy against HIV when the rules of the game continue to be set by donor countries and their political and economic interests and institutions?

Although the ideological underpinnings of the various approaches to public health are the subject of medical anthropological inquiry, results, as manifest in morbidity and mortality rates, need to remain at the core of such analyses. Of course, the major debate in health and social policies is about what outcomes should be perceived as “of interest.” For economists, such matters as GNP and external debt are key indices (which are ideologically freighted subjects in and of themselves). For education experts, it’s literacy rates. The human rights community, interestingly, almost always narrows its focus to privilege rights of expression and representation and to exclude social and economic rights— an omission that should trouble physicians, who need supplies of tangible goods, the very tools of their trade, before they can go to work (Farmer 2003a). Unless the Latin American poor are accorded some right to health care, water, food, and education, their rights will be violated in precisely the ways manifest in Haiti: their lives will be short, desperate and unfree.

And so we return, as always, to the health of the poor as the most telling social-policy outcome. Even as national economies and stock markets boom, the health of the Latin American poor remains abysmal by both absolute and relative criteria. The shiny towers of wealthy Latin American neighborhoods and dismal health statistics are of course related, since the privatization of health care occurs at the same time, and as part of the same policy environment, as do massive transfers of public wealth to private coffers (Kim, Millen, Irwin, & Gershman, 2000).

Because we believe that watching the health of the poor is the best way to assess public health in Latin America, we argue that it is wise to avoid confident claims regarding “cost-effectiveness” and “appropriate technology.” Cuba has introduced sophisticated assays of viral load costing a small fraction of test costs in the USA; it has manufactured many antiretrovirals locally. “It is no accident that the country that disproves the assumptions behind the argument, Cuba, is virtually always left out of mainstream analyses that attempt to defend neoliberal reforms” (Chomsky 2000:332). Actually, developments in Cuba lead us to a consideration of the economics of intervening to slow the spread of HIV and to diminish the death toll.

In Haiti, where HIV is the reason for plummeting life expectancies and for increasing numbers of orphans, we discern fairly overt obstructionism to the use of HAART. Leaving aside all moral arguments, any economic logic that justifies as acceptable the orphaning of children is unlikely to be sound, since the cost to society, though difficult to tabulate, is far higher than the cost of prolonging parents’ lives so that they can raise their own children. Furthermore, AIDS treatment causes a dramatic drop not only in mortality (Marins, Jamal, Chen, Barros, Hudes, Barbosa, et al. 2003), but also in the number of opportunistic infections and consequent number of admissions to hospital (Gebo, Chaisson, Folkemer, Bartlett, Moore 1999). HAART has already been declared cost-effective in Europe, North America, and even Brazil, where HIV has become, for many, a chronic infection (Freedberg, Losina, Weinstein, et al. 2000).

We keep hearing that we live in “a time of limited resources.” But how often do anthropologists, physicians, or public-health specialists challenge this slogan? The wealth of the world has not dried up, it has simply become unavailable to those who need it most. By questioning these unfounded economic assumptions, medical anthropologists can contribute to rethink long-standing public health paradigms that curtail access to health care for the poor. Alas, ethnographic inquiry is not often regarded, within public health, as a robust source of information. But the fetishization of numbers means that cost-effectiveness analysis holds sway among policy makers even when it is not underpinned by experience or empiric research.

What is to be done if we want to take stock of the health of Latin America's poor, and act purposefully? Of course, we need resources, and to be quite honest, resources should not be the problem. In this time of record profits for many industries—especially the research-based pharmaceutical industry—and dazzling individual fortunes, is it unthinkable that we should spread the wealth? But surely there is some way to redirect some part of the profit stream to take care of the destitute sick, right now? Otherwise, doctors and public health experts will stand by, helpless, watching resources flow— along the gradient established for them by our policies, our choices, and our blind spots— to become ever more narrowly concentrated in the hands of a few. If the health of the poor is the yardstick by which our public-health efforts in Latin America are judged, we or our descendants will have a lot of explaining to do when history sits to consider our case.

Acknowledgements

We are grateful to Jen Singler and Theresa Liu for their research assistantship, and to Lorena Barberia for our fruitful and ongoing discussions on the Cuban economy. Jorge Pérez-Ávila was invaluable, as always, in sharing his knowledge on the Cuban health system and its National AIDS Program. The Ford Foundation, through a grant made to the David Rockefeller Center for Latin American Studies at Harvard University in January 2003, helped us initiate our broader study on resource allocation practices for HIV/AIDS in the Caribbean, in collaboration with colleagues at the Pan American Health Organization.

Notes

¹ It is worth noting that, on a more positive tone, in a special session of the United Nations General Assembly on September 22, 2003, the World Health Organization declared a 'treatment state of emergency' for the AIDS pandemic, putting forth an ambitious and necessary plan to provide HAART to 3 million people in poor countries by 2005.

² It has been argued that as the United States market has become saturated, health care corporations have turned their attention to developing countries where they are exporting managed care programs that are coming under increasing scrutiny in the United States (Waitzkin and Iriart 2001).

³ Launched in January 2002, the Global Fund has disbursed USD 1.5 billion in grants to 160 programs in 85 countries in its first and second round of grants. The Global Fund was originally called for by United Nations Secretary General Kofi Annan and authorized at the G8 summit in Genoa in July 2001.

Regrettably, the Global Fund is facing a budget shortfall of US \$ 1.6 billion to meet the anticipated need in the third round of grants in October 2003 (Fund the Fund 2003).

⁴ Polio, announced eradicated from the Americas in 1994 (CDC 1994), resurfaced on the island in 2000 (CDC 2000). This unexpected resurgence occurred because of a sharp decline in vaccination rates under military rule. Haiti's self-appointed leaders had scant interest, it would seem, in public health. National vaccination rates for measles and polio reached their lowest point ever, with one PAHO survey suggesting that, in 1993, only 30% of Haitian children had been fully vaccinated for measles, polio, mumps, and rubella (PAHO 1993). It was only a matter of time— in this case, a few months to a few years— before these diseases came back. The measles epidemics came quickly, as we documented in central Haiti (Farmer 1996). But even polio, deemed vanquished forever, could and did return. The strain of polio that spread was actually derived from a vaccine: but a strain fully capable of causing paralysis and death and able to spread only because so few children had been vaccinated during the early nineties (Kew, Morris-Glasgow, Landaverde et al. 2002).

⁵ But it also led to the growth of the local pharmaceutical industry, which by the mid-1990s was bringing Cuba some 100 million dollars a year in export earnings. In 2003, nearly 80 percent of the more than 800 essential medicines employed in Cuba are locally manufactured in 12 of the local factories. Nationally produced medicines are sold at heavily subsidized prices in the government network of neighborhood pharmacies (Castro, Togores, Barberia 2003).

⁶ In 1998, Cuba's tuberculosis case notification rate was 11.7 per 100,000 population (although it was 3.8 in 1992 and had been steadily declining in the 1980s, averaging 6.9 during the decade, an incidence in fact lower than that reported for the U.S.). The rates, however, are still extremely low compared to other low-income countries, where between 45% and 59% of deaths are due to infectious disease (Gwatkin and Guillot 2000; WHO 1999).

⁷ A year later, Cuba manufactured its own HIV serologic test and, in 1988, a Cuban Western blot technique was available (Pérez-Ávila, Peña-Torres, Joanes-Fiol, Lantero-Abreu, Arazoza-Rodríguez 1996).

⁸ The screening progressively expanded to include, since 1987, specified risk groups: blood donors; pregnant women; adult in-patients; patients diagnosed with sexually transmitted infections; prisoners; army recruits; and those who have traveled abroad since 1975 or who have frequent contact with foreigners, among others.

⁹ The first AIDS sanatorium, in Santiago de la Vegas (near Havana) was opened on April 30, 1986.

¹⁰ Following the model of government production in countries such as Brazil, certain antiretrovirals (zidovudine (AZT), didanosine (DDI), lamivudine (3TC), stavudine (D4T), dioxicitidine (DDC), and indinavir (IDV) to treat national cases of AIDS are produced with imported raw materials at Novatec, a Cuban state-owned pharmaceutical industry (Castro, Farmer, Barberia 2002).

¹¹ In a 1992 paper examining mortality rates in developed countries, Wilkinson argues that less inequality translates into better health outcomes: "But the apparent effect of income distribution on health is too large to be explained by changes in the mortality of a poor group alone. If the United States or Britain were to adopt an income distribution more like that of Japan, Sweden, or Norway, the indications are it might add two years to average life expectancy. That is considerably more than would be gained even if the health detriment suffered by poor minorities were wholly overcome" (Wilkinson 1992:1083). He concludes: "health inequalities result from the extent of relative deprivation in each society" (Wilkinson 1992:1084).

¹² For example: indinavir (US\$ 6.49 in Haiti and US\$ 2.42 in the US), efavirenz (US\$ 4.84 and US\$ 3.94), abacavir (US\$ 8.45 and US\$ 5.57), lamivudine (US\$ 5.43 and US\$ 4.15) (PAHO 2002b).

¹³ The market fails when it comes to research and development— in the case of tuberculosis, for example, the last novel treatment was developed over 30 years ago (t’Hoen 2000.). Over the past two decades (1975-1996), less than 1% of over 1,200 new molecular entities sold worldwide were earmarked for tropical diseases (Trouiller and Olliaro 1999)— this despite the fact that infectious diseases remain a major cause of mortality throughout the world: in 1998, infectious diseases accounted for 25% of deaths worldwide and 45% of deaths in low-income countries (WHO 1999). One candid review of drug development notes that “few developments are need-driven”— the average cost of bringing a new drug to market is approximately \$224 million, costs that pharmaceutical companies argue would not be recouped for diseases endemic in poor countries with few resources and no property rights laws to prohibit far cheaper generic products from entering the market (Trouiller and Olliaro, 1999:164).

References

Attaran A., Sachs J., 2001, Defining and refining international donor support for combating the AIDS pandemic, *Lancet* 357:57-61.

Banque de la République d’Haïti, 2000, Rapport Annuel. Port au Prince: Banque de la République d’Haïti.

Barberia, Lorena and Arachu Castro (eds.), 2003, *Seminar on Cuban Health System: Its Evolution, Accomplishments, and Challenges*. Working Papers on Latin America, Paper No. 02/03-4. Cambridge, MA: David Rockefeller Center for Latin American Studies at Harvard University, 52 pp.

Barberia L, Castro A, Farmer P, Farmer C, Gusmão R, Kim JY, Levcovitz E, López-Acuña D, Mate K, Schroeder P, Tambini G, Yen E, 2002, *The Impact of Health Systems Reform on the Control and Prevention of Infectious Diseases in Latin America and the Caribbean*. Washington: Pan American Health Organization and Partners In Health.

-
- Beinfeld, Harriet, 2001, "Dreaming with Two Feet on the Ground: Acupuncture in Cuba", *Clinical Acupuncture and Oriental Medicine Journal* 2(2):66-69.
- Bell, Clive Bell, Shantayanan Devarajan, Hans Gersbach, 2003, *The Long-run Economic Costs of AIDS: Theory and an Application to South Africa*. Washington, DC: World Bank. Available at: http://www1.worldbank.org/hiv_aids/docs/BeDeGe_BP_total2.pdf.
- Blower, Sally and Paul Farmer, 2003, Predicting the public health impact of antiretrovirals: Preventing HIV in developing countries. *AIDScience* 3(11), 7 pp. Available at: <http://aidsscience.org/Articles/aidsscience033.htm>.
- Brock D.W., 2003, Separate spheres and indirect benefits, *Cost effectiveness and resource allocation* 1:4. Retrieved 9 June 2003 at www.resource-allocation.com/content/1/1/4.
- Castro, A., 2003, Determinantes socio-políticos de la infección por VIH: Violencia estructural y culpabilización de la víctima. Conferencia plenaria. [Socio-political determinants of HIV: Structural violence and the blaming of the victim. Plenary lecture]. *2nd Latin American Forum on HIV/AIDS and STIs* (p. 22). Havana, Cuba. Available at: <http://www.foro2003.sld.cu/index.html>.
- Castro, Arachu and Paul Farmer, 2003a, Infectious Disease in Haiti: HIV/AIDS, Tuberculosis, and Social Inequalities, *EMBO Reports* 4 (6s):S20-S23.
- Castro, Arachu and Paul Farmer, 2003b, "Health and Economic Development", in Carol R. Ember and Melvin Ember (eds.), *Encyclopedia of Medical Anthropology: Health and Illness in the World's Cultures*. New York: Kluwer/Plenum, pp. 164-170.
- Castro, A., Farmer, P., & Barberia, L., 2002, *Control of HIV/AIDS in Cuba: A Briefing Memo for President Carter's visit to Cuba*. Atlanta: Carter Center.
- Castro A, Farmer P, Kim JY, Levcovitz E, López-Acuña D, Mukherjee JS, Schroeder P, Yen E., 2003, *Scaling Up Health Systems to Respond to the Challenge of HIV/AIDS in Latin America and the Caribbean*. Special Edition of the Health Sector Reform Initiative in Latin America and the Caribbean 8. Washington: Pan American Health Organization, 102 pp.

Castro A, Togores V, Barberia L., 2003, Access to Medicines in Cuba: The Hampering and Burgeoning Effects of the Economic Crisis. Paper presented at the American Anthropological Association Annual Meeting, Chicago.

Cayemittes M, Placide MF, Barrère B, Mariko S, Sévère B, 2001, *Enquête Mortalité, Morbidité et Utilisation des Services, Haïti 2000*. Calverton, MD: Ministère de la Santé Publique et de la Population, Institut Haïtien de l'Enfance, and ORC Macro.

CDC (Centers for Disease Control and Prevention), 1994, International notes certification of poliomyelitis eradication— the Americas, 1994. *Morbidity and Mortality Weekly Report* 43(39): 720-722.

CDC (Centers for Disease Control and Prevention), 1997, HIV/AIDS surveillance report 2:9.

CDC (Centers for Disease Control and Prevention), 2000, Outbreak of poliomyelitis— Dominican Republic and Haiti, 2000. *Morbidity and Mortality Weekly Report* 49(48): 1094, 1103.

Chomsky A, 2000, The threat of a good example': health and revolution in Cuba. Kim JY; Millen JV; Irwin A, and Gershman J, eds. *Dying for Growth: Global Inequality and the Health of the Poor*. Monroe, ME: Common Courage Press.

Creese, A., K. Floyd, A. Alban, et al. 2002. "Cost-Effectiveness of HIV/AIDS Interventions in Africa: A Systematic Review of the Evidence." *Lancet* 359: 1635-1642.

Desormeaux J, Johnson MP, Coberly JS, et. al., 1996, Widespread HIV counseling and testing linked to a community-based tuberculosis control program in a high-risk population. *Bulletin of the Pan American Health Organization* 30(1): 1-8.

Domínguez, Jorge I., 1978, *Cuba: Order and Revolution*. Cambridge, Massachusetts: Harvard University.

ECLAC (Economic Commission for Latin America and the Caribbean), 1997 [2000], *La Economía Cubana: Reformas Estructurales y Desempeño en los '90*. Mexico: Fondo de Cultura Económica.

ECLAC (Economic Commission for Latin America and the Caribbean), 2001, *Cuba: Evolución Económica durante 2000*. LC/MEX/L.465 Mexico: ECLAC.

Eisenberg L, 1984, Rudolf Luwig Karl Virchow, where are you now that we need you? *American Journal of Medicine* 77: 524-532.

Escobar, Arturo, 1995, *Encountering Development: The Making and Unmaking of The Third World*. Princeton: Princeton University.

FAO (United Nations Food and Agriculture Organization), 2000, *The State of Food Insecurity in the World*. United Nations Food and Agriculture Organization: Rome. Available at: <http://www.fao.org/FOCUS/E/SOFI00/img/sofirep-e.pdf>.

Farmer P., 1992, *AIDS and Accusation: Haiti and the Geography of Blame*. Berkeley, CA: University of California Press.

Farmer P., 1994 [2002], *The Uses of Haiti*. Monroe, ME: Common Courage Press,

Farmer P, 1996, Haiti's Lost Years: Lessons for the Americas. *Current Issues in Public Health* 2(3): 143-151.

Farmer P, 1999, *Infections and Inequalities: The Modern Plagues*. Berkeley, CA: University of California Press.

Farmer P., 2003a, *Pathologies of Power: Health, Human Rights, and the New War on the Poor*. Berkeley, CA: University of California Press.

Farmer P and Arachu Castro, 2003, "Castigo a los más pobres de América: El embargo de la ayuda internacional crea una crisis humanitaria en Haití", *El País*, 12 January, pp. 8-9.

Farmer P. Smith-Fawzi MC. Nevil P., 2003, Unjust embargo of aid for Haiti. *Lancet*. 361(9355):420-423.

Farmer, P., Léandre, F., Mukherjee, J., Claude, M., Nevil, P., Smith-Fawzi, M., Koenig, S., Castro, A., Becerra, M., Sachs, J., Attaran, A., & Kim, J., 2001, Community-based approaches to HIV treatment in resource-poor settings. *Lancet*, 358, 404-409.

Farmer P. Leandre F. Mukherjee J. Gupta R. Tarter L. Kim JY., 2001, Community-based treatment of advanced HIV disease: introducing DOT-HAART (directly observed therapy with highly active antiretroviral therapy) *Bulletin of the World Health Organization* 79(12):1145-51.

Feinsilver, Julie, 1993, *Healing the Masses: Cuban Health Politics at Home and Abroad*. Berkeley, CA: University of California Press.

Ferrer, Ada, 2000, Thinking Through Haiti: Cuban Slave Society and the Haitian Revolution. A Working Document, New York: New York University. Available at: <http://www.princeton.edu/plasweb/news/Ferrer4-4.doc>.

Freedberg KA, Losina E, Weinstein MC, et al., 2000, The cost effectiveness of combination antiretroviral therapy for HIV disease. *N Engl J Med* 344: 824–31.

Fund the Fund, 2003, The current funding crisis. Available at: <http://www.fundthefund.org/crisis.html> (accessed 9/20/03).

Garber AM., 2000, Advances in cost-effectiveness analysis of health interventions. In: Culyer AJ, Newhouse JP, eds. *Handbook of Health Economics, Volume 1*. Amsterdam: Elsevier Science, pp. 182–221.

Gebo KA, Chaisson RE, Folkemer JG, Bartlett JG, Moore RD, 1999, Costs of HIV medical care in the era of highly active antiretroviral therapy. *AIDS* 13: 963–69.

Global Fund to Fight AIDS, Tuberculosis and Malaria, 2002a, Haiti's Response to HIV/AIDS. Application to the Global Fund to Fight AIDS, Tuberculosis and Malaria. Geneva: Global Fund to Fight AIDS, Tuberculosis and Malaria. Available at: <http://www.globalfundatm.org/proposals/round1/files/haitihivuk.doc>

Global Fund to Fight AIDS, Tuberculosis and Malaria, 2002b, Global Fund Money to Scale Up AIDS Treatment and Prevention Efforts in Haiti. Geneva: Global Fund to Fight AIDS, Tuberculosis and Malaria. Available at: http://www.globalfundatm.org/journalists/press%20releases/pr_021202.html

Gold, M. R., J. E. Siegel, et al., eds., 1996, *Cost-Effectiveness in Health and Medicine: The Report of the Panel on Cost-Effectiveness in Health and Medicine*. New York: Oxford University Press.

González-Núñez, I, Díaz-Jidy, M & Pérez-Ávila, J, 2000, La transmisión materno infantil del VIH/SIDA en Cuba. *Revista Cubana de Medicina Tropical* 52(3):220-224.

-
- Gwatkin DR and Guillot M., 2000, *The Burden of Disease Among the Global Poor: Current Situation, Future Trends, and Implications for Strategy*. Washington, D.C.: The World Bank.
- Holtgrave, D.R. ed., 1998, *Handbook of economic evaluation of HIV prevention programs*. New York: Plenum Press.
- Holtgrave D.R., Qualls N.L, Graham J.D., 1996, Economic evaluation of HIV prevention programs. *Annual Reviews of Public Health* 17:467-88.
- Hsieh, Y, Chen, C, Lee, S, de Arazoza, H., 2001, On the recent sharp increase in HIV detections in Cuba. *AIDS* 15:426-428.
- Iriart C, Merhy EE, Waitzkin H, 2001, Managed Care in Latin America: The New Common Sense in Health Policy Reform, *Social Science and Medicine* 52:1243-1253.
- Jean-Louis, R., 1989, Diagnostic de l'état de santé en Haïti." *Forum Libre (Santé, Médecine et Démocratie en Haïti)* 1:11-20.
- Jha, P., N.J.D. Nagelkerke, E.N. Ngugi, et al., 2001, Reducing HIV Transmission in Developing Countries, *Science* 292(5515): 224-225.
- Kaplan E.H. & Merson M.H, 2002, Allocating HIV-prevention resource: Balancing efficiency and equity. *American Journal of Public Health* 92(12): 1905-1907.
- Kew O, Morris-Glasgow V, Landaverde M, et al., 2002, Outbreak of poliomyelitis in Hispaniola associated with circulating type 1 vaccine-derived poliovirus, *Science* 296 (5566): 269-70.
- Kim JY, Millen JV, Irwin A, and Gershman J (eds.), 2000, *Dying for Growth: Global Inequality and the Health of the Poor*. Monroe, ME: Common Courage Press.
- Kim, Jim Y., Aaron Shakow, Arachu Castro, Chris Vanderwarker, and Paul Farmer, 2003, "Tuberculosis Control", in Richard Smith, Robert Beaglehole, David Woodward and Nick Drager (eds.) *Global Public Goods for Health: Health Economic and Public Health Perspectives*. Oxford: Oxford University Press, pp. 54-72.

Kumaranayake L. & Watts C., 2001, Resource allocation and priority setting of HIV/AIDS interventions: addressing the generalized epidemic in sub-Saharan Africa. *Journal of International Development* 13:451-466.

Laurell AC, 2001, Health Reform in Mexico: The Promotion of Inequality. *Internacional Journal of Health Services* 31(2):291-321.

López-Acuña, D, 2000, La Naturaleza de las Reformas del Sector de la Salud en las Américas y su Importancia para la Cooperación Técnica de OPS, Washington: OPS / OMS / División de Desarrollo de Sistemas y Servicios de Salud.

Lurie P, Hintzen P, and Lowe RA, 1995, Socioeconomic obstacles to HIV prevention and treatment in developing countries: the roles of the International Monetary Fund and the World Bank, *AIDS* 9(6):539-46.

Marins JRP, Jamal LF, Chen SY, Barros MB, Hudes ES, Barbosa AA, et al., 2003, Dramatic improvement in survival among adult Brazilian AIDS patients, *AIDS* 17: 1675-1683.

Marrero A, Caminero JA, Rodríguez R, Billo NE, 2000, Towards elimination of tuberculosis in a low income country: the experience of Cuba, 1962-97, *Thorax* 55(1): 39-45.

Marseille, E., P.B. Hofmann, and J.G. Kahn, 2002, HIV Prevention before HAART in Sub-Saharan Africa, *Lancet* 359: 1851-1856.

Martí, José, 1894[1959], *La cuestión racial*. Havana: Lex, 146 pp.

Ministerio de Comercio Exterior, 1994, Havana: Ministerio de Comercio Exterior.

Ministerio de Finanzas y Precios, 1998, *Políticas, estrategias y programas*. Havana: Ministry of Public Health. Available at: www.sld.cu/sistema_de_salud/estrategias.html.

MINSAP, Ministerio de Salud Pública, 2001, Anuario Estadístico 2001. Havana: Cuba. Available at:

<http://bvs.sld.cu/cgi-bin/wxis/anoario/?IsisScript=anoario/iah.xis&tag5001=mostrar^m694&tag5009=STANDARD&tag5008=10&tag5007=Y&tag5003=anoario&tag5021=e&tag5022=2001&tag5023=694> (accessed 9/20/03).

Mintz, Sidney, 1985a, *Sweetness and Power: The Place of Sugar in Modern History*. New York: Penguin, 274 pp.

Mintz, Sidney, 1985b, "From Plantations to Peasantries in the Caribbean", in Sidney W. Mintz and Sally Price (eds.) *Caribbean Contours*. Baltimore: Johns Hopkins University Press, pp. 127-153.

Murray, C. J. L. and A. D. Lopez, 1996, *The Global Burden of Disease*. Geneva: World Health Organization, Harvard School of Public Health, World Bank.

Musgrove, P, 1999, Public spending on health care: how are different criteria related? *Health Policy* 47(3):207-223.

Nicholls S, McLean R, Theodore K, Henry R, Camara B et al., 2001, Modelling the macroeconomic impact of HIV/AIDS in the English speaking Caribbean: The case of Trinidad and Tobago and Jamaica. United Nations Development Program.

PAHO (Pan American Health Organization), 1993, *Haiti— L'Aide d'Urgence en Santé*. Port-au-Prince: Pan American Health Organization.

PAHO (Pan American Health Organization), 1996, Executive Committee of the Directing Council, 26th Meeting of the Subcommittee on Planning and Programming: "Progress of activities in health sector reform," SPP27/7 (Eng.), Washington, D.C., 25-27 March.

PAHO (Pan American Health Organization), 2002a, *Health in the Americas 2002*. Washington, D.C.: Pan American Health Organization.

PAHO (Pan American Health Organization), 2002b, Average prices of a one year treatment with antiretrovirals in countries of Latin America and the Caribbean. Washington, DC: Pan American Health Organization. Available at: <http://www.paho.org/English/HCP/HCA/analysis.pdf> (accessed 9/20/03).

PAHO (Pan American Health Organization), 2003, Country Profiles: Haiti. Available at: http://www.paho.org/English/DD/AIS/be_v24n1-haiti.htm.

PAHO, UNDP and CARICOM, 1999, *Implementing Decentralization and Financing Strategies while Protecting the Poor*. Washington, DC: Pan American Health Organization, 36 pp. Available at:

<http://www.paho.org/English/HDP/HDD/policygreeneonline.pdf>.

Pape, Jean William, 2000, AIDS in Haiti: 1980-96. In Glenford Howe and Alan Cobley (eds.) *The Caribbean AIDS Epidemic*. Kingston: University of the West Indies Press, pp. 226-242.

Pape, J. W., B. Liautaud, et al., 1983, Characteristics of the acquired immunodeficiency syndrome (AIDS) in Haiti. *New England Journal of Medicine* 309(16): 945-950.

Pérez-Ávila, Jorge, 2003, Atención Integral y Tratamiento del VIH en Cuba , *2nd Latin American Forum on HIV/AIDS and STIs*. Havana, Cuba.

Pérez-Ávila, J, Peña-Torres, R, Joanes-Fiol, J, Lantero-Abreu, M & Arazoza-Rodríguez, H., 1996, HIV Control in Cuba. *Biomedicine & Pharmacotherapy* 50:216-219.

Portuondo, Fernando and Hortensia Pichardo, 1974, *Carlos Manuel de Céspedes: Escritos*. Havana: Editorial de Ciencias Sociales.

Rosen, George, 1974, *From Medical Police to Social Medicine: Essays on the History of Health Care*. New York: Neale Watson Academic Publications.

Russell S, Gilson L, 1997, User Fee Policies to Promote Health Service Access for the Poor: a wolf in sheep's clothing? *International Journal of Health Services* 27(2):359-379

Rylko-Bauer B, Farmer P, 2002, Managed Care or Managed Inequality? A Call for Critiques of Market-Based Medicine, *Medical Anthropology Quarterly* 16(4):476-502.

Smith, Richard, Robert Beaglehole, David Woodward and Nick Drager (eds.), 2003, *Global Public Goods for Health: Health Economic and Public Health Perspectives*. Oxford: Oxford University Press.

Sullivan CA, Meigh JR, and Fediw TS, 2002, *Derivation and Testing of the Water Poverty Index Phase I*. Centre for Ecology and Hydrology: Wallingford. Available at:

<http://www.ciaonet.org/wps/suc01/suc01.pdf>.

t'Hoen E, 2000, Statement from Médecins Sans Frontières, campaign for access to essential medicines at the Health Issues Group DG Trade; Brussels, 26 June.

Trouiller P and Olliaro PL, 1999, Drug development output: what proportion for tropical diseases? *Lancet* 354(9173): 164.

UNAIDS, 2001, AIDS Epidemic Update. Geneva: UNAIDS.

UNAIDS, 2002, Epidemiological Fact Sheets on HIV/AIDS and Sexually Transmitted Infections: Haiti.

Available at:

http://www.unaids.org/hivaidsinfo/statistics/fact_sheets/pdfs/Haiti_en.pdf.

UNAIDS, 2002, Report on the HIV/AIDS Epidemic. Geneva: UNAIDS.

UNDP (United Nations Development Programme), 1990, *Human Development Report 1990*. New York: Oxford University Press for UNDP.

UNDP (United Nations Development Programme), 2000, *Human Development Report 2000*. New York: Oxford University Press for UNDP.

UNDP (United Nations Development Programme), 2003, *Human Development Report 2003*. New York: Oxford University Press for UNDP. Available at: <http://www.undp.org/hdr2003/>

Waitzkin H, Iriart C, 2001, How the United States Exports Managed Care to Developing Countries. *International Journal of Health Services* 31(3):495-505.

Wilkinson RG, 1992, National mortality rates: the impact of inequality? *AJPH* 82(8):1082-84.

World Bank, 1994, *Social Indicators of Development*. Baltimore: Johns Hopkins University Press.

World Bank, 1997, Poverty reduction and human development in the Caribbean: a cross-country study. Washington, DC: World Bank Discussion Paper (WDP 366).

World Bank, 2001, HIV/AIDS in the Caribbean. Available at:

<http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:20020360~menuPK:34457~pagePK:34370~piPK:34424,00.html> (accessed 9/19/03).

World Bank, 2003a, Long Term Economic Impact of HIV/AIDS More Damaging Than Previously Thought. World Bank Press Release Number 2003/24/S. Available at:

<http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:20120894~menuPK:34463~pagePK:34370~piPK:34424~theSitePK:4607,00.html> (accessed 9/19/03).

World Bank, 2003b, *Cuba at a glance*. Available at: http://www.worldbank.org/cgi-bin/sendoff.cgi?page=%2Fdata%2Fcountrydata%2Faag%2Fcub_aag.pdf (accessed 9/19/03).

WHO (World Health Organization), 1999, *Report on Infectious Diseases: Removing Obstacles to Healthy Development*. Geneva: World Health Organization.

WHO (World Health Organization), 2000, *World Health Report 2000: Health Systems: Improving Performance*. Geneva: World Health Organization.

WHO (World Health Organization), 2001, *Macroeconomics and Health: Investing in Health for Economic Development*. Geneva: Commission on Macroeconomics and Health, 200 pp.

WHO (World Health Organization), 2002, *World Health Report 2002*. Geneva: World Health Organization.