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World Health: An Overview

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World Health: An Overview

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I. What is the State of the Health of the Peoples of the World?

Life expectancy at birth: Changes in life expectancy at birth are rough indicators of overall trends in health. For example, the World Health Organization (WHO) reported that, worldwide, life expectancy rose from 48 years in 1955 to 66 years in 1997 and 1998. These statistics are averages based on actuarial tables in which it is assumed that the death rate at every age in a population during a given year will be experienced by the babies born in that year for the duration of their lives. Life tables have tended to underestimate life expectancy because they fail to account for economic, social, and technological development. However, public health gains are fragile, and global statistics are heavily affected by developments in China and India, which together account for over one-third of the world population. Life expectancy has declined over the past decade in parts of Africa hard hit by HIV/AIDS, and from 1991–94 in the former Soviet Union. Life tables are calculated from vital statistics (birth and death registrations) and census data which, although often poor, are recorded in all countries.

Life expectancy at birth increased significantly in the twentieth century, primarily through spectacular gains in infant and child survival. The two main reasons are:

(1) Improvement in and spread of technology and public hygiene (better nutrition, safer water and food, waste disposal and sewage treatment, antiseptics, and preventive and curative drugs and vaccines).

(2) Improvement in the educational level and social status of women.

Health for All: In 1978, the member states of the World Health Organization set three targets to be achieved by the year 2000. This is termed "Health for All."

(1) *Life expectancy at birth above 60 years in all countries*
By 1995, this target had been achieved by countries representing 86 percent of the world population.

(2) *Under-5 mortality rate below 70 per 1,000 live births in all countries*
By 1995, this target had been achieved by countries representing 64 percent of the world population.

(3) *Infant mortality rate below 50 per 1,000 live births in all countries*
By 1995, this target had been achieved by countries representing 60 percent of the world population.

The shortfalls in these targets show that there is still much room to reduce infant and child mortality. Whole nations are falling short, and these data, which are averages, mask high death rates in poor and socially marginalized groups within countries that have achieved the national targets. Some wealthy countries (and Cuba) have achieved under-5 mortality rates of 3–9 per 1,000, close to the current technological limit.

Extending life expectancy: Extending life expectancy, already 75 – 80 years in the developed world, is running into the relentless arithmetic of the Life table where the easy gains have been achieved. For example, it takes a 9 percent reduction in the death rate at each age to move the average from 80 to 81 years. Biodemographers estimate that the maximum average life expectancy with current medical science is about 85 years. Substantial increases above that age may await medical breakthroughs that attack the aging process, for which there is ample possibility, given the pace of research in human genetics. (Natural selection, of course, favors reproduction over longevity.) Some, including me, question whether adding years to life expectancy above eighty is an appropriate goal for societies (individuals should be free to pursue longevity as a personal goal), especially if extension of the life-span is accompanied by disability, suffering, and dependence.

Alternative measures such as "health expectancy," "disability-adjusted life expectancy" (DALE), or "disability-adjusted life years" (DALYs) have been tried in recent years by the World Bank, Harvard University, and others. They are composites of morbidity and mortal-

ity statistics that are conceptually problematical and pose challenges in defining and collecting data, and obtaining international comparability. None has yet rallied a consensus in the scientific community or among public health policymakers. DALYs are nearly useless as policy tools in developing countries. Some analysts have turned to the "Delphi" method, or estimates by structured panels of experts or "key informants" (of their choosing), to fill gaps or correct deficiencies in statistics or even substitute for them. These estimates also are often widely off the mark. Nonetheless, a focus on disability as well as mortality is appropriate in today's health promotion strategies because non-fatal, disabling mental and physical illnesses and injuries, which are widespread and devastating, are not picked up well in mortality statistics.

The explosion of centenarians: The number of centenarians has been doubling every decade since the 1950s in wealthy countries and doubled in China in the 1980s to more than six thousand, now the largest number in a single country. Their absolute number is small, with women outnumbering men four to one, but their presence, wisdom, and problems give us a glimpse of how a second demographic transition might look, assuming continued decline in fertility, with the population pyramid turned upside down! (Many new aids for sight, hearing, and mobility are coming onto the market.) Population aging, combined with declining fertility, has created a global financial crisis in health care, affecting even the wealthiest societies. Health care costs for people over 65 are five times greater than for younger persons.

Causes of death: In 1998, there were about 54 million deaths in a global population of nearly six billion. Causes of mortality often are poorly identified, and data must be interpreted with caution. The continuing toll of communicable diseases (see Table) reflects the twentieth century's uncompleted health revolution. The preponderance of deaths

Causes of Death 1998	**%**
Communicable diseases, maternal, perinatal and nutritional causes	30
Noncommunicable diseases	60
Accidents and injuries	10

Source: World Health Report 1999

from noncommunicable conditions (heart and lung diseases, cancer, diabetes, etc.) measures achievements in child survival, which, however, have left many developing countries struggling with a "double burden" of disease and investment in treatment and care of large numbers of chronically ill or disabled middle-aged and elderly citizens at a time when they are still battling rather high child mortality and need to reduce inequality in infrastructure and health service for disadvantaged groups. Advances in molecular biology have revealed that many cancers are, in part, an expression of chronic infection — interlinked with environmental, nutritional, lifestyle, and genetic influences. The traditional distinction between communicable and noncommunicable diseases is becoming blurred.

Tobacco: Tobacco is the major preventable cause of death from noncommunicable disease, directly accounting for about four million deaths annually. The WHO and the international health community have been developing and debating the idea of a global framework convention on tobacco control (FCTC) for about ten years. I advocated this myself. The FCTC is now under negotiation just as the industry has begun to embrace regulation to protect itself from lawsuits. There is a risk that a weak convention might protect the industry from legal liability while doing little to constrain it from advertising, sports sponsorship, etc. It is an idea that had better prospects under a Democratic administration in the United States.

Age at death: Age at death also points to the unfinished health revolution of the twentieth century. Forty percent of deaths under age fifty (see Table), and, especially, twenty percent under age five (more than ten million in actual numbers), represent premature and preventable deaths. Most occur in the forty-nine least developed countries where per capita public expenditure on health is less than $10 per year and where three of four people still die under age fifty. A global average immunization rate of 80 percent for six childhood diseases, which are

Age at Death 1998	**%**
under 5	20
5-50	20
over 50	60

Source: World Health Report 1999

major killers, was achieved in 1990 and has been maintained or slightly improved in succeeding years, but immunization rates among disadvantaged populations and in areas of instability are poor and fluctuate from year to year, often depending on truces and external vaccination initiatives.

Communicable diseases (old and new): While some 70 percent of the world's population eventually dies from chronic, noncommunicable conditions or injuries, infectious diseases are the leading cause of premature death. Their impact is heaviest on the one billion poorest people on the planet (concentrated in Africa and South Asia). The Table below features the main causes of this 30 percent of deaths. In the past 25 years, along with HIV/AIDS, some thirty infectious diseases have emerged (Ebola and other hemorrhagic fevers, hepatitis C,D,E…, BSE, Legionnaire's disease, Hantaan virus, etc.) or reemerged (tuberculosis, cholera, and malaria) where they had been unknown for years to shake any complacency that infectious diseases are being brought under control. Increasing microbial resistance (multidrug-resistant malaria, cholera, pneumonia and TB, and hospital infections) and new problems with food safety (diseases in meat animals and E. coli 0157:H7) have intensified these concerns.

IMCI: Of the ten million deaths annually of children under five noted above, over 70 percent are caused by diarrhea, pneumonia, measles, malaria, malnutrition, or a combination of these. Many children are

Mortality from major communicable diseases and maternal, perinatal and nutritional conditions 1998

Respiratory infections	21%
AIDS	14%
Perinatal conditions	13%
Diarrhoeal diseases	13%
Childhood diseases (measles: 5%)	10%
Tuberculosis (HIV-neg.)	9%
Malaria	7%
Maternal conditions	3%
Nutritional conditions (all other: 7%)	3%

Source: World Health Report 1999

lost because parents and first-level health workers confuse similar symptoms of these afflictions or fail to recognize that the child is suffering from more than one of them. In 1992, WHO and UNICEF worked out step-by-step clinical guidelines to integrate all five conditions in case management, called "Integrated Management of Childhood Illness" (IMCI). The strategy requires reliable supplies of oral rehydration salts, appropriate antibiotics and antimalarials, and nutritional support. In 1994–95, WHO and UNICEF pretested this strategy in Kenya, the Gambia, and Ethiopia with promising and cost-effective results. It is now being adapted to the specific conditions of many other countries.

Essential drugs: Procuring and distributing the most effective mix of drugs and vaccines at the least cost is a major task of health systems. In the 1970s, WHO developed a minimum list of essential drugs (about 300), frequently updated and modified to specific country needs, and with donor funds procured drugs on a bid basis for health services in developing countries. Whenever possible, the cheapest generic or off-patent version of a drug is recommended, and donations of drugs from manufacturers are constantly solicited. Normally these activities attract little public attention. The recent widely publicized issue concerning the provision of antiretrovirals and other drugs to HIV/AIDS patients in Africa is unusual in that activist groups in the developed world are pressing manufacturers to lower prices of patented drugs which currently sell at premium prices in their home countries. The manufacturers believe they need high profit margins to successfully maintain research and development activities.

Tuberculosis (TB): When the resurgence of tuberculosis was identified in 1989–90, WHO adapted and promoted the DOT (Directly Observed Therapy, which means that a health worker personally observes the patient taking the cocktail of antibiotics that has to be ingested daily for 6–8 months to obtain a cure) strategy, which produces a 90 percent or better cure rate when successfully applied. Currently, less than half of TB patients in the world have access to DOT. Equally important is diagnosis by microscopic examination of sputum and sustained availability of appropriate TB drugs. Recent studies indicate that the key to success in DOT is intensive contact and follow-up with the patient rather than DOT per se. HIV/AIDS patients often contract TB as an opportunistic infection. Curing HIV-positive patients of TB is a special

challenge. There is a high risk of developing resistant microbes and spreading them to the non-HIV-infected population.

Malaria: WHO efforts to eradicate malaria in the 1950s and 1960s failed because of resistance to DDT (which also had unfavorable environmental consequences) and to the common anti-malaria drugs chloroquine and fansidar. Malaria was, nonetheless, contained for many years. It began to spread again in the 1980s, possibly due to climate change and population movements associated with economic development (especially exploitation of tropical forests) and with migration out of conflict zones where public health activities had been abandoned. At a 1992 ministerial conference, WHO formally abandoned the eradication strategy in favor of one that integrates malaria control into the health care system with surveillance, including patterns of resistance, use of mosquito nets treated with insecticide, selective household and community spraying (and clean-up of potential mosquito breeding sites), early detection and treatment (especially of children), use of new drugs where resistance has developed, and systematic prophylaxis for pregnant women. In 1997, WHO launched a Multilateral Initiative on Malaria (MIM) in Africa involving three international agencies and six bilateral donors with twenty African countries. The 1992 guidelines and MIM are now incorporated into WHO's Roll Back Malaria campaign.

Epidemiological transition profiled: Many middle-aged and older people today, particularly in Asia and Latin America, of which I am one, belong to a generation that experienced simultaneous epidemiological and demographic transitions. Born with a life expectancy of around fifty, many migrated from the countryside to one of the crowded, polluted cities now inhabited by 50 percent of the global population after surviving several pre-transitional diseases, injuries, and nutritional deficiencies in childhood. Modestly rising income from hazardous, stressful employment and a modern lifestyle led them to consume increasing amounts of sugar, alcohol, fat, salt, and tobacco. They and their working spouses had little opportunity for sports and exercise and lived in housing unkindly compared to rabbit hutches. They had half as many children as their parents, benefiting from some family planning and obstetrical services, and spent most of their discretionary income on children's education. Members of this transitional generation often live beyond 65, coping with multiple chronic diseases, dis-

abilities, and dysfunctions (loss of teeth, hearing, and eyesight, back pain, diabetes, pulmonary and cardiovascular disease, cancer, etc.). They care for grandchildren and do casual work as long as physically able in order to supplement meager savings and retirement benefits. Women outlive men by a few years in sickness and disability.

II. Does this Age of Globalization Help or Hinder the Quality of Life and Health?

Globalization is not a very rigorous concept, and it needs a political project. I see the term as shorthand for the interaction of a number of developments in the late twentieth century, focused around the linking and deregulation of markets, transport, and communications. Population growth, environmental degradation, and progress in medical science, although not particularly aspects of globalization, are important in the health sector.

(1) The communist world collapsed spectacularly, breaking down the barriers to trade, travel, and communications represented by the "iron curtain." But the end of the Cold War also generated social turmoil, wars, and millions of refugees. Western countries, especially the United States, saw in this a universal triumph of their values.

(2) Newcomers (ex-communist and ex-Asian tigers) joined the ranks of the insolvent under IMF/World Bank tutelage, and the chorus for debt relief finally achieved some results.

(3) Information/communication technology discovered as far back as the 1960s reached commercialization in affordable, user-friendly, and globally interconnected packages. This included continuous, real-time television news (too often with shallow, inaccurate, and culturally insensitive reporting on health issues) followed by the Internet, which widened the choice of information sources for those with access, including health professionals.

(4) International air travel came within the reach of millions, as new roads (often aid-funded) linked remote areas to the outside world, pushing back wilderness and bringing the growing human population of the planet into closer contact with each other and with insects and wild animals, just as climate changes were altering disease patterns.

(5) The Uruguay round of trade negotiations culminated in the establishment of the World Trade Organization (WTO), which is intended to have more institutional power, a broader mandate to liberalize and expand world trade, including health services and patent-protected pharmaceuticals, and a more inclusive membership (China, Russia, etc.) than the previous regime.

Health values: The modern health professions, derived from Western medicine, share a value system based on scientific rigor and respect for human dignity and the rule of law, originating in the Hippocratic oath. The discrediting of the Soviet model was a vindication of these values which, nonetheless, need to be constantly reaffirmed, particularly as possibilities for cloning and other genetic manipulation increase. But we must acknowledge the public health achievements of states like China, Malaysia, Singapore, Cuba, and Iran. While the rest of the world shares many Western values, it does not fully embrace the Anglo-Saxon market model. The ending of the Cold War on Western terms was favorable, however, to an ongoing global trend toward greater market orientation in the health sector as a means of controlling the costs of serving a growing and aging population. Evaluation of health care has become pragmatic and results driven. But public health never gets the attention it deserves. The relationships between health and political and economic systems, development, and poverty are complex and far from fully understood.

Health as a Priority: IMF/World Bank structural adjustment policies forced poor countries to cut already inadequate health expenditures and charge user fees in order to repay debt. Many developing countries hurt their cause, however, by spending the bulk of their health budgets on hospitals, which liberal economists consider to be candidates for privatization, rather than on primary health care in communities. Creditor countries, including the United States, which control the policies of the World Bank and IMF, have recently taken steps to forgive debt conditionally and to recognize health as an investment rather than a consumption expenditure. If this sticks, it is an important shift.

Information technology: Information technology as it is developing is a superb set of tools for medical research and practice. Innovations ranging from DNA chips to so-called "hospitals without film" are revolu-

tionizing health care. Digitalized X-rays, scans, or ultrasound images can be transmitted to the next room or around the world together with text, laboratory slides, and data from a patient's computerized chart while practitioners consult in real time, looking at the same information on their screens. The world of medical specialists who used to meet every year or two at a conference has shrunk to the point that the main constraints on communication and the sharing of knowledge are time and time zones. Personal trust and confidence remain critical. Medical mistakes linked to Internet use are a risk, and serious issues of liability and protecting the confidentiality of patient records are looming.

Patients themselves will increasingly be able to avail themselves of consultations with health professionals via tele-medical services. Heart pacemakers have long been adjustable by telephone, and new telecommunications offer much more sophisticated monitoring of patients at home. Through tele-medicine, patients will have a choice between the knowledge and opinions of leading specialists or low cost medical consultations within a limited health care budget. A savvy health consumer already has an enormous reach of medical and health information online but must filter it. A substantial, for the most part unregulated, market has developed via the Internet for medicines and health products, but the goods themselves are subject to national trade regimes. The failure and discrediting of many online sales schemes is a cautionary tale.

Trickle down: The Internet is an important health resource for the middle and upper classes and health professionals in developing countries, especially English-speaking South Africa, India, and ASEAN nations, which are already deeply involved in the global information market. China, with its 1.3 billion population, will develop a parallel Chinese language Internet. Digitalized telecommunications, particularly via wireless telephones, offer catch-up potential for poor and remote populations. In the health sector, they will need specialized applications, probably requiring public investment, to bridge the digital divide. It may be an apocryphal story, but it is said that Bill Gates initially wanted to tie his health philanthropy for the poor to information technology but found it unfeasible and turned to conventional health interventions.

WTO: Health services in which government intervention is significant have lagged behind others in WTO negotiations on liberalizing trade in services (GATS), with less than 40 percent of members making any commitments in the Uruguay Round (compared with 70 percent in finance and telecommunications). In many cases, governments are conceding what they are unable to control (tele-health services, information, and medical care abroad for patients who have the funds or rare portable health insurance benefits). Portable health insurance for patients and liberalized investment regimes for international hospital chains would enable developing countries to offer price-competitive hospital care to patients from abroad.

The WTO and the Internet are driving the standardization of medical education and health care procedures (reducing national and local idiosyncracies) around the concept of "evidence-based medicine" and with it the standardization of professional qualifications, licensing examinations, and so on. Globalization of the health labor market is already well underway with increasing opportunities, competition, migration, and Third World brain drain. Tele-teaching would potentially enable health professionals to upgrade/update their knowledge wherever they live.

Health and Travel: Travel has been spreading knowledge, culture, and disease for many centuries. Travel and migration have been especially important in spreading sexually transmitted diseases, including AIDS. (The Japanese have a proverb: "There's no shame on a trip.") The world has over 5,000 airports, all linked to land and water transport networks. Today, no two permanently inhabited places on the globe are more than a few days apart.

A few years ago, a German economic minister developed a nearly fatal case of cerebral malaria after visiting Africa, but he didn't contract it in Africa, where all necessary precautions had been taken. Instead, it was from infected mosquitoes that flew out of his plane's baggage compartment upon the minister's arrival back in Germany. There are hundreds of cases of airport malaria every year, and Americans are familiar with the West Nile virus threatening New York City. Doctors often misdiagnose travelers who bring home exotic diseases, but in parallel with increased trade and travel, disease surveillance and containment have also improved. In the mid-1990s, WHO, for example, went online with its computerized surveillance services for disease outbreaks and microbial drug resistance. With user-friendly, standard-

ized software, laboratories around the world that collaborate with WHO are able to merge their files and monitor, analyze, and exchange data online. Patterns can be spotted and action taken quickly. The output is even available online to the public. The 1976 outbreak of Ebola in former Zaire ran its course unnoticed by the outside world. In 1995, WHO had a team on site (barely ahead of the media) within 2–3 days of confirmation. With globalization, disease can spread faster, but outbreaks can be signaled and help can arrive faster. Disease surveillance and control is a public good. Making the necessary investment to keep pace requires leadership and political will.

Trade: Food and medicines have always occupied a special place in economic and trade regulation. The phytosanitary norms applied by the WTO are in the Codex Alimentarius produced jointly by WHO and the U.N. Food and Agriculture Organization. There is always tension between facilitating trade and protecting human health. Politically, agricultural interests are strong and health interests weak (and dominated by doctors who focus on cure rather than prevention). Recent experience with deleterious health effects from genetically-modified corn and outbreaks of Mad Cow Disease and Foot and Mouth Disease in Europe are cautionary tales about market deregulation and industrialized agriculture for export. The pendulum may be swinging away a bit from deregulation toward the principle of health precaution.

Freeing markets may increase efficiency and wealth in the aggregate, but there are winners and losers. Income distribution has worsened through years of global trade expansion. The gap between the rich and poor is widening both between and within countries, and the absolute number of people living in poverty is increasing. In the face of these trends, the public health gains of the past half-century are at risk of unraveling. Globalization needs a political project to give it a human face, to make it work for the poorest one billion people on the planet. In the decade of the 1990s, U.N.-sponsored ministerial and summit conferences on the environment, children, women, population, malaria, nutrition, AIDS, poverty, housing, and human rights identified problems and established consensus goals and strategies for their alleviation. There has been enough talk. Activists should use the international political and moral authority of these goals to go to work country-by-country, village-by-village, goal-by-goal to achieve them.

III. What are the Roles for Science and Culture in the Promotion of Health and the Treatment or Eradication of Disease?

Neither science nor culture nor the two together will do much to improve human health without finance. Money is a scarce resource.

The United Nations technical agencies, including WHO, were set up as global normative institutions. Their early focus was on science and statistics. The founding fathers of the U.N. believed they could achieve U.N.-centered global peace and security, and that this would automatically unleash the forces of prosperity. When none of this happened, U.N. agencies began giving technical and policy assistance to less developed countries and suggesting global priorities. This work increasingly interacted with politics and culture. In WHO, "vertical programs" attacking specific diseases or needs (yaws, smallpox, malaria, polio, leprosy, essential drugs, training, etc.) worldwide were launched with varying results. Those experiences gave rise to the Primary Health Care movement for a minimum set of health services for all in a context of social development (education, public infrastructure, etc.) linked to achieving the HFA targets mentioned above. Primary health care action in countries had to be adapted to local conditions and culture. Sometimes health messages — for example, AIDS prevention and the movement against female genital mutilation — have to promote cultural change, which requires careful research and preparation.

Female literacy: In large regression studies across developing countries, gains in adult female literacy, more than increases in income, explain reduction in fertility, under-5 mortality, and adult female mortality. The results of these regression studies were surprising in that they went against the conventional wisdom that economic development with increasing per capita income is the best way to lower fertility and mortality. For both women and men, gains in female literacy contribute more than gains in income and nearly as much as increases in the use of new knowledge toward achieving all three HFA targets. (In 1995, about 70 percent of all women on the planet were literate.) Throughout the world, women overwhelmingly manage family hygiene, nutrition, child rearing, and their own fertility. A woman who can read and apply new knowledge has the tools to make a critical difference in family health, including the health of the adult males.

Health education: Given the complementarity of health and education, WHO programs and guidelines emphasize health education and health services in schools. They include important efforts to train teachers of health education and student counselors who must be convinced to set an example of what they teach. Similarly, effective health education requires that schools set a healthy example in sanitation, safety, school lunches, sports, and so on. The importance of peer influence in the educational process is now recognized, and health education has to be designed to enable students to learn from and reinforce each other. In societies where adult women are secluded in the family home, a few years of childhood schooling offer the best chance to impart basic health knowledge and motivation. In these societies, male relatives rather than mothers usually accompany children to receive health care. It poses a challenge to recast health messages intended for mothers to impact on a grandfather or a brother barely older than the child.

Life-cycle approach: The profile described above of the generation of the epidemiological transition is one of people who had rudimentary health education in school and none relevant to noncommunicable diseases. Health promotion and education have to change to cover lifestyle and incorporate a life-cycle approach so that healthy behavior and timely health monitoring at each stage in life, starting with the pre-pregnancy counseling of the mother, enable a person to better live each succeeding stage. This is called "positive health" and "active aging." Molecular biology and genomic information are revolutionizing health monitoring and disease prevention at a price. AIDS-prevention, anti-smoking, physical fitness, and safe driving efforts, to name some examples, must impart inner discipline and a long time-horizon to individuals. As health promotion and disease prevention increasingly rely on motivating individuals to preserve their own health, the spiritual dimension has assumed greater importance. Organizations with a spiritual core, excluding cults and fanaticism, are often the most effective in helping individuals to avoid or overcome addictions, stress, or a propensity to violence, and to live constructively with long term treatments and chronic illness.

HIV/AIDS: I appreciate the analysis of Professor Ronald Bayer concerning "AIDS exceptionalism," which has certainly characterized the international response. AIDS is the only disease ever to have its own

United Nations agency (UNAIDS), or, more correctly, the U.N.'s first seven-agency co-sponsored program, which, fortuitously, has become a vehicle for U.N. Secretary-General Annan to intervene personally in the AIDS crisis. Concentrated most acutely in Africa, the AIDS epidemic needs an African of his stature to galvanize the global response and to speak frankly to Africans on difficult issues involving beliefs and cultural practices.

When the AIDS virus was identified, I was in Manila as Director of the Western Pacific region of WHO, where several countries had large émigré populations on the U.S. west coast, hosted U.S. military facilities, tolerated all varieties of sex tourism and/or were asked to provide HIV-negative certificates to contract workers in the Middle East. Leaders in the region clamored for technical assistance on AIDS, and I had to start a regional AIDS program to meet this legitimate demand although my initiative was not well-received by the WHO headquarters AIDS program, the Global Program on AIDS (GPA), the predecessor to UNAIDS. Indeed, in 1987, we discovered several dozen HIV-positive prostitutes near U.S. bases in the Philippines and HIV-positive donated blood in the South Pacific islands.

After I became Director-General of WHO in 1988, I worked hard to decentralize the GPA (entirely in Geneva, at the time, in a building they had built for themselves), move it into the field, and integrate it with public health programs on other sexually-transmitted diseases. The GPA had a shortage of qualified personnel as many of the early recruits were non-technical journalists, writers, public relations specialists, social scientists, human rights activists, diplomats, etc., who

HIV/AIDS through 2000	
Living with HIV/AIDS (Africa 25.3 million)	36.1 million
Died (Africa 16.4 million)	21.8 million
Total infected (Africa 41.7 million)	57.9 million

HIV/AIDS in 2000	
New infections (Africa 3.8 million)	5.3 million
Died (Africa 2.4 million)	3 million

were quite successful with media and opinion in the West but had much difficulty in the field. By the mid-1990s, however, the GPA had developed programs and partnerships with national AIDS programs in over 150 countries.

Uganda: There were some success stories in HIV prevention with the GPA in Africa, notably Uganda, where WHO coordinated a program involving over 100 organizations, which halved the rate of infection from around 20 percent of the sexually active population. Field research showed that girls were becoming infected as early as age 11. Adolescent girls, 15–19, had five times the infection rate of boys that age, and young women, 20–24, double the rate of their male peers. It was clear that adolescent girls were contracting HIV from older infected men at puberty and earlier. A successful intervention to prevent AIDS needed to reduce the vulnerability of women and change the sexual behavior of men, and it needed to reach children as young as the 6–10 age group in a country where only half the school age children were in school. President Yoweri Museveni was the first African head of state to address AIDS proactively, initiating not only targeted educational campaigns, voluntary HIV/STD testing, and social marketing of condoms but also action to change the norms and values of society. As confidence in the commitment of the political leadership and its performance grew — and this is critical — funding increased from $500,000 (1989) to over $30 million per year where it remained. In 1997, Uganda (population 20 million) received 20 percent of AIDS prevention aid to Africa. It is the first African country to turn around its AIDS epidemic. Similar conditions of HIV transmission exist in other African countries, and with strong funding and political commitment, similar results probably could be achieved. Thus far, most AIDS prevention in Africa has been on the scale of demonstration projects.

Thailand: A contrasting success story is that of Thailand where commercial sex and intravenous drugs were a lethal combination for spreading HIV. Thai society historically has been tolerant of prostitution (although it is illegal) and stable polygamy, and hostile to casual sex, which is viewed as socially disruptive. Widespread prostitution and drug addiction were the basis for sex tourism organized by criminal syndicates which brought HIV/AIDS to Thailand where about a million people became infected, one of the highest rates in the region. An intensive campaign for 100 percent condom use in commercial sex

transactions has more than halved the sero-prevalence rate among young Thai men.

Recent AIDS initiatives: Briefly, I think the health emergency provision in the WTO TRIPS agreement should be used to lower prices and increase the supply of antiretrovirals and other drugs needed in Africa. This is why the emergency provision was included in the agreement, and using it successfully will show WTO's human face. I do not believe that patent holders will donate or cheaply supply sufficient quantities of drugs to meet the needs of more than a few percent of the people in need. Ultimately, external funding will fall short of the goals being set, which already do not cover the needs. I contend that this initiative will develop case-by-case with many approaches and that neither the U.N. nor the World Bank will control it. The best work international health agencies might do is to help countries define their needs, formulate requests, and find partners, and then document outcomes, employing technically rigorous standards, to develop and circulate a repertory of success/failure stories, lessons learned, and best practices. Monitoring microbial resistance, for which evidence is mounting, is very important as is funding of research for a vaccine, which is still the best hope of mastering HIV/AIDS.

IV. What Roles are Appropriate for Governments, IGOs, NGOs, and the Private Sector?

Comparative advantage: The international community uses the (Ricardian sounding) term "comparative advantage" to define roles of public and private actors in global issues. Examples in the health sector are:

Governments: All matters where national sovereignty counts—legislation and legally enforceable norms and standards (including domestic enforcement of international health regulations), vital statistics, licensing, patents, trade regulation, immigration, quarantine, bilateral and multilateral ODA (donors and recipients), domestic public health policy and action (especially disease surveillance and control), public infrastructure, basic education, participation in IGO meetings, and negotiations and implementation of resulting resolutions and agreements.

IGOs:

World Bank/IMF: (donor control) Multilateral funding, large-scale lending and project coordination and implementation, financial management, macro research and policy advice and pressure. Counterpart to finance ministry in governments.

U.N. system: (one country/one vote) Consensus building and advocacy for global commitments and priorities, global technical norms and standards, statistics and surveillance (including of compliance with international health regulations), technical and policy assistance to developing countries, donor and partner search and coordination, research, feasibility studies, special programs (voluntary contributions controlled by donors) where donor governments prefer multilateral action (family planning, research on tropical diseases and contraception, refugee programs, procurement of essential drugs, training, etc.). Counterpart of foreign ministry and functional ministries in governments.

NGOs: Advocacy, activism, political mobilization and influence, and fundraising (private and government sources) from global to local level. Formal and informal representation with governments and IGOs and at IGO conferences. Self-generated field activities and contracts with governments and IGOs for specific activities. Counterpart of civil society. The term "GONGO" (government-organized NGO) has appeared in parts of Eastern Europe where statist attitudes continue to hold sway.

Private Sector:

Firms: Profit-making contractors for goods and services, sources of monetary contributions and donations in kind (drugs, vehicles, and equipment), often in response to tax incentives, lobbyists for company interests on health issues (drug policy, infant formula, tobacco, etc.).

Philanthropic Business Organizations and Foundations: Sources of funds and volunteers, i.e., Rotary International contributions to polio eradication and Sasakawa Foundation contributions to smallpox and leprosy programs.

Industry Associations: Lobbyists for industry interests on health issues.

Tobacco, Pharmaceuticals, and Infant Formula: WHO uses the expression "tobacco *or* health" and has a publicly adversarial relationship with tobacco manufacturers. WHO guidelines on infant formula,

which it calls "breast milk substitutes," oppose advertising and donations which would discourage mothers from breastfeeding. However, HIV transmission via breast milk is imposing limited exceptions to this position. WHO is in both conflict (patents and pricing) and cooperation (drug donations and essential drug procurement for developing countries) with the pharmaceutical industry. WHO has strict guidelines on drug donations, especially for humanitarian emergencies, because many donations in the past have been unmarketable products donated for tax write-offs, which encumbered relief operations. All manufacturing sectors that supply products affecting human health face growing pressures for more socially responsible behavior. Pharmaceutical and tobacco manufacturers may eventually come to prefer regulation to endless attacks on their interests and open-ended harassment from media and public interest groups.

V. Conclusion: Problems and Issues for the Future

Coordination, especially in the field, of a large number of partners, each with its own governance, agenda, organizational culture, and funding, is difficult and sometimes poor even when there is formal consensus on principles and action. (Many U.N. consensus documents paper over disagreements that reemerge in the field.) In the end, control over funds determines control over activities.

Governments are hostile to NGOs that are friendly to political opposition or dissident groups. Some NGOs are openly or secretly financed by foreign governments and suspected of subversive or intelligence activities. Others financed by the private sector have hidden agendas to market products or promote special interests.

Governments are sometimes unwilling or unable to honor their obligations under international agreements. For example, in 1994, the Indian government, which hosts the WHO regional office covering that part of the world, refused to fulfill its obligation under the international health regulations to notify WHO of an outbreak of pneumonic plague in Surat. A request to investigate by countries of the neighboring region, which had already begun to impose travel and trade restrictions in response to sensational media stories and rumors, provided WHO with a belated constitutional mandate to act. Much of the economic harm from this rather small incident could have been avoided if the Indian government had been more transparent and lived up to its international obligations.

There is heavy competition for turf, funds, media coverage, and public recognition among all international health partners. Some of this is good, but it leads to exaggerated claims of success, excessive expenditure on public relations, and high fundraising and overhead costs. At the other extreme, partnerships can lead to collusion and corruption when financial oversight is weak.

Global priorities painstakingly agreed upon in U.N. institutions easily become distorted or unravel when pressure groups and private sector interests in donor countries are driving policy. A current example is the response to AIDS in Africa.

All U.N. system agencies have had zero nominal growth budgets for a number of years, reflecting the policy of the United States but silently supported by the majority who also wish to hold down costs to themselves. Unlike the U.N. itself, the technical agencies, including WHO, did not benefit from a personal donation by Ted Turner when the U.S. share of their budgets was reduced. They have to make up the shortfall from miscellaneous income, mainly interest on money in the pipeline for field activities, which formerly was available for high priority activities. Voluntary contributions, now in the majority, reflect the interests and priorities of donors and absorb administrative funds from the regular budget. The one country/one vote element of the international system is weakening. ◉

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