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GLOBAL HEALTH CHALLENGES (Beijing, China)**

Madam Chairperson, Ladies and Gentlemen.

First, let me thank you for the invitation to address this meeting of the World Federation of Public Health Associations, and I must congratulate you on your growth since I spoke to you nine years ago in Atlanta. I must compliment you on your decision to address, here in China, the major challenges of public health at the dawn of the 21st century. This is a proper time and place for public health professionals and public health associations to reflect on their roles in changing global practice and policy in health.

It is fitting that I begin here by quoting from the Nei Ching, the famous Chinese classic of internal medicine. At the very beginning, Huang Ti, the Yellow Emperor addresses Tien Shi, the divinely inspired teacher thus;

“I have heard that in ancient times the people lived to be over a hundred years, and yet they remained active and did not become decrepit in their activities. But nowadays people reach only half of that age and yet become decrepit and failing. Is it because the world changes from generation? Or is it that mankind is becoming negligent of the laws of nature?”

I am humbled that today we are concerned with a very similar problem. Why should not all men and women on this earth have the possibility of living out in full health that span of years that has probably been imprinted in their genes? The challenge for the millennium is pretty similar to that which engaged Huang Ti over two thousand years ago. Perhaps the advances we have made in that eternal struggle of man against nature makes us see the challenge with more optimism, and perhaps we are blessed with both the insights of the Tao, as well as with the modern technologies that science has brought us.

I know that the response of persons like yourselves and your associations to these health challenges of today and tomorrow is not to dwell on a catechism of the various ills. We adopt basically two approaches to these challenges. First, there is the approach that

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stems from the tendency to empathize with the less fortunate, and ill health is cast as one of the most serious of misfortunes. We cannot help but identify with human suffering anywhere and not one of us would deny that the ill health of every single person on the globe has to be of concern to us, even though we may only be affected tangentially, if at all. There is the natural humanitarian instinct to help, to heal the sick and alleviate the condition that induced the illness. Good Samaritanism is not confined to the practice of medicine in situations where there is direct personal contact with the ill. It extends to population groups as well. The other approach to global health problems or challenges is born of self-interest, and sees the possibility of problems elsewhere affecting us directly or indirectly.

Let me deal now with the first approach. We can regard the health of the people of the globe as being representative of one of those essential elements of human development that every person should enjoy. As Amartya Sen would postulate, it is a freedom that allows us to enjoy other freedoms, and the reduction of any of these freedoms diminishes us all. We are, to a large extent, responsible for the health of our brothers and sisters. Therefore, we have to regard it as a global human health challenge when children die from eminently preventable or treatable causes every year. We have to regard it as a global human health challenge when the victims of wars, famine, and violence on a massive scale manifest their deprivations through ill health and even starvation to the point of death. We have to see it as a global human health challenge that six hundred thousand women die every year from pregnancy related causes—most of them in the developing countries. Many in the industrialized world see a mosquito only a few times a year and appreciate perhaps only subliminally that three to 500 million persons suffer from malaria every year and over one million will die—most of them children.

I listen to Bob Marley and accept sadly that he was prophetically correct when he sang that many more will have to suffer and many more will have to die. In any consideration of global health challenges we have to consider the burden of disease that affects large numbers of persons in places that are many times mere names on the map to many of us. It is proper to consider them global health problems not only because of the staggering scale of the tragedy, but because the solution can only come from global action.

It is proper to ask why, 23 centuries after Huang Ti posed his question we are still confronted with the problem of why many more do not live longer. There have been global advances—tremendous advances; indeed, in developing countries of the world life expectancy at birth has increased by sixty percent over the last half century and continues to increase. Indeed, for many countries the problem lies less in the extension of life and more in the quality of life in the last years.

But large numbers of the world's people still suffer and die prematurely and there is no doubt about the basic cause of their plight. The cause is poverty—grinding poverty. Should this interest public health associations? The answer is yes, and we must be exquisitely aware that not only is poverty the cause of much ill health, but also that

attention to health can be a mechanism for alleviating poverty. The poor are doubly damned. They are more likely to be ill, and the economic cost of illness weighs more heavily on them than on the rich.

Poverty is not only deprivation of income, for as Amartya Sen puts it brilliantly, it is a matter of loss of capabilities. He writes:

There are good reasons for seeing poverty as a deprivation of basic capabilities, rather than merely as low income. Deprivation of elementary capabilities can be reflected in premature mortality, significant undernourishment (especially of children), persistent morbidity, widespread illiteracy and other failures.

And in justifying the attention to health as a mechanism for creating a virtuous circle that has health linked to income he says:

It is not only the case that say, better basic education and health care improve the quality of life directly; they also increase a person's ability to earn an income and be free of income poverty as well. The more inclusive the reach of basic education and health care, the more likely it is that even the potentially poor would have a better chance of overcoming penury.

I would not wish to minimize the other factors that contribute to ill health on a massive scale. There is no doubt that population growth that is unsustainable is important, as are pollution, environmental degradation, and widespread patriarchy that breeds gender discrimination. But many of these can be linked causally or consequentially with poverty. When over one billion of the world's people exist rather than live on incomes of less than a dollar a day, then there must be massive global ill health.

In the Region of the Americas, which is what I know best, the problem is not only poverty, it is inequality –the disparities that are socially unjustified and lead to ill health. The better the efforts of the countries to collect good data and disaggregate them, the more easily we identify the gross disparities in health status among and within countries. It is important to recognize these health disparities that we deem to be inequities, but if we are going to address them we have to do so by first identifying the disparities in the determinants of that health.

There are disparities particularly in the economic and social conditions that lead to differences in health status that we deem to be unfair and so socially unjust that we dub them inequities. Health indicators are worse in poor countries but within all countries the distribution of indicators of mortality and morbidity shows gross disparities among various groups. We see inter-country differences of ten fold in terms of infant mortality and one hundred fold for maternal mortality. Within countries we see gross disparities when ethnicity and geography are used as discriminants. The poor health of indigenous peoples is a classic example of health inequity and this is not a problem only of the indigenous people of poor countries. We never fail to insist that it is this inequity that is a reflection of social injustice that is at the heart of Health for All.

There is acceptance of the fact that dealing with poverty on such a massive scale needs collective action, and we see rich industrialized countries laying plans and devising schemes for action to reduce income poverty, most of which are based on enhancing economic growth. But we also need the collective advocacy of groups, such as the World Federation of Public Health Associations, to argue much more vigorously for a multidimensional approach to poverty reduction -an approach that seeks to strengthen institutions and give voice to the voiceless poor. At your last meeting you argued for debt reduction. That was excellent, but that battle is not yet won—far from it and perhaps there are many who would say that it has not been joined seriously.

But given the relation of poverty to health as I mentioned before, there are some approaches that fall squarely within your domain, and I will mention only one to which we in PAHO have been paying special attention. Health services for the poor are, in general, poor, if they exist at all. There is a large informal sector that is predominantly poor and female in many countries of the Americas, and has little or no access to the formal health care sector. PAHO has been exploring with the International Labor Organization (ILO), the possibility of stimulating the creation of micro-insurance schemes that are locally managed, partly state-supported, and give hope of health security to those whom the formal care systems have passed by. I would like to see public health associations much more involved in the debate and discussion on the various reforms of the health sector and raising their voices to ensure that the changes introduced are not inimical to the poor.

I mentioned a second approach to global health that is based mainly on self-interest and speaks to the possibility of transfer of health risks. Global in this sense is seen as being opposed to national or local. Here we are concerned with health problems that actually or potentially escape the confines of national boundaries and have repercussions at a distance. It goes almost without saying that such problems need cooperative action between national and other partners. This approach to, or vision of global health that has a large component of self-interest should have no pejorative connotation. In its report on America's vital interest in global health, the Institute of Medicine recommends that the United States exert greater leadership in global health and gives the following as one justification:

“In so doing the United States will fulfill its national responsibility to protect Americans' health, enhance U.S. interests and project U.S. influence internationally.”

In this century we will see the transfer of risks that pose major global health challenges mediated in three main ways: (1) the movement of people, (2) the movement of potentially harmful products and foods; and (3) the movement of information that induces various behaviors that may be damaging to health.

People have always sought to expand their knowledge of other places and international travel that is as old as human experience continues to grow inexorably. According to the World Tourism Organization, international arrivals increased by 2.4%

in 1998, in spite of the Asian economic crisis, and some 625 million persons left their homes to visit a foreign country. Travel is one industry, which according to the Secretary-General of the WTO:

“shows vulnerability to external economic and political forces and great resiliency in the face of adversity.”

Much of the movement is to developing countries, and there is much concern about the transfer of communicable diseases from the developing to the developed countries. The top five tourist destinations in 1998 were all developed countries, which together accounted for 36% percent of all arrivals. The prospect for spread of disease among all countries is enormous with this intensity of travel. The movement of people is particularly critical for the emergence of one of the time bombs of public health –the spread of antimicrobial resistance, which in my view has not been receiving the attention it deserves.

Antimicrobial resistance is a natural biological phenomenon that is really unstoppable. Microbes usually acquire resistance through the normal process of mutation, or by the transfer of genetic material from one to another. When microbes are exposed to antibiotics, the phenomenon known as selection pressure encourages the development of resistance—perhaps a particular application of the old saying that only the strong survive. Antimicrobial resistance has become a major public health problem because of our own arrogance and carelessness in the use of antibiotics. We are now well past the euphoria of a half century ago when the first antibiotics came into common use, and raised the possibility of victory over the microbes. It has been claimed that antibiotics have had very little to do with global improvements in health, that have really been due to advances in nutrition and social and environmental engineering that occurred in what some would say were the golden days of public health. That view cannot be sustained, and the world of the pre-antibiotic era was very different from this one when the phenomenon of globalization brings us all together in ways that were not imagined.

We know how and why antimicrobial resistance develops. There is misdiagnosis and inappropriate therapy. Inappropriate in the sense of applying antibiotics when they are not needed or applying them in insufficient quantity and in courses that are too short. The problem of counterfeit drugs and the dispensing by unqualified personnel also contribute. The global spread of antibiotic resistant gonococci is a classic example, since we now find that in some parts of the world up to 98% of these organisms are multidrug resistant, whereas initially –at least when I was a medical student, they were all sensitive to penicillin. The problem has been felt very keenly in the case of tuberculosis. The inadequate local treatment leads to the development of multidrug resistance and an increase in cost of treatment by several orders of magnitude. The global nature of this problem is shown by the fact that antimicrobial resistant organisms are found in all countries. In one of the poorest countries of our Region, Bolivia, apparently healthy children from urban areas carried *E-coli* of which 97% were insensitive to ampicillin.

The risks involved in the traffic of food relate both to the quality of the food itself and the possibility of it being a disease vector. About half of all antibiotics produced are

used in animal farming, where they are applied prophylactically to treat sick animals, and to promote the growth of healthy ones. The action of European governments to ban growth-promoting antibiotics in animal feed results from the real possibility of antibiotic resistant pathogens passing from animals to humans.

We are faced already with the global spread of communicable diseases through the two principal vectors mentioned above –humans and food, and I believe that those communicable diseases of greatest concern for us in the context of global health are – HIV/AIDS, malaria, and tuberculosis. I am sure you know the data, –over 34 million persons living with AIDS, and sub-Saharan Africa facing a plague of biblical proportions, –the Caribbean with a prevalence rate second only to that in Sub-Saharan Africa; 3,000 persons dying every day from malaria -mostly children- and 1.5 million dying every year from tuberculosis.

But grim as the global picture may seem for the transfer of infections by human and other vectors, it is perhaps potentially worse as a result of the propaganda that knows no frontiers and induces others to adopt health-damaging practices. The most egregious example is the one of tobacco, which is estimated to have killed 4 million in 1998, with the possibility of that figure rising to 10 million by 2030.

What are the possible global responses to these global challenges? The first, and perhaps most important, is the ability to detect changes at a global level –that we should know what is upon the people where they live and the possibility of its transfer. This means the presence of some global surveillance system. International health regulations represent a reactive system so we need to have a more agile one that provides information on a systematic basis on disease trends worldwide. There are surveillance systems for specific diseases such as tuberculosis, but there is not one that is able to detect outbreaks rapidly and facilitate the efforts to contain them. This is not easy, as we have found in our attempt to establish a regional system. One of our first tasks -important and painstakingly prosaic- was that of strengthening the capacity of laboratories to diagnose accurately some of the most common pathogens. Given the rapidity of information flow, and the near impossibility of its restriction, it is becoming a point of debate whether it will ever be possible to establish a truly global system that will operate in real time.

Another part of the response to the global challenge is the establishment of global mechanisms based on shared interests and responsibilities. International organizations such as WHO have, as part of their mandate, the coordination of a global response, and the existence of these organizations is an indication of the willingness of nations to work together for common causes. Indeed, in many instances, there have been outstanding successes in this joint work. The eradication of smallpox, the imminent eradication of poliomyelitis, the possible eradication of measles –following a successful effort in the Americas– the strong movement to develop a framework convention for tobacco control –these are all excellent examples.

But I will predict that this century will see the growth of other kinds of international efforts in health. I would hope that the growth of your Federation is an

example of national organizations coming together to address genuinely global problems. The organizations of civil society are increasingly adopting positions on global issues, and there will be other examples of organizations that began as purely national in scope assuming a global role. The process of globalization will lead inexorably to the strengthening of the role and influence of transnational businesses. As these businesses come to be bound less and less by national borders, they will have to be concerned about these global health issues. Transnational companies will appreciate that their success will increasingly depend on the stability of global conditions and the health of persons where they do business. Once again, self-interest will drive the concern for attention to global health. A recent issue of Business Week examined the 21st century corporation in the new creative economy in which intellectual rather than physical or financial capital will be at a premium. It wrote:

“Global corporations will try to take advantage of their transnational status to operate beyond the control of national governments.”

and went on to point out that:

“Many corporations have already begun to adjust to the new realities of the creative economy –by allowing power to tilt from the sources of capital toward the sources of ideas by embedding themselves in fertile corporate ecosystems, and by adopting codes of social responsibility to win the trust of a wary public.”

It is not farfetched to imagine these codes of social responsibility embracing efforts to address global health issues. It will be a challenge for people like us to find ways of merging these business interests with those of the international intergovernmental organizations.

Let me end by wishing you a successful conference, and I would mark as one criterion of success that you, representatives of your associations return home with the conviction that there is cause for optimism that these major global challenges can be met and overcome. There is nothing immutable about the poverty that leads to ill health. There is nothing immutable about the spread of antimicrobial resistance to the point that we regress to the pre-antibiotic era. Your voices in the right places, united with others like yourselves who share the same concerns, can make a difference. The efforts of the American Public Health Association, in this regard, under the vigorous leadership of Dr. Mohammed Akhtar, represent a good example of this kind of advocacy for what can be done to promote the global view without forgetting domestic concerns. Of course, the change you try to achieve will not occur with the speed that we sometimes wish, but the real tragedy would be if you did not try.

I thank you.