

US Senators Address Global Reach of Infectious Disease

In May, the US Senate's Foreign Operations Subcommittee held a hearing on combating infectious diseases, one of only two such hearings in the last decade to examine the global implications of emerging communicable diseases. Representatives from the World Health Organization, USAID, pharmaceutical manufacturers and the National Academy of Sciences presented testimony calling for the United States to take a more active role in fighting infectious diseases on a global level and for increased funding for surveillance and research.

The hearing helped spur a bill calling for a \$30-million increase in USAID's budget for controlling infectious disease, to be spent to prevent the development and spread of antibiotic resistance and to combat such diseases as TB and malaria.

During the hearing, Senator Mitch McConnell, a Republican from Kentucky who is chairman of the subcommittee, and Senator Patrick Leahy, who represents Vermont and is the ranking Democrat on the subcommittee, articulated why they feel it is important that the US government devote more resources to studying and combating disease not only within its borders, but around the world. The following is excerpted from their remarks.

Senator Mitch McConnell:

Having been a victim of polio as a child, I have a very personal interest in this area. I believe we are finally close to eliminating polio from the face of the earth, in part due to a dedicated effort by international health organizations, bilateral aid programs and the active involvement of nongovernmental organizations and community activists. But polio should not be the only targeted disease. We need to see the same kind of effort concentrated on tuberculosis, malaria and diphtheria, to name just a few.

From my perspective there are two compelling reasons to focus our attention and resources on the problem of infectious disease. First, it is consistent with our humanitarian traditions. Right now, one person dies every 15 seconds from malaria. And, of those deaths, 85 percent are children under 5. We need to add malaria, measles and polio to the short list of fatal diseases, including smallpox, which we have erased from the earth.

But this is not just an issue of saving children. The spread of infectious diseases directly affects both our personal safety as well as economic and national security.

We need an effective surveillance system to assure our blood supply is not contaminated by emerging deadly microbes. At this point, we can screen out well-known bacteria or viruses, but I am not confident we have the national or international mechanisms in place to protect us from emerging deadly agents.

We need to coordinate prevention, diagnosis and treatment programs for TB, which by some estimates is harbored by more than 2 billion people worldwide, the majority of whom are in Mexico, China and Russia.

Last year we provided emergency assistance to combat the diphtheria epidemics in Russia and Ukraine. While I think this aid was helpful, it was a stop-gap measure, not a part of a comprehensive strategy for the NIS.

These epidemics have a human face but economic costs. Just as one example, 1995 estimates of health care and lost production in tropical Africa for malaria run nearly \$2 billion, a staggering toll for a destitute continent.

Finally, while some may still be indifferent to the human or economic interests at stake, there is no question that improving surveillance, control and treatment of these diseases has real national security implications. In April, 100 people were quarantined for eight hours in Washington, DC in response to an anthrax scare. While it turned out to be a sadistic hoax, the drill was a live demonstration of the problems we may face in the future. In spite of a global convention banning the production, distribution or acquisition of biological weapons, ten countries are suspected of having biological warfare programs. Iraq has acknowledged manufacturing 25,000 liters of an anthrax bacterium which is sufficient to kill the earth's population three times over.

Senator Patrick Leahy:

Just 20 short years ago, with the eradication of smallpox and the discovery of the polio vaccine, people actually thought we were on the verge of eliminating infectious disease forever.

As Laurie Garrett wrote in *The Coming Plague*:

The world was a very optimistic place on September 12, 1978, when the nations' representatives signed the Declaration of Alma Ata. By the year 2000 all of humanity was supposed to be immunized against most infectious diseases, basic health care was to be available to every man, woman and child, regardless of their economic class, race, religion or place of birth.

But as the world approaches the millennium, it seems, from the microbe's point of view, as if the entire planet, occupied by nearly 6 billion mostly impoverished people, is like the city of Rome in 5 B.C. Our tolerance of disease in any place in the world is at our peril. While the human race battles itself...the advantage moves to the microbes' court. They are our predators and they will be victorious if we, Homo sapiens, do not learn to live in a rational world that affords the microbes few opportunities. It's either that or we brace ourselves for the coming plague.

In many respects, that plague is already here.

--By the year 2000, 12 million people will be infected with the AIDS virus in India alone, and there will be 40 million cases worldwide. Over 100,000 people were infected with HIV by 1980, before AIDS was even discovered.

--Each year, 3 million people die worldwide from tuberculosis, a curable disease, and multi-drug-resistant forms of TB pose a new, even more serious threat. After years of decline, TB re-emerged as a major public health problem in this country just a few years ago.

--Each year, there are some 250 million new cases of malaria and 2 million deaths. New drug-resistant forms are being transported around the world.

--The Ebola virus, were it to spread beyond isolated rural parts of Africa, could cause a similar catastrophe as the AIDS virus.

The cost of stopping these microbial threats at our borders is no longer a realistic option. To quote from "America's Vital Interest in Global Health," a 1997 [US] Institute of Medicine study:

The movement of 2 million people each day across national borders and the growth of international commerce are inevitably associated with health risks....Poverty and violence impose major burdens on health, burdens that are shared by people in developing countries

and in the inner cities of the industrial world alike. Due to the ease of rapid international travel, emerging and drug-resistant infectious diseases in one country represent a threat to the health and economies of all countries.

Since 1973, more than 30 new infectious diseases have been identified and numerous known diseases have re-emerged as serious public health threats. Our failure to maintain and strengthen our ability to control the spread of these diseases has recently received attention, thanks in part to Laurie Garrett's book and films like *Outbreak*. In June 1996, President Clinton announced a national policy to address the threat of emerging infectious diseases through improved domestic and international surveillance, prevention and response measures.

Other government-funded studies over the past several years have also warned of the dangers and made numerous recommendations. However, as so often happens, many of those recommendations were ignored. Perhaps it is because microbes are invisible to the naked eye, and we assume that technology can defeat any disease, that we have not done more about it.

Frankly, I am amazed that this topic has not received greater attention in the Congress. The government has a responsibility to protect its citizens. America's pharmaceutical companies could make an enormous contribution to global health, but they face many obstacles. We know what needs to be done, yet we continue to treat one of the most serious threats we face with the same kind of naive optimism as we did 20 years ago.