# April 25, 1996

# Testimony by Chuck Woolery, Director Communication for Health Campaign

# Before Congressman Sonny Callahan Chairman of the Foreign Operations Subcommittee of Appropriations U.S. House of Representatives

Regarding Funding for International Health and Development Programs for Preventing the Spread of Infectious Diseases.

Thank you for allowing me as the Director of the Communication for Health Campaign to testify today regarding the prioritization of US foreign aid appropriations.

The World is in great change. Within the context of this change, the appropriations made by this Subcommittee now constitute the basis for maintaining the security of the American people. In the past, this Constitutional mandate was carried out by military strength. Today, military strength alone can no longer protect Americans from the foreign threats now approaching and breaching our shores.

The disturbing trend of new and re-emerging infectious diseases puts public and global health squarely in the realm of national security interests. Numerous reports document the threat infectious diseases pose to American lives and prosperity, and identify them as a threat that will only grow in the coming years. The rate and magnitude of that growth has been determined by our past neglect of poverty, environment and public health concerns. Our continuing failure to address a host of critical international problems within this specific context promises us almost certain catastrophe.

For some, the catastrophe is already here in the form of HIV/AIDS or multidrug-resistant Tuberculosis. These two diseases already consume a large portion of our nation's health expenses.

AIDS was first recognized as a US problem in the early 1980s. If we had been more interested in international health threats earlier, we could have started research to combat the AIDS virus as early as 1962 when it was first recognized by African physicians as the "slims" disease.

After three decades of decline, TB in the US re-emerged as a major public health problem in the late 1980s. Targeted federal funding brought it back under control but still, in 1995, TB outbreaks were investigated in churches, schools, dental offices, court rooms, trains, subways, neighborhood bars, racetracks and even on a river boat casino. Until we control TB globally, we will continue to pay the expensive price for outbreaks here. One outbreak in New York City in 1993-1994 cost the city over \$90 million. The world devotes less than half of that annually for the global control of TB.

Infectious diseases spreading in US hospitals kill more Americans each year than all the American troops lost throughout the entire Vietnam conflict. A significant number of these 'domestic' infectious diseases were imported from the harsh conditions of poverty abroad. As these conditions worsen, the number and variations of microbes will continue to grow and move with the aid of modern transportation. The actions of this Subcommittee, in regard to development and humanitarian assistance will have the greatest impact on the future security of the American people and control of these impending threats.

The cost of stopping microbial threats at the gates of our cities or at our water's edge is no longer a practical option. A handful of microbes can be stopped at the border but the vast majority cannot. It would be prohibitively expensive to stop, test and quarantine every human or foreign product that crosses our borders or air space every day. Reducing infectious diseases, terrorism, pollution, or even unemployment in America now requires our pro-active efforts to extend beyond US boarders. Prevention there is far cheaper than dealing with these problems at our borders or in our cities. That is the new profound opportunity of this Subcommittee - to impact the conditions of global poverty and chaos, that are the primary fuel feeding the health, economic, environmental and security threats now facing this nation.

The Communication for Health Campaign and NCIH represent over 120 member organizations including the American Medical Association, the American Public Health Association, American Dental Association, the American College of Preventive Medicine, the American Nurses Association, the American Association of Critical Care Nurses, 9 Schools of Public Health and dozens of other international medical and health related organizations. These organizations and thousands of individual health care professionals urge this Subcommittee to re-examine its fundamental priorities in this new 'national security' context.

This Subcommittee took two steps forward last year by establishing the "Child Survival and Disease Account". Unfortunately, it took a large step backward when it failed to appropriate sufficient funds to achieve its own recommendations. The 'Child Survival and Disease' earmark of \$484 million falls \$127 million short of the levels it recommended for Child Survival (\$254 million), UNICEF (\$100 million), Polio (\$25 million), AIDS (\$129 million), and Basic Education (\$108 million). If we consider the absence of other expenditures needed to cure or prevent tuberculosis, provide clean water and sanitation, slow the spread of malaria and other tropical diseases, and support other vital health related programs, the total appropriated will be stretched even further. USAID could divert other aid resources to meet these specific health needs but cannot do so without taking away from other vital programs; that in the long run, bring health, security and stability in the Third World, and ultimately to our shores. Family planning and microenterprise programs are also important contributors to the health of individuals and communities. Support for democracy and human rights also have an impact in reducing the chance of conflict that so often halts and even destroys health services.

The 52 words of the Preamble to our own Constitution now provide the perfect and most urgent rationale to solve this dilemma.

"We the people of the United States in order to form a more perfect Union, establish justice, insure domestic tranquillity, provide for the common defense, promote the general welfare, and secure the blessings of liberty to ourselves and our posterity, do ordain and establish this Constitution for the United States of America."

Nearly every American would agree that the primary role of any legitimate government is to provide for the defense of its citizens. Reductions in development assistance over the last few years however, have reduced our health defenses, and dramatically increased our risks.

**Article 1. Section 8**. of the Constitution says that "The Congress shall have Power to lay and collect taxes, duties, imposts and excises, to pay the debts and provide for the common defense and general welfare of the United States..."

It does not suggest that the common defense and general welfare of the American people should be sacrificed to balance the budget. That is indeed the scenario now being played out.

It is not hard to imagine a health crisis in this country where even **Article 1. Section 9** of the Constitution "...The privilege of the Writ of Habeas Corpus" would need to be "suspended", when "the public safety may require it."

Article IV. Section 4 of our Constitution states that "The United States shall guarantee to every State in this Union a Republic Form of Government, and shall protect each of them against Invasion; ..." The Constitution does not specify invasion from what. I believe it is not a stretch of the imagination to claim that the framers of our Constitution had the protection of American citizens in mind when they agreed to this wording. This Article has now been violated by the entry of AIDS, malaria, dengue fever, ebola, tuberculosis, cholera and perhaps a dozen other pathogens; and unfortunately, this is only the beginning. Legal and illegal immigration certainly plays a role in the transportation of disease, but the greatest source of cross-border transport of pathogens is the result of legal domestic travelers dressed in business suits, army uniforms, and tourist or holiday attire. More than 50 million people cross the US border each year. Nearly half of the food we purchase and place on our kitchen table each evening has been imported from nations where the cheapest labor is hired for harvesting and processing the crops.

Stopping the flow of people and goods would be prohibitively expensive if not impossible. Yet at any given time approximately one-half of the world's population is ill. The heaviest concentration of pathogens is found in the developing world where fewer than half the world's people try to make a living on less than \$400 a year. It is in these parts of the globe that we must implement comprehensive, preventive measures if we want to provide the greatest safety for American citizens.

**Article VI** says "...This Constitution and the laws of the United States...shall be the supreme law of the land." We are hopeful that the next law this body passes will reflect its solemn duty to provide for the defense and welfare of the American people.

Over the last 50 years, the US Government has devoted trillions of dollars to a cold war to protect us from the possible threat of a communist aggressor. While that threat remains a remote possibility today, we are guaranteed an onslaught of infectious diseases in the near and not too distant future. This is not my opinion. It is the findings of a National Academy of Sciences Institute of Medicine report published 3 years ago. Since then the world has suffered an outbreak of bubonic plague in India, Ebola virus in Africa and new variations of tuberculosis within the US that are resistant to every antibiotic we now have in our health arsenal. Perhaps this Subcommittee could provide the bold leadership needed to commit the US to a "hot war" to ensure our freedom from fever. How easily we forget that the largest killer and disabler of men, women, children and even the unborn in the world is simple malnutrition and infection. Our reliance on the progress of science to protect us has betrayed us. The progress of pathogens to adapt to our arsenal of medicines promises to be the fight of our species. It is truly an "us against them" war that needs to be waged. We can destroy the majority of them at their base camp by ridding the world of the poverty related conditions in which they multiply, thrive, and strengthen.

For the cost of a pair of B-2 bombers (bombers the Pentagon says it doesn't want or need) we could launch such an offensive. This minor investment could eradicate many diseases and greatly reduce our risk to a host of others. No number of additional B-2 bombers can do that.

In the closing paragraphs of <u>The Coming Plague</u>, aptly entitled "Searching for Solutions", Laurie Garrett writes:

"The human 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 microbes' point of view, as if the entire planet, occupied by nearly 6 billion mostly impoverished *Homo sapiens*, is like the city of Rome in 5 B.C. "The world really is just one village. Our tolerance of disease in any place in the world is at our own peril," Lederberg [Nobel laureate for discovery of DNA] said. "Are we better off today than we were a century ago? In most respects, we're worse off. We have been neglectful of the microbes, and that is a recurring theme that is coming back to haunt us."

In the end, it seems that American Journalist I.F. Stone was right when he said, "Either we will learn to live together or we will die together."

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 global

village that affords the microbes few opportunities. It's either that or we brace ourselves for the coming plague."

This new reality requires a radical shift in the way Americans relate to each other and to the rest of the world. More weapons will not bring us more security. In fact just the opposite may now be true.

# More Might! More Fright! More Plight!

In the modern world of disorder and dissolving nation states, the more US Military superiority we have, the less US national security we actually gain. Maintaining or increasing US military strength has at least 4 negative consequences on the health of US citizens. First, military spending usually distracts scarce financial resources from meeting basic human needs. Every billion dollars spent today beefing up our military against a possible human aggressor means a billion dollars less for the programs essential to protecting Americans from the aggression of infectious diseases. It is true that a small portion of military spending is spent in combating infectious diseases and more spent here could certainly be helpful. However, more B-2 bombers or a new space based anti-missile defense system is just plain wasteful, in the face of this new threat.

Second, military units stationed abroad always return home bringing whatever health problems they have with them. There may be as many as a quarter million troops stationed overseas at any given time. Their interactions with foreign populations, combined with their rapid and regular travel habits contribute to globalizing health problems. Sexually Transmitted Diseases, AIDS, anti-biotic resistance and a host of other communicable diseases are now in the pipeline.

Another increasingly important effect of 'military might' affecting public health falls in the category of terrorism. As our military gains an undisputed level of superiority, we squelch the possibility of any overt enemy attack on our shores. This squelching of overt aggression however, only increases our risks to covert aggression by any hostile individual, group or nation. The bad news: The ultimate weapon of affordability, ease of delivery, and effective human destruction is microbial in nature. In the Conference report on the Anti-Terrorism bill passed last week, a Senator suggested that if this bill passed, it would help protect the American people. This is a dangerous myth. We are all entirely vulnerable to the misuse of lethal or crippling pathogens in nearly every aspect of our lives. Any moderately intelligent person can find at least a dozen ways to infect hundreds if not thousands of people. A 98 cent plastic misting bottle from any drug store, a dose of salmonella from any blend of raw eggs and a 20 second pass around any popular salad bar is just one example. The Tokyo subway nerve gas attack last year killing 12 and injuring over 5,000 wasn't particularly creative (nerve gas in a paper bag). The fact that members from this same sect went to Zaire posing as relief workers responding to the 1995 outbreak of ebola is, however, truly terrorizing. Imagine the consequences in America if the unibomber, the Oklahoma City bomber or the Trade tower bombers had any training in basic microbiology.

Senator Hatch reminds us that the "possession of dangerous human pathogens, such as bubonic plague, anthrax...are...readily available to just about anyone..." The December 30, 1995, Washington Post has a story with a headline that leaps off the page: 'Man Gets Hands on Bubonic Plague Germ, but That's No Crime.' The story is more chilling than the headline. In Ohio, a white supremacist purchased three vials of the bubonic plague pathogen through the mail. This was the same pathogen that wiped out about one-third of Europe in the Middle Ages. When the purchaser called the seller to complain about slow delivery, the sales representative got concerned about whether the caller was someone who really should have the bubonic plague in his possession. According to the story, the Ohio authorities were contacted. When police, public health officials, the FBI, and emergency workers in space suits scoured the purchaser's house, they found nearly a dozen M-1 rifles, smoke grenades, blasting caps, and white separatist literature, but no bubonic plague. The deadly microorganisms were found in the glove compartment of his automobile, still packed as shipped..."

Investments in research on pathogens and the development of targeted treatments is a viable responsibility of government involvement. We cannot wait for the market place to catch up with the mortality rate of Americans.

With the current level of global poverty, rapid means of global transportation and general lack of resources directed at improving the human condition, terrorists really don't have to do much of anything. Our own lack of basic human services here for the US homeless and below-poverty populations means the spread of disease by normal factors is already a disaster waiting to happen.

The fourth military factor is related to 'peace keeping' and 'nation building'. These traditionally non-military roles carry a certain element of risk by increasing American troop exposure to foreign populations. Keeping peace and increasing a nation's capacity to meet the immediate needs of its people is however, the best way to prevent or eliminate the chaotic conditions that give favor to pathogens in the first place. International involvement carries a risk but it is a far greater risk to allow war and chaos to disrupt the health and well-being of any population. US military capacity is still needed to protect us from an array of the traditional military threats but they can no longer alone protect American lives. Even the Military recognizes this fact.

#### **CISET Report**:

Perhaps the most alarming, comprehensive and credible warning related to this issue, came last summer from the Committee on International Science, Engineering, and Technology (CISET) Working Group. A report, co-authored by the Department of Defense, the National Security Council and the Center for Disease Control and Prevention, and a dozen other federal agencies, documented the emergence since 1973 of at least 30 new pathogen types and the re-emergence of dozens of previously controlled infectious diseases. The report places infectious disease issues in the realm of national security.

"...any city in the world is only a plane ride away from any other. Infectious microbes can easily travel across borders with their human or animal hosts. In fact, diseases that arise in other parts of the world are repeatedly introduced into the United States, where they may threaten our national health and security. Thus, controlling disease outbreaks in other countries is important not only for humanitarian reasons. It also prevents those diseases from entering the United States, at great savings of US lives and dollars."

(CISET report is available: http://www2.whitehouse.gov/WH/EOP/OSTP/html/cisetsum.html For a copy of the report call CDC, 404-639-2603 or fax your request to 404-639-3039.) [Updated 10-10-14 <a href="http://clinton1.nara.gov/White\_House/EOP/OSTP/CISET/html/toc-plain.html">http://clinton1.nara.gov/White\_House/EOP/OSTP/CISET/html/toc-plain.html</a>... Updated again 3-12-20: <a href="https://1997-2001.state.gov/global/oes/health/task\_force/index.html">https://1997-2001.state.gov/global/oes/health/task\_force/index.html</a>. ]

### Other Sources:

A <u>Washington Post</u> article last June also pointed out that among all the infectious threats, the problem of increasing drug resistance may be the most serious, and America is no safe haven.

Antibiotic resistance is on the rise...A few pay in illness and death. The bill is going up every year... Once emerged, resistant bacteria spread quickly, sometimes via a single infected person traveling between countries. Similarly rapid diffusion occurs in the microbial world [when] resistance...can pass from bacterium to bacterium, evolving in one enterprise, such as agriculture, and soon showing up in an unrelated one, such as medicine. In the United States, resistance is everywhere - in childhood ear infections, in venereal diseases, in TB, in surgical wounds and among the 60,000 deaths each year from hospital acquired infections. In the developing world, antibiotics are the most common pharmaceuticals, and they often can be bought without a prescription. Many people take them when they're not needed or don't take them long enough to cure an infectious completely. Such practices, combined with high rates of infectious disease, make developing countries especially fertile breeding grounds for drug resistance.

In one high-profile example, the outbreak of dysentery that killed up to 15,000 Rwanda refugees last summer might have been less deadly if the strain of *Shigella dysenteriae* hadn't been resistant to five common antibiotics...

Epidemics, however, are not what experts fear from drug resistance. Instead, they fear the slow erosion of history's most useful medicines...They fear that treating simple illnesses will become onerous and expensive, and that the number of mild illnesses taking complicated turns will rise.

"The old people in the nursing homes are going to die, and the young kids with ear infections are going to progress to mastoiditis, sinusitis, meningitis," said Calvin M. Kunin, a professor at Ohio State University School of Medicine and past president of the Infectious Disease Society of America. "I think there ought to be a new organization called MAMA, Mothers Against the Misuse of Antibiotics. Because it's the mothers' children who are going to die."

...About 150 million courses of oral antibiotics are prescribed each year in the US. Childhood ear infections are the single leading reason...Some experts estimate that as many as half the prescriptions written for antibiotics in the US are not needed or warranted on diagnostic grounds...

Whatever their source, drug-resistant germs are now such an unavoidable part of the environment that children get them as birthright. In a study published five years ago, researchers analyzed the intestinal bacteria of infants and toddlers in three separated locales. They found that 42% of sample from children in Qin Pu, China, were resistant to three or more antibiotics. Multiple-drug resistance was found in 30% of children sampled in Caracas, Venezuela, and in 6% of children in Boston. None of the children had recent exposure to antibiotics.

...For reasons that are quite mysterious, some microbes develop resistance to many antibiotics simultaneously...

One of the more important disease-causing bacteria in human beings is called *Streptococcus pneumoniae*. Its resistance to penicillin is a huge problem in Europe and a growing one in the US. Penicillin-resistant *S. pneumoniae*, however, was originally found in Papua New Guinea. In the late 1960s, the Australian army gave New Guinean villagers monthly penicillin shots in order to prevent yaws, an infection resembling syphilis that is spread by casual, not sexual, contact. Over time, the campaign created a large human population in which penicillin-resistant *S. pneumoniae* could flourish. ...

... The best documented example involves the spread of penicillin-resistant *S. pneumoniae* in Iceland. The bug surfaced in Iceland in December 1988, at a hospital in Reykjavik. DNA fingerprinting revealed that it was similar to a strain found in Spain, a popular winter vacation spot. Within 3 years, 20% of the *S. pneumoniae* in Iceland was resistant...apparently all descended from the single Spanish import...

As a threat to public health, *S. pneumoniae* is currently the greatest object of concern. The bacterium is the leading cause of illness and death from infection in the US. It is responsible for roughly 7 million cases of ear infection, 500,000 cases of pneumonia; 50,000 cases of bloodstream infection; and 3,000 cases of meningitis each year...Inevitably, though, a greater number of cases will become "complicated"...

Each year in this country, about 2 million cases of infection are contracted by people while they are in the hospital. The problem is far more common than in the past, as critically ill patients are kept alive, many connected to tubes and ventilators that give microbes easy portals of entry.

A common cause of these infections is a family of bacteria known as the enterococci, which infect surgical wounds, the urinary tract, the heart and bloodstream. ...these germs have developed resistance to a half-dozen antibiotics. However, they remain susceptible to vancomycin, an expensive and occasionally toxic intravenous antibiotic...

The biggest cause of hospital acquired infections - the family of Staphylococcus bacteria -- is currently resistant to everything but vancomycin in 40% of cases in large teaching hospitals. Experts fear the day that drug becomes useless in staph infections -- though few doubt it will arrive.

Nearly every multidrug-resistant TB organism evolved in patients who stopped taking their medications early or took them sporadically. Changing both patients and doctors habits would slow the emergence of resistant strains and might even turn back the clock in some cases

"The Abuse of Antibiotic: Bacterial resistance evolves". Washington Post, June 26, 1995

Last year, about 25,000 people between the ages of 3 and 49 died of unexplained causes in the US -- but with symptoms that suggested microbial infections...

"Budget Cuts Slow Agencies Fighting New Bacteria Strains" Washington Post, June 27, 1995

# **Cost effectiveness of Development dollars:**

Development is far cheaper than defense. Even the strategic planners in the military now figure that preventing and resolving conflict is far cheaper, in both lives and dollars, than waging war. Healthy populations also tend to be better consumers of American goods and services. Thus the importance of public health and prevention of disease. Global disease eradication efforts also have a significant domestic return on international investments. For each of these reasons, increases for development assistance can be justified on economic grounds alone. But the security rational is far more important. Cuts to development assistance have troubling side effects. One of our members, upon return from the refugee camps in Bosnia noticed a decrease in cooperation among private voluntary organizations. She made me aware of the fact that cuts to development assistance decrease the overall effectiveness of our relief efforts. Shrinking moral is one small factor. Another consequence is the increased competition between PVOs and NGO's for scarce donor dollars. Competition may be increasing the effectiveness of individual PVOs, but it is detrimental to the larger scale cooperative efforts needed to effectively deal with development and relief problems. Making sufficient government money available, and strengthening the mechanism for delivering US aid abroad could reduce this competitive problem.

USAID plays an important role here and continues to work closely in collaboration with WHO, PAHO, PHS/CDC, NIH and others in a number of areas, and is producing cost-effective health improvements. CDC, WHO and USAID bring collaborative partners to the table, thus sharing the benefits of worldwide and local expertise and reducing the cost borne by any one partner.

It is vital to keep overall funding for development activities at a level that will allow AID to continue to support internationally-coordinated efforts. Since 1993, such funds, though a relatively small amount of the AID budget, have been in decline. Cooperative funding activities, including work on HIV/AIDS through WHO, the Global Program on AIDS, and the new independent UNAIDS program, is estimated to decline by one-third between FY94 and FY96, from a level of \$40 million to about \$27 million, of which HIV/AIDS funding still accounts for at least two-thirds of the total.

#### The latest in infectious diseases:

Last month the British beef industry was crippled (almost eliminated) because of a pathogen 'scare'. The economic cost alone could be as high as \$2 billion dollars. Last week, Ebola related primate deaths in Alice, Texas resulted in the need to kill hundreds of other primates. Aside from this loss of life, this incident cost both business and government, a few hundred thousand dollars. The media will probably spend more than that covering this particular isolated and relatively insignificant health threat, yet the real story is not being told. These are not 'isolated' incidents. They are an increasing trend in the global spread of infectious diseases that requires our utmost attention and response. It is a trend that holds the capacity to bring life as we know it to a grinding halt.

**The bright side**: If we respond to the trend appropriately and adequately it could propel all of humanity into a long, healthy and prosperous future.

Benjamin Franklin long ago reminded all of us that preservation of our form of government depended on our constant vigilance. The trend of new and re-emerging diseases is a threat to our people, and our way of life. These global warning signs require more than constant vigilance.

The choice is yours and the time is now. We urge this Subcommittee to recognize this growing threat for what it is; a threat worthy of top priority concern. Any less would be a form of negligence in protecting the national security of this nation and the lives of the American people.

For this Subcommittee to protect the American people, there are at least four basic areas requiring adequate and immediate action.

- 1. The need for surveillance is quite clear. A global network of adequately supplied, staffed and trained health posts capable of monitoring and reporting health conditions of even remote populations.
- 2. The capacity to response quickly and adequately to any and every outbreak of infectious disease.
- 3. Research and development to ensure our capacity to respond to any outbreak be it accidental or intentional.
- 4. Elimination and prevention of the conditions that breed and foster infectious diseases. Poverty is perhaps the greatest culprit. Unlike other attempts to address poverty from a humanitarian perspective, any new effort must be comprehensive and eternally supported.

Because this subcommittee determines appropriations that will impact each of these areas, you have the greatest capacity to defend this nation's security. You can advance our most basic values and provide for our most basic security by focusing your fullest attention on last area mentioned. Ensuring that every man, woman and child on earth has at least the basic necessities (nutrition, clean water, sanitation, education and basic health services) for a healthy existence will not ensure total safety from infectious diseases. It would, however, greatly reduce this growing threat.

#### Last year:

Despite the most restrictive budget limitations, last year this Subcommittee found the resources to increase funding for at least 3 foreign aid programs, in the context of 'national security'.

This House Subcommittee on Appropriations passed its FY'96 bill with increases for:

Foreign Military Financing Program (FMF) Int'l Military Education & Training (IMET) Economic Support Fund (ESF) OPIC increased by \$13 million. increased by \$13.5 million. increased by \$42 million increased by \$35 million

TOTAL non development aid increases:

\$103.5 million

Last years cuts to development assistance programs averaged over 25%. A 25% reduction to FY'95 levels of the favored programs listed above could yield \$1.408 billion -- more than enough to meet the development goals that most of this nation's citizens are aligned on; nutrition, primary health care, water and sanitation, family planning, basic education, microenterprise lending...

Last year the Senate Foreign Operations Subcommittee attempted to shift Department of Defense dollars into the foreign aid budget to increase funding for IMET. The time for this funding source to be considered in the context of infectious national security threats has arrived.

The economic benefits alone that will result from improving the quality of life for people internationally cannot be overemphasized. The cost savings to this government and the American people from the global eradication of smallpox has been well documented. Our cost savings from the global eradication of polio and measles will be even more bountiful. Combine this with the increase in US jobs as result of increased US exports to a healthier, more prosperous international markets and we could balance our federal budget well within a safe time line.

These decisions are always difficult, and we have a history of ignoring warning signs prior to crisis. An example was the reduction of defense appropriations prior to the sneak attack on Pearl Harbor in 1941. But I can tell you that the cost of that negligence will be insignificant compared to the cost if these microbial trends are also ignored.

In conclusion, the effectiveness of pathogens can be attributed to one simple trait. They are basically non-discriminatory. Most pathogens are blind to their victim's nationality, income level, political party, skin color, age or sex. Until we Americans, as humans reach the same level of indiscrimination regarding who benefits from our foreign assistance, we may soon find ourselves on the bottom of the food chain. As Nobel Laureate, Dr. Joshua Lederberg says, to pathogens we're all just "another piece of meat". This Subcommittee is our best defense.

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