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BUILDING ON SUCCESS: NEW DIRECTIONS IN GLOBAL HEALTH

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BUILDING ON SUCCESS NEW DIRECTIONS IN GLOBAL HEALTH

WEDNESDAY, MARCH 10, 2010

U.S. SENATE,
COMMITTEE ON FOREIGN RELATIONS,
Washington, DC.

The committee met, pursuant to notice, at 9:39 a.m., in room SH-216, Hart Senate Office Building, Hon. John Kerry (chairman of the committee) presiding.

Present: Senators Kerry, Feingold, Boxer, Menendez, Cardin, Casey, Shaheen, Lugar, Corker, Risch, and Barrasso.

OPENING STATEMENT OF HON. JOHN F. KERRY, U.S. SENATOR FROM MASSACHUSETTS

The CHAIRMAN. Thank you very much. This hearing will come to order. Thank you all very much for coming. Today we are obviously delighted to be able to welcome two of our Nation's most important leaders on global health, one a former President of the United States and the other the CEO and chairman of one of America's most transformative companies. Long after their own places in history were secure, both President Bill Clinton and Bill Gates made it their passion to write an impressive new chapter in an effort to solve some of the world's most pressing problems. Fighting HIV-AIDS has long been at the top of that list, and during a polarizing era in America's politics it's been the kind of bipartisan success story that defines our democracy at its best.

Back in 1999 and 2000, I was pleased to work with Jesse Helms, Bill Frist, and many partners from both sides of the aisle to pass comprehensive HIV-AIDS legislation that laid the foundation for PEPFAR. Today, thanks to these programs, over 2.4 million people are receiving life-saving treatment and nearly 350,000 babies of HIV-positive mothers have been born HIV-free. That is a tremendous accomplishment, but it is still not enough.

What's more, we've made great strides against malaria. This in turn has cut childhood mortality in some areas by as much as one-third. And the Global Fund, where every American dollar is matched twice over, has helped to prevent millions of deaths across 140 countries.

But as long as so many lives remain at risk, we can't rest on past accomplishments. As the administration finalizes the Global Health Initiative, we need to ask ourselves, where do we go from here? How do we build on the success that we've achieved?

The Global Health Initiative has rightly identified several core principles that ought to guide our thinking. First, health systems

are more than the sum of their parts. Even as we expand our fight against HIV–AIDS, we have to look beyond the vertical silo of any single disease.

Second, a holistic approach leads us to focus on women and girls, who are the center of each family’s health, but are too often marginalized by their economies and health systems. This includes taking on maternal mortality, which robs families of half a million young mothers every year.

Third, because we seek to empower other countries to eventually assume full responsibility for the care of their own citizens, we must recognize their priorities and the importance of building local capacity.

These principles informed the strong bipartisan message of the Lantos-Hyde PEPFAR reauthorization bill of 2008, and I hope they will provide the underpinnings for strong bipartisan support going forward for advancing global health and strengthening the fight against HIV–AIDS.

Last summer I had occasion to travel in South Africa and my wife, Teresa, and I saw firsthand the most courageous and yet frustrating realities of this struggle. We saw them particularly when we visited the Umgeni Primary School near Durban. We saw caregivers who devote their lives to helping the region’s AIDS orphans, children left with no choice but to assume adult responsibilities at a tender age, and single mothers scratching out subsistence in mud houses, their husbands lost to a horrific disease and many of them HIV-positive. We saw the crushing economic impact of poor health, which underscores why improving health lays the foundation for better economic development across the board.

Clearly, our fight against HIV–AIDS is far from over, but we also have new challenges. Already, as our climate changes and mosquitoes expand their range, malaria is surging in areas that have hardly ever seen it before, like the Kenyan highlands. We must ask ourselves, are we doing enough to prepare for the health challenges that climate change may bring on a massive scale?

We in Congress must answer another crucial question: Is this an investment that we can afford? In an interconnected world, where drug-resistant tuberculosis could be on the next plane landing at Dulles, the answer emphatically is that we can’t afford not to invest in these programs. A strong global public health system is not merely a favor we do for other countries, it is the right thing to do morally and strategically, and it protects our own citizens. In fact, such a remarkably effective bipartisan effort is precisely the kind of program that is worth defending in a budgetary environment where there is pressure to simply slash our investments in the world.

It is no exaggeration to say that the Clinton and Gates foundations have revolutionized the public-private partnership. The Bill and Melinda Gates Foundation has invested billions of dollars in support of HIV–AIDS treatment and prevention, vaccines, and a host of other health challenges. The Clinton Foundation has done groundbreaking work negotiating down drug prices globally for life-saving medications and pioneered projects that transcend the artificial boundaries between health and development.

Our guests today, Bill Clinton and Bill Gates, need no further introduction, but I look forward to a lively discussion with two of the great innovative thinkers in America today, and we are particularly grateful to both of them for taking time to come here.

Senator Lugar.

**OPENING STATEMENT OF HON. RICHARD G. LUGAR,
U.S. SENATOR FROM INDIANA**

Senator LUGAR. Thank you very much, Mr. Chairman. I join you in welcoming our esteemed panelists. We especially appreciate the efforts they have made to change their schedules to be with us today.

In numerous locations around the world, the Bill and Melinda Gates Foundation and the William J. Clinton Foundation rival our government as visible representatives of the United States of America. Even as these foundations focus on helping individuals, they are playing an increasing role in the public sector and rendering policy assistance to governments. Their actions have set global precedents that have influenced public opinion and catalyzed international action.

Most notably, these foundations have been vital partners with the U.S. Government in the fight against HIV–AIDS, malaria, and tuberculosis, and they share in the successes that our country has achieved in this area. According to the Office of Global AIDS Coordinator, the President’s Emergency Plan for AIDS Relief is directly supporting life-saving antiretroviral treatment for more than 2.4 million men, women, and children. They represent more than half of the estimated 4 million individuals in low- and middle-income countries on treatment. Before the program began in 2003, only 50,000 people in all of sub-Saharan Africa were receiving life-saving antiretroviral drugs. Today, 10 times that many are being treated in South Africa alone.

The success of prevention programs is harder to measure, but no less critical. Vaccine research, development, and distribution remain at the forefront of our prevention efforts for HIV, malaria, tuberculosis, and many other preventable diseases that plague the developing world. I commend the Gates Foundation for its \$10 billion pledge to provide funding for vaccine research and to distribute vaccines to the poorest countries.

Both of our witnesses today have spent a great deal of time thinking critically about how to maximize the funds available for global health. Their organizations are deeply attuned to both the strengths and deficiencies of the global health effort, and they have acted independently to implement good ideas. For example, the Clinton Foundation has devoted intense efforts to negotiating lower prices for HIV–AIDS drugs, thereby increasing their availability, especially in Africa. Among its many endeavors, the Gates Foundation has worked hard to promote innovative funding mechanisms that would encourage research on vaccines applicable to specific circumstances in the developing world, despite the limited potential for profit from such vaccines.

I am especially interested to hear the assessments of our witnesses concerning how the global community can more effectively work together to make progress against catastrophic diseases. Do

you feel that contributions from our friends and our allies are adequate? Can global efforts, including both public and private programs, be more efficiently coordinated with one another? Currently, do you believe that there is a rational division of global health contributions between treatment and prevention?

Meanwhile, the U.S. Government must do more to ensure that its own global health dollars are being spent effectively. Although PEPFAR has been an unqualified success, we need to continue to seek greater efficiencies in this program and other global health efforts. In particular, we should improve coordination among agencies working on international health programs. The State Department, USAID, NIH, CDC, and the Defense Department all have critical expertise and capabilities that are being applied to global health. We need to ensure that these agencies are talking to one another, adopting best practices throughout our government, and avoiding duplication in activities.

Two achievable steps that could improve performance are ensuring colocation of health care agencies in embassies wherever possible and reducing unnecessary overlapping reporting requirements by U.S. personnel in the field. Conversations with the administration indicate they are aware of these issues and are working on improvements. I look forward to the results of these reviews in the near future.

As efforts on global health move forward, it is vital that they be accompanied by effective assistance to improve agricultural productivity and food security. The connection between undernourishment and health has long been established. The World Food Programme reports that 25,000 people die each day from malnutrition-related causes. Prolonged malnutrition in children results in stunting and cognitive difficulties that last a lifetime. Health experts advise us that a diverse and secure food supply has major health benefits, including improved cognitive and physical development of children and stronger immune system function.

I am especially appreciative of the creativity and the resources that the Gates Foundation has applied to encouraging agricultural research and productivity in the developing world.

When Secretary of State Clinton testified before us last month, we noted the strong convergence between her Global Hunger and Food Security Initiative and the Lugar-Casey Global Food Security Act, which has been passed by this committee. I believe we have an opportunity in the coming months to achieve something close to a consensus and to pass a global food bill that would have major benefits for international health and stability, as well as for U.S. foreign policy.

Again, I welcome both of you as good friends of the committee and look forward to hearing your statements.

Thank you very much.

The CHAIRMAN. Thank you very much, Senator Lugar.

President Clinton, Mr. Gates, thank you very much again for being here. Your initiatives have had a profound impact and we are grateful for them, and we look forward to your sharing your views about where we head on global health. Mr. President, if you would lead off, and then Mr. Gates.

STATEMENT OF HON. WILLIAM JEFFERSON CLINTON, CHAIRMAN, WILLIAM J. CLINTON FOUNDATION, NEW YORK, NY

President CLINTON. First of all, I thank you very much—

The CHAIRMAN. Can you press the button on there.

President CLINTON. There you go.

The CHAIRMAN. Thanks.

President CLINTON. Chairman Kerry, Senator Lugar, members of the committee, thank you for inviting me here. I worked for this committee 44 years ago when I was a junior at Georgetown, and Bertie Bowman, who walked me in here, worked with me, too. He now looks 10 years younger than me.

I think I last testified before the Congress in 1988 on welfare reform when President Reagan was in office. So I thank you for giving me the chance to come back.

I also want to thank you for the chance to be here with Bill Gates. I think he and Melinda and his father and the people with the Gates Foundation have not only provided more money for health advances, but have actually spent the money better and promoted more innovation and saved more lives than anyone could have imagined. I count it a privilege to work with the Gates Foundation in many areas. I'll mention a couple of them today because I think they reflect how you should consider the Global Health Initiative proposed by the administration.

I want to thank both of you for your bipartisan support of large increases in health care investments. The PEPFAR and the President's Malaria Initiative, which began under President Bush, were literally of an order of magnitude beyond anything that our country had been able to do before. In my second term we were contributing 25 percent of the total the world was spending on HIV and AIDS, but my last budget was something like \$300 million a year. The biggest thing we did was the Millennium debt relief initiative because all those savings had to be spent on health care of education or development. So what you have done here I think is very important.

I also want to thank you for repeatedly recognizing that global health is a foreign policy priority for the United States. I might just cite one example before we get to the bill. The Gates Foundation gave some money to the Clinton Foundation, to subsidize the price of high-quality malaria medication that would actually deal with drug-resistant malaria.

We decided to test it in two provinces in Tanzania, and we decided to do the announcement in an all-Muslim area, in a remote village of 2,000 people on a Sunday afternoon. Twelve thousand people showed up in the middle of the Iraq war that alienated America from Muslims throughout the world. We were in a country where just a few years earlier our Embassy had been blown up. Twelve thousand people showed up, and none of them were mad at the United States because they thought we cared whether their children lived or died.

I applaud the committee for doing this. Now, let me make just a couple of observations about the bill, and make a few specific recommendations. First, I know what you're going through with the budget constraints, and the restoration of the pay-as-you-go rules,

which I strongly supported. I understand, therefore, the dilemmas that you and the Congress will face in funding this initiative.

Since I left office I've spent a lot of time working on global health and matters related to it. As Senator Kerry was kind enough to mention, and Senator Lugar—I've always tried to do more with less, because when I started less was the order of the day.

You talked about reducing the price of AIDS medicines. Generic medicine that was \$500 a year is now about \$120 a year. Pediatric AIDS medicine that was \$600 a year is now down to \$50 a year. That's the biggest drop.

Thanks to the Gates Foundation, high-quality malaria medicine that was about \$8 or \$9 a dose is now down to 50 to 60 cents a dose. That's harder to do with malaria than with ARVs. So far, we still need a subsidy.

We have lowered the cost of laboratory tests and equipment, and we just succeeded in getting our first agreement with a major pharmaceutical company, Pfizer, which produces the only drug that we know of that you can take to treat tuberculosis if you also are HIV-positive. It's the only drug that doesn't make you so sick you can't function. Pfizer gave us a 60-percent discount to buy in volume for people in developing countries. When I asked the Pfizer chairman why he did this, he said, "I realized we had a marketing strategy designed to saturate 15 percent of the world. I would like to sell to the other 85 percent." So far, they have not gotten enough credit for doing this, for thinking about the future in a different way.

But this one change could help us save 200,000 to 300,000 lives a year, of about a half million people who die every year of tuberculosis who also are HIV-positive.

Basically, we have been able to lower the cost of commodities—tests, equipment, machines, and the medicine—by going from what was a low-volume, high-profit margin, uncertain payment business to a very high-volume, low-profit margin, but absolutely certain payment business. We've tried to work with the manufacturers to improve the manufacturing process, to improve the supply chain, to give greater predictability to the process. I think all of that is relevant to the decisions you make on this bill, for reasons I will say in a minute.

The second thing we have tried to do is to work on building up health systems. The thing I love best about the Global Health Initiative proposal is that it is designed to work us all out of jobs. It is designed to break the cycle of aid, by increasing the capacity of local governments to care for their own people.

Think about the discussion you're going to have on this bill and the debate we're having over health care in America. It's a classic example of the polarity of problems in the world today. The biggest problem in developed countries is that the interest groups are rigidly dug in and therefore change is difficult. The biggest problem in developing countries is they don't have the structures that we take for granted. In most of the places that we work, all the stuff we're taking for granted today—that the lights will stay on, the air conditioning will stay on, the microphone will work—people can't take any of that for granted.

So I think that the idea of building systems is important. We have worked to train medical personnel in Ethiopia and Kenya. We

put 40,000 health care workers back into the Zambian system. In Malawi, Lesotho, and Rwanda, we helped the governments to completely rebuild their systems or to build them for the first time. The Rwandans last year finally had a hospital in every region of Rwanda for the first time since the genocide, but this time they also have a network of satellite clinics and community health workers to try to extend the reach of health care to all citizens.

Finally, in Ethiopia—where we have about 140 people working and the United States Government also has spent a lot of money—when we began there was a two-tier system in Ethiopia. The cities had pretty good health care. But 58 percent of the country's 80 million people, approximately 60 million people, lived in villages of a thousand or less. So there are about 60,000 villages, and just a few years ago there were only 700 clinics in the entire country.

So they adopted a plan to grow to 3,500 clinics and asked us to help them. They think once we get all them built everybody will be within a day's walk of a clinic.

Other parts of our foundation have done work in Latin America on nutrition and providing cataract operations, the No. 1 problem impacting the adult work force in Peru, where, thanks to Carlos Slim, the Clinton-Giustra Sustainable Growth Initiative has funded 50,000 cataract surgeries in Peru.

At the Global Initiative, we've raised about \$6.5 billion to improve health access, clean water, and child nutrition. Now, of course, in Haiti with Dr. Paul Farmer, who's my deputy at the U.N. and the head of Partners in Health, we're going to try to do for Haiti, where Paul has worked for 25 years, what we did in Rwanda; just build an entire national health network.

With this background I want to say that I strongly support the Global Health Initiative and its closely related—I'm so glad Senator Lugar mentioned this—food security efforts. If possible, I think the two things should be supported hand in hand. I think the bill is well conceived. It focuses on developing systems in the 20 Global Health Initiative-plus countries. It is the next logical step after PEPFAR, the Malaria Initiative, and what we NGOs have been doing.

It focuses on reducing infectious diseases and malnutrition, increasing access to safe drinking water. It is user friendly. They want to have one site to treat everything. Separate sites for treating different conditions is still a horrible problem in many countries. And there is an enormous emphasis on maternal and newborn and child health with what they call a new business model of public, private, and NGO partnerships. It has very specific, ambitious goals and a scorekeeping system so you can know if you're meeting them.

So I like all that, and I hope you will pass this bill. Now, having said that, I would like to make just a couple of observations and a few very specific recommendations. It is a very good bill, but it reflects the budget constraints under which Congress labors in the recommendations for PEPFAR and the Global Fund funding. If you have to make a choice, I think they made the right choice, because if we don't get these countries to the point where they can stand on their own two feet and take care of their own people and work

themselves away from total dependency, we're not doing right by them.

My goal in Haiti in this reconstruction is to be able to go to Haiti as a tourist, where all they need from me is to pay my bills. So I love the concept.

But we've got a real problem. Bill Gates and I started talking about this in January in Switzerland. First, everybody getting AIDS medicine is living longer, which means they need the medicine longer, and more and more people need it every year.

Second, the longer you live, the more likely you are to need "second-line" medicines. And even though we cut their prices between 30 and 50 percent, they're still higher than the first-line drugs. So far, the volumes are going up more than the costs are coming down for second-line medicines.

Third, if you succeed in building national systems, then people will show up who aren't being treated at all now and once they start showing up in new clinics, they're going to expect to be treated. Therefore, if we're going to approve this budget, we need a different strategy for funding the medicine for the next 5 to 10 years to get on the other side of this divide.

So the big question is how to get the benefits of the Global Health Initiative and either get more money for the medicines or do more with existing funds. No. 1, I believe we can still accelerate the reduction of commodity prices. I think there is more we can do to reduce drug and lab and test prices and other commodities in the medical system. If you look at the experience we've had, if we can get the prices down now, that will make the money go further.

Second, we do have one new source of funds and we shouldn't forget it. After the Global Fund, PEPFAR, and the Gates Foundation, the best thing that's happened to the world in the last few years on this score is UNITAID, which was funded by the French airline tax on every overseas trip out of France. It's a couple of bucks. About a dozen countries have followed suit and a dozen more give funds to UNITAID from general revenues.

We are the purchasing agents for UNITAID for pediatric and second-line ARV drugs. But they buy all kinds of medicines to help poor people across the world. That's why UNITAID was set up.

The INITAID chairman, Philippe Douste Blazy, former Foreign Minister of France, and I just announced a voluntary private complement to UNITAID called MASSIVE GOOD. It will allow people in other countries, beginning in the United States, to make a small voluntary contribution when they buy airline tickets to fund medicines for poor people. We announced this at the U.N. a few days ago, and all the big ticket sellers, including online sellers, signed up. A McKinsey study says MASSIVE GOOD can produce between \$600 million and \$1 billion a year, and that's before we get China in. I hope the Chinese and many other European, Asian, and Latin American countries will participate. It's voluntary. That's the only new source of funds that I am aware of to help with the present and projected demand for ARVs and other medications.

Third, I think the noncommodity costs of the health systems can be reduced through better management, with greater reliance on nurses and community health care workers, better training, and

other system delivery changes which are too obscure to spend a lot of time on today.

Fourth, I cannot emphasize strongly enough how much I believe we should use the Global Health Initiative to send a clear signal to the world that we are moving away from a dependency model of aid toward an affordable empowerment model. We have to build capacity. Twenty-four percent of the world's health care problems are in Africa, but only 3 percent of the medical personnel are there. We've got to recruit, train, and retain health care personnel who are African.

Fifth, prevention is really still the key. If you look at the Caribbean, where we started our AIDS work, the last 2 years there have been zero mother-to-child transmissions in the Bahamas, the wealthiest country in the Caribbean, which had a substantial AIDS problem when we started—zero. But we're still reaching nowhere near the number of pregnant women who are HIV-positive with medication that is 98 percent-plus effective.

Next, Bill's going to talk about vaccinations. They work and they're cheap. It's very important that we increase our efforts there. Focusing on prevention, we ought to do more on clean water. Eighty percent of the people who die from water-borne diseases—cholera, dysentery, diarrhea—are children under 5. My biggest worry in Haiti today is that the sanitation problems in the rainy season will lead to a second round of deaths. Procter and Gamble has a pill that costs 10 cents that cleans enough water for a family of three or four for 3 days.

Sixth, I know people talk about this and nobody ever does it, but you are being given an opportunity, on a bipartisan basis, to look at whether we can substantially lower the overhead and transaction costs of our foreign assistance program. I think that we should spend more money on foreign aid, but we should also get more value out of the money we spend. We need to have a higher percentage of the aid dollar being spent in-country. We can lower overhead.

I think you should look at requirements that add to the cost of applying for, complying with, and filing reports on grants. A lot of these reports are never read because they are not consistent with the nation's own health care plans. The Clinton Foundation operates with simple rules: A, we don't go to any country unless invited. B, we don't start until the country has adopted a plan. If they want us to help develop the plan, we do it. And C, we keep score and have a strict no-corruption policy. That's it.

We only had to pull out of one country. I hope you will take this opportunity to start a new initiative in an era of budget constraints to see how we can get a much higher percentage of the aid dollar spent in the countries that are affected.

Finally, just one thing on the food issue that Senator Lugar mentioned. Since 1981 the United States has followed a policy until the last year, when we started rethinking it, that we rich countries that produce a lot of food should sell to poor countries and relieve them of the burden of producing their own food, so that they can leap directly into the industrial era. It has not worked. It's maybe been good for some of my farmers in Arkansas, but it has not worked.

It was a mistake. It was a mistake that I was a party to. I am not pointing the finger at anybody else. I have to live every day with the consequences of the lost capacity to produce rice in Haiti because of what I did.

I believe that this food security issue should be addressed on a bipartisan basis. When President Bush tried to change the way we give food aid so that 25 percent of it was cash to buy food produced in the country nearest to the need by farmers there, I supported it. I was one of the few Democrats who did. It was beaten by a bipartisan majority. The Canadians have a large agriculture sector more subsidized than ours, and they give half their food aid in that way, with the support of all the farm groups.

So, anything you can do to support agricultural self-sufficiency will reinforce your health initiatives.

Thank you very much.

The CHAIRMAN. Thank you very much, Mr. President.

Mr. Gates.

**STATEMENT OF WILLIAM H. GATES, COCHAIR, BILL AND
MELINDA GATES FOUNDATION, SEATTLE, WA**

Mr. GATES. Well, Chairman Kerry, Senator Lugar, members of the committee, I want to thank you for having us here today.

The CHAIRMAN. Is the mike on? Can you pull it close to you, a little bit closer? That would be great, thanks.

Mr. GATES. I want to thank you for having me here today, and I want to thank you for your commitment over the years to investing in the health of the world's poorest people, and for holding this hearing today.

I would especially like to acknowledge Senators Kerry and Lugar for their longstanding leadership and commitment to America's investments in global health. I also want to acknowledge the crucial contributions and partnership that we have with President Clinton, who is a tireless champion for this cause.

I'm grateful for the opportunity to discuss the success of the past investments and the opportunities to make more progress. I will try to make my comments brief. I have additional material in the written testimony that I submitted.

This is my first chance to testify in Congress since I stepped down from my full-time work at Microsoft and began full-time as cochairman of the Gates Foundation. The foundation has been doing work for over 8 years to drive these health issues and I've been very excited to be able to get more involved in the work and make sure the money that we spend has the greatest impact possible.

Global health is the major focus of our giving and we also have a division working on other poverty issues and then one that focuses on U.S. education.

About the same time as our foundation was getting going, the U.S. Government started a significant increase in global health spending. This committee has been instrumental in making that happen and making sure the money has had a huge impact.

I wish that every American understood how well the investments in global health are working: the success with polio, where we're quite near to eradication; the success with malaria, where deaths

in many of the target countries are down 50 percent, including Rwanda and Zambia; the 4 million people receiving AIDS treatment that would have died just years ago.

One of my favorite statistics is that since 1960 the number of children who die every year has dropped from 20 million to now less than 9 million, and things like new vaccines deserve a lot of credit for that.

Now, the United States is the biggest funder of global health, so we deserve a lot of credit for these advances. It's over a quarter of the money given for global health comes from this country. Yet in total it represents only one-quarter of 1 percent of the Federal budget.

As we get these successes to be understood, I think we can get strong support. The image of foreign aid that people had during the cold war, where much of the money was political and there weren't controls to really measure how well the money was spent, those days are gone. Particularly in the health area, we can look at the outcomes. I think if people do, the conclusion would be inescapable: these investments are the most effective we can make for improving and saving lives.

This is the reason that Melinda and I have decided to make this cause our primary focus for our foundation. We know these are tough times in the budget, as President Clinton alluded to. If the budget wasn't so constrained, I would come here and suggest that this GHI budget be increased substantially more than is the current plan. But there are tough tradeoffs and I know that you have to consider those. But as you do that, I hope you will remember the impact and the success of these investments.

In terms of the Global Health Initiative proposal, I support it very strongly. I think it's very well done. I think you've got some great people involved, not only in formulating the plan, but who will also be there to make sure that the money is spent well. It increases funding for global health and this is important despite the incredible constraints.

It has new strategies to make the money more effective. It focuses on particular countries. It focuses on the health problems where we have known interventions. GHI builds on the success of PEPFAR and the President's Malaria Initiative, but adding crucial health interventions focused on the lives of mothers and children. We know a lot more now about the integrated approaches that can help there, including things like micronutrients, support for community health workers, promotion of breastfeeding, voluntary family planning, and better vaccination coverage.

There are two initiatives in here where I would hope Congress would be able to increase the funding even beyond the current proposals. One is the vaccine allocation, which is money that would go to the Global Alliance for Vaccines. It is phenomenal in terms of how effective it is, and it's working now to get some new vaccines out, pneumococcal and rotavirus, that between them will save over a half million lives a year. I know the countries involved want to get these vaccines and so our generosity will make the difference.

The other area—to highlight that, I think—I hope would be increased is the funding for the Global Fund. The Global Fund is a well-run organization. The United States has been the biggest con-

tributor. I think whatever generosity we provide there, other countries will respond in kind. The current approach does have a small cut in the money for the Global Fund, so I hope that can be fixed, particularly because this is a replenishment year and those other donors will be looking at us as they make their decisions.

So overall this is very, very important work. We have evidence about the great impact that these investments have. We have a chance to increase them and make them more effective, and I appreciate the opportunity to talk about this and engage in a conversation.

Thank you.

[The prepared statement of Mr. Gates follows:]

PREPARED STATEMENT OF WILLIAM H. GATES, COCHAIR, BILL & MELINDA GATES
FOUNDATION, SEATTLE, WA

INTRODUCTION

Chairman Kerry, Ranking Member Lugar, members of the committee. Thank you for inviting me to testify today.

I want to thank the committee for taking the time to focus on global health and more broadly for your commitment over the years to robust U.S. investment in global health and development. I am grateful for the opportunity to share some thoughts with you about the foundation's global health work, the progress we have made in addressing global health needs, and the new U.S. approach to improving health around the world.

This is my first time testifying before Congress since I relinquished my day-to-day role at Microsoft and began focusing exclusively on the work of the foundation. I have often said that my work at Microsoft had three magical elements: an opportunity for big breakthroughs; a chance to make a big contribution by building teams of people with different skill sets focused on tough problems; and work that let me engage with people who were smart and knew things I didn't. I have found—not surprisingly—that my job at the Bill & Melinda Gates Foundation meets these same criteria.

The work of the foundation reflects the essential optimism that Melinda and I feel about the future, and our belief that a combination of scientific innovation and great partnerships with leaders who work on behalf of the world's poorest people can dramatically improve the human condition. It also reflects the belief Melinda and I share that every person deserves the chance to have a healthy and productive life—a value embodied in the words and deeds of the distinguished members of this committee. Most importantly, we know that aid works and there is a track record of success in global health to prove it. All of us in the global health community need to build on this success through continued investment. We can't walk away from funding right now, even in the face of very difficult fiscal challenges.

Our foundation focuses on three programs: Global Health, Global Development, and U.S. Programs. Our Global Health program is our largest grantmaking area, and our priority conditions can be divided in two categories: Infectious diseases, which includes diarrheal diseases, HIV/AIDS, malaria, tuberculosis, neglected diseases, pneumonia, polio and other vaccine-preventable diseases; and Family Health, which focuses on the leading causes of illness and death for mothers and newborns during and immediately after childbirth, as well as nutrition and family planning. The Global Development Program explores the best opportunities to help the world's poorest people lift themselves out of hunger and poverty. Our grantmaking areas include agricultural development; financial services for the poor; water, sanitation, and hygiene; and global libraries. In the United States, our goal is to dramatically improve education so that all young people have the opportunity to reach their full potential. We know that, in order for our students and our country to successfully compete in the global economy, our young people need more than a high school education. Yet only 40 percent of those aged 25 to 29 have obtained some type of college degree. Working with our partners, we invest in solutions that help all students graduate high school prepared to succeed in college and their careers, and dramatically increase the number of young people who complete a degree beyond high school with real value in the workplace.

We invest in global health because we know that when health improves, life improves by every measure. Healthy, well-nourished women have children who per-

form better in school and earn more throughout their lives. By treating people with particular diseases, programs like the President's Emergency Plan for AIDS Relief (PEPFAR) help create the infrastructure—clinics, distribution systems, and so on—necessary to tackle other health problems. We also invest in health because we know that we can dramatically save and improve lives in poor countries right now, with simple, cost-effective solutions like insecticide-treated mosquito nets and oral rehydration therapy. Vaccines are a prime example of an inexpensive solution that makes a vital impact. Simply expanding access to vaccines that already exist can save millions of lives. Moreover, new advances in science have put us in a better position than ever to discover and develop new vaccines, drugs, and other interventions, and we hope donors and companies can work together to accelerate the pace of research.

WHY I AM AN IMPATIENT OPTIMIST—BECAUSE INVESTMENTS IN GLOBAL HEALTH WORK

I am proud that the American resolve to improve the lives of others has persevered, and that in the last decade President Bush and President Obama have both worked to increase U.S. investments in global health and development. I also want to acknowledge the crucial contributions of President Clinton, who is a tireless champion for this cause.

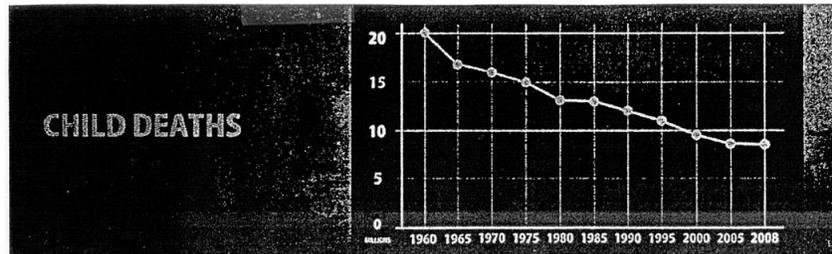
The vision and leadership of this committee and of Congress in general in support of a robust investment in global health and development has been indispensable. You recognize that when we invest in the least fortunate among us, we save lives, and we make an important statement about the kind of leader and partner America is in the world.

Last fall, I came to Washington to talk about “Living Proof,” a project that showcases investments in global health are working. Melinda and I spoke about the amazing results we've seen, and the people we've met who are alive today because they received medicines and other help through programs like PEPFAR or the President's Malaria Initiative. We came to Washington to say “thank you.”

Thanks in part to American investments, malaria cases and deaths are both down 50 percent in several African countries, including Rwanda and Zambia. The first malaria vaccine is going into late-stage trials and could be available as a new tool within the next 5 years. Four million people in sub-Saharan Africa are receiving antiretroviral treatment for HIV/AIDS, up from 155,000 five years ago, due for the most part to the investments the United States has made in PEPFAR, an initiative that this committee had a large part in shaping, and in the Global Fund to Fight AIDS, Tuberculosis, and Malaria. In the 1970s, the United States led global efforts to eliminate smallpox—an investment of \$130 million over 10 years that has saved over \$17 billion in costs to the U.S. alone. And the United States has been the largest funder of efforts to eliminate polio around the world, reducing new cases of the disease 99 percent since 1988.

I am optimistic because aid works. I am also impatient. We know how to save lives, we have low-cost tools, but children are still dying because we can't reach them all with the interventions that we have. Solutions won't solve anything if they can't be delivered. Every human life is precious, and every death is tragic, and this gives me a sense of urgency to create and deliver what is needed. Our foundation will be doing everything we can to achieve this by funding research and working closely with other governments, donors, research institutes, pharmaceutical companies, and a broad range of actors committed to this same goal. Although the foundation can fund some of these programs, our resources are but a “drop in the bucket” compared to what's needed. The U.S. Government is a critical partner in this mission.

Consider the progress with child mortality. The chart below demonstrates the progression of child mortality in the last 50 years. In 1960, more than 20 million children died before their fifth birthday; last year, it was fewer than 9 million. During this time, the number of births rose by about 25 percent. This means that we have reduced the number of deaths by a factor of more than two even as more children were born. I think this is one of the greatest accomplishments of the last hundred years, and it was achieved through increased resources and the availability of vaccines.



Source: UNICEF, “Progress for Children: A World Fit for Children Statistical Review,” No. 6 (New York: UNICEF, 2007) and http://www.unicef.org/media/media_51087.html (accessed September 30, 2009).

Yet 9 million children dying unnecessarily each year is still 9 million too many. I believe that a combination of interventions, as suggested by the approach of the Global Health Initiative, can cut this figure in half again in well under 15 years. The Johns Hopkins University Bloomberg School of Public Health modeled the expected results of applying several basic interventions to the problem of child mortality. They discovered that if existing and newly developed vaccines were widely available, an array of prevention and treatment techniques were applied against malaria, and simple interventions to care for newborns plus treatment of diarrhea and pneumonia were more widespread, the survival rates of babies in the first month of life would increase and child deaths would fall to 5 million per year. To achieve this, we must continue to invest in success and share best practices so that all countries can learn from leading examples.

If we continue to innovate and to dedicate resources, huge gains in global health and development are ahead of us. If we keep pushing, we will be able to reduce poverty and prevent disease, which will help countries ultimately end their dependence on foreign assistance and allow more people to live healthy, productive lives without support from the United States or other donor governments. Already, South Korea, China, Mexico, and Brazil have graduated from heavy reliance on aid, and other nations want to follow in their footsteps.

As a believer in the role of the scientific process in driving innovation—trial and error, taking calculated risks—I understand that some experiments in foreign assistance did not work, and some gains were undone by poor governance, natural disaster, or insufficient sustainability plans. I do not believe that the United States should invest increased resources in foreign assistance based on the false belief that more is always better. To be sure, some programs should be expanded. Ineffective programs should be ended. Working collaboratively, Congress and the administration can maximize the return on these important investments.

I do know that when programs are coordinated, held accountable, and designed based on evidence, they will work better. The budget scrutiny that has come with this economic downturn can and should be used to force a new fiscal vigilance that is more creative and more constructive than simply cutting spending. We have to demand smarter spending. If a more equitable world is worth fighting for—and I believe that it is—we have to make sure we are getting as much as we can for every dollar. I commend the chairman and ranking member for recognizing this and for exploring legislative avenues to better evaluate the impact of U.S. foreign assistance programs, identify best practices, and find innovative approaches to solving global development challenges.

I recognize that I am bringing this message of optimism to a body that is tasked with guiding our country through the harshest realities of our time. We are fighting wars in Iraq and Afghanistan. We’re facing climate dangers, trade imbalances, and record deficits. The global financial crisis has cost millions of Americans their businesses, homes, jobs, and savings. We have severe budget strains at every level of government that, combined with the deficit outlook, have changed some people’s view of what our country can afford.

This crisis has affected Americans profoundly, and it has also reverberated throughout the world. It has increased the need for American generosity even as it has tested our will to give. But Americans have maintained that will to give—“The Chronicle of Philanthropy” reported that in seven weeks, Americans gave more than \$895 million to Haiti relief efforts.

I understand that the federal budget now under consideration will be one of trade-offs, and a certain amount of spreading the pain will be necessary. As you and your

colleagues in both Chambers consider the President's Fiscal Year 2011 International Affairs budget request, I urge you to be mindful of the many successes U.S. foreign assistance has achieved and equally aware of the many challenges that persist. With proposed fiscal year 2010 supplemental spending taken into account, the President's FY 2011 International Affairs budget would be 2.8 percent above FY 2010 amounts. These increases would fund the scale-up of the administration's Global Health Initiative, which I will address in a moment. They will also fulfill the President's historic G20 commitments on global food security and provide resources to America's first Global Hunger and Food Security Initiative. The Gates Foundation has devoted nearly \$1.5 billion to increasing global food security, and we are thrilled with the President's proposals in this area. I know that they would not be possible without the leadership that Ranking Member Lugar, Senator Casey, and others have shown on this issue, and that they will require congressional resolve to bring to fruition.

THE GLOBAL HEALTH INITIATIVE

I've been asked today to discuss my views on the administration's Global Health Initiative (GHI). I believe GHI is an important next step—indeed a natural progression—in U.S. efforts to address health challenges around the world. I would like to touch on four points related to the GHI. First, I support the overall increases requested by the administration for global health. Like many of you, I would like to see a more rapid rise in the trajectory of global health funding given the extraordinary need for these investments. Second, I believe that the GHI, when taken with the recently released PEPFAR 5-year plan, represents a shift in approach to HIV/AIDS that will make U.S. efforts more effective, specifically by expanding its focus on prevention. Third, I am pleased that the GHI will include an increased emphasis on family health and myriad interventions that, when taken together and integrated in both approach and execution, make families healthier and societies more productive. Finally, I want to address the issue of vaccines and continued innovation—components of the GHI that I believe should be afforded more focus and investment—and the power of research and development to achieve massive breakthroughs in global health.

I do not approach the issue of global health merely as an interested observer. Melinda and I have made saving lives through investments in innovative global health technologies and programs the centerpiece of the Gates Foundation's philanthropy. Since the foundation's establishment, we have committed just over \$13 billion in global health investments. We are proud that some of our largest commitments have been made side by side with U.S. investments, including the Global Fund to Fight AIDS, Tuberculosis, and Malaria, and the Global Alliance for Vaccines and Immunizations (GAVI). So it is with deep personal commitment and a clear recognition of the kinds of resources necessary to make real progress on key global health challenges that I testify before you today.

Nevertheless, it is important to note that the foundation's resources represent only a small part of the overall funding picture for fighting disease and improving health in developing countries. Our global health grants accounted for about 5 percent of total donor assistance for health in 2007. Far bigger shares were provided by other sources, including government and corporate donations. This comparison considers only donor assistance, and not expenditure by developing country governments or private health spending, which further reduces our overall share of health funding.

The United States has been a generous donor to global health efforts, as demonstrated by dramatic scale-up in resources that began nearly a decade ago. If Congress grants the President's FY 2011 budget request, the United States will be on pace to invest more than \$9.5 billion in global health next year, making this country by far the world's largest single donor in dollar terms. At the same time, the U.S. provides only 0.19 percent of its Gross Domestic Product (GDP) for official development assistance, far less than the 0.5–1.0 percent of GDP provided by a number of European countries.

In the President's May 2009 announcement of the 6-year, \$63 billion Global Health Initiative and again in the Consultation Document released on February 1 of this year, the administration made it clear that global health is in a much different state than a decade ago when the United States scaled up investments in global health through programs like PEPFAR, the President's Malaria Initiative (PMI) and GAVI.

As you know, the GHI aims for greater resources and a fresh approach to deploying resources in order to maximize health outcomes in as short a time as possible. It seeks to concentrate resources in order to better achieve scale in selected coun-

tries. And it utilizes targeted funding increases on diseases and conditions that have a devastating health and economic impact on countries yet are entirely preventable or treatable. These are laudable goals.

For instance, the President's FY 2011 budget request would increase funding for neglected tropical diseases (NTDs) from \$65 million this year to \$155 million next year. According to administration estimates, this additional funding would reduce the prevalence of seven NTDs by 50 percent among 70 percent of the affected population. NTDs are a tragedy. Lymphatic filariasis, which the GHI proposes to help eliminate by 2017, causes grotesque swelling of the limbs, making it impossible for otherwise healthy people to work or even at times to move. Onchocerciasis, a treatable infection that the GHI aims to eliminate in Latin America by 2016, is the second leading infectious cause of blindness. The administration's request is building on congressional leadership in this case. The Senate, in fact, pushed for the first funding, calling for \$30 million explicitly for the development and distribution of treatments for NTDs in 2006.

HIV/AIDS, TB, AND MALARIA

I'm pleased that the Global Health Initiative aims to build off of and improve successful American platforms such as PEPFAR and PMI, and that it will enable a more integrated approach to health both here in Washington, DC, and on the ground—where we lose patients if we can't address their needs comprehensively.

PEPFAR has been a truly revolutionary approach to global health. The \$32 billion the United States has invested in AIDS relief since fiscal year 2004 has leveraged billions of dollars from other donors and resulted in countless millions of lives saved. Estimating the number of people alive today thanks to these investments can be difficult, but we do know one thing for certain: 4 million men, women, and children who would have otherwise gone without life-saving AIDS treatment are alive today thanks to the generosity of the U.S. Government. That's a tenfold increase in just 7 years.

Right now, more than 5 million people are in need of antiretroviral drugs on top of those already receiving them. That's just a subset of the 33 million people living with HIV who will one day need drugs to stay alive. The lowest price for first-line treatment drugs is an average of \$88 per person per year; in many cases the cost is much higher. The cost of personnel, lab work, and other expenses easily exceeds another \$200 per person per year. Providing treatment to all of those who currently need it to stay alive would cost over \$1.5 billion per year at a minimum. That doesn't account for the 29 million people who don't currently need treatment or the estimated 2.7 million people who will become HIV infected this year.

We have to understand that the goal of universal treatment, or even the more modest goal of significantly increasing the percentage of people who get treatment, cannot happen unless we dramatically reduce the rate of new infections.

We need to bring down treatment costs, an area in which we have made some progress. From 2004 to 2008, drug prices dropped as much as 48 percent. However, even considering greater price decreases, it is clear when you consider likely future scenarios that there is no feasible way to do what morality requires—treat everyone with HIV—unless we dramatically reduce the number of new infections. The harsh mathematics of this epidemic prove that prevention is essential to expanding treatment, and that stressing treatment without paying adequate attention to prevention is simply unsustainable.

Data shows that if we scale up well-planned, evidence-based prevention programs we can avert as much as half of all new HIV infections. For example, support from PEPFAR for scaling up programs to prevent mother-to-child transmission of HIV has prevented more than 300,000 babies being born HIV-positive.

This is why I commend the administration, under the leadership of Global AIDS Coordinator Ambassador, Eric Goosby, for its new PEPFAR 5-year plan that places prevention as a top priority, even as it seeks to maintain and expand access to treatment. This shift in emphasis should yield better results, in terms of lives saved, for U.S. taxpayer investments.

The President's Malaria Initiative is an essential partner in the fight against malaria. PMI has contributed to the significant scale-up of malaria interventions in 15 African countries, through the distribution of insecticide-treated bed nets, effective treatment and indoor residual spraying. As coverage with these interventions increases, the number of people sickened by the disease declines rapidly. Within Africa, Eritrea, Zambia, and Rwanda cut their malaria burden by 50 percent or more between 2000 and 2008. As malaria cases continue to decline in many parts of the world, so do the number of deaths from malaria.

PEPFAR and PMI are important pieces in the fight against AIDS and malaria. The Global Fund to Fight AIDS, Tuberculosis and Malaria is another. As a major investor in the Global Fund, the United States has been able to leverage billions of additional dollars for the world's most deadly diseases. Our foundation also contributes to the Global Fund and I consider it one of our best investments. In 6 years, the Global Fund has become the leading funder of malaria and TB programs around the world—further expanding the power of U.S. dollars for global health.

I was disappointed that the President's budget request would decrease the U.S. commitment to the Global Fund even as the GHI has pledged to place more of an emphasis on multilateral approaches, and I hope Congress will work to remedy this. This is a replenishment year for the Global Fund, and other potential donors will be looking to the U.S. for cues as they craft their own commitments.

FAMILY HEALTH

I'm pleased that the GHI approach builds on the progress that has been made through U.S. investments in PEPFAR and PMI by recalibrating those investments to strike the most effective, integrated balance of resources. At the Gates Foundation, we are grappling with similar issues. We have begun to look at how to combine various health interventions—such as malaria prevention and treatment; vaccines for childhood illnesses; antenatal health care and behavior change; increased access to family planning; and nutrition—in what we call a “family health” framework. This framework doesn't mean that we have stopped investing in certain things or only invest in others. It simply means that we are moving beyond individual disease stovepipes and sharing developments and best practices. I view the GHI as seeking to do the same thing.

We know that healthy mothers mean healthier children. More than 500,000 mothers die each year in childbirth, most of preventable causes. When a mother dies, she leaves behind a newborn and usually several older children who have lost their primary caretaker. A mother's death destabilizes the family, causing a chain reaction that affects everything from her surviving children's health to their prospects for education and ultimately breaking the cycle of extreme poverty.

When our foundation is determining how to invest our global health dollars, we often measure the projected outcomes in terms of dollars per “disability adjusted life years” (or “DALYs”) saved. One DALY is equal to one year of healthy life lost, and takes into account both premature death and the deterioration of quality of life due to illness. Investments in family health are highly cost effective, especially when we make it easier for women and children to access information and multiple health services in an integrated setting. Up to 72 percent of deaths in the first month of life could be prevented through delivery of packages of proven interventions during pregnancy, childbirth and the postnatal period, in households, communities and in primary care and referral level facilities in low- and middle-income countries. Some of the interventions are scientifically innovative; others have existed for decades but have never before been applied systematically and to scale. Some key interventions that could be taken to scale include:

- Fortifying foods with key vitamins and minerals like zinc and iodine, one of the most cost-effective interventions as it can reach individuals for fewer than 25 cents per person per year. Cost: \$8–\$30 per DALY saved.
- Promoting breastfeeding, starting immediately after birth and continuing as the sole food for the first 6 months of life, then transitioning to feeding appropriate foods in addition to breast milk, to boost a child's immunity, prevent the uptake of pathogens and ensure healthy nutrition. Cost: \$2–\$7 per DALY saved.
- Promoting a comprehensive package of interventions for mothers and newborns, including: discouraging a mother from washing a baby right after she is born, which can induce hypothermia and introduce an abrasion, and then an infection, through the skin; encouraging “kangaroo mother care,” which allows a baby to benefit from his mother's warmth until she is strong enough to maintain his own body temperature, while also promoting breastfeeding and prevention of infection; and providing two very inexpensive drugs to prevent postpartum bleeding so a mother doesn't hemorrhage during childbirth. Cost: between \$1 and \$18 per DALY saved.
- Training community-based health workers and skilled birth attendants who can help ensure that women in the most rural and remote areas receive prenatal care, accurate information about best practices in newborn care, assistance in delivering their babies safely and hygienically, and advice on care seeking for illness.

Another powerful and cost-effective intervention that could have a dramatic effect on everything from maternal and child health to HIV prevention is providing access

to voluntary family planning. An estimated 215 million women would like to determine the number and spacing of their children but lack sufficient access to family planning. Integrating family planning into other services would cost \$1.20 per year per capita and could have a dramatic effect on lives saved. A recent study by the Guttmacher Institute found that combining maternal and neonatal health interventions with access to family planning services could cut maternal deaths by 70 percent—saving the lives of 390,000 mothers every year.

Incorporating family planning services into programs aimed at preventing mother-to-child transmission of HIV (PMTCT) would prevent twice the number of child HIV infections and three times the number of child deaths than PMTCT programs alone. In fact, between 1999 and 2006, access to family planning services helped prevent more than 10 times the number of HIV-infected pediatric cases in sub-Saharan Africa than did the provision of antiretroviral drugs to pregnant mothers.

I know that for some lawmakers, family planning is a controversial issue. The question of whether and how the United States should help increase access to voluntary family planning for those who seek it remains difficult for many lawmakers. As you wrestle with this question, I urge you to remember that voluntary family planning is a proven and cost-effective way to save lives.

VACCINES

As many of you may have heard, Melinda and I recently called for this to be the “Decade of Vaccines.” We committed to providing \$10 billion over the next 10 years in the hopes of saving millions of young lives through vaccines. We made this commitment because we know that vaccines are the single most effective investment we can make. We are making this commitment because it will make a difference, but we can’t do it alone.

Ten years ago, when the foundation made its first major global health investment of \$750 million to launch the Global Alliance for Vaccines and Immunization, now the GAVI Alliance, immunization rates in poor countries were in decline and there was slow progress in introducing vaccines that were readily available in rich nations. Thanks to the work of the GAVI Alliance and other global efforts around polio and measles, global vaccination rates are today at an all time high. Yet 24 million children remain unimmunized, thereby suffering and dying needlessly from diseases we know how to prevent. That’s not acceptable.

Prior to calling for the Decade of Vaccines, we modeled what would happen if we could further increase access to existing vaccines from today’s 79 percent average to 90 percent. We found that this scale-up could save nearly 8 million lives in the next 10 years. While the foundation’s investment is significant, it is not sufficient. Saving these young lives and helping millions more children get a healthy start at life is quite possible, but cannot be achieved by the Gates Foundation alone. It will require a collective effort among donors, developing country governments, and the private sector. Billions of dollars are needed. Even with the foundation’s commitments, and a potential commitment of \$90 million by the U.S. Government, the GAVI Alliance alone is facing a resource gap approaching \$3 billion through 2015. The polio eradication program is facing a gap of more than \$1 billion through 2012. We all need to do much more.

Key to the success in raising global vaccination rates in recent years has been the global partnership model. The Global Polio Eradication Initiative, the Measles Initiative and the GAVI Alliance have demonstrated what is possible when stakeholders bring their respective strengths together under a common cause.

I am pleased that, as part of GHI, the United States has signaled increased support to the GAVI Alliance in addition to its ongoing support of programs including polio and measles. The GAVI Alliance is an innovative public-private partnership that harnesses the unique strengths of global stakeholders (including the World Health Organization, UNICEF, World Bank, donor governments, industry, developing country governments and civil society) to efficiently deliver vaccines to the world’s poorest countries. Since 2000, the GAVI Alliance has reached more than 250 million children and, critically, saved 5 million lives.

I want to highlight two important features of the GAVI Alliance model as an illustration of why partnerships of this nature are critical in our efforts to improve health in an environment of expanding need and limited resources. First, GAVI has successfully shaped the vaccine market, reducing vaccine prices by guaranteeing developing country markets for the manufacturers. For example, the price of the five-in-one pentavalent vaccine has declined by more than 20 percent since the start of GAVI and 56 of the poorest countries of the world had introduced this vaccine by the end of 2009. Second, the GAVI model emphasizes the practice of cost-sharing.

In 2009, 45 of the 49 countries required to cofinance GAVI-supplied vaccines did so. This is a 91 percent success rate.

The United States has been a generous donor in the area of vaccines, contributing \$1.8 billion to polio eradication and another \$568 million to the GAVI Alliance. We will never have a better chance to eradicate polio than we will in the next 3 years. The new Global Polio Eradication Initiative 2010–12 strategy outlines a time-bound, aggressive program, one which takes full advantage of new tools, acknowledges and overcomes previous setbacks, looks to address risks proactively, and builds on the lessons learned in the past several years. We are optimistic that this will strike at the final reservoirs of polio and consign this terrible virus to history. In addition, we now have new vaccines available to help prevent the two leading causes of death among young children—pneumonia and diarrhea—and a mechanism through the GAVI Alliance to make them available to countries in greatest need.

I recognize that times are tough and it will be an uphill battle to fund the GHI at the level of the President's request. But, an investment in GAVI will give American taxpayers the best bang for their buck, and the committee should consider increasing the level of funding beyond the administration's request. Poor countries have an enormous desire to introduce these new vaccines to their children as they recognize their lifesaving potential. The opportunity is immediate. These early investments have positive life-long returns.

It is our hope that with increasing commitment from the United States and the Global Health Initiative, that we are one step closer as a global community to making the Decade of Vaccines, measured by lives saved, a reality.

INNOVATION

Melinda and I have built our foundation on the premise that innovation in product, process, and organization is essential to realize the greatest gains possible for the world's poor. In the global health arena, we have placed particular attention on science and technological innovation, improving upon existing interventions and driving the development of new ones. Imagine a world with a significantly simplified HIV drug regimen, a malaria drug to which the parasite cannot become resistant, a fever diagnostic test mothers can administer to children in their homes to figure out whether or not the child has pneumonia or malaria, or a revolutionary new manufacturing process that cuts the time and thus the cost of making critical, life saving vaccines in half.

We can save lives while saving money. Multiple U.S. Government agencies—NIH, the Department of Defense, Centers for Disease Control and Prevention, the State Department, the FDA, and USAID—have supported research to advance new global health solutions. The U.S. commitment to innovation—doing things differently, applying the best science and the best minds—is critical as you develop and implement the Global Health Initiative. I would like to underscore the need for investments in clinical trials, including at USAID, to ensure that global health investments are solidly grounded in the scientific evidence of what works best. I would urge you to consider incentives that could increase private sector investments in global health innovation and product development. Experience under current policies such as the Orphan Drug Act (1983) and the Priority Review Voucher provided by the Food and Drug Administration Amendments Act may offer insights into how to design new incentives most efficiently. I pledge the best efforts of my foundation to finding ways in which it can partner with the U.S. Government in this work.

THE POTENTIAL OF U.S. COMMITMENT

I recognize that you must be able to explain your choices to your constituents and show them what they get for their taxpayer dollars. You must be able to assure them that their money is being spent on efforts that will save lives, reduce suffering, and positively impact our country's future.

The administration has set ambitious targets for the GHI. If achieved, these targets would make clear to the American people what their investment can yield. With the support of Congress, the GHI will aim to prevent 12 million new HIV infections, double the number of at-risk babies born HIV-free, and bring 4 million people under antiretroviral treatment. It will seek to reduce the burden of malaria by 50 percent for 70 percent of the at-risk population in Africa, save 1.3 million lives by reducing TB prevalence by 50 percent, save 360,000 women's lives by reducing maternal mortality 30 percent in targeted countries, prevent 54 million unintended pregnancies, and save 3 million children's lives. In my judgment, this effort to dramatically reduce needless suffering is worthy of congressional support, even in these times of great fiscal stress.

I pledge to you today to devote the resources of the foundation to this effort as well.

I want to thank Chairman Kerry, Ranking Member Lugar, and the members of this committee for the tremendous leadership they have demonstrated in changing the very shape of our Nation's commitment to global health and development. Your vision of the role the United States must play in the world has inspired your colleagues—in Congress and in the executive branch—to set ambitious goals and devote the resources to achieve them. Our team at the Bill & Melinda Gates Foundation and I look forward to continuing to be a partner with the U.S. Government in pursuit of health and development goals, and we are eager to help you move this important agenda forward in whatever way we can.

It has been an honor to appear before you today. I appreciate your time, and I look forward to a productive conversation.

The CHAIRMAN. Thank you very, very much, Mr. Gates. Thank you both again.

Mr. President and Mr. Gates, let me ask you the first question if I can. You both alluded to the budget pressures that we face and pay-go, and you're both passionate about the importance of the United States being committed to this particular initiative. Can you help some reluctant Member of Congress who is feeling the intensity of the pressures of people unemployed in his or her State and the pressures of the health care bill, the deficit, the budget?

I think this committee is powerfully committed to this. But we obviously have a lot of members who spend most of their time not necessarily thinking about this as much as you do. So could you reduce to simple terms for the average person in this country why this is so important? What is the difference that it makes for the United States, and why does everybody need to care about it no matter where we come from or what we're doing?

President CLINTON. First of all, apart from the moral claim that we ought to save every child we can, we live in an interdependent world in which we have learned the hard way that, no matter how brilliantly our forces perform, we cannot kill, jail, or occupy all of our adversaries. We have to build a world with more partners and fewer adversaries. That's what foreign policy is about, and this is an important part of our foreign policy. It makes a world with more friends and fewer enemies.

If people think you care whether their children live or die, you don't have to send our young people off to war as often and it also saves money. The most expensive thing you can do in modern society is go to war. Every other investment is better.

So I would say the second point is, as Bill Gates has said over and over and over again, this is a very good deal. You have now decades of evidence that public health investments of the right kind work.

Just think about Haiti. If we can build a healthy Haiti and one where the economy works well, then that's much less incentive for it to be a drug transshipment point for America and all the problems here. We live in an interdependent world. Whether we like it or not, we are affected by what happens elsewhere. And this is such a tiny percentage of our problem.

The final thing I would say is this may be a fool's errand, but for 25 years I have seen the surveys which show that large majorities of the American people actually support programs like this and would support spending a higher percentage of our budget on this sort of thing. The reason we can't get support for it is that they

think we spend 5 or 10 times what we actually spend on foreign assistance.

So it may be that because so much attention is now being paid to all these budgetary issues, you will be able to help people put this in proper context. If they realized how little it was—and Bill mentioned it in his testimony—I believe it would make a difference.

The CHAIRMAN. Mr. Gates, do you want to add to that?

Mr. GATES. Yes; just to add a bit. We talked about lives being of equal value. Well, the health interventions in this plan typically save lives from something like \$10,000 per life all the way down to a few hundred dollars per life. So in fact we're talking about spending less than 2 percent as much as would be spent in a rich country. So on the path to all lives being treated equally is to treat these lives as though they're worth 2 percent of other lives.

But that's not the only argument. As you improve the health of these societies, the amazing thing is that the population growth goes down and therefore the ability to educate, to feed and provide jobs becomes possible. In the 1960s when we thought about aid it included countries like Brazil and Mexico, and those countries today are actually providing aid.

I met with the President of South Korea at Davos and he talked about how as a child United States aid came to his country. Now they are increasing their aid budget. It will be over a billion dollars next year. The countries we're talking about have terrible health problems and you've got to solve those problems to get them on the path to self-sufficiency.

Finally, diseases don't know any boundaries. Both the science and the interventions to reduce these diseases prevent them from becoming worldwide problems.

Finally in terms of how people think about the United States, the idea that our health budget would be 1 percent of our military budget, the global health budget, that's logical to me and I would argue for an even higher percentage, because this is America at its best, really helping people and putting them on a road to self-sufficiency.

The CHAIRMAN. My time is almost up here, but I just want to ask one quick question. The balance between prevention and treatment. One of the things that struck me when I was in Africa was the recruiting system or farm system that was being run to fill the next treatment center. Obviously, there's a tension in the community about this, and I wonder if you'd speak to that for a moment.

President CLINTON. Well, obviously whenever you can do prevention it's preferable and almost universally less expensive. My own view is that you have to make the decision that that should be our policy. Then the implementation of that policy should be informed by what is practically possible country by country.

For example, you do the right sort of bed nets with malaria, it really helps you to get to zero, saves you the money on the medicine and, better, you don't have so many people getting sick. I think we can eliminate malaria.

You get to 100 percent of the HIV-positive mothers with the medication to stop mother-to-child transmission, you get 98 percent-plus effectiveness. It's a prevention strategy.

You're arguing with people about not having sex and abstinence and all that. I think you really have to do it, but we know it's far less effective than bed nets are for malaria.

So from my point of view there's not a one-size-fits-all argument here. You should always prefer prevention and always be prepared to do what actually will work condition by condition and country by country.

Mr. GATES. The toughest disease in terms of both treatment and prevention is AIDS. The tools we have for prevention today are education to change behavior, to get people to either abstain or use condoms. We're very hopeful that some new tools will be added to the toolkit.

Recently it was proven that male circumcision actually has a substantial effect; reduces male-to-female transmission 60 percent. I was a skeptic about whether there would be a demand from adult males to be circumcised, but in fact in the key countries in Africa, both in Kenya and South Africa and Botswana, it's been shown that there is significant demand. So that's a new prevention tool and in fact PEPFAR is involved with our foundation in funding a lot of that circumcision scale-up. So that's good news.

The ultimate prevention tool would be a vaccine. Over in the 550 budget, the United States has significant moneys for AIDS vaccine research. The United States is the biggest funder of AIDS vaccine research and—although we don't have the timeframe—there's been good progress. So that would be the ultimate tool.

There's another tool that may come in a couple of years and be important in the high prevalence countries, and that's the idea of either using a gel, called a microbicide, or taking a pill daily, which is often called prep. It's actually an AIDS drug, but if you take it it prevents you from getting drugs. So it's prophylactic. Those trials will report out in 2011 and if things went well we could start to be using that tool in 2012.

So the GHI proposal does put new energy into prevention while maintaining commitment to treat the people who need it. As President Clinton said, they're going to have to be more efficient to be able to drive those numbers up because not only U.S. funding, but the global funding for this is not growing the way it used to, and so efficiency will be very important for them to balance those two missions.

The CHAIRMAN. Thank you very much.

Senator Corker wanted to apologize for leaving. He had to go to the financial regulatory reform hearing on the Banking Committee, but he wanted to thank you both for being here.

Senator Lugar.

Senator LUGAR. I want to discuss for a moment the foreign policy implications of the work of your foundations. The Pew Research Center conducts annual polls around the world asking people for their opinions on broader U.S. foreign policy, and whether or not they generally have a positive opinion of the United States. The result of these polls often show that in a very large number of countries, the majority of the population, for some reason or other, does not like us or does not approve of our foreign policy. Most of us feel hurt by this rejection because we feel we are doing a lot of good

in the world for the purposes of moral equivalence that you have talked about today. Nevertheless, that's the way the world works.

President Clinton, in your opening statement you mentioned a situation where 12,000 people in a predominately Muslim area of Tanzania showed up for an announcement that they were going to be provided with high-quality malaria medication. These people liked what was going to happen, and they showed good feelings toward the announcement and those who were responsible. Such events certainly constitute positive developments related to our image abroad.

In order to fully understand the foreign policy implications related to the work of your foundations, it is important to ask whether you consult with USAID, the State Department, or other relevant agencies about your objectives, plans of action, and the foreign policy implications of your activities. Even beyond that, a number of governments such as South Korea, Mexico, and Brazil are now pleased to talk about the humane foreign policy gestures they are making. So, it appears that you have personally discussed these foreign policy implications with foreign leaders.

What extent do you think your foundations and our government are actually having a positive impact on foreign policy around the world? I ask this of both of you because as I have already said in the opening statement the amounts of money and personnel you are contributing to these objectives are impressive even in comparison to everything our government is doing, quite apart from the governments of other countries. It is not that you are directing these foundations to act as separate nation-states; nevertheless, the impact of the sheer billions of dollars you have dedicated to your causes is enormous and influential.

So discuss, if you could, how you have taken the initiative—or what sort of consultation occurs among your foundations, our government, and other governments so that not only is the net result humane for those who receive aid, but also, you are perceived as Americans who really have the best interests of the citizens of these lesser developed countries at heart.

President Clinton, would you speak to that?

President CLINTON. I think I can say without fear of contradiction that no NGO leader in American history has ever consulted as much as I have with the Secretary of State. [Laughter.]

Senator LUGAR. This is an important point.

President CLINTON. Let me say quite seriously, you alluded to some of this with Hillary in her confirmation hearings. I think this is really important. President Bush was President when I started all this and we tried to do the following things. No. 1, we tried not to go into any country where doing so would cause real conflict with America's foreign policy interests; I think more important for me than others because of my previous position.

No. 2, whenever possible we try to work with PEPFAR. We developed a very good relationship with PEPFAR, and in turn—I have to give him credit because I argued that he should allow PEPFAR funds to be used to buy the least expensive generic drugs and we reached an agreement, which he honored, which is if the medicines that we sell in 70 countries that serve 2 million of those

4 million people getting treatment, that if they passed the FDA scrutiny PEPFAR money could be used.

But we worked through all that. In other words, my goal is not to go someplace where my being there causes problems for America's foreign policy, and whenever possible to work with the Americans on the ground in cooperation, as well as with the host government.

But, Senator, I think the work that Bill and I and many others do is intrinsically good for America's foreign policy. It doesn't matter who is the President. You know, you see now President Obama being criticized by some of the people in other countries who criticized President Bush, who say he's not as different from President Bush as I wanted him to be.

It doesn't matter who's the President now. The interests of the United States and the challenges we face are sufficiently different from other countries that nobody's going to be popular in all these decisions that are made. What I think we have to recognize is we don't want to politicize our work, but we want it to be reinforcing of the best of America.

This is not complicated. When people think you care whether their kids live or die, they like you pretty well and they cut you a lot of slack. You can disagree with them on a lot of things because they know you care whether their kids live or die. This is not complicated.

I believe that we don't want to overly politicize what we do, but the best thing we can do for America is to do a good job of these things that we do and avoid causing some real conflict with current American policy by going somewhere or doing something with someone that would trigger that conflict.

Senator LUGAR. Mr. Gates.

Mr. GATES. Well, President Clinton mentioned his personal situation. My personal experience is that if you're rich enough there will be some resentment no matter what. [Laughter.]

And the United States is the richest country in the world. So if you look at our popularity, it reflects many different things. In fact, the countries where the United States is the most admired, many of those countries are the countries in Africa, where this aid is visible and it is making a huge difference. In the Middle East, other factors I think come into play, and it is disappointing what those polls show in terms of attitudes toward the United States.

In terms of the scale of spending, I do want to make sure it's clear that the rich world governments spend dramatically more than all foundations, including my foundation. Our foundation as a whole would be about 5 percent of the overall spending. So the U.S. Government is substantially bigger.

And it is amazing how the other rich countries, with very few exceptions, even in these tough times have maintained their global health spending. There's the incredible countries like Sweden and Denmark, Netherlands, that have stayed super strong, 1 percent of GDP. There's countries like Germany and particularly the U.K. that have continued to increase their numbers.

So it's really that in total that's made this possible. I do think this work has a substantial impact on how the country is viewed,

a willingness to take our science and our innovation and have it benefit the poorest people in the world.

Senator LUGAR. Thank you very much.

The CHAIRMAN. Thank you, Senator Lugar.

Senator Feingold.

Senator FEINGOLD. Thank you, Mr. Chairman.

Mr. President, it's good to see you again, sir. Mr. Gates, of course welcome you. You've both presented a compelling case why the United States must continue to lead and invest in global health, and I of course agree that we have a vital role to play.

I've seen firsthand, as many Americans have, the tremendous goodwill generated by our leadership in global health. I've also seen Americans of all ages, many from my own State of Wisconsin, who have been involved in health work abroad. In 1999 when you were still the President, Mr. President, one of my most moving trips to Africa was with your United Nations Ambassador Richard Holbrooke, and I saw firsthand the devastating and destabilizing impact of HIV-AIDS then. Holbrooke said to me that the HIV-AIDS was not just a health issue, but a diplomatic and in particular a security issue.

This is true today not only for HIV-AIDS, but, as you've indicated, malaria, TB, child and maternal health, and more. Our global health assistance plays an important role not only in saving lives, but also in advancing our overarching national security goals. I believe you both spoke about building strong health infrastructure earlier. As you obviously both know, many doctors and nurses in the developing world emigrate to Europe or North America for better pay and better working conditions. This so-called "brain drain" continues to put a real strain on health systems in many developing areas, especially Africa, where I've spent a lot of my work on this committee. I'd like to get both of your views on how the United States can help governments to address this problem or at least ensure that we're not contributing to it. And what's the role of NGOs and private foundations in this regard?

Mr. President.

President CLINTON. Well, first, thank you, Senator. I worry about this a lot, but I would like to say first of all I don't think you can eliminate it completely, because people will make personal judgments about where they want to live and what they want to do.

But I do think the systems matter to the outcome. I think one of the most important things that this Global Health Initiative can do is to intensify the ability of countries to recruit, train, and retain health care workers in delivery models that are affordable over the long run for those countries. I think there are plenty of available people that will do it.

What can we do? We can fund more in-country education and training programs. We can figure out how to help countries over rough spots. As I said, in Zambia the whole thing was just breaking down—the health care system. We did a lot of things and I think it's in the documents we sent, but we helped them to rehire 40,000 people. We set up training programs for nurses in Ethiopia; went in Kenya, where we built out, with the Partners in Health, larger systems. In Rwanda and Malawi, we actually were involved in training community workers.

But let me give you an example of at least pre-earthquake Haiti versus Africa, where in many cases the per capita incomes are about the same, but one thing is different. Most African universities or a lot of them collapsed at the end of colonialism because they were supported entirely by the colonial governments. The Haitian private universities, a lot of them were supported by the religious organizations and others. So that before this earthquake we actually had quite a large number of really gifted young Haitians able to get a college education in Haiti.

A young American named Connor Bohan who went there to teach was so moved by this that he stayed and organized an NGO to raise money to send Haitians to school in Haiti. He had about 75 graduates before all this happened. Not a single one had left the country to work. Sixty-eight were already working in Haiti. Seven others were overseas doing graduate study only.

So I think we need to seriously look at how we educate and train people in terms of their retention. I'm thinking about this in Haiti now because we've got to figure out what to do with these kids whose schools were destroyed and for the next year or so. It may be that we should offer scholarships to foreign students which become grants that they work off if they go home, just like the Rural Medical Service Corps grants were in rural America when I was a Governor in the 1970s, that helped us so much in our desperate infrastructure problem, and say, but if you stay in America, of course you can do it if you get through immigration, but you have to pay your loan back over time, but you can convert your loan into a scholarship if you go home.

I think we really need to think about how you take the life experiences of people and make it work for them. There's nothing you can do about the fact that you're going to be able to make more money here than in rural Ethiopia for the foreseeable future. But if you make it easier for people to stay and operate at a high level of efficiency, I think more will stay.

That's why I think this is a good idea. You'll be amazed how much this Global Health Initiative will help just by building the infrastructure. People don't like to fail at what they do. They don't like to feel that they're in an environment where their efforts are going to be fruitless. That's one of the most important things about the concept behind GHI. There are smart people in every country in the world. If they think they can succeed, they're more likely to stay at home, even for less money.

Senator FEINGOLD. Now, Mr. Gates, let me just ask you about the malaria issue. We formed the first-ever U.S. Senate Working Group on Malaria recently and I'd just like your thoughts on the future of the fight against malaria.

Mr. GATES. Just to add one to that, the previous thing. The people who leave the country are actually responsible for the best thing that happens in African countries, which is remittances. Remittances are five times all foreign aid. So you really—when somebody leaves, it's not a bad thing, because they're going to be sending money back. So the capacity-building in the country, which PEPFAR has done good things in, our drug trials do, that's really the magic.

In terms of malaria, these are exciting days. That is, the rollout of bed nets and indoor spraying, the numbers in many areas are quite impressive. There are some areas where the bed-net format doesn't work as well, so we need to deliver a candle or a stick-type format to get the insecticide there. There are new tools coming. There's a vaccine in a phase-three trial. President Clinton mentioned the idea that getting the very powerful artemisinin-based medicines out by subsidizing their price will have a huge effect, because the older, cheaper medicines, there's widespread resistance to those, and only by getting these better drugs out will we be able to reduce the number of deaths.

There's really been a lot of engagement, great people coming in, into this field, the Malaria No More group that the United States back and we back. So I think you will continue to see a huge reduction in the number of childhood deaths. We actually have some computer modeling work to try and figure out what areas we could get a geographic elimination over the next 5 years. There's a number of countries where malaria's hold on the country is tenuous enough that that's—it's within the possibility to substantially shrink the malaria map.

President CLINTON. Senator Feingold, could I just follow up one thing? Mr. Gates, as usual, is being a little bit too modest here. Let me remind you of the first foreign policy example I gave you. We had this announcement in Tanzania in a rural village of 2,000; 12,000 people showed up because we were giving them artemisinin-based medicine that works because the Gates Foundation is funding it. We started in two Tanzanian provinces.

This medicine was selling everywhere between \$8 and \$10 a dose. Nobody can afford that. We got it down to about 50 cents. But we're not at the volume levels now, given the cost of the component parts, to have the market take it down. All the AIDS drugs, the market took them down. Without the Gates subsidy, we couldn't do it.

Now we're in 11 countries in Africa doing this, thanks to the Gates Foundation. Huge numbers of people will live. Other people are still taking this old quinine-based medicine. It's like taking aspirin for a headache. Pretty soon you're sick again and people die.

So this is one dilemma you're going to face here with this whole Global Fund issue and the whole PEPFAR issue and the President's Malaria Initiative issue. We can get these malaria drugs down in price, but to do it we've got to figure out how we're going to get enough artemisinin compound and how to get the volumes up so that you can get the prices down the way we did with ARVs.

But we wouldn't know any of that if it weren't for the Gates Foundation in these 11 countries in Africa. That's the dilemma you face. You'd actually wind up maybe getting the price down if you could put a little more money into this medicine now.

Senator FEINGOLD. Mr. Chairman, my time is well over. I just want to say that on both this issue of HIV-AIDS and malaria, on behalf of all my colleagues, this has been an area, at a time when people despair of bipartisanship, bipartisanship has been superb on both of these issues for years. I think Americans should know that that is happening here in this body.

The CHAIRMAN. A point well made, Senator. Thank you.
Senator MENENDEZ.

Senator MENENDEZ. Thank you, Mr. Chairman.

Mr. President, thank you for your incredible continuing service to this country and, for that fact, to the world, for what you're doing in the foundation. Mr. Gates, thank you for making a difference in an individual using their resources to actually be willing to make a difference in a really powerful, positive way.

You know, I'm fortunate enough to chair the subcommittee on all of our foreign assistance abroad, and I'd like to take your experiences a little bit—and certainly I'm with you four-square on the Global Health Initiative, but to try to extend out some of those experiences on how we may do better. You know, Mr. President, you as the United Nations Special Envoy to Haiti have a tremendous amount of convening power, as well as tremendous reach across multilateral efforts in Haiti. I know that work is only going to get harder, even though we've had a tremendous response. But it's only going to get harder in the days ahead.

It seems to me in some respects that Haiti is an example, not just of a technical challenge, but a leadership challenge as well. I'm wondering, as we look at Haiti and our responses there, are we doing enough, whether it be Haiti or overall, long-term thinking about how we do foreign assistance and how in that context are we looking at how we develop leadership at the end of the day within countries to help us, whether it be Global Health Initiatives or development assistance or other efforts, because we can externally provide resources and make a difference, but at the end of the day, whether it be today's Haiti or tomorrow somewhere else, the question is how at the same time do we create indigenous leadership to move this in the right direction.

Mr. Gates, if you could comment on that as well, as well as that you have a unique ability through the foundation to make long-term commitments, and which individuals and countries can ultimately depend upon. And that's somewhat transformative versus what we do here in the Congress on an annual basis.

So I wonder, do you have any thoughts in that regard, is what I'd love to hear from both of you.

President CLINTON. Well, first, I think it's very important, President Preval is here and is meeting with the President today. The Secretary of State and I had dinner with him and his wife and his team last night. The Haitians have got to settle on one of a few options for a model for how this reconstruction process is going to play out.

I believe the one that Indonesia adopted after the tsunami is a good model, something like that will give the world the confidence that there will be great transparency in the process and that it will be moving in the right direction.

Second, Haiti has a bigger job proportionately than even Aceh was. But it's got some advantages. You've got a real commitment there on the part of the Haitian Government to the modernization process. Again, I think that our goal should be empowerment, and in that sense our model should probably be Rwanda. The Rwandan Government hopes to receive no foreign assistance by 2020.

To give you an idea—this is one thing I think you can tell our constituents, by the way, about whether it works. In 1998, 4 years after the Rwandan genocide, the per capita income was still only \$268 a year, less than a dollar a day. Ten years later, \$1,150 a year. There is no other country in the world that quadrupled its per capita income in 10 years, even from a low base, which shows that this can be done.

I would say to you that the Haitians had adopted before the earthquake a very ambitious long-term development plan to genuinely modernize the country and make it more self-sufficient. It covered education, it covered economic development, it covered health, it covered the whole range of issues. It required them to modernize their government and open it and open the port system and the airport system.

They're sticking with the plan and putting the response to the quake into that plan to amend it as soon as the post-disaster needs assessment is completed. So I believe that we've got a real shot to support a successful enterprise there, Senator, because they think the same thing you do. They think they have to retain talent, they have to be held accountable. They want to not need us except as friends. And that's what we're trying to do.

The key is in the structure and the personnel. But I believe, based on the decisions, the conversations we've had, they're going to make good decisions on that.

Mr. GATES. There's always the challenge of which countries to help, the ones that are in the greatest need or the ones that have the best government, so that the money will be most effective. Right now, in Ethiopia, certainly in the health area they have very effective leadership. The GHI proposal talks about some of the ambitious goals they've set for Ethiopia. The government's decided to do health workers and so the U.S. money will allow them to succeed with that program.

There are some things, like vaccinations, that can be done even in the worst areas. The vaccination rates in Somalia are higher than in many other countries. So if you get in, do grassroots work, vaccination works. Some other things, like getting a mother to a clinic to treat conditions that might come up, that's very difficult if you don't have reasonable governance, reasonable roads. So these programs have to be tailored.

Vaccination should be done everywhere. Some of the other things, like really training health care workers and trying to get a big improvement there, you want to pick places where you have strong governance. GHI has this idea of picking countries. They have a challenge with India in particular where you don't want to pick the whole country, you probably want the ability to pick parts of the country. It's just too important to the global health picture not to have it be involved in some ways.

Likewise, Nigeria is a challenge. The health statistics are tough there and so you want to work, and yet the government coordination hasn't been very good. You've got constant tradeoffs. We've got—from our foundation's point of view, we've got to be in Nigeria. Polio, it's the last place in Africa it still is. We see some improvement from what was being done in the past, with the debt relief dollars, a bit better governance.

President CLINTON. Senator, could I just go back? One thing you said relates to what Senator Lugar asked me about, the impact of this on foreign assistance—I mean, on our foreign policy. Before the current coalition government took office in Zimbabwe, we were providing pediatric AIDS medicine and some other antiretrovirals, because under the UNITAID agreement two-thirds of all the kids in the world who get this medicine get it from the contracts we negotiated. They didn't have any other way to get it.

Now, we cleared it, but the State Department made the right decision. They said that, even though we're at odds with Mugabe and there's all these controversies, first, there's a humanitarian case to be made; and second, South Africa is wallowing in an AIDS problem that in part has been aggravated by people pouring across the border from Zimbabwe.

So I think that that goes back to what Bill said. I think there's an inherent conflict sometimes between how good the government is and how much the need is, and there is no one rule. But you can't walk away from the humanitarian crisis, and often it turns out that's the best policy.

The CHAIRMAN. Senator Cardin.

Senator CARDIN. President Clinton, Mr. Gates, thank you very much for everything you've done to help internationally on health. Thank you for being here. I think your presence here today helps in the challenge that Senator Kerry pointed out, about getting the type of support, but also the type of focus and priority to this issue in this Congress. So I really do thank you personally.

I just want to underscore the point, President Clinton, that you made about capacity. It's sometimes very difficult to get support to build up the internal capacity of a country. We have a little bit easier time with disease-specific programs. We did with malaria and HIV-AIDS and tuberculosis. I think the strategy was to use those programs to be able to get the type of activity in that country to build its capacity so that it could take care of its own needs. I applaud you for using the funds to deal with the direct disease, but also to build the type of structure in the country.

President Clinton, you said one thing that really got my attention. I want you to expand on this, about not tolerating corruption, because the countries in which you both have been actively involved, there's a lot of corruption. But evidently you've been successful in getting the funds for health to the people and not being diverted to fund the greed of certain corrupt officials.

Is there a lesson that you can help us with? As we tailor foreign assistance, we look at ways of changing our foreign aid focus to make sure there's transparency, to make sure that there is oversight and accountability, so that we don't find that the international assistance is going to fund corrupt regimes.

President CLINTON. I'd be interested in that. I don't think I've had a conversation with Bill about this, but, you know, I'm not in the position I was in when I was President. When I was President the question was, Is this government corrupt and to what extent? Now I just don't want the health care programs to be corrupt. They can't take the money that I bring in there, the medicine I bring in there.

This is a good way in to building good governance and honest governance in countries, because you can argue that corruption in health care programs kills people. The only country I ever pulled out of—and I don't want to cause any embarrassment here—insisted on paying \$880 for my then-\$140-a-year AIDS drugs. And the leader of the country, I had a very good personal relationship with. He said: Why do you care? We've got lots of money now, even though our per capita income's low. I said: Because this is a little world and 3 days from now they'll know it in Africa, and if somebody in Africa does what you did then six people will die for every life I save. You've got all this money; hire somebody else to come run your AIDS program.

In other words, I'm just saying this because I do believe that the health care issue is a good way in. I can do this and you may or may not want the State Department to do this or AID or the new Global Health Initiative, or the President's health and malaria initiative to do it. I can go into a place and it's enough for me if we run the health program honestly.

I try to build capacity. That is, I don't buy this medicine. You have to understand, most of this money that we have some impact on we never touch. It goes directly to the governments and they buy the medicine. We just cut the deal, because I don't want them to need me. I want them to build the capacity.

There is one country in the 70 where I buy the medicine because the President is a friend of mine and he called and said: Look, there was a lot of corruption in the previous government and I've got to get rid of a lot of people, and I can't start with the health ministry; will you buy the medicine for a year or 2? But the point is he recognized that we had to operate honestly.

So my advice to you is first decide, will you only go into places that are 100 percent clean, or will it be enough that nobody messes with American money and if there is integrity in the health system? I would argue to you that there is less corruption where you improve capacity. This is worth a lot. It is worth a lot to save these lives and build the capacity, and people are so proud to be doing something in honest government that you will perhaps create a different culture in these countries if you do it.

And then you've got to watch it. But if you say this, you've got to be prepared to walk away. I've only had to do it one time. I did it and I hated it, but it was the right thing to do.

Senator CARDIN. You have to have accountability.

Mr. Gates, have you confronted corruption in the countries in which you're operating?

Mr. GATES. Well, fortunately, things like vaccines or bed nets are not that attractive for the political elite to stockpile. So if you can track the grant to the purchase of the commodity and the commodity getting delivered, then you can make quite sure the money's not being diverted.

It gets more difficult as you get into personnel systems. That's a difficulty with education, road-building, and even health systems, to make sure that the work is actually being done, that the jobs aren't just being given to the politically favored, as opposed to the people who have the skill sets. That is not always executed on very well. We see programs like in Ethiopia, where that's being done

well. We see places like India, where the results are mixed. The north, which has the greatest need, tends to have the most difficult challenges.

The answer in many locations is to organize women's groups and to make sure they have the expectation that their kids will be vaccinated, that they will get a bed net. In a lot of locations, their activism has been key to making sure that nothing is lost between the money being given and the services being delivered.

In the case of vaccination, if people claim that they're doing and they're not, it's easy to go in and do surveillance. There's also a disease, measles, that very quickly shows up people who claim to have high rates who don't.

Senator CARDIN. Thank you very much. I appreciate it.

The CHAIRMAN. Senator Casey.

Senator CASEY. Thank you, Mr. Chairman.

Mr. President, we're grateful for your testimony in your presence here; Mr. Gates as well.

I was thinking as you were reviewing a lot of these issues that the impact you've both had on the world on a whole host of issues that relate to global health in one sense is incalculable, but in another sense very much measurable. I was noting, Mr. President, in your annual report that two, two among many, numbers jumped out at me: reducing malnutrition among more than 42 million children and providing access to safe drinking water for 3 million people in Asia, just among the many results.

I think that's important, that we focus on results. There are so many ways to document the problem, so many ways to specify the nature and the gravity of the threat to human life. But the American people more and more look to us and look to nongovernmental entities for results.

I wanted to focus on two areas. One is on maternal and child deaths, and two, on food security. Let me just cite two numbers from the staff memo. As usual, our staff does a great job here compiling this data. Sub-Saharan Africa and Asia accounted for 92 percent of all under-5 deaths in 2000, a stunning number. The second related number, the same area, sub-Sahara Africa, Asia, accounted for 94 percent of all maternal deaths in 2005. Just chilling numbers.

I guess the question I have is twofold. One is, we know that this year the President's 2011 budget provides \$9.6 billion for global health activities. If we had another billion or two to spend and you could only spend it, just hypothetically, on maternal and child health, I guess the question I would ask is: How would you spend that extra dollars or how should we spend it if we could only spend it in these areas?

Second, in a very brief way, just the list of what works, because sometimes I think we have these discussions and debates here and we don't itemize or list what we know works and what we know we can invest in and get results.

President CLINTON. Well, I think if I had another billion dollars to spend I would—if you take Ethiopia, for example—I don't know if you were here when I said this. When we started in Ethiopia, there were only 700 clinics in the country. That's before the United

States program got under way. We helped them develop a plan to go to 3,500 clinics.

So I would go in and try to make sure that every pregnant mother could be checked, could be part of some community, the health worker network, and eventually get to a clinic before a baby is born and we find out what the deal is. I would make sure that we had adequate nutrition. I would make sure that in the high prevalence areas we tested for HIV status and gave the mother-to-child transmission drugs. And I would then fund those things which reduce infant mortality.

But you talked about all these kids who died in Africa. The mortality rate is very grievous for babies born with HIV-AIDS, even though we save a lot of them. But it's horrible. Eighty percent of the people that die from waterborne diseases are under 5. They're almost all in poor countries.

So anyway, that's what I would do. I would spend the money on that.

Mr. GATES. I mentioned the drop in childhood deaths from 20 million to 9 million. We can really think of the remaining work as the deaths between 30 days of age and 5 years, where it's really going to be vaccines that are going to carry the weight. We have a new vaccine, rotavirus, for part of the diarrheal burden. We've got a new vaccine, pneumococcus, for part of the pneumonia burden. Hopefully, we'll have a few more for both of those and we'll have a malaria vaccine.

If you could cover those disease conditions, then you could cut the 30-day to 5-year piece by well over half. That would leave still a gigantic number in those first 30 days, and that's where all these words about integrated approaches come in, because if you get the mother starting prenatal, make sure she has the right vitamins, perhaps even some vaccines, make sure she has the clean birth kit, some tools, probably some antibiotics, make sure she's been given the right advice about keeping the baby warm, breastfeeding, vaccination, that integrated approach can save over half of the children that die during that first 30-day period.

That's a big new focus, not only of the GHI plan, but work that we're doing, because exactly how you go about that is not well understood. The vaccine piece, we need to put more into research, we need to put more into GOBI. The model is pretty clear there. This first 30-days piece, there's a lot we know, but there's more that we need to know, particularly because creating the demand by the mothers within their culture, within their social practices, that they'll want these services—in many places you go, when you say, hey, your kids have chills, hey, come down to the clinic, the answer is: Oh, that's where children go to die; why would I take my child down there? So there's some new ideas on this that will be somewhat tailored to each local area.

President CLINTON. Senator Casey, if I could just say, Bill just said something; I know that maybe everybody on the committee understands this, but I do think it's very important to understand it, that, partly because of the way programs get funded in the countries providing aid and partly because of the absence of systems in poor countries, it's hard for you to believe just sitting here, but the most important thing maybe about this GHI proposal is providing

a coherent health system and a sort of a one-stop place in developing countries.

It's crazy they don't have enough money to do anything, but—this program's dealing with AIDS and another program's dealing with maternal and child health and another program's dealing with malaria. There are literally places where you've got to walk someplace to get health care anyway, and you may have to walk three or four or five places to get everything your family needs.

This is what the Global Health Initiative, among other things, will correct and will give the rest of us sort of marching orders and a framework so that we can all be more effective and make the money that you have appropriated go further. I think it's really important that everybody understands that it's almost hard to imagine that this exists, but it does, and this is maybe one of the most important reasons for you to pass the GHI.

Senator CASEY. Thank you very much.

The CHAIRMAN. Senator Risch.

Senator RISCH. The problem you just described, is that—I hate to use the word “fault,” but is that the consequences of what we're doing or not doing or the consequences of what the individual countries are doing or not doing?

President CLINTON. Oh, probably a little bit of both. But I think a lot of people in developed countries are providing aid with really good intentions. You know, we started the PEPFAR program, the Global Fund for AIDS, TB, and malaria, but you can't run separate programs on AIDS, TB, and malaria and maternal and child health, immunizing against other tropical diseases—I could go on, the whole list.

What we said earlier, Senator, is that the United States and the other donors I think need to be in the business of making this a user-friendly system and also helping to build the capacity of the countries in which we work, and hopefully one day they won't need us any more or anybody else.

But I think that what happens is if you deal with these things problem after problem, you have unintended consequences if you put the problem-solvers into an environment where there is no system, like we take for granted, for health care.

Senator RISCH. What you're saying then, I suppose, is that when these things are done they should focus, particularly at the outset, on system and process as much as they do on delivery?

President CLINTON. Absolutely. The problems—all major debates in rich countries about health care policy, education policy, they're about how do you change the system you have, what's the right way to do it, what's the wrong way to do it. There are rigidities and you know you have to keep improving. In poor countries they're about capacity. They have no systems, so that there's no predictability in the connection between what you do and the consequence you get.

So I think that this is noble work. You can see the U.S. Government doing more of it, Bill Gates's foundation, and I—we've been involved in all of this. I fell into this, too, by the way. I'm just as guilty as the next person. We were out there doing AIDS drugs and so proud, and we cut the price, and then we cut the price of the equipment, and then we did something on malaria. Then pretty

soon we realized that the impact of all this was being drastically truncated in places where there were no health care systems where people could also show up and get maternal and child health or whatever.

Senator RISC. Thank you.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much, Senator.

Senator Shaheen.

Senator SHAHEEN. Thank you.

I want to add my thanks to everyone else's on the panel for both of you, for being here today and for all of the work that you've done. Thank you both very much.

For the last year, along with Senator Snowe, I have served on the Smart Global Health Commission of CSIS. We're getting ready to produce a report that will come out next week, and it reinforces so much of what both of you have said today. Many of your friends and colleagues have served on that commission with me.

Mr. Chairman, I'd like to ask unanimous consent if we can submit in the report an advance copy of the CSIS report on Smart Global Health Policy.

The CHAIRMAN. Without objection.

[EDITOR'S NOTE.—The CSIS report mentioned above was too voluminous to include in the printed hearing. It will be retained in the permanent record of the committee.]

Senator SHAHEEN. One of the things that we talk about in that report is exactly what you both said about building a system that can deliver results. As we look at how to structure that kind of a system that I think is important, not just in terms of delivering results, but in producing a base that we can go back to people, whether it's funders or governments or the American people, and say, look, this works and we have the accountability, we have the data to show that.

So can you talk a little bit more about that, about how we structure those systems that are accountable for people?

Mr. GATES. Well, in some ways, compared to all the money you spend, this is the most accountable money, more than the money you spend on Medicare, the defense budget, even education. This money, you can say: We spent this many dollars and we've saved this many lives, and at levels where it's pretty stunning that those resources weren't there in the past.

The piece that isn't in the 150 budget, the part that's the research pieces that are over in the other thing, those are a little tougher because we can't say to you how quickly you'll get an AIDS vaccine. We know it's important work. We know eventually one will come, but that's a long quest, probably more than a decade.

But when it comes to giving money to Global Fund or PEPFAR or to the Global Alliance for Vaccines, there is a very direct measurement of how many kids' lives were saved with these new vaccines or how many new people were able to go on treatment. So I think of this—and I wish all of government had such a clear if you spent money then you'll absolutely get this result.

There aren't many things where you can go from 20 million deaths down to 9 million deaths. Of the rich world government

budgets, it was less than half a percent that caused that to take place.

President CLINTON. I completely agree with that. But if I could be the curmudgeon here, because I'm a bleeding heart cheapskate and we need more money for medicine, for reasons we've already outlined. I do think this is an appropriate time, Senator, for you to reexamine the transaction costs, the compliance costs, and the overhead costs to see if you can squeeze any more money out of the money that the Congress appropriates and get it spent in the communities which you intend it to benefit.

One of the things that in the report on the Global Health Initiative that the administration has issued—and you'll have their testimony later today, and they're very good people—but there was a mention, in passing, of cooperation with NGOs. But one of the things that we really haven't worked through is exactly what should the nature of the government's cooperation with NGOs be?

I described my relationship with the Bush administration's PEPFAR, but I'm in a different position. I can't and don't want to get U.S. Government money, although we have made our health initiative free-standing in the event that it's necessary some time.

But you need to think about how you do these things faster, cheaper, better, and whether we really do have the highest percentage of dollars possible being spent in the countries you intend them to go. In my opinion, Senator Shaheen, there may be some things you can do to improve that.

But I'm with Bill Gates. At least all these things are scoreable. You can keep score. You know what you got for the money you spent and you know what you would have gotten if you'd spent it on other things. But that doesn't mean you shouldn't keep trying to get more blood out of the turnip, because we've got desperate needs, and the more we build these systems the more people will show up. And you don't want to have 5 years from now, because this program works, riots in countries because they can only give medicine to 45 percent of the people who need it to stay alive and the other 55 you didn't see before you built the system.

Senator SHAHEEN. Well, that leads me to raise another issue that has been a sensitive and controversial issue, but I think it's important as we're talking about that, how do we best invest the dollars. As we all know, family planning remains a controversial issue in this body, in the country. Mr. Gates, you mentioned in your written testimony that voluntary family planning is a proven and cost-effective way to save lives. According to the CSIS report, for every \$100 million invested in family planning 4,000 maternal lives are saved, 70,000 infant deaths are prevented, and 825,000 abortions are averted.

So how can we move this debate beyond this topic being controversial to being another way to accomplish what we need to deliver health care for people around the world?

The CHAIRMAN. Before you answer, if I could just ask: Mr. President, do you have a deadline at 11:30 or so?

President CLINTON. No, I can stay until 10 to 12, I think.

The CHAIRMAN. I think Doug Band is sitting behind you going "What?" That's all right. Thank you, Mr. President.

President CLINTON. Go ahead, Bill.

Mr. GATES. Well, I think the best way to change people's minds would be to have them go to the countries and see what's being discussed when we talk about family planning in these countries. Talk to the mothers who want access to the tools. The tools can improve. A lot of women use injections. Right now that's a needle, so you have to go to a health worker. There's a new advance where it's subcutaneous and so the person could actually get it at the pharmacy or administer it themselves. Also, the implants have been way too expensive. There's a new generation of those coming out that are substantially less expensive.

What voluntary family planning means is bringing down by choice the rate of population growth and having more birth spacing. That's very dramatic in terms of improving maternal health. If you want 2 years between children, it cuts more than half the chance that there will be a maternal complication.

So it's very effective. In these very poor places, the high population growth caused because you don't have access to these tools when you want them, that builds in huge problems for the future. So it's great to see the United States looking at these investments and that that receives somewhat of an increase in the GHI budget. It's important spending. It's an area that our foundation prioritizes as well.

The CHAIRMAN. Thank you.

President CLINTON. Here's what my recommendation is. I don't know if it'll work or not. Ask your colleague here. But I think the Foreign Relations Committee should start with members and staff members going to see some of these places, because I think there is the—look, when a pro-life person hears the word “family planning” they think, you know, abortion, they think license, they think all these things. If you could see these things in operation, they come across as clearly pro-family and profoundly pro-life.

These poor women, they're just trying to manage their lives, and if they space out the births, like Bill said, they can do a better job as mothers, they can still work and earn income for the family. It changes everything for them.

So I personally think that your best bet is for people, whether they're viscerally for this or viscerally against it, to actually see it, see how it works in real people's lives. I think that would change things.

And I don't think you should give up on this. Who would have thought that Jesse Helms would have supported the global debt relief initiative in 2000? Who would have thought that by the time President Bush supported PEPFAR we'd have had everybody in the wide world on the bandwagon? I think it's very important just to keep working at it.

But believe me, most people who talk about family planning have never seen it in operation on the ground.

Senator SHAHEEN. Thank you.

The CHAIRMAN. Senator Barrasso.

Senator BARRASSO. Thank you very much, Mr. Chairman.

Mr. President, Mr. Gates, thanks so much for being here. I appreciate the work that both of you continue to do for the benefit of all humanity.

Mr. President, I agree completely when you talk about vaccination. They're cheap and they work. And I really appreciate when you talk about recruiting, training, and retaining health care providers, whether it's nurses, nurse-practitioners, physicians in the communities. And I appreciate what you say when you say you must be invited in, they must have a plan, and you want to make sure they're making measurable results.

Mr. Gates, I agree completely, the integrated approach to care. I saw in my 25 years as an orthopedic surgeon how important that is, early detection, prevention, all of those things in an integrated approach, and the kind of one-stop shopping that you talked about, where people can go, whether it's for malaria, for AIDS, for whatever the disease.

What I hear, Mr. Gates, from my colleague Senator Enzi, who's had a chance to visit a number of these locations, is that the patients and the people want to go to the Gates facility much more than the local, say, state-run or government-run facility because, as President Clinton talked about, they have to walk to the clinics, but apparently you've come up with a better way with transportation and sending a van 230 miles around. So it's not just the health care, but it's all of these other ancillary things that we can do to help improve the systems.

So I look forward to having a chance to visit the facilities as well. But I don't know, Mr. Gates, if you could talk about that, about how the Gates Foundation has set up criteria for when you decide to get involved and holding people accountable for a continuation of support because you actually do want to make sure that the value is there for the dollars invested and the best results can be obtained.

Mr. GATES. The Gates Foundation gives money to the Global Fund because we think it's a great organization. I think we've given \$650 million to them at this point. They work with the countries. They're quite low overhead in terms of how they do it.

In terms of setting up clinics, there is a difference between high AIDS prevalence countries and low AIDS prevalence countries, and a little bit of a mistake was taking them all from high AIDS prevalence, where dedicated facilities and people are trained in special ways really makes sense. Because of the adult health care you're delivering, it's a high percentage, so Botswana, South Africa, Lesotho, Swaziland. As you move to countries like Rwanda, Ethiopia, where the AIDS prevalence is more in the 2-percent range, there you don't want to create a separate structure.

So having the judgment to look at, OK, the AIDS prevalence, rural versus urban, there's decisions that get made. I think there's a lot of learning going on. I wouldn't characterize the field as there's the vertical levers and the, "health systems" levers. It's all about taking a particular set of facts and circumstances and coming up with what the right approach is. Country by country, I do see that being done. GHI talks a lot about that, consulting with countries and picking a few countries to be model countries and even having some funds that are somewhat unprogrammed that would help them drive those model programs.

President CLINTON. Senator, I think you hit on something. You gave a specific example of a general issue that I would urge you

to explore with the administration officials when they come, because nobody's got an answer to this. I can tell you, at least I don't. But I've already said here I strongly support this GHI initiative. It is well conceived. It is what we ought to do.

But when you ask us, well, OK, that's fine, so what should the government of X's relationship be with the NGO community, both from a country like ours or a domestic one, and what should the American Government's relationship be to that government? For example, as I know you know, we don't give foreign assistance to other countries for direct budget support. Now, when you first hear it, it makes enormous sense because we want to achieve certain specific objectives—and we sure as heck don't want to fund ineffective government. On the other hand, we are now coming up and saying, we've got to build health care systems in this country.

So I just want to urge you to keep pushing this and keep thinking through this, and use your experience as a physician with the health care system. If the end of this is—if the definition of success is they have their own health system and it works as well as possible given that amount of money, how are we going to relate to the government and how should the U.S. assistance program relate to the NGO community, both the American NGOs and the ones in the country? Try to get some examples.

If you read the GHI report, there's a pretty good description of what they did in Bangladesh, but that's about it. I love the report, but you need to really work through this, I think.

Senator BARRASSO. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Dr. Barrasso.

If I could just ask a couple of things before we wrap up. Africa has fewer doctors and fewer trained medical personnel than any other region, and apparently continues to lose many of those who are trained to either North America or to Europe. I wonder how we can help to prevent that from happening and to take the underserved regions and empower them to be able to build their indigenous permanent medical corps, if you will.

This sort of plays off the question that was asked earlier about people going to the Gates entity versus others.

President CLINTON. Well, I'll give you just a couple of ideas. First of all, there are plenty of gifted people there who want to stay, that will stay if you train community health workers, you train more nurses, and you provide facilities. A lot of those doctors will stay at home and make a heck of a lot less money than they could here, as long as they don't have to fail as doctors as long as they have a health care network that makes sense.

Second, I think with physicians in particular, I think we have to recognize that the African university system declined over decades as the colonial era faded away, to an astonishing degree. Now all these American universities are opening in the Middle East. I'm for it. I love it. NYU is opening in Abu Dhabi. You've got all these universities in Qatar. Why? Because that's where the money is. They pay them to come in there. I think it's good for us over the long run, good for America and the Middle East. It gives people a different look at us.

But we maybe should think about funding the same sort of help in Africa where our universities could be there and be there in

partnership with African universities and build their capacity even as there's an architecture school from, I don't know, the University of North Dakota there. I think you should really think about it. There's no analog. This is a very discreet strategy that universities are following in the Middle East and it's going to be good for our foreign policy, I think, but it's only because they're rich. We really need to do this where people aren't rich. I think you should really look at that.

The CHAIRMAN. Mr. Gates, you and Melinda launched the Living Proof Project. Can you share with us what kind of traction that's gained since it started and what your hopes are for it?

Mr. GATES. Yes, Melinda and I did about a 1-hour presentation, which was really a thank-you to the committee and broadly the U.S. taxpayers for the generosity, and telling some of those success stories. We got that on line at the foundation Web site, and we've even broken it down into pieces so you can look at a 5-minute video in malaria, 5-minute video in AIDS, and see these heart-rending stories, fortunately mostly with successful outcomes.

It's been interesting. We've had a lot of the European governments ask us to go over and do the equivalent there, because again the awareness of the programs is not that broad. So I think over the next year we'll go to U.K. and a couple other countries and talk about that story, because their generosity is important as well.

Global health is more visible today than it was 10 years ago, but not as visible as it really needs to be so that people feel great that this budget item continues to grow at a time when overall not much will be growing.

President CLINTON. Senator, if I could just echo. I think that what Bill and Melinda have done on this is great. In order to build support for this if we could humanize it I think it would make a big difference. If you come to my office in New York, you'll see a picture of a little girl whose mother and father were both HIV-positive, and they became friends of mine when they risked everything to get the medicine to prevent mother-to-child transmission a decade ago in Nigeria. The child is healthy, without HIV.

You see a picture of a beautiful girl in her prom dress who at 13 weighed 75 pounds and was so weak she could not hold her head up at her school desk in Haiti. She had to be taken to school by a cab. That young woman was the first person to get our AIDS medicine and we became friends and she's asked me to send her to law school now.

At one of our remote clinics in Rwanda, there were a boy and a girl living in a mud hut whose parents both died, but the older sister was not HIV-positive and the brother was. He miraculously lived until he got our medicine, and now he has a third-grade education at 15—he said: If I finish high school, can I go to medical school so other kids won't get sick?

I think we need to tell these stories everywhere. I think if you can make this come alive to people through stories we can get all the support we can say grace over.

The CHAIRMAN. My next question was really going to be, given the extraordinary accomplishments and the things that you've talked about that we've been able to achieve, it's disturbing that we are viewed the way we are in many different places. Now, not so

much in Africa to some degree. But is there something more we should be doing in terms of public diplomacy that doesn't amount to a kind of shameless self-promotion, but on the other hand does better inform people about our efforts and desires and shared aspirations?

Mr. Gates.

Mr. GATES. Well, it's interesting. Governments, including the U.S. Government, aren't that good at telling their success stories. It's partly because nobody knows, should you allocate talent for that or not, is it appropriate or not. So when things do go well, there's just—that muscle, OK, how do you get that story out there, is not that strong.

Coming from a corporate environment, you'd think, can we announce this? If we can't announce it, should we do it? So it's a feedback loop where you get credit for the things that you do well and that helps you to pick some of the right things.

Here we have this phenomenal success story that everybody who is in the community is amazed at PEPFAR. They were thrilled with the President's Malaria Initiative. Getting new government programs off the ground quickly, with all the complexities of making sure money's not misspent, is very hard, and these two actually surprised me in both cases by having—partly by having able leaders. The initial leaders of PEPFAR were good, the current leader of PEPFAR is good. I'm certainly a big fan of Raj Shah, who runs USAID now and did a lot of great work at our foundation.

I think to some degree you will—you could do a better job of telling the story, and I think you will have to rely on people like ourselves and other third parties to get that story out, because in some ways they have more credibility. Certainly we're trying to do that. The Internet is a wonderful tool to take a 5-minute video and tell these stories. So even though we got about 50,000 people to look at Living Proof, I went back to the foundation and said: I want 500,000, and then I'll ask for 5 million.

So we're not quite as adept, even ourselves, at taking this digital environment that should be so wonderful, because whichever thing you're interested in, you should be able to go right to that.

The opaqueness of the budgeting process I do think is tough for people. You say, OK, there was a supplemental here and that's in the 150 account, and it was authorized but never appropriated, and now you want credit. It really is very hard for people who don't follow these things. What's the percentage increase in GHI? Well, there's about five different ways you could look at that.

The CHAIRMAN. I've got news for you. It's hard for people who do follow it.

President CLINTON. You're going to have the administration come up here, and I'm with Mr. Gates. I have a very high opinion of Raj Shah and he worked for the Gates Foundation, not for me. And I love Eric Goosby, who did work with us in China, where we were invited by the government to go out and reach people in rural areas.

This goes right to the point you're making. I had a fascinating experience. The Chinese asked me to go out in the rural areas and be on television playing with and talking to children with AIDS. They said: I know you think we don't have politics, we're just a

Communist country, but we do. It's just like America. You get in the rural areas, people are more conservative. They're still scared of AIDS. So we want you to go out there and sell it.

I say that because this idea of selling it is a problem everywhere. You don't want to be self-serving. Most of the people who do this work, frankly, don't care how much credit they get. They just want to save lives. But as a result, we're not very good at it, that plus the complexities of the government budget process.

So I think it's something you should explore with the State Department, because they do have very good public diplomacy people there. I think the message you want to send to the rest of the world is: There is no way you can agree with everything we do. Within our country, none of us agree with everything we do. But you should know everything we do and view us through the lens of everything we do and what we stand for, where we're wrong and where we're right from your point of view.

I think that if you do it like that, then you don't come across as self-serving. You're not trying to put a shine on people and you're not taking tax money and in effect using it for pretty smarmy ends. You're just telling people they need to know. It's terrible that all this good stuff's been done and nobody knows about it.

The CHAIRMAN. Mr. President, Mr. Gates, a final question if I can. You recently made some important comments, Mr. Gates, about climate change. There is a growing body of literature and scientific evidence about the impact of climate change on human health, directly impacting the very goal of this Global Health Initiative. I wonder if, whether it's access to water or food security, which we've talked about a little bit, or the spreading of disease, could both of you perhaps quickly share with the committee any observations you have made or conclusions you have come to regarding this interconnection?

Mr. GATES. Well, I think there's good news, that if you want to help Africa or any poor country mitigate the effects of climate change, the kinds of things you need to do are exactly the things you would want to do otherwise. You want better seeds that are more productive. You want better extension programs. You want better markets for their output. Probably on another occasion, new moves around food security, I think there are some important things there that the administration is trying to push forward. So more investment there, whether it's called mitigation or simply helping the agricultural needs of the poor; very valuable.

Likewise, if we can get energy that's cheaper and doesn't emit CO₂, which is a very huge challenge, but the benefits of that would be very dramatic and far more dramatic for the poorest. The richest can afford energy to get more expensive, but the poorest really cannot. So that's why I love the idea of increased R and D, particularly on technologies that, while meeting the new constraints, have a chance over a period of decades to actually be cheaper than the ways we get energy today. On another occasion, I'm sure I'll be back here elaborating more in that area.

President CLINTON. I'm reluctant to talk about this, Senator, on the theory that if you get into everything relates to everything else you muddy the water. But I think there's no question there are

going to be health impacts. If I could just give you a couple of examples.

No. 1 you mentioned. In places where the climate is getting hotter substantially and where water tends to be concentrated more in severe weather events rather than regular waterfall, this will cause on the one hand water shortages and on the other it could lead to standing water which bears waterborne illnesses.

There's no question that malaria is occurring at higher and higher altitudes in places it didn't before because mosquitoes are going to places they didn't feel comfortable before. There's lots of evidence of that.

In the food area, this is important because most studies show that Australia was the first place really hit hard by changing climate, as you see from the wildfires. Their capacity to grow livestock and raise crops has been substantially altered. But ironically, the next places that have been identified by most people who study this are the poor countries that already can't take care of themselves. Two of the next ten on the list are Afghanistan and Haiti, interestingly enough. So I would be worried about all that.

In terms of energy, I think that small-scale clean energy and promoting self-sufficiency is really important. The best entrepreneur I work with in Haiti raises fish. Last year more than half the fish on Earth were raised, instead of caught naturally, in oceans, lakes, and rivers. He has a huge operation that he runs with a \$35,000 solar unit with a battery that stores excess solar power and a refrigeration unit run by a \$10,000 solar unit.

So yes, I think the whole clean energy thing and the climate change debate has health implications both positive and negative. Maybe some time we can come back and talk about that.

The CHAIRMAN. I appreciate that very, very much.

Well, Mr. President, Mr. Gates, we are very appreciative. I'll turn to my colleagues in a moment to see if they have any last comments. But let me just say that 20 million to 9 million is an extraordinary reduction in human suffering, obviously. There are so many ways and so many stories that are testimony to the extraordinary efforts that both of you have made. You've both aggregated your assets and resources from different fields, but together I think have created a unique team and have had a unique impact which has served the country and humanity in an extraordinary way.

I'm reminded of one of the things de Tocqueville wrote when he came and observed America, "America is great because Americans are good," and he was referring to this natural charity that took place in America, about how people took care of each other and how we reached out and built community, and he found it quite extraordinary.

I think in the best of ways that the two of you are doing that and representing us in an extraordinary way, and the accomplishments are beyond just measurable and words don't adequately describe it. We thank you. It's really an extraordinary story, quite superb.

Do any of my colleagues want to comment?

Senator CARDIN. Good job.

Senator SHAHEEN. Thank you.

The CHAIRMAN. If not, we really are grateful to you for helping to accent how important this Global Health Initiative is, and we have our work cut out for us. Thank you very much. Thank you. We stand adjourned.
[Whereupon, at 11:52 a.m., the hearing was adjourned.]

