THE FUTURE OF GLOBAL HEALTH:
Ingredients for a Bold & Effective U.S. Initiative

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"We cannot fix every problem. But we have a responsibility to protect the health of our people, while saving lives, reducing suffering, and supporting the health and dignity of people everywhere. America can make a significant difference in meeting these challenges, and that is why my Administration is committed to act."

—President Barack Obama, May 5, 2009

TOWARD A BOLD & EFFECTIVE GLOBAL HEALTH INITIATIVE

Summary Document

Major accomplishments in global health over the last decade demonstrate that adequately resourced programs, focused on achieving specific results, can improve health outcomes for millions and support economic progress. They also show that distinct public health challenges are closely interconnected and that a comprehensive and integrated strategy is needed to ensure that ambitious health goals are met.

The next step forward in US global health must be defined by significantly expanded investments, a bold vision of what U.S. assistance can accomplish, and building on successful programs to increase effectiveness and self-sufficiency at the country level. Based on these lessons learned, the United States, through a Global Health Initiative, should:

- **Double U.S. aid for global health to approximately $16 billion per year in 2011 and challenge other donors to similarly scale up their investments;**
- **Establish bold U.S. targets for improved health outcomes in each of the six GHI areas and contribute our fair share to reach the health-related Millenium Development Goals; and**
- **Ensure that as we invest in programs to scale up health for all, we build on successful programs and fulfill existing commitments.**

The Global Health Initiative

President Obama's Global Health Initiative (GHI) represents an historic opportunity to achieve bold and ambitious targets in the fight against the most daunting global health challenges of our generation. Alongside related efforts to reform U.S. foreign assistance and to coordinate various initiatives that populate the global health landscape, the GHI is an important signal of the intention of the U.S. government to expand its leadership on global health. At a moment of global economic downturn, we recall the Institute of Medicine's statement from earlier this year that global health programs "play a crucial role in the broader mission of U.S. foreign policy to reduce poverty, build stronger economies, promote peace, and enhance the U.S. image in the world today."[1]

Currently the GHI consists only of a limited number of known elements; fundamental aspects such as scope, targets, timelines, and specific costing data have yet to be finalized. The language of a broad and realistic vision of what the U.S. can accomplish, however, is encouraging.

This report strongly supports the President's focus on the six areas identified: *HIV; tuberculosis; malaria; reproductive, maternal, newborn and child health; health systems and health workforce; and neglected tropical diseases.*

To substantively tackle these areas, success will depend upon key decisions:

- First, funding targets must be sufficient to meet current estimates of the U.S. share of funding required to reach internationally agreed upon goals in the six priority areas of the GHI. The nation's highest scientific body—the National Academies of Sciences, Institute of Medicine—eloquently articulated the U.S. interest in investing significantly more in global health. Initial figures for GHI—$63 billion over six years – will not be sufficient.
- Second, investing in each of these key areas could yield major synergies for people's health—with an exponential benefit in lives saved. Yet an expanded response to certain health priorities at the expense of planned scale up in other areas would miss this opportunity.

To help achieve these key elements of what the GHI can be, a coalition of civil society organizations with expertise in the six GHI priority areas has developed an analysis of the appropriate U.S. program and funding targets that should define the GHI. Our analysis also includes recommendations for policy changes necessary to facilitate the success of the GHI.

Ingredients for A Bold & Effective Initiative

The U.S. government can and should be a leader in global health on a larger scale—moving the world toward realization of the human right to health through smart, aggressive scale up of key health services that improve not only the health of people but also the economies of nations.

This requires continued expansion of what is working and scale up of other priority efforts to levels sufficient to reap the synergies possible—ensuring systems of health that can care for people long term. We cannot address maternal and child health in Southern Africa, for example, without aggressively scaling up AIDS treatment to address the largest cause of deaths of mothers and, often, their nurses and midwives as well. Simultaneously, with smart, integrated and additional programming we can ensure that their communities are stronger because these same women do not die in child birth, their children do not die of pneumonia, and everyone receives core preventative care. As the GHI announcement highlights, a cross-cutting commitment to strengthening country health systems is essential for this to happen—and this will require increased investment in the health workforce to address bottlenecks that have impeded effective health programs for decades.

In order to reflect a bold, innovative new approach to global health a GHI is needed which:

- **Supports bold, people-centered, outcome-oriented services reaching toward universal access to health.** A focus on a selective set of the cheapest interventions has been the hallmark of weak and ineffective responses that have undermined progress in reaching global health commitments. The GHI should not support rationing of services based on a narrow and restrictive concept of cost effectiveness.
- **Supports direct health service delivery as the core of U.S. global health programs.** Major scale up in the purchase of commodities and provision of services to people should be central where it is not currently.
- **Continues promised growth of HIV/AIDS, TB, and malaria programs and uses these as a platform for expanded services.** As the greatest killers of people living in impoverished nations, infectious diseases must continue to be a major priority. U.S.-supported HIV programs

have been used to expand community health care coverage; these innovative models for delivering integrated community care should be expanded as best practices. This will require full funding of the Lantos-Hyde Act.

- **Sets bold U.S. targets based on global need to urgently scale-up sexual, reproductive, maternal, and child health and neglected disease response.** Despite decades of promises to address these priorities, far too little progress has been made, and scandalous rates of preventable sickness, death and disability must spur the U.S. to bold action.
- **Strengthens health systems by focusing on recruiting, training, and retaining health workers.** None of the U.S. priorities described here will be reached without sufficient midwives, doctors, nurses, and community health workers.

RECOMMENDATION 1: Define Bold, Measurable Global Health Initiative Targets to Reach Universal Access to Services

Over the years, nations of the world have worked together to agree on key global health targets including:

1. Reducing the maternal mortality ratio by three quarters;
2. Achieving universal access to reproductive health, including meeting unmet need for voluntary family planning;
3. Reducing the under-five mortality rate by two-thirds;
4. Achieving universal access to HIV treatment, care and prevention;
5. Halving the global burden of TB;
6. Reaching near zero preventable deaths from malaria and 75% fewer cases through universal access to malaria control tools;

Pronouncing that U.S. funding is contributing toward larger goals, however, is not enough. If we pledge to "do our part" we can leverage other nations to reach global goals. The U.S. should set measurable, achievable U.S.-specific targets to ensure accountability and results-based funding. The GHI should be built on a co-ordinated strategy that supports comprehensive care at the point of delivery, using targets as guideposts rather than limitations.

As explained in this report, based on global and congressional goals, by 2014 the U.S. can ensure:

- **Another 35 million births** take place in facilities that provide quality care for both normal and complicated births.
- **40 million women** receive quality antenatal care, while 35 million women and newborn babies receive quality postnatal care and 10 million more couples would have access to modern family planning.
- Appropriate treatment for **40 million more episodes** of child pneumonia.
- HIV/AIDS treatment for **6 million people**, and **12 million new HIV cases** prevented.
- HIV/AIDS care for **12 million people,** including **5 million orphans**/ vulnerable children.
- Treatment under DOTS programs for **4.5 million new tuberculosis patients** and diagnosis and treatment for **90,000 new multidrug-resistant tuberculosis cases.**
- **730 million people** provided with long-lasting insecticidal nets, a mortality rate near zero for all preventable malaria deaths, and a **75% reduction in malaria burden** in the original 15 PMI countries.
- Treatment and care for millions facing 14 currently-neglected tropical diseases.
- At least **1 million new midwives, doctors, nurses, doctors, and other health personnel** trained and retained, to achieve all the goals of the GHI.

RECOMMENDATION 2: Include sufficient funding to reach these achievable goals.

These targets are achievable—yet they require sufficient scale to reap synergies of services. With the passage of the Lantos-Hyde Act last year, the U.S. is already on track to spend roughly $54 billion on the GHI priorities in five years ($48b for infectious disease plus $5b for other priorities at current levels). As a six-year effort, the Global Health Initiative will need significantly more room to ramp up real services, especially if scale up of maternal, child, reproductive, and neglected disease programs are to be sufficiently bold. Failure to invest in the health workforce, especially, could undermine all these goals.

This report does not suggest that the U.S. should shoulder the entire burden. However, the U.S. can and should:

- Fully fund AIDS, TB, and malaria programs at the 5-year levels authorized by Congress in the Lantos-Hyde Act last year and fully fund the Global Fund. An extra year of funding must be added for 2014 since care cannot be put on hold for a year.
- Reach the target goals outlined above by increasing spending on Reproductive, Maternal, Newborn, and Child Health, Neglected Tropical Diseases, and health workforce so that our contribution to each reflects a U.S. share toward global goals—for an additional $28 billion.

Overall, we call for a doubling of U.S. aid to global health from nearly $8 billion a year to $16 billion by 2011. A six-year scale up of a sufficiently resourced initiative would total $95 billion. While this reflects higher levels than the President's original announcement, 40% of this increase is for the total of $14 billion that must be invested in health workforce—which we believe could make or break the effort.

	2009	2010*	2011	2012	2013	2014	6-Year Total
AIDS (bilateral)	5.03	5.13	7.25	8.2	9.5	10	45.1 b
TB (bilateral)	0.16	0.23	0.65	1.2	1.3	1.3	4.8 b
Malaria (bilateral)	0.39	0.59	0.92	1.28	1.76	1.76	6.7 b
Global Fund	0.9	1.05	2	2.25	2.5	2.75	11.5 b
Reproductive, Maternal, Newborn, and Child Health	1.04	1.18	3.71	3.78	3.86	3.72	17.3 b
Neglected Tropical Diseases	0.03	0.07	0.15	0.23	0.33	0.4	1.2 b
Health Care Workers	0	0	1.55	2.04	2.34	2.75	8.7 b
Totals	**7.5**	**8.3**	**16.4**	**19.0**	**21.5**	**22.6**	**$95 b**

** FY'10 figures reflect an estimate for TB, Malaria, and RMNCH above President's request, mid-way between House and Senate. AIDS numbers assume House levels and NTD numbers assume the President's request.*

Reduce the cost of commodities: The U.S. can reap additional benefits by actively driving down the price of essential medicines and other health commodities by encouraging local generic production, negotiating prices for pooled procurement, and eliminating harmful trade policies that push countries to adopt rules that surpass their obligations at the World Trade Organization.

On Research: The figures above are based on strengthening and expanding health services to people. In addition to the Global Health Initiative, a bold global research agenda must be crafted with commensurate increases for these areas in the NIH, CDC, and USAID budgets.

RECOMMENDATION 3: The Global Health Initiative—and foreign aid reform—should build accountability, focus on outcomes, and support country needs and community rights.

a. PEOPLE-CENTERED & COMPREHENSIVE: While maintaining clear, specific targets and goals for priority health issues, policies that hinder co-location of services must be eliminated. U.S. supported services should be built around the person rather than the funding stream and should actively seek to deliver priority interventions in ways that strengthen primary care. Programmatic goals must be used as guideposts for accountability and not as excuses for failing to provide comprehensive services.

b. RESULTS-DRIVEN & TRANSPARENT: Funding allocations should be performance-based—ensuring that every organization receiving funds is consistently monitored and evaluated for its success in delivering high-quality services to people. Information on allocations and results should be public and easily accessible via the internet. Programs that are not achieving results should show improvement or have funding withdrawn.

c. MULTILATERAL: Significantly expand funding through effective international efforts. The Global Fund to Fight AIDS, Tuberculosis, and Malaria should receive significantly more funding—at least $2 billion in 2011 to meet the U.S. commitment to fund 1/3 of the need—and should serve as a model for results-based, participatory, transparent funding for health. Similar support to the GAVI Alliance and other U.N. health-focused agencies must also be provided.

d. SUPPORT FOR THE PUBLIC SECTOR: While NGOs will play an important role in health, direct U.S. support for building national health systems capable of providing high quality health services must be explicitly authorized.

e. COUNTRY-DRIVEN, ACCOUNTABLE, AND PARTICIPATORY: Programs should be driven by national strategies where those are bold and aim toward universal access. This must not mean, however, that decisions are made simply between governments. Every U.S. program should be required to assure that affected communities are central to planning, implementation, and monitoring.

f. EQUITY: The GHI should include a specific strategy and accountability mechanisms to ensure resources reach the most marginalized and vulnerable populations including rural and poor populations as well as youth, women, sexual minorities, sex workers, injecting drug users, and others.

g. GENDER FOCUS: Women and girls often are more at risk of injury, disease, and death and receive poorer treatment because of their gender. Explicit, specific goals and strategies to reduce gender inequity should be included in the GHI.

1. IOM (Institute of Medicine). *The U.S. Commitment to Global Health: Recommendations for the Public and Private Sectors,* 2009 at 7-9.
2. The White House, "Statement By The President On Global Health Initiative," May 5, 2009.
3. IOM, 2009.

HIV and AIDS

Background

HIV/AIDS remains among the most devastating infectious diseases the world has ever known—continuing to ravage the health workforce, the military, mothers, and young children in the global South. The emergency is far from over, yet attention seems to be flagging.

The response to HIV/AIDS has driven a new approach to global health and development that emphasizes accountability, adequate resources, community engagement, attention to the needs of the most vulnerable groups as well as the general population, and a sense of urgency in demonstrating impact. HIV/AIDS services through PEPFAR have had wide-ranging benefits for general health services, demonstrating that programs focused on the most deadly infectious diseases can serve as a platform from which to strengthen overall health systems, yielding broad results.

U.S. investment in HIV/AIDS has saved an estimated 1 million lives through bilateral programs and millions more through the Global Fund to Fight AIDS, Tuberculosis, and Malaria. Clear and encouraging outcomes are being seen at a population level: rebounds in life expectancy, reduced overall adult mortality,[1] reduced infant and maternal mortality,[2] and a positive impact on HIV incidence[3] and other diseases, including reduced incidence of TB[4] and sexually transmitted infections (STIs).[5]

Nonetheless, HIV/AIDS continues to be a leading cause of preventable death in many nations. AIDS treatment, care, and prevention remain a development and security imperative when a third to a half of the nurses, teachers, and soldiers in countries like Uganda, Democratic Republic of Congo, Botswana, and South Africa are HIV positive. New studies identify HIV as a leading cause of maternal death. In Zimbabwe, for example, HIV is the culprit in one of every four maternal deaths[6] while in South Africa the figure is half.[7] In one Johannesburg study, only two of the 108 maternal deaths examined had access to antiretroviral drugs that could have saved their lives.[8] There remain important opportunities for PEPFAR to expand treatment and scale up prevention programming to reverse findings of the Government Accountability Office (GAO) that PEPFAR has had a minimum impact on HIV prevention.[9]

Recognizing the continued urgency, President Obama made a campaign pledge of $50 billion for AIDS over 5 years and the full U.S. fair share of the Global Fund, a pledge joined by then-Senators Clinton and Biden.[10]

Taking Our Foot Off The Gas?

Our Work is far From Complete

With PEPFAR and Global Fund support flat-lined in 2009, and the global financial crisis undermining the fight against AIDS, plans to expand treatment and prevention efforts are stagnating—with countries including Tanzania, Uganda, Swaziland, South Africa, and Botswana pulling back planned services.[11] Some AIDS service providers have reported that, because of financial limitations, they have been forced to scale back services, ration care, or cease initiating new patients on treatment.[12] A recent World Bank report estimates that treatment for over 1.7 million people could be at risk by year's end.[13]

In 2005 the U.S. joined the world in promising Universal Access to AIDS treatment, care and prevention by 2010. Yet, today **the majority** of adults in immediate need of treatment ***still lack access*** and the majority of HIV-positive pregnant women go without treatment that would prevent mother to child

transmission.[14] Experts suggest **well below half** of people in the global South **have the information and tools they need to prevent infection**; men who have sex with men, sex workers, and IV drug users have even less access to those services. The unmet need amongst children is even greater: only **38% of children** in need **currently access treatment**[15] and only a tiny fraction of children born to HIV-positive mothers are tested.[16]

Now is the Time for Renewed Commitment
The Global Health Initiative presents a crucial opportunity for the current Administration. The Administration must recommit to universal access goals, while using HIV programs as a platform for the delivery of other vital health services and building on the bipartisan commitments established through the Lantos-Hyde Act passed in 2008.

Positive Synergies Between HIV funding and Maternal, Reproductive, Child, and Primary Healthcare

HIV/AIDS programs *are* an important maternal, child, reproductive, and primary healthcare intervention. Increases in HIV services in Uganda, Botswana, and South Africa were accompanied by decreases in infant and child mortality of as much as 83%, as parents not only lived but thrived.[17] A study in South Africa, meanwhile, showed a 75% reduction in tuberculosis after anti-retroviral therapy was rolled out.[18] Women being treated for HIV are more likely to access antenatal care, deliver children in healthcare settings, and access vaccination.[19] Clearly HIV programming is not enough; testing programs, prevention of mother-to-child transmission, and wrap-around services depend on a strong underlying health system. Supporting people living with HIV must necessarily include improved maternal, child, reproductive, and primary care health programs for success.

The new Global Health Initiative should continue to expand successful HIV/AIDS programs to provide lifesaving treatment, care, and prevention, while simultaneously using HIV/AIDS infrastructure as an opportunity to build out other direct services, such as maternal and reproductive health and nutrition programs. Additionally, the US must also separately increase support to ensure a move toward universal, comprehensive primary health care.

Targets

The U.S. should live up to its HIV treatment, care, and prevention pledges and targets to support, by 2013:

- Putting 6 million people on HIV/AIDS treatment;[20]
- Preventing 12 million new HIV cases;
- Supporting care for 12 million people including 5 million orphans/ vulnerable children;
- Training and retaining at least 140,000 new professional health care workers; and
- As a six, rather than five-year strategy, the GHI should reflect increases for 2014.

Costs

Last year, then-Senators Obama, Clinton, and Biden joined a bipartisan group of lawmakers in co-sponsoring the Lantos-Hyde Act, which re-authorized U.S. HIV/AIDS, TB, and malaria programs and set the targets listed above and the funding levels needed to reach them. In order to reach the global goal of universal access, UNAIDS estimates that approximately $172 billion will be needed in the six years covered in the Obama Global Health Initiative. The U.S. should lead the world by giving the previously pledged one-third, or $57

billion, of this total need. Congress provided the authorization to reach this level of funding through the passage of the Lantos-Hyde Act, and President Obama's campaign pledge to increase global AIDS funding by $1 billion per year was also consistent with funding needs.[21]

Table 1 below reflects fulfillment of the Lantos-Hyde Act authorization of $48 billion in total over five years, from 2009 to 2013, including $39 billion for HIV/AIDS. Since the Administration added an additional year to the GHI, 2014 levels are included for a total of $50 billion for HIV/AIDS.

Table 1: Yearly Appropriations to Reach Lantos-Hyde Act Authorization Levels (US $Billions)

	FY09 Enacted	FY10 Assumed	FY11	FY12	FY13	FY14
Bilateral (PEPFAR, not including HIV or non-PEPFAR TB)	5.028	5.128	7	8.2	9.5	10
Global Fund	0.9	1.05	2	2.25	2.5	2.75
Global Fund Portion to HIV (50%)	0.45	0.525	1	1.125	1.25	1.375
AIDS Total	**5.478**	**5.653**	**8**	**9.325**	**10.75**	**11.375**

	HIV/AIDS Total
5-Year TOTAL	**$39 B**
6-Year TOTAL	**$50 B**

Despite campaign pledges of $50 billion for global AIDS, the FY2010 budget put global AIDS funding far below these levels and as a result, significant "catch-up" will be needed in FY2011. These budget numbers make the difference between clinics halting prevention and treatment scale up or continuing bold growth as promised. These funding levels are specific to HIV/AIDS needs and do not include TB or Malaria specific needs.

Needed Policy Changes: HIV and AIDS

In addition to increased funding to ensure continued scale up, a key set of policy changes are needed to ensure that U.S. global AIDS programs and the Global Health Initiative can be most effective:

Support Multilateralism & the Global Fund

- A key partner to bilateral programs, the Global Fund to Fight AIDS, Tuberculosis, and Malaria has proven one of the most effective and transformative development initiatives in existence—demonstrating transparency, collaborative country-driven programming, and results-based funding that U.S. programs should model. The U.S. should lead the world in supporting the Global Fund—increasing U.S. funding while encouraging other nations to follow suit.

Support Evidence-Based Programs

- The administration should launch a full review of its prevention

portfolio to be completed within three months and *eliminate funding for programs not based on sound evidence,* such as abstinence-only programs. It must also lift the policy barriers to proven health interventions such as syringe exchange.

Promote Integration

- Encourage program implementers to bring together funding streams to provide a range of interrelated services in single locations.

Invest in Health Workforce to Strengthen Health Systems

- PEPFAR should play a leading role in increasing the number of doctors, nurses, and midwives—ensuring that the 140,000 new health workers envisioned in Lantos-Hyde are in fact new workers who can be leveraged for broader health outcomes.

Provide Transparency

- PEPFAR and all U.S. programs should make public all contracts, program evaluations, and planning documents via the internet.

Drive Down Commodity Prices

- PEPFAR should fully embrace transparent, competitive bidding for health commodities and make use of bulk purchasing power to drive down prices. Supporting the development of local generic production capacity in Africa and crafting strategies to drive down the cost of 2nd and 3rd line ARVs will be essential.

Utilize Local Capacity & Public Sector

- Wherever possible, U.S. global AIDS programs should make use of local NGOs and public sector partners in ways that strengthen the overall health system. Where local and public systems do not possess capacity to provide lifesaving treatment and prevention services, specific strategies should be implemented to build such capacity.

Re-Emphasize TB-HIV Integrated Care

- Tuberculosis is the most common AIDS-defining illness and the leading cause of death among persons with HIV in the developing world. Though PEPFAR has been a leader in this area, more must be done. In every PEPFAR-supported clinic, continued funding should be based on making TB screening routine, infection control strong, and ensuring those who receive positive HIV tests in TB settings are actually linked to HIV treatment.

Tuberculosis

Background

The U.S. contribution to global tuberculosis control improves health both abroad and at home,[22] contributes to increased productivity in low-income countries,[23] serves an important public diplomacy function in strategic states,[24] and promotes national and global security.[25] U.S. funding for TB, however, continues to fall short of the U.S. fair share based on current and projected global resource needs.[26] To achieve its full potential and demonstrably impact the pandemic, the Global Health Initiative must elevate tuberculosis control to a level commensurate with the global burden of the disease.

Tuberculosis kills 1.67 million people per year, making it the world's leading infectious cause of death after HIV/AIDS. TB is also the leading killer of people with HIV in developing countries; WHO estimates that one in four people living with HIV developed TB disease in 2007.[27] Drug-resistant TB strains (DR-TB) continue to proliferate. Extensively drug-resistant TB (XDR-TB), first described in 2006, has been confirmed in over 50 countries, with mortality rates exceeding 95 percent in some areas.[28] The House Committee on Homeland Security placed XDR-TB among public health threats that fall "squarely on the homeland, national, and transnational security agendas."[29] The diagnostic tools and drugs currently available are inadequate in the face of drug-resistant TB and TB-HIV co-infection.

Basic TB control, TB-HIV co-infection, and DR-TB treatment efforts are hamstrung by antiquated diagnostics and drugs and the absence of an effective vaccine. Due to inadequate tools and poor access to services, less than half of people with tuberculosis in Africa are ever diagnosed. Furthermore, only an estimated 2% of people with HIV are screened for TB, and laboratory capacity—particularly in sub-Saharan Africa—remains too weak to diagnose and track the spread of drug resistance.[30] In 2009, less than 6% of the more than 500,000 people with multidrug-resistant TB (MDR-TB) are expected to receive treatment.[31]

The Global Health Initiative provides an unprecedented opportunity to turn the tide. To do so, the Obama administration must work proactively with Congress to appropriate the full level of TB funding authorized by the 2008 Lantos-Hyde Act—$4 billion over five years—as recommended by the Institute of Medicine.[32] Funding should support the direct provision of TB services, as well as help to build country capacity via technical assistance to governments and to Global Fund grant applicants and recipients. PEPFAR, already supporting some best practices in TB-HIV service integration, should bring these activities to scale, building lab capacity and ensuring access to the full continuum of TB and HIV services. Substantially increasing TB research and development support to the National Institutes of Health, U.S. Agency for International Development, and the Centers for Disease Control must be a priority and is crucial to developing modern medicines and diagnostic tools, without which TB will never be eliminated.

Positive Synergies

Making TB control a global health priority would have positive implications for other development goals. According to a paper commissioned by the World

Bank, fully funding the Global Plan to Stop TB in sub-Saharan Africa would yield economic benefits that outweigh the costs by a factor of nine.[33] TB is also a leading cause of death for adult women,[34] and children are two to three times more likely to die if their mothers have TB.[35] TB control, along with other infectious disease efforts, can also help to strengthen the broader health system.[36]

Targets

The U.S. should fulfill its legislative commitments to support, by 2013:

- Successful treatment of 4.5 million new tuberculosis patients under DOTS programs, primarily through direct support for services, commodities, health workers, training, and additional treatment through coordinated multilateral efforts;
- Diagnosis and treatment of 90,000 new multidrug resistant tuberculosis cases and additional treatment through coordinated multilateral efforts; and
- As a six, rather than five-year strategy, the GHI should reflect increases for 2014

Costs

TB resource needs are laid out in Table 2 below. Costs include scaling up of basic TB control, provision of additional services required to tackle drug-resistant TB, and research and development of new diagnostics, drugs and a vaccine. Cost estimates for these activities are based on the Stop TB Partnership's *Global Plan to Stop TB 2006-2015,*[37] the WHO's *MDR-TB and XDR-TB Global Response Plan* and personal communication,[38] and *Treatment Action Group's Tuberculosis Research and Development: A Critical Analysis of Funding Trends, 2005-2007* update.[39] These figures do not include the full potential additional costs associated with strengthening laboratory networks in developing countries, particularly in sub-Saharan Africa and Eastern Europe, nor for instituting universal infection control measures in healthcare settings. As such, they represent conservative estimates of the total global resource need for TB.

Table 2: Annual Global Resource Needs for Key TB Control Activities (US$ Billions)

	2009	2010	2011	2012	2013	2014	6-Year Total
Country Needs	4.6	4.9	5	5.1	5.3	5.4	***30.30***
R&D	2	2	2	2	2	2	***12.00***
M/XDR	1	1	1	1	1	1	***6.00***
Totals	**7.60**	**7.90**	**8.00**	**8.10**	**8.30**	**8.40**	**48.30**

In 2008, Congress authorized $4 billion in bilateral spending for TB over five years. Table 3 provides a scenario in which the $4 billion for global TB activities authorized by the Lantos-Hyde Act for fiscal year 2009 to 2013 could be fully appropriated, plus an additional year (FY14) captured by the six-year span of the GHI. Additional funding is also needed to accelerate research and development of new TB diagnostics, drugs, and a vaccine.

Table 3: Proposed Global TB Funding, FY09-14
(US$ Millions)

	2009	2010	2011	2012	2013	2014	6-Year Total
Proposed Global TB Funding	162	650 *	650	1,238	1,300	1,300	***5,300***

**Appropriations request supported by the authors. The President requested $173 million for bilateral TB in FY2010; as of the time of this writing, the House and Senate Appropriations Committees had approved $252 million and $201 million, respectively.*

Policy Priorities

Supporting the Global Fund to Fight AIDS, Tuberculosis and Malaria
Congress authorized up to an additional $2 billion annually for the Global Fund, the largest external funder for TB efforts worldwide. Fully appropriating this funding would bring the U.S. closer in line with its fair share of global TB control financing, based on current and projected resource needs. Supporting health programs in 140 countries and having treated 5.4 million people with TB disease as of January 2009,[40] the Global Fund is a proven multilateral partner whose work complements U.S. bilateral TB efforts. Furthermore, U.S. contributions to the Global Fund mobilize donor contributions from other partners, historically at a rate of about 2:1.

Integrating TB and HIV Efforts in Areas Experiencing Co-epidemics
An integrated approach to TB and HIV/AIDS is critical to reversing the burden of either disease in areas where both are prevalent. Integrating services for TB and HIV/AIDS also strengthens the delivery of health services, ensuring a continuum of care for patients impacted by both diseases. TB-HIV integration in line with WHO guidance needs further scale up globally. PEPFAR has served as a chief platform for implementing these activities, with a TB-HIV budget that increased from virtually zero in 2003 to $150 million in FY2009.[41] Scale up in activities has been largely targeted at providing HIV services in TB settings.[42] Provision of TB services in HIV settings has lagged, despite PEPFAR's comparative advantage as an HIV/AIDS initiative. In 2008, only 23% of PEPFAR's project components implemented in sub-Saharan Africa described plans to implement at least one TB-HIV activity.[43] In its second phase, PEPFAR must prioritize TB-HIV integration, bringing the full continuum of services to scale. This will require PEPFAR spending at be least $300 million annually on TB-HIV related activities beginning in the next fiscal year. As the roll-out of ARVs scales up, providing robust support for infection control is critical to reducing the transmission of TB within healthcare settings, thereby protecting both healthworkers and patients—many of whom are immune-compromised. PEPFAR should also work with partner governments to strengthen lab capacity to improve TB diagnosis among people with HIV.

Supporting TB Control in Strategic States
The U.S. provides billions of dollars in foreign aid to countries that are among the hardest hit by the global TB epidemic, but little of this money goes to TB control or to public health generally. Together, the top five Asian recipients of U.S. aid[44] account for 16% of the global burden of TB, or 1.5 million new cases of infectious TB disease each year.[45] These same five countries received approximately $2.2 billion in aid in 2008.[46] A small portion of this total support, if invested in TB programs, could go a long way toward securing the health of millions. A heightened focus on TB could make a tangible contribution to both public health and diplomacy.

Needed Policy Changes: Tuberculosis

A key set of policy changes are needed to ensure that U.S. global TB programs and the Global Health Initiative can be most effective:

Fulfill Commitments of the Lantos-Hyde Act

- Develop a strategy to reach the U.S. target of providing 4.5 million successful DOTS treatments and 90,000 successful MDR-TB treatments; and
- Fully fund U.S. bilateral TB programs supported through PEPFAR, USAID, CDC, and multilateral programs such as the Global Fund to Fight AIDS, Tuberculosis and Malaria.

Address the TB-HIV Co-infection Epidemic

- At the very least double PEPFAR's TB-HIV budget line to $300 million annually;
- Ensure every person receiving HIV services in USG-supported health centers are routinely screened for TB;
- Fully incorporate the Three I's (intensified case finding, isoniazid preventive therapy, and infection control) into PEPFAR programming as recommended by WHO; and
- Direct PEPFAR to set aggregate five-year TB-HIV goals to guide annual target-setting for country teams and to create hard annual TB-HIV service targets.

Invest in Research & Development

- Increase resources available to the NIH, USAID, and CDC for TB research and development by at least $300 million annually, prioritizing development of new tools appropriate for resource-poor settings;
- Fast-track and fund clinical trials for drugs to treat MDR-TB and XDR-TB;
- Expand laboratory capacity and treatment in high burden regions; and
- Support increased operational research that identifies and disseminates best practices for TB and TB-HIV.

Malaria

Background

Half of the world's population is at risk of malaria. In 2006, there were 247 million cases and nearly 881,000 malaria deaths—of which 91% were in Africa, and 85% were of children under five-years of age. Children under age five and pregnant women are the most vulnerable to the disease, especially in areas of high transmission. Each year, approximately 50 million women living in malaria-endemic countries throughout the world become pregnant, over half of whom live in Africa. An estimated 10,000 of these women, and 200,000 of their infants, die as a result of malaria infection during pregnancy.[47]

Over the last five years, the scale-up of malaria prevention and control programs has made great strides in helping to reduce the number of malaria-related deaths. Since 2000, 22 countries outside of Africa have experienced at least a 50% reduction in malaria cases, and seven African countries have experienced at least a 50% reduction in malaria cases and deaths.[48] By 2008, the President's Malaria Initiative (PMI) reached 25 million people with prevention and treatment services, and supported the training of more than 35,000 health workers.[49] The PMI, a $1.2 billion, five-year effort focusing on 15 target countries, has been associated with a one-third drop in child mortality in Zambia and Rwanda.

Prospects for the future of malaria control are promising. The President's request to Congress for malaria funding in FY2010 included a $201 million increase over the FY2009 level.[50] In addition, new cost-effective technologies for prevention and treatment present an opportunity to halt and begin to reverse the incidence of malaria by 2015.

However, much remains to be done to reduce the burden of malaria. The WHO World Malaria Report 2008 showed that many countries are far from meeting universal coverage targets, while drug resistance and reemergence threatens current progress and already weak health systems. All of these factors continue to undermine economic development.[51]

The Global Health Initiative provides a unique opening to maximize U.S. impact in malaria programs, by improving the delivery of services and harmonizing with global efforts, such as the Roll Back Malaria (RBM) partnership, its Global Malaria Action Plan (GMAP), and the normative work and guidelines developed by the World Health Organization (WHO). Most importantly, the GHI should also drive all donors worldwide to increase funding for malaria. Increases in malaria funding should also be reinforced by increases in funding for interventions focused on education and behavioral change. It is imperative that we not only provide the needed tools, but also the corresponding education to use these tools effectively.

Positive Synergies

Country-level capacity building and the strengthening of national health systems are critical to ensuring countries have the ability to deliver needed interventions to vulnerable populations. With sufficient support, national health care systems can support large-scale programs and bring integrated, quality malaria prevention, treatment and care services to the greatest number of people, including those hardest to reach through evidence-based community interventions. Building strong health systems should include not only building and improving health facilities and training medical providers, but also harnessing community-based and private sector delivery models.

Integrated health services will ensure strong health systems that can respond to the mutually reinforcing burdens of malaria, malnutrition, HIV/AIDS, and maternal and child death. Experts at the Copenhagen Consensus ranked control of HIV/AIDS, providing micro-nutrients, and control of malaria as three of the four most cost-effective development interventions.[52] These diseases share determinants of vulnerability and geographic overlap, and their elimination is mutually reinforcing. Co-infection with HIV/AIDS and malaria, often worsened by malnutrition, may complicate treatment, increase the chance of mother-to-child transmission of HIV, and exacerbate symptoms of both diseases. In addition, the integration of maternal and child health services can allow ministries of health to reach a greater number of women and children at a lower cost per intervention by providing a "one-stop shop" for mothers who are seeking care for their children. The U.S., in accordance with the WHO "Making Pregnancy Safer" protocol, should support malaria treatment during antenatal care, not just in PMI countries, but across USAID and its partners' programs in all countries.

Along with efforts by donor countries, support from the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) has been instrumental in the international response to the disease. To date, the Global Fund has approved grants totaling nearly $2.6 billion to more than 85 countries for malaria-related efforts.[53] To maximize efforts to cut malaria cases and deaths, the Global Fund must be supported financially and the U.S., therefore, must contribute its fair share of funding. For FY 2011, appropriators in Congress should be urged to provide the estimated U.S. fair share of $2 billion to the Global Fund. Multilateral financing has been a significant part of the U.S. investment in global health, and has ensured a comprehensive and amplified response, through the pooling of resources and creation of partnerships, that exclusive bilateral funding would otherwise be unable to provide. The U.S. should continue to be a leader in donations to the Fund.

U.S. agencies should also harmonize their policies for malaria diagnosis and use of long lasting insecticide-treated nets (LLINs), indoor residual spraying (IRS), and Artemisinin-based combination therapy (ACT), consistent with the World Health Organization recommendations.[54] Large-scale, integrated net distribution, combined with timely diagnosis and treatment, indoor residual spraying of homes and interventions focused on malaria social mobilization and education to ensure the correct and sustained use of these tools, will increase the likelihood of achieving the RBM goal of 80 percent coverage of all populations at risk of malaria. In addition, the U.S. should strengthen its efforts to prevent the spread of drug-resistant malaria as antimalarial drug resistance poses a growing threat to global malaria control. Such efforts should include scaling up resources for improving capacity in drug quality control and antimalarial drug resistance surveillance, as well as working to reduce the transmission of malaria from drug resistant hotspots in Southeast Asia and the Amazon Basin.

Targets

The United States should be a strong leader in the fulfillment of global targets and live up to its pledges to support, by 2015:

- Purchasing and distributing 730 million LLINs;
- Achieving a mortality rate near zero for all preventable deaths and a 75% reduction in malaria burden in the original 15 PMI countries;
- Expanding PMI malaria support to at least 10 more countries and malaria control program strengthening to the Democratic Republic of the Congo and Nigeria;

• Continuing universal coverage with effective interventions: ITNs, IRS, diagnosis, and provision of ACTs and IPTs;
• Ensuring global and national mortality is near zero for all preventable deaths and global incidence level is reduced by 75% from 2000 levels;
• Achieving the malaria related Millennium Development Goal of halting and beginning to reverse the incidence of malaria with a focus on all PMI focus countries and regions where USAID and PMI are supporting national and regional malaria control programs; and
• Eliminating malaria in eight to ten countries by 2015, continuing with all countries in the pre-elimination phase today and working with countries to receive certification of malaria elimination by the World Health Organization.

Costs

Although there have already been significant increases in malaria funding, with disbursements from international donors increasing from US$250 million in 2004 to $700 million in 2007, more funding is needed and outlined below in Table 4. In 2008, national spending in endemic countries made up 34% of funding for malaria, international donors made up 47%, and private household spending made up 19% of a total of about $1.5 billion. The Roll Back Malaria's *Global Malaria Action Plan* estimates a four-fold increase in funding is necessary in order to reach sustained control and eventual elimination.[55]

Table 4: Annual Global Resource Needs for Key Malaria Control Activities (US$ Millions)

	2009	2010	2011	2012	2013	2014	6-Year Total
Bilateral Funding for Malaria Programs*	385	585	924	1275.12	1759.66	1759.66	***6688.44***
Percentage Increase Over Previous Year		52%	58%	38%	38%		

** FY2011 estimated based on U.S. fair share of GMAP need from donor countries. FY2012 and FY2013 based on Hyde-Lantos commitment of $5 billion total spending by 2013. FY2014 is flat-funded, consistent with a front-loading strategy for malaria control.*

The U.S. commitment to malaria programs in the past should be commended, but contributions must continue to increase to fulfill its fair share of the global need. Consistent with the GMAP strategy and the scale necessary to meet the commitment made in the Hyde-Lantos U.S.Global Leadership for HIV, TB and Malaria Act, ambitious funding would meet the current and future needs for malaria control. Such leadership among the donor community is pivotal, as the U.S. could lead the way to bridge the present and future funding gaps for malaria programs.

Needed Policy Changes: Malaria

A key set of policy changes are needed to ensure that U.S. global malaria programs and the Global Health Initiative can be most effective:

Strengthen Health Systems

- Continue to focus on strengthening health systems to deliver integrated services, particularly maternal and child health programs.

Comprehensive Evaluation

- Encourage the Global Malaria Coordinator and the Interagency Coordinating Task Force to comprehensively evaluate all programs to determine effective and ineffective programs and policies; use these findings to promote best practices with all malaria funding recipients.

Support the Global Fund

- Increase support to the Global Fund and encourage other nations to fulfill their funding commitments.

Resource Support

- Increase resources to support normative work and technical assistance provided by the World Health Organization and Roll Back Malaria Partnership, supporting countries in regional strategy development and achieving universal coverage targets through PMI, USAID, and CDC, as consistent with the Hyde-Lantos U.S. Global Leadership for HIV, TB and Malaria, P.L. 110-293.

Re-Emphasize Monitoring and Research

- Expand emphasis on drug and insecticide resistance monitoring and research.

Improve Country Coordination

- Enhance the sustainability of interventions by continuing to improve alignment with in-country national priorities and existing implementation strategies.

Continued Commitment to Research and Development

- Continue leadership in research – vaccine development, drug resistance research, new drug development.

Reproductive, Maternal, Newborn and Child Health

Background

Promoting the sexual and reproductive health and rights of all people and reducing maternal, newborn and child mortality are integral to alleviating poverty, promoting security, and building more stable nations — central tenets and goals of the "smart power" approach to U.S. foreign policy and U.S. foreign assistance. At the 1994 International Conference on Population and Development (ICPD), the U.S. helped forge and signed onto a global consensus around a 20-year plan of action that placed empowering women and girls, protecting human rights, and promoting the sexual and reproductive health of men, women, and youth at the core of efforts to achieve sustainable development.[56] This agreement has been reaffirmed numerous times since then by the global community.

In 2000, the world community adopted eight Millennium Development Goals, including: reduce child mortality (MDG 4), improve maternal health (MDG 5) and combat HIV/AIDS, malaria and other diseases (MDG 6). MDG 5 includes two specific targets, one on reducing maternal mortality, and the other on ensuring universal access to reproductive health.[57] In order to effectively promote global health and development, it is crucial that the U.S. adopt the fulfillment of the ICPD commitments and the health MDGs, including 4, 5 and 6, as central goals of US foreign policy, and end restrictive policies that have limited access to reproductive health information and services.

To align with ICPD and Millennium Development Goals, U.S. global health strategy must be framed around the continuum of care, including:

- **Infancy and childhood:** Many of the most prevalent causes of childhood death are preventable or easily treatable through simple, proven interventions. Providing accessible, comprehensive health care during infancy and childhood lays the foundation for lifelong good health.
- **Adolescence:** Providing appropriate, accessible information and services can address gender-based violence, promote healthy relationships, reduce unintended pregnancy and unsafe abortion, equip young people to avoid infection with HIV and other sexually transmitted infections (STIs), and give them the resources and information they need to delay pregnancy. Preventing child marriage and promoting gender equality between boys and girls are important elements of a comprehensive strategy.
- **Reproductive age:** Women and girls risk a range of health problems during their reproductive years; complications from pregnancy and childbirth are often the leading cause of death and disability during this time in women's lives. Universal access to family planning services, which enable women (and men) to avoid unintended and high-risk pregnancies, can reduce deaths from pregnancy and childbirth by up to 30%; spacing births by three years or more also reduces infant and child mortality significantly.[58] Providing skilled, rights-based care before, during, and after childbirth, and emergency care for the management of complications, is essential for preventing these needless deaths. It also offers the most effective setting for preventing transmission of HIV from mother to child.
- **Throughout the lifespan:** Promoting good sexual and reproductive health requires information and services throughout the lifespan to

confront reproductive cancers, STIs, and HIV/AIDS, which account for a large portion of the catastrophic burden of ill-health for women in poor countries. Engaging men and boys in sharing responsibility for the sexual and reproductive health of their partners can also contribute to greater gender equality and reduce sexual and gender violence.

Addressing these health needs across the lifespan requires a functioning and effective health system. Key characteristics of such a health system that are essential for reproductive, maternal, newborn and child health include attention to human rights and quality of care; sufficient numbers and equitable deployment of health workers with the appropriate skills, including life-saving obstetric skills; essential drugs, equipment and other commodities; effective mechanisms for communication and transport, especially for women, newborns, or children with life-threatening complications; adequate health facilities; and a health information system.

Positive Synergies

The components of sexual and reproductive health, as well as maternal, newborn, and child health, have strong synergies with each other as well as with other aspects of health. An integrated approach, providing comprehensive, client-centered, equitable, rights-based care, carries multiple benefits. For health care users, it enables their varying health needs to be met through a single visit to a health care facility, minimizing transport and other costs. For example, women can receive antiretroviral treatment for HIV at the same time that they receive counseling and services for family planning and immunization for their children. For health systems, an integrated approach brings greater efficiency, enabling managers to economize on training, supervision, and supply systems costs. For societies, higher quality health services that are used by more people translate into a greater reduction in the prevalence and impact of disease and other health problems.

Sexual & Reproductive Health

The global community has defined sexual and reproductive health services to include:[59]

- **Quality family planning information, counseling and services** aimed at satisfying the unmet need for contraception and enabling people to determine the number and timing of children
- **Comprehensive care during pregnancy and childbirth** to reduce deaths and illness among women and newborns
- **Prevention, detection, management and treatment of STIs**
- **Prevention, detection, management and treatment of reproductive tract cancers**

Sexual, Reproductive & Maternal Health

Family planning: Women's lack of access to sexual and reproductive health services — including family planning — is a key contributor to poor health and poverty. Over 200 million women in developing countries have an unmet need for effective, modern contraceptives.[60] Addressing this unmet need would avert an estimated 52 million unintended pregnancies each year, and would give millions of families and individuals greater control over their personal and economic lives by allowing them to choose the number and timing of their children.[61]

For more than 40 years, the United States has been a leader in supporting family planning programs around the world. Between 1965 and 2005, use of family planning by women of reproductive age in the developing world

(excluding China) rose from less than 10 percent to 53 percent.[62] But in real terms, US support for family planning is at the same level now than it was 35 years ago, despite a significant increase in the size of the global population and significant increases in the level of unmet need.[63]

U.S. support for family planning programs must provide people with affordable access to basic sexual and reproductive health services, a wide range of contraceptive methods from which to choose, and information and education about safe and responsible family planning.

Maternal and newborn health, including management of unsafe abortion: Each year more than 500,000 women die from pregnancy- and childbirth-related complications, and an additional 15 to 20 million women suffer debilitating consequences of pregnancy.[64] Annually, four million newborns die in the first four weeks of life, accounting for 40 percent of all deaths among children under the age of five.[65] Almost all of these maternal and newborn deaths occur in developing countries. In many countries, maternal and child mortality statistics have not improved in the last two decades, and MDGs 4 and 5 are far off track for fulfillment by the 2015 deadline.

Most maternal deaths are caused by common complications that often come without warning, including hemorrhage, infection, hypertensive disorders, obstructed labor, and unsafe abortion.[66] Effective health strategies for preventing or managing poor maternal health comprise: quality antenatal care, including counseling on birth preparedness, detection of complications, nutrition education, and nutrition supplementation; skilled care by a doctor, nurse or midwife during childbirth, including management of obstetric or neonatal complications as necessary; and immediate postpartum/postnatal care for mother and baby, including management of neonatal complications. Providing these services also offers an effective setting for preventing transmission of HIV from mother to child.

Worldwide, there are almost 20 million unsafe abortions per year; an estimated 70,000 women die from the complications of unsafe abortion, and millions more suffer infertility or other health problems.[67] Pregnancy prevention is a critical first step; addressing the unmet need for family planning would significantly reduce the number of unsafe abortions and their public health consequences. Providing safe services for legal procedures would also help reduce deaths significantly. The third key element of a strategy to address unsafe abortion is post-abortion care, a combination of interventions that includes management of abortion complications; contraceptive services to prevent future unintended pregnancies; and links and referrals for other reproductive or social services, including diagnosis and treatment of sexually transmitted infections and counseling on gender-based violence.

Sexually transmitted infections: Each year there are 340 million new cases of curable sexually transmitted infections (STIs), the most common of which are gonorrhea, syphilis, Chlamydia, and trichomoniasis. Women, especially young adults, are particularly vulnerable to STIs because they often lack the knowledge and resources to protect themselves. Worldwide, women are five times more likely than men to contract an STI, which can result in pregnancy-related complications, infertility, pelvic inflammatory disease, cervical cancer, and elevated risk of contracting HIV.[68]

Effective strategies for STI management should integrate prevention and treatment within reproductive health services as well as providing youth with comprehensive services and information. Other key strategies include condom promotion and distribution, community-based advocacy on preventing STIs,

early diagnosis and treatment, and providing specific services for at-risk populations. STI prevention and treatment cuts across other elements of reproductive and maternal health, including family planning, antenatal care, and HIV; there is a clear need to assess and address STI management needs comprehensively.

Reproductive cancers: Reproductive cancers include cancers related to the breast, uterus, vulva, endometrium, ovaries, prostate, testicles, and penis. Among women, breast cancer and cervical cancer are the most common. Worldwide, there are over 1.3 million new cases of breast cancer and 400,000 new cases of cervical cancer each year. Cervical cancer is the leading cause of cancer-related deaths in women living in developing countries, who account for 85% of the estimated 235,000 deaths worldwide. Many of these women develop cervical cancer as a result of contracting the Human Papilloma Virus (HPV). Providing regular Pap test screenings, HPV tests, and/or vaccines can prevent infections or enable women to receive early diagnosis and treatment.[69]

Young people: People under the age of 25 represent nearly half of the world's population, and face significant sexual and reproductive health challenges. Worldwide, about 6,000 youth aged 15 to 24 are infected with HIV each day.[70] Young people experience over 100 million new cases of STIs each year.[71] Young women experience high rates of unintended pregnancy, and each year, there are about 15 million births to adolescent mothers. Complications of pregnancy and childbirth, including unsafe abortion, are the leading cause of death for young women aged 15 to 19 in low and middle income countries.[72] In many countries, gender imbalance leads to negative outcomes for young women, including child marriage, too-early childbearing, and lack of access to reproductive supplies, services, and information.

Providing young people with appropriate, accessible information and services can help them to address gender-based violence, avoid infection with HIV and other STIs, and prevent unintended pregnancy, thus reducing the high rates of unsafe abortion and maternal and infant mortality among this demographic. Accurate, appropriate sexuality education should include information and skills development to delay sexual relations, engage in healthy sexual activity, and practice respect for individuals' rights and autonomy.

Child Health

In 2008, for the first time since records have been kept, the number of annual global child deaths fell below nine million. This milestone is the culmination of decades of effort in which the U.S. has played a critical role. In the 1980s, U.S. leadership, funding and technical expertise were critical in launching a "child survival revolution." Working alongside UNICEF and other partners, U.S. investments in low-cost, life-saving basic health interventions have saved millions of lives.

However, in the last decade U.S. leadership and resources have failed to keep pace with the scale of the problem. Despite progress, 8.8 million children still die every year before reaching their fifth birthday – over 24,000 every day.[73] Nearly all of these deaths occur in poor countries, with the highest rates of child mortality occurring in sub-Saharan Africa and South Asia. A child born today in sub-Saharan Africa is 27 times more likely to die than a child born in an industrialized country.[74] This extreme inequity exists not only among countries, but within them; like maternal morbidity and mortality, child morbidity and mortality are overwhelmingly concentrated among the poorest and most marginalized populations.

Childhood malnutrition & Food Security

Weaning children aged 6 months to 2 years are the most vulnerable to malnutrition and suffer irreversible damage. Good maternal nutrition and exclusive breastfeeding of infants for the first six months followed by the introduction of a nutritious and diverse complementary diet are well-established principles of good nutrition. A just-released World Bank evaluation costed key nutrition interventions in 36 priority countries at $11.8 billion per year, with costs shared by affected countries and the private sector. Childhood malnutrition sits as the nexus of Food Security and Child Health.The U.S. should substantially increase funding for nutrition; incorporate direct nutrition interventions and include nutrition indicators in health projects; target children under the age of two and pregnant women for nutrition interventions; prioritize areas of endemic malnutrition; support the community-based treatment of severe acute malnutrition; and target children before they fall off into the most severe form of malnutrition by supporting prevention strategies, including safety nets. While some nutrition funding is included in our costing estimates here a comprehensive approach, which bridges the Global Health and Food Security Initiatives could have a much greater impact. We urge that the Food Security Initiative have substantial funding for nutrition and a mandate for integration with the GHI.

Of the 67 countries with the highest child mortality rates, only 10 are on track to achieve Millennium Development Goal 4, which calls for a two-thirds reduction in child death rates by 2015.[75] The U.S. must invest in scaling up a basic package of proven, life-saving interventions to accelerate progress toward MDG 4:

- **Providing appropriate pneumonia treatment:** Pneumonia kills more children than any other single disease, accounting for as much as a third of all under-5 deaths. Treatment with antibiotics is effective and inexpensive, but only 56 percent of children in the developing world with suspected pneumonia see an appropriate health care provider.[76]
- **Preventing and treating diarrheal diseases:** Oral rehydration therapy (ORT) supplemented with zinc is an effective treatment for dehydration and a live-saving intervention for diarrheal diseases, which kill up to 2 million children per year. Only 38 percent of children receive this treatment when needed.[77] Prevention of diarrheal diseases includes basic sanitation, hygiene and safe water supply.
- **Providing measles vaccine:** Measles is the leading cause of vaccine-preventable deaths. Despite considerable reductions in deaths since 1999, extending vaccine coverage is an unfinished priority in child health.
- **Confronting malnutrition:** Malnutrition is an underlying cause of almost half of child deaths and accounts for 11% of the total global burden of disease. Key nutrition interventions include nutrition education, including breastfeeding promotion; micronutrient supplementation/fortification; complementary and therapeutic feeding; and community-based therapeutic care for severe acute malnutrition (see sidebar).
- **Malaria prevention and treatment** (see pg. 15).
- **Newborn care** (see section on maternal and newborn care above).

Targets

The Global Health Initiative can, with sufficient funding, achieve a great deal in the area of Reproductive, Maternal, Newborn, and Child Health. Based on UN estimates, by investing in successful interventions, building on what works, and crafting a comprehensive approach U.S. funding could, by 2015:

- Prevent the deaths of 150,000 women from complications of pregnancy and childbirth
- Save the lives of at least 975,000 children (aged 1 month to 5 years)
- Save the lives of at least 675,000 newborn babies
- Reduce by over one-third the rate of chronic malnutrition in children aged 12 to 23 months
- Prevent 225,000 stillbirths
- Provide comprehensive sex education to at least 370 million adolescents and young people

In order for this to be possible, the approach described above must be undertaken—eschewing half-hearted intervention in favor of well resourced comprehensive strategies. *This need for comprehensive interventions at the local level, however, must be matched by a U.S. strategy with clear, specific programmatic targets to drive accountability and ensure success.* As such, we believe the U.S. should set the following coverage targets to reach by 2015 (noting that 2015 is the year for which estimates are available and recognizing this is longer than current the GHI):

By 2015 the U.S. should aim to ensure that:

- An additional 35 million births taking place in facilities that provide quality care for both normal and complicated deliveries
- 40 million more women receiving quality antenatal care
- 35 million more women and newborn babies receiving quality postnatal care
- In 2015, an additional 10 million couples using modern methods of family planning
- 25 million more episodes of child pneumonia taken for appropriate treatment

Costs

The Institute of Medicine has noted that reproductive, maternal, newborn and child health, along with nutrition and neglected tropical diseases have been severely under-resourced during the past decade. Based on various costing estimates generated by the World Health Organization and UNFPA, it is estimated that $79.7 billion is needed between 2011 and 2015 to achieve MDGs 4 and 5 in the 49 most high-burden, aid-dependent countries.

The U.S. government currently invests approximately $1 billion per year in reproductive, maternal, newborn and child health (see Table 5).

Table 5: Proposed Funding by Congress and Administration FY 2009 and FY 2010 (US$ Billions)

	FY09 Enacted	FY10 President's Request	FY10 House	FY10 Senate
Maternal, newborn, child health	0.495	0.5235	0.528	0.555
Family Planning[79]	0.545	0.593	0.6485	0.6285
TOTAL	**1.040**	**1.1665**	**1.1765**	**1.1835**

In light of the massive and urgent need, we call for the U.S. government to significantly increase its support for all of the reproductive, maternal, newborn and child health program interventions outlined above, to a level of at least $3.7 billion per year for the period 2011 to 2014. UN estimates developed by UNFPA and the World Health Organization suggest that a total of $64.72 billion in *additional* funding is needed between 2011 and 2014 for the "aid dependent" countries. The U.S. should do its fair share which, added to current funding levels, would bring us to a minimum of approximately $3.7 billion per year.

Table 6: U.S. Fair Share of the Additional Annual Global Resource Needs for Key Reproductive, Maternal, Newborn and Child Health Activities (US$ Billions)

	2011	2012	2013	2014	Total
Child Health[80]	5.74	5.68	5.80	5.13	***22.35***
Reproductive, maternal and newborn health[81]	10.08	10.57	10.95	10.77	***42.37***
TOTAL (CH + RMNH)	**15.82**	**16.25**	**16.75**	**15.90**	***64.72***
U.S. "fair share"	**3.71**	**3.78**	**3.86**	**3.72**	**15.07**

Needed Policy Changes: Reproductive, Maternal, Newborn and Child Health

- Prioritize maternal, newborn, and child health, and sexual and reproductive health and rights, within an integrated global strategy for strengthening health systems. This should include addressing the enormous health workforce shortfalls in many developing countries, with a specific emphasis on ensuring adequate numbers of mid-level providers with the appropriate skills to provide life-saving interventions for women, newborns and children.
- Allocate the consistent, predictable, additional funding necessary to fulfill these priorities, while fulfilling existing commitments to HIV and AIDS prevention and treatment programs.
- Encourage the development of health systems that ensure access to a comprehensive range of health services in single health care settings or located nearby with meaningful referral services.
- Establish "universal access to reproductive health" as a formal goal of U.S. foreign policy, in line with the commitments of ICPD and the Millennium Development Goals.
- Ensure equitable and maximum access to integrated services, information, and comprehensive sexuality education for young people, eliminating funding restrictions that have limited such access.
- Set clear, achievable, and enforceable goals and indicators for increasing access to health services across the full continuum of care, including comprehensive sexual and reproductive health services as well as interventions to reduce maternal, newborn, and child mortality.
- Ensure that U.S. programs and policies protect and promote the human rights of women and young people, including their right to make decisions on matters related to their sexual and reproductive health free of coercion, discrimination, and violence.

Neglected Tropical Diseases (NTD)

Background

Over one billion people are infected with one or more of the 14 diseases defined by the World Health Organization (WHO) as neglected tropical diseases (NTDs).[82] These are the most common infections in the 2.7 billion people living on less than $2 a day.[83] Those affected are often marginalized and forgotten by governments, left to suffer in silence.

NTDs are diverse but all cause severe disability or death and bring a major economic burden on endemic countries. The successes achieved to date prove that the interventions are technically feasible, immediate, visibly powerful, and scalable when there is political will and financial resources dedicated to recognizing and responding to these diseases.

A comprehensive NTD response will require a significant increase in prevention and treatment resources – as well as dedicated research and development (R&D) for improved tools. The cost of the ongoing neglect of these diseases is tremendous. The prioritization of NTDs in the Global Health Initiative (GHI) presents a unique opportunity for an effective response.

US Investment in the Fight Against NTDs

In 2006, USAID began an integrated two-year, $30 million NTD control program. This program concentrated on only five of the fourteen WHO identified NTDs.[84] In 2008, the Presidential Initiative for Neglected Tropical Diseases (NTD Initiative) was introduced, calling for a commitment of $350 million over five years to NTDs. The White House budget request proposes $70 million for NTDs in 2010. The NTD Initiative expanded the available funding and targeted number of countries to approximately 30 by 2013 but still targeted only five of the fourteen WHO identified NTDs.

The Most Neglected Diseases

The NTD Initiative currently excludes nine of the WHO recognized NTDs. Among these are the four diseases recognized by the WHO as the most neglected—leishmaniasis, human African trypanosomiasis (HAT or sleeping sickness), Chagas disease (American trypanosomiasis), and Buruli ulcer. All of these, save for Buruli ulcer, are often fatal if left untreated and have the highest rates of death of all of the NTDs.[85]

These four diseases are largely left out of control and treatment programs because they are considered more difficult and costly; the available tools are limited; there has been negligible research; and there are less measurable results due to poor diagnostics and surveillance systems. The diseases are no less devastating for the individuals and countries affected. These barriers beg greater and more directed attention to an effective response to these diseases, not less.

- ***Leishmaniasis,*** including cutaneous (CL) or visceral (VL, or kala azar) is, after malaria, the most common parasitic killer. VL, the most severe form, is 100% fatal within 2 years if untreated.[86] There are a total estimated 12 million people infected currently with leishmaniasis, including 500,000 new cases annually of VL—over 90% in five countries.[87] VL is an increasingly common opportunistic infection for people living with HIV.[88] Liposomal amphotericin B is available as a highly effective treatment for VL, with a cure rate surpassing 90%.[89] However, the cost, distribution, and storage requirements, and administration of this life-saving medicine are factors that have restricted wider access.[90]

- ***Sleeping sickness*** is a fatal parasitic disease in 36 countries in sub-Saharan Africa, with an estimated 70,000 annual cases and 60 million at risk.[91] Developments using nifurtimox-eflornithine combination therapy (NECT) have proven that there is safer, more effective treatment compared to the existing standard of care—melarsoprol, which is painful and toxic.[92] This new regimen should be implemented widely while efforts continue to develop appropriate tools for disease control, easy diagnosis, and an oral treatment at village level.

- ***Chagas*** is endemic in parts of Latin America and with up to 15 million cases worldwide, including 300,000 in the US, causing 14,000 deaths annually.[93] A meaningful response to Chagas requires implementation of screening and treatment programs using available tools (benznidazole and nifurtimox), and dedicated R&D for new diagnostics and treatments as the existing tools require complex and long regimens and do not have pediatric formulations.[94]

- ***Buruli ulcer*** is the third most common mycobacterial disease and is in over 30 countries. Lack of treatment can cause irreversible deformity.[95] Effective and easy to administer treatments exist for the early stages, but are insufficiently available.[96]

Targets

Within the GHI, the U.S. government should work to eliminate the 14 WHO recognized NTDs.[97] In particular, by 2014, the US government should have comprehensive initiatives in place in the main disease-endemic countries to treat leishmaniasis, sleeping sickness, Chagas, Buruli – diseases that affect over 30 million people – in addition to the nine other WHO-recognized NTDs, only five of which are currently included within the NTD Initiative.

Costs

To make progress in the fight against the NTDs *already identified* in the NTD Initiative, the US would need to invest $1.2 billion as its "fair share" of the total global need over the duration of the GHI.[98] To expand on the number of diseases on which the US government provides funding—to include the diseases discussed above and the other WHO-identified NTDs, for instance—the U.S. would need to increase the NTD financial commitment beyond $1.2 billion over six years.[99]

A meaningful NTD initiative would require a comprehensive response to the 14 WHO recognized NTDs, including vector control and other forms of prevention; routine testing and diagnosis; treatment in health care systems, including increased access to available medicines and capacity for surgical or other interventions where necessary; surveillance and research and development.

The diseases specifically identified here as in need of further funding are treatable with political and financial commitments. Visceral leishmaniasis, for instance, can be treated with $130-$300 including cost of drugs, medical care and hospitalization.[100] Sleeping sickness, also inevitably fatal without adequate treatment, can be treated for between $100 and $600 per patient, depending on drug regimen and the costs of hospitalization.[101] The cost of implementing the new recommended nifurtimox-eflornithine combination therapy (NECT) is $345.[102] Chagas can be treated at a cost of approximately $120, relying on

partial drug donations.[103] For some interventions, cost savings can be pursued, but even these costs are not too high for lives saved.

Though saving lives by treating those infected today should be the priority, research and development (R&D) for the most neglected diseases is critical to provide the tools needed to eliminate these diseases. In 2007, only $268 million worldwide was invested in R&D for the WHO-recognized NTDs.[104] U.S. government R&D spending for the four most neglected NTDs totaled only $43 million, primarily on basic research.[105] Product development partnerships (PDPs) are proving to be an efficient alternative in the development of new tools adapted to patient needs.[106] Modest resources invested in needs-based approaches to R&D for NTD tools, can be targeted for the most impact.[107]

Needed Policy Changes: Neglected Tropical Diseases

A key set of policy changes are needed to ensure that U.S. global neglected disease programs and the Global Health Initiative can be most effective:

Commit Resources

- The US government should commit at least $1.2 billion over the 6-year GHI to implementing prevention, diagnosis, treatment, health systems strengthening, and disease surveillance efforts to address all 14 NTDs.

Encompass All WHO Identified Neglected Diseases

- Any US government supported comprehensive global health strategy must encompass the 14 WHO-recognized NTDs, including leishmaniasis, sleeping sickness, Chagas disease, and Buruli, four diseases identified by WHO as the most neglected.

Support Comprehensive Approach

- The US government should support a comprehensive initiative, including programs of early and accurate diagnosis and treatment, vector control, capacity building, and follow-up in endemic countries. The government should work with national programs and non-governmental organizations (NGOs).

Support Routine Testing and Diagnosis

- The US government should support routine testing and diagnosis at the primary care level in endemic areas, and where there is significant migration from endemic areas.

Identify Needs

- The US government should support better data collection through stronger national health information systems to determine the prevalence and incidence of NTDs, and R&D needs.

Encourage Drug Cost Reduction

- Where the high cost of patented drugs has been a barrier for affordable treatment access for drugs for neglected diseases, the US government must support the reduction of the prices of key drugs. This includes liposomal amphotericin B and sodium stibogluconate (SSG), important medications for the treatment of VL that are priced out of reach of poor countries.

Strengthen Research, Development, and Implementation

- The US government, especially the NIH and USAID, should support needs-based research, development and implementation of new and better tools that can meaningfully impact the global burden of NTDs. An additional $7-10 million annually invested into NTD R&D would contribute significantly to bringing at least three new tools for the most deadly NTDs by 2014. The US government should also support new R&D incentives and funding mechanisms; and ensure that existing mechanisms, such as the FDA's priority review voucher (PRV) system, encompass the WHO's list of 14 NTDs.

Support Multilateral Efforts

- The US government should prioritize and address NTDs in delegations to international bodies, such as the UN, WHO, PAHO and the G8.

Health Workforce

Background

To strengthen health systems, the Global Health Initiative must invest in health workers in low income countries. Severe shortages of health workers – a shortfall of 4.3 million health workers in countries with the greatest shortages, including about 1.5 million in sub-Saharan Africa[108] – are a major obstacle to scaling up quality health services. In Africa, 3% of the world's health workers struggle to combat 24% of the global disease burden with less than 1% of the world's health expenditures.[109] Other critical workforce problems include dramatic internal inequities in health worker distribution and unsafe working conditions.

WHO has stated that countries that do not reach a certain threshold of health workers are "very unlikely" to reach the Millennium Development Goals.[110] A top World Bank official described the "desperate shortage" of health workers as the "most difficult challenge" in implementing HIV/AIDS treatment programs.[111] WHO and others report that "the evidence from many developing countries with massive deprivation where maternal mortality is high suggests that the sheer absence of staff and facilities is the most substantial barrier to progress."[112] Even 73% skilled birth attendance coverage by 2015 will require 334,000 additional nurse-midwives and the equivalent of 27,000 physicians providing back-up care.[113]

U.S. investments in the health workforce are growing, particularly though PEPFAR. The Lantos-Hyde Act set the target of training and supporting the retention of at least 140,000 new health professionals and paraprofessionals. USAID's maternal and child health program plans, by 2013, to increase the number of community health workers by at least 100,000.[114]

President Obama has recognized the centrality of the health workforce to strengthening health systems[115] and during the presidential campaign, pledged to increase the number of health workers by at least 1 million.[116] The GHI should build on President Obama's pledge and existing U.S. commitments to significantly strengthen the health workforce in developing countries.

Targets

The U.S. should live up to its pledges and targets to support, by 2015:

- Increasing the health workforce in developing countries and supporting the retention by at least one million new health workers by 2015; and
    - This includes the PEPFAR target of at least 140,000 new professionals and paraprofessionals and the USAID MCH plan for 100,000 new community health workers. Maternal health programs should expand their focus from community health workers to also include new skilled birth attendants, as well as new clinical officers and specially trained nurse-midwives who can provide back-up emergency obstetric care;
    - The one-million new health worker figure, which would include health workers still in the training pipeline in 2015, is based on President Obama's campaign pledge. It is also approximately one-quarter of the global need of at least 4.3 million more health workers, and thus largely consistent with the U.S. share of the global economy based on gross national income; and
    - This target should include the full range of health workers, including community health workers, paraprofessionals, and

professionals. Health workers produced and deployed should be based on country priorities, and should include a substantial number of health professionals.

- Prioritize efforts to promote equitable distribution of health workers and equitable access to health services.
  - Through educational strategies, incentives, and other measures, the United States should endeavor to have these new health workers deployed predominantly in rural and other underserved areas;
  - As countries engage in rapid scale-up of health worker production, they will need support to recruit qualified faculty and build new facilities. GHI should assure quality during this scale-up, such as by supporting school accreditation, faculty training and mentoring, and quality facilities; and
  - Achieving this target should occur in concert with investments in existing health workers to help retain them and enhance their equitable distribution, effectiveness, and efficiency. Along with direct workforce investments, this will require additional U.S. investments in health systems, including enabling health workers to have sufficient medicines, supplies, equipment, and information. The United States should also support countries in developing health workforce plans based on need and grounded in human rights and, along with new U.S. investments, should support governments in securing funds required to fully implement these plans.

Costs

The funding needed for one-million new health workers in Table 7a is derived from the WHO report to the High Level Taskforce on Innovative International Financing for Health Systems.[117] WHO calculated the costs of training and employing nearly 3.48 million new health workers needed in 49 low-income countries[118] and incentives to support their retention and rural placement. The incentives also covered current health workers. The estimate for one million health workers is thus approximately 29% of the WHO costing estimates.

Table 7a: Annual Global Resource Needs for 1 Million New Health Workers (US$ Billions)

	2009	2010	2011	2012	2013	2014	6-Year Total
Total for 3,476,569 new health workers	3.28	5.31	7.24	9.30	10.61	12.33	***48.07***
U.S. Share: 1 million new health workers	0.94	1.53	2.08	2.67	3.05	3.55	***13.82***

The GHI, as a conservative estimate, should include approximately $14 billion for strengthening and expanding the health workforce in developing countries. The incentives to support retention and rural placement—50% of salary—may be insufficient to reflect actual needs. Additionally, the costing does not include other investments to improve retention, distribution, and effectiveness of new and current health workers, such as investments in basic health infrastructure, health workplace safety, and improving supervision and other aspects of health leadership and management, which the GHI should also support.

A portion of these *additional* costs to reach the goal of 1 million new health workers is accounted for within the health area-specific costing estimates relied upon in this paper. Done well, each of the health areas touched on by this paper require recruiting, training, and retaining new health workers. As such, we have reduced the yearly estimates here to account for this "overlap"—which comes largely from the HIV/AIDS[119] and Reproductive, Maternal, and Child Health estimates.[120]

Reducing the above figures for these two overlaps for 2011-2014, and including no funding for 2009 and 2010 under the assumption that U.S. investments in health workforce strengthening are covered elsewhere in this document, the additional health workforce investments are:

Table 7b: Annual Global Resource Needs for 1 Million New Health Workers (US$ Billions)

	2009	2010	2011	2012	2013	2014	6-Year Total
U.S. Share minus overlap	0	0	1.55	2.04	2.34	2.75	***8.68***

Needed Policy Changes: Health Workforce

A key set of policy changes are needed to ensure that the global health workforce and the Global Health Initiative can be most effective:

Ensure Safe Working Conditions

- The GHI should establish a policy of ensuring safe working conditions for all health workers who participate in U.S. global health programs, including ensuring that they all have the equipment and training required to implement universal precautions and other forms of infection control, including safe injecting equipment.

Provide Health Care for Health Workers

- The GHI should ensure that all health workers who participate in U.S. global health programs have access to confidential health services, including HIV prevention, care, and treatment.

Provide Salaries

- The GHI should establish clear, government-wide policy that the United States can pay health worker salaries, including in the public sector.

Address Stigma and Discrimination

- The GHI should incorporate modules that address stigma, discrimination and mistreatment of women, people living with HIV/AIDS, and other marginalized populations within U.S. health worker training programs.

Train and Integrate Community Health Workers

- The GHI should ensure that community health workers who are part of U.S. global health programs receive fair compensation, regular supervision, adequate initial and on-going training, necessary supplies

and other materials, career paths, and are integrated into the formal health system with the capacity to effectively refer patients to health facilities. Coordination among U.S. global health programs, other governments and partners is critical so as to prevent community health workers with more responsibilities than they can fulfill.

Ensure Ethical Recruitment Practices

- The GHI should support laws and regulations to curtail recruitment from developing countries suffering health worker shortages—except as may be permitted through mutually beneficial agreements—and discourage policies that would accelerate health worker migration to the United States from these countries. Instead, the United States should develop a national health workforce plan aimed at greater health workforce self-sufficiency by prioritizing training, recruiting, and retaining sufficient numbers of domestically-trained health workers.

Ensure Additionality of Workers and Funding

- The GHI should ensure that health workforce investments create additional health workers and that health workforce funding is additional to—rather than a substitute for—needed domestic investments. In some instances, overly restrictive macroeconomic policies could restrain total spending on the health workforce, and will need to be challenged to allow needed investments from both donor and domestic sources.

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121 Special measures may be necessary due to unique access challenges health workers face in the context of continued stigmatization of HIV/AIDS. For example, health workers might be treated by their own co-workers, and could stand in the same lines as their patients.

Endorsing Organizations:

- Advocates for Youth
- Africa Action
- AIDS Action
- American Medical Students Association
- American Public Health Association
- American Foundation for AIDS Research (AmFAR)
- Center for Health and Gender Equity
- Drugs for Neglected Diseases Initiative
- Family Care International
- Harvard University FXB Center for Health and Human Rights
- Global AIDS Alliance
- Global Action for Children
- Health Alliance International
- Health Gap (Global Access Project)
- Housing Works
- International Association of Physicians for AIDS Care
- International Women's Health Coalition
- Pathfinder International
- Physicians for Human Rights
- Partners in Health
- RESULTS
- Sexuality Information and Education Council of the United States
- Treatment Action Group
- Vermont Global Health Coalition
- Voices For A Malaria-Free Future