



Centers for Disease Control and Prevention Global Health Programs: FY2001-FY2011

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Summary

A number of U.S. agencies and departments implement U.S. government global health interventions. Overall, U.S. global health assistance is not always coordinated. Exceptions to this include U.S. international responses to key infectious diseases; for example, U.S. programs to address HIV/AIDS through the President's Emergency Plan for AIDS Relief (PEPFAR), malaria through the President's Malaria Initiative (PMI), and avian and pandemic influenza through the Avian Flu Task Force. Although several U.S. agencies and departments implement global health programs, this report focuses on funding for global health programs conducted by the U.S. Centers for Disease Control and Prevention (CDC), a key recipient of U.S. global health funding.

Congress appropriates funds to CDC for its global health efforts through five main budget lines: Global HIV/AIDS, Global Immunization, Global Disease Detection, Malaria, and Other Global Health. Although Congress provides funds for some of CDC's global health efforts through the above-mentioned budget lines, CDC does not, in practice, treat its domestic and global programs separately. Instead, the same experts are mostly used in domestic and global responses to health issues. As such, CDC often leverages its own resources in response to global requests for technical assistance in a number of areas that also have domestic components, such as outbreak response; the prevention and control of injuries and chronic diseases; emergency assistance and disaster response; environmental health; reproductive health; and safe water, hygiene, and sanitation.

President Barack Obama has indicated early in his Administration that global health is a priority and that his Administration would continue to focus global health efforts on addressing HIV/AIDS. When releasing his FY2010 budget request, President Obama indicated that his Administration would increase investments in global health programs and, through his Global Health Initiative, improve the coordination of all global health programs. The President requested that in FY2011, Congress appropriate \$353 million to CDC for global health programs—an estimated 5% increase over FY2010 enacted levels. From FY2001 to FY2010, Congress made available more than \$3 billion available to CDC for global health programs.

CDC also partners in programs for which it does not have specific appropriations, such as global efforts to address tuberculosis (TB) and respond to pandemic influenza. In addition, the State Department and the U.S. Agency for International Development (USAID) transfer funds to CDC for its role as an implementing partner in U.S. coordinated initiatives, including PEPFAR, PMI, and the Neglected Tropical Diseases (NTD) Initiative.

There is a growing consensus that U.S. global health assistance needs to become more efficient and effective. There is some debate, however, on the best strategies. This report explains the role CDC plays in U.S. global health assistance, highlights how much the agency has spent on global health efforts from FY2001 to FY2010, and discusses how funding to each of its programs has changed during this period. For more information on U.S. funding for other global health efforts, including those implemented by USAID, the Department of Defense (DOD), and the Global Fund to Fight AIDS, Tuberculosis, and Malaria (Global Fund) and debates about making U.S. global health assistance more efficient, see CRS Report R40740, *U.S. Global Health Assistance: Background, Priorities, and Issues for the 111th Congress*.

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Introduction

Several U.S. agencies and departments implement global health interventions. With the exceptions of initiatives to fight HIV/AIDS through the President's Emergency Plan for AIDS Relief (PEPFAR), malaria through the President's Malaria Initiative (PMI), and pandemic flu through the Avian Flu Task Force, the funding and implementation of U.S. global health initiatives are not always coordinated among agencies and departments. There is a growing consensus that U.S. foreign assistance needs to become more efficient and effective. There is some debate, however, on the best strategies. As Congress considers how best to improve foreign assistance, some Members are attempting to identify the scope and breadth of U.S. global health assistance.¹ This report highlights the global health efforts that the Centers for Disease Control and Prevention (CDC) undertakes, outlines how much CDC has spent on such efforts from FY2001 to FY2010, highlights FY2011 proposed and enacted funding levels, and discusses some issues the 111th Congress and the incoming director face.

Since 1958, CDC has been engaged in global health efforts. At first, CDC's global health engagement focused primarily on malaria control. CDC's global health mandate has grown considerably since then. In 1962, CDC played a key role in the international effort that led to smallpox eradication and in 1967 expanded its surveillance efforts overseas to include other diseases, when the Foreign Quarantine Service was transferred to CDC from the U.S. Treasury Department.² As CDC's mission expanded, so have the authorities under which it operates.³ Today, CDC is a partner in a number of global disease control and prevention efforts, including those related to HIV/AIDS, influenza, polio, measles, and tuberculosis (TB). In addition to its work in controlling the spread of infectious diseases, CDC's global health efforts aim to address other global health challenges, such as chronic disease, injury prevention, child and maternal health, and environmental health concerns.

CDC's Global Health Programs

Congress provides funds to CDC for global health efforts through Labor, Health and Human Services (HHS), and Education appropriations. The bulk of funds for CDC's global health programs are provided to the Center for Global Health through five main budget lines: Global HIV/AIDS, Global Malaria, Global Disease Detection, Global Immunization, and Other Global

¹ For more information on debates about making U.S. global health assistance more efficient and U.S. funding for other global health efforts, including those implemented by USAID, the Department of Defense (DOD), and the Global Fund to Fight AIDS, Tuberculosis, and Malaria (Global Fund), see CRS Report R40740, *U.S. Global Health Assistance: Background, Priorities, and Issues for the 111th Congress*.

² In 1962, CDC established a smallpox surveillance unit, and a year later developed an innovative vaccination technique that the World Health Organization (WHO) later adopted in its smallpox eradication efforts. In 1977, smallpox was eradicated; the United States had invested \$32 million on this effort. For more information, see CDC, "Historical Perspectives History of CDC," *MMWR*, vol. 45, no. 25 (June 28, 1996), pp. 526-530, <http://www.cdc.gov/mmwr/preview/mmwrhtml/00042732.htm>. For more information on the Federal Quarantine Service, see CDC Website, History of Quarantine at <http://www.cdc.gov/ncidod/dq/history.htm>.

³ CDC's global health work is authorized under a number of acts, including the Public Health Service Act; Foreign Assistance Act; Federal Employee International Organization Service Act; International Health Research Act; Agriculture Trade Development and Assistance Act; Economy Act; Foreign Employees Compensation Program; International Competition Requirement Exception; and relevant appropriations.

Health. CDC programs are implemented bilaterally and in cooperation with other U.S. agencies, international organizations, foreign governments, foundations, and nonprofit organizations.⁴

CDC is engaged in a wider range of global-health activities than what Congress appropriates for global health initiatives. The HHS Office of Global Health Affairs, for example, transfers funds to the Center for Global Health in support of global health efforts. In addition, CDC receives support from other U.S. government agencies and departments, such as the Office of the Global AIDS Coordinator (OGAC) at the U.S. Department of State, for the implementation of PEPFAR programs,⁵ and the U.S. Agency for International Development (USAID), for partnership in PMI and the Neglected Tropical Diseases (NTD) Initiative, among other programs.⁶ The section below describes global health activities that Congress funds the Center for Global Health to implement.

Global HIV/AIDS

CDC launched its Global AIDS Program (GAP) in 2000 under the LIFE Initiative.⁷ GAP supports HIV/AIDS interventions in 41 countries and offers technical assistance in an additional 29 others.⁸ To combat HIV/AIDS, CDC sends clinicians, epidemiologists, and other health experts to assist foreign governments, health institutions, and other entities that work on a range of HIV/AIDS-related activities. The key objectives of GAP are to help resource-constrained countries prevent HIV infection; improve treatment, care, and support for people living with HIV; and build health care capacity and infrastructure. Specific activities within the projects include

- developing and implementing integrated evidence-based prevention, care, and treatment programs;
- building sustainable public health capacity in laboratory services and systems;
- evaluating the scope and quality of global HIV/AIDS programs;
- strengthening in-country capacity to design and implement HIV/AIDS surveillance systems and surveys; and
- supporting host government capacity to monitor and evaluate the process, outcome, and impact of HIV prevention, care, and treatment programs.⁹

⁴ For more information on CDC's partnerships, see <http://www.cdc.gov/cogh/partnerships.htm>.

⁵ First authorized in 2003 through the U.S. Leadership Against HIV/AIDS, Tuberculosis, and Malaria Act (P.L. 108-25), PEPFAR is a coordinated approach to combating HIV/AIDS globally. In 2008, Congress extended authorization of PEPFAR through the Tom Lantos and Henry J. Hyde United States Global Leadership Against HIV/AIDS, Tuberculosis, and Malaria Reauthorization Act (P.L. 110-293). For background information on PEPFAR, see <http://www.pepfar.gov/> and CRS Report RL34569, *PEPFAR Reauthorization: Key Policy Debates and Changes to U.S. International HIV/AIDS, Tuberculosis, and Malaria Programs and Funding*, by Kellie Moss.

⁶ For background information on PMI, see <http://www.pmi.gov/> and CRS Report R40494, *The President's Malaria Initiative and Other U.S. Global Efforts to Combat Malaria: Background, Issues for Congress, and Resources*, by Kellie Moss. For background information on the NTD Initiative, see CRS Report R40740, *U.S. Global Health Assistance: Background, Priorities, and Issues for the 111th Congress*, by Tiaji Salaam-Blyther and Kellie Moss.

⁷ For background information on the LIFE initiative and PEPFAR, see CRS Report RL33771, *Trends in U.S. Global AIDS Spending: FY2000-FY2008*, by Tiaji Salaam-Blyther.

⁸ For more information on GAP see <http://www.cdc.gov/globalaids/about/>. For more information on outcomes of GAP, see CDC, *FY2009 Congressional Justification*, pp. 317-322, http://www.cdc.gov/fmo/topic/Budget%20Information/appropriations_budget_form_pdf/FY09_CDC_CJ_Final.pdf.

⁹ These bullets were summarized by CRS from E-mail correspondence with Anstice Brand, Program Analyst, CDC (continued...)

President's Emergency Plan for AIDS Relief (PEPFAR)

CDC's spending on global HIV/AIDS programs increased significantly after the launching of PEPFAR. From FY2004 through FY2008, appropriations to GAP changed little and amounted to \$753.2 million, representing about 40% of CDC's global health spending. Increased spending on global HIV/AIDS programs by CDC during this time period was caused primarily by transfers provided to the Center for the implementation of PEPFAR.¹⁰ From FY2004 to FY2008, OGAC transferred some \$3.4 billion to CDC for global HIV/AIDS activities. When OGAC transfers are added, from FY2004 to FY2008, HIV/AIDS spending accounted for nearly 80% of all spending by CDC on global health. In FY2009, OGAC transferred about \$1.3 billion to CDC for implementation of PEPFAR programs and has not yet released how much it transferred to CDC for FY2010.¹¹

Global Immunization

According to the latest estimates, which were based on data collected in 2002, 1.4 million children under age five die annually from vaccine-preventable diseases (VPDs).¹² CDC has increasingly supported efforts to prevent the transmission of vaccine-preventable diseases, particularly polio and measles. CDC global immunization activities primarily focus on children younger than age five, who are at the highest risk of contracting polio, measles, and other VPDs. Appropriations in support of these efforts have grown from \$3.1 million in FY1991¹³ to \$153.7 million in FY2010. Nearly all of the funds that Congress provides CDC for global immunizations are earmarked for polio and measles interventions. CDC leverages funds from other sources to prevent other VPDs and respond to global requests for technical assistance on immunization-related epidemiologic and laboratory science.

CDC implements immunization programs bilaterally and through international partnerships with groups such as WHO, UNICEF, PAHO, the World Bank, the American Red Cross, and Rotary International. CDC staff are seconded to these organizations and offer technical and operational support in improving global usage of immunizations. In addition, CDC officials serve on the Global Alliance for Vaccines and Immunization (GAVI Alliance) and act as implementing partners in a number of initiatives, including GAVI's Hib and Accelerated Vaccine Introduction Initiatives and the Meningitis Vaccine Project, all of which seek to accelerate introduction of new or underutilized vaccines in developing countries that can reduce child mortality.¹⁴

(...continued)

Washington Office, February 2, 2009.

¹⁰ For background information on transfers made to CDC as an implementing partner of PEPFAR, see CRS Report RL33771, *Trends in U.S. Global AIDS Spending: FY2000-FY2008*, by Tiaji Salaam-Blyther.

¹¹ E-mail from Elizabeth Crosby, Health Policy Analyst, March 26, 2010.

¹² WHO Website, *Vaccine-Preventable Diseases*, http://www.who.int/immunization_monitoring/diseases/en/.

¹³ CRS summarized information about CDC's global immunization efforts from CDC, *Global Immunization Strategic Framework: 2006-2010*, <http://www.cdc.gov/vaccines/programs/global/downloads/gisf-2006-2010.pdf>. For more information on outcomes of CDC immunization efforts, see CDC, *FY2009 Congressional Justification*, p. 327, http://www.cdc.gov/fmo/topic/Budget%20Information/appropriations_budget_form_pdf/FY09_CDC_CJ_Final.pdf.

¹⁴ For more on GAVI, see <http://www.gavialliance.org/>; the Hib Initiative, see <http://www.hibaction.org/>; and the Accelerated Vaccine Introduction Initiative, see http://www.gavialliance.org/resources/6__Accelerated_Vaccine_Introduction.pdf; and the Meningitis Vaccine Project, see <http://www.who.int/vaccines/en/olddocs/meningACproject.shtml>.

In partnership with WHO and UNICEF, CDC developed the Global Immunization Vision and Strategy for 2006-2015 (GIVS),¹⁵ which among other goals, outlines how the international community will collaborate to reduce vaccine-preventable deaths and sickness by at least two-thirds from 2000 levels. The strategy aims to sustain the gains made over the past decades in eradicating polio and eliminating measles (see below) by helping to ensure universal application of routine immunizations and using those efforts to strengthen health systems.

Polio

Polio is a highly contagious virus that mostly affects children under five years of age.¹⁶ There is no cure for polio; it can only be prevented through immunization. Less than 1% of those who contract polio (one in 200) become irreversibly paralyzed. Between 5% and 10% of those who become paralyzed die of respiratory failure—when the lungs become paralyzed. As a result of global eradication efforts, polio cases have declined by more than 99% from an estimated 350,000 cases in 1998 to 1,648 cases reported in 2008.¹⁷

The number of polio-endemic countries has decreased from 125 in 1988 to four in 2008: Afghanistan, India, Nigeria and Pakistan.¹⁸ Polio was nearly eradicated but resurged in 2003, when some northern states in Nigeria suspended inoculations citing safety concerns. This action led to a national epidemic and many global outbreaks. Between 2003 and 2007, the wild poliovirus originating in Nigeria reached 20 countries and an Indian strain reached six additional countries. By May 2007, most of the resulting outbreaks were arrested. However, six of the 26 countries that reported polio reinfection had not yet stopped transmission (Angola, Bangladesh, Democratic Republic of the Congo, Ethiopia, Myanmar, Somalia); four additional countries that border endemic areas continued to experience sporadic importations (Cameroon, Chad, Nepal, Niger).¹⁹ Polio threatens not only countries bordering endemic countries, but all countries until its transmission has been stopped globally.

CDC provides technical expertise and support to national governments and international organizations in support of the global effort to eradicate polio.²⁰ Its laboratory support is an important component of such efforts. Over more than 20 years, CDC has helped countries build laboratory capacity in polio, resulting in a global polio network that now involves 145 laboratories around the world, which processed almost 180,000 lab specimens in 2008. In its multilateral efforts, CDC works closely with the other founding partners of the Global Polio

¹⁵ For more on the Global Immunization Vision and Strategy for 2006-2015, see http://www.who.int/vaccines-documents/DocsPDF05/GIVS_Final_EN.pdf.

¹⁶ Information about polio was summarized by CRS from WHO Website on polio at <http://www.who.int/mediacentre/factsheets/fs114/en/index.html>.

¹⁷ Estimated polio cases for 2008 were taken from Global Polio Eradication Initiative, *Wild Poliovirus Weekly Update*, February 3, 2009, <http://www.polioeradication.org/casecount.asp>.

¹⁸ For a history of polio eradication efforts, see <http://www.polioeradication.org/history.asp>.

¹⁹ Dr. Margaret Chan, WHO Director General, *The Case for Completing Polio Eradication*, WHO, May 10, 2007, p. 1, http://www.polioeradication.org/content/general/TheCase_FINAL.pdf.

²⁰ Information on CDC's polio programs was summarized by CRS from U.S. Congress, Senate Committee on Appropriations, Subcommittee on Labor, Health and Human Services, Education, and Related Agencies, *Global Health*, Prepared Statement by Michael Leavitt, Secretary of the U.S. Department of Health and Human Services, 110th Cong., 1st sess., May 2, 2007, S. Hrg. 110-443, pp. 9 and 10.

Eradication Initiative—WHO, UNICEF, and Rotary International—and houses the global reference laboratory for polio.²¹

Measles

Measles is another highly contagious virus that mostly affects children younger than five years of age.²² In 2007, measles killed about 197,000 people worldwide, most of whom were children. Healthy people usually recover from measles or suffer moderately from the disease. Measles severely affects those who are poorly nourished, particularly those suffering from Vitamin A deficiency or immune suppressing diseases, such as HIV/AIDS. Those who survive severe measles infection may become blind or suffer from encephalitis (an inflammation of the brain), diarrhea and related dehydration, ear infections, or respiratory infections such as pneumonia. Among populations with high levels of malnutrition and a lack of adequate health care, up to 10% of measles cases result in death.

From FY2001 through FY2009, CDC spent more than \$342 million on global measles control activities in 42 sub-Saharan African countries and 6 Asia ones (**Table 5**).²³ With the funds, CDC has purchased over 200 million measles vaccine doses and provided technical support to ministries of health in those countries. Key technical support activities include

- planning, monitoring, and evaluating large-scale measles vaccination campaigns;
- conducting epidemiological investigations and laboratory surveillance of measles outbreaks; and
- conducting operations research.²⁴

Along with WHO, UNICEF, the United Nations Foundation, and the American Red Cross, CDC is a partner in the Measles Initiative, which has facilitated the precipitous decline in measles-related deaths from 2000 to 2007. During this period, about 576 million children who live in high risk countries were vaccinated against the disease.²⁵ As a result, measles-related deaths decreased globally by 74% during that time. The greatest improvements in measles death rates occurred in the Middle East and sub-Saharan Africa, where measles deaths declined by about 90%. Although measles was eliminated from the United States in 2000, travelers can carry the disease and cause sporadic cases annually. At the end of 2008, CDC's global measles campaign contributed to the decline in measles-related deaths from an estimated 733,000 deaths to about 164,000 in 2008.²⁶

²¹ For more information on the Global Polio Eradication Initiative, see <http://www.polioeradication.org/>.

²² Information about measles was summarized by CRS from WHO, *Measles*, Fact Sheet, December 2008, <http://www.who.int/mediacentre/factsheets/fs286/en/index.html>.

²³ Senate Committee on Appropriations, Subcommittee on Labor, Health and Human Services, Education, and Related Agencies, *Hearing on the FY2008 Budget of HHS*, Hearing on H.R. 3043/S. 1710, 110th Cong., 1st sess., March 19, 2007, S. Hrg. 110–400, p. 650.

²⁴ CDC defines operations research as the application of scientific methods and models to improve decision-making, resource allocation, and processes to predict and improve program performance.

²⁵ WHO, *Measles*, Fact Sheet, December 2008, <http://www.who.int/mediacentre/factsheets/fs286/en/index.html>.

²⁶ FY2011 CBJ for CDC, p. 247.

Global Malaria

Through its malaria programs, CDC conducts research and engages in prevention and control efforts.²⁷ CDC staff provide technical assistance that helps several malaria endemic countries strengthen their malaria control activities. Their work includes policy development, program guidance and support, scientific research, and monitoring and evaluation. CDC malaria programs are implemented bilaterally, in partnership with other multilateral organizations, and as part of the coordinated U.S. strategy—PMI. CDC combats malaria bilaterally with foreign Ministries of Health, through international initiatives such as Roll Back Malaria (RBM), and with multilateral partners, such as the World Health Organization (WHO), the United Nations Children’s Fund (UNICEF), the Global Fund to Fight AIDS, Tuberculosis, and Malaria (Global Fund) and the World Bank. Through its multilateral partnerships, CDC has staff posted at the Global Fund, UNICEF, and the World Bank.

CDC’s global malaria efforts focus on utilizing data and applying research to develop evidence-based strategies for malaria prevention and control, and monitoring and evaluating existing malaria projects.²⁸ Specific activities include

- designing technical and programmatic strategies, which include training, supervision, laboratory, communications, monitoring and evaluation, and surveillance systems;
- developing plans to estimate the impact of malaria control and prevention efforts;
- evaluating impact of long-lasting insecticide-treated nets (LLINs) and monitoring the spread of insecticide resistance;
- improving surveillance with the use of hand-held computers equipped with global positioning systems to conduct household surveys in remote villages; and
- evaluating the performance of health workers.

President’s Malaria Initiative

In addition to appropriations CDC receives for global malaria efforts, USAID transfers funds to CDC as an implementing partner of the President’s Malaria Initiative. In June 2005, President Bush proposed the initiative and asserted that with \$1.2 billion spent between FY2006 and FY2010, PMI would seek to halve malaria deaths in 15 target countries. PMI is led by USAID and jointly implemented by CDC and USAID. From FY2006 through FY2008, USAID transferred an estimated \$25 million to CDC for global malaria programs. In FY2009, USAID transferred \$15 million to CDC, of which some \$13 million was for PMI and nearly \$2 million for malaria efforts in the Mekong region.

²⁷ Information about CDC’s global malaria activities was summarized by CRS from CDC’s international malaria Website at <http://www.cdc.gov/malaria/cdcactivities/index.htm>.

²⁸ For more on outcomes of CDC’s malaria interventions, see CDC, *FY2009 CBJ*, p.333, http://www.cdc.gov/fmo/topic/Budget%20Information/appropriations_budget_form_pdf/FY09_CDC_CJ_Final.pdf.

Global Disease Detection

Established in 2004, CDC's Global Disease Detection (GDD) efforts aim to "protect the health of Americans and the global community by developing and strengthening public health capacity to rapidly detect and respond to emerging infectious diseases and bioterrorist threats."²⁹ The GDD program draws upon existing international expertise across CDC programs to strengthen and support public health surveillance, training, and laboratory methods; build in-country capacity; and enhance rapid response capacity for emerging infectious diseases.

CDC has established seven GDD centers, which serve as regional resources to bolster laboratory capacity and epidemiology programs of the host countries and neighboring ones. Through the centers—which are in China, Egypt, Guatemala, India, Kazakhstan, Kenya, and Thailand—CDC focuses on five key activities: (1) outbreak response, (2) surveillance, (3) pathogen discovery, (4) training, and (5) networking. During health emergencies—such as the emergence of pandemic flu in 2009—CDC can use the centers for bilateral response or as part of the Global Outbreak Alert and Response Network (GOARN), which is coordinated by WHO.³⁰ Examples of GDD activities include CDC responses to severe acute respiratory syndrome (SARS) outbreaks in 2003; the Asian tsunami in 2004; ongoing avian influenza outbreaks, which began in 2004; and cholera outbreaks in Zimbabwe in 2008.³¹ In FY2009, CDC provided emergency technical assistance in over 70 humanitarian assistance missions.

Other CDC Global Health Programs

Congress funds CDC's efforts to build public health capacity among country leaders, particularly health ministries, through the budget line entitled "Other Global Health." Two key components of these efforts are the Field Epidemiology (and Laboratory) Training Program (FE(L)TP) and the Sustainable Management Development Program (SMDP).³² While these two programs received direct Congressional appropriations, they are also supported by funds from other sources, including USAID, DOD, and the private sector.

FE(L)TP, established in 1980, is a full-time, two-year postgraduate applied public health training program for public health leaders to help strengthen health systems, train health professionals, build capacity to assess disease surveillance, and improve health interventions.³³ The program is modeled after CDC's Epidemic Intelligence Service and is adapted to meet local needs. Participants spend about 25% of their time in the classroom and 75% in field placements, providing public health services to host countries' health ministries. CDC develops the FE(L)TP

²⁹ Information about GDD was summarized by CRS from CDC, *Global Disease Detection*, Policy Paper, June 2008, http://www.cdc.gov/cogh/pdf/GDD_At_a_Glance_2008.pdf.

³⁰ For more information on GOARN, see <http://www.who.int/csr/outbreaknetwork/en/>.

³¹ For more information on GDD outcomes see CDC, *FY2009 CBJ*, pp. 329-330, http://www.cdc.gov/fmo/topic/Budget%20Information/appropriations_budget_form_pdf/FY09_CDC_CJ_Final.pdf. For more on CDC's response to cholera outbreaks in Zimbabwe, see CDC, "CDC Responds to Cholera Outbreak in Zimbabwe," *CDC Global Health E-Brief*, Fourth Quarter 2008, p. 6, <http://www.cdc.gov/washington/EGlobalHealthEditions/pdf/4thQuarter2008GlobalHealthE-Brief.pdf>.

³² The Field Epidemiology Training Program (FETP) and the Field Epidemiology and Laboratory Training Program (FETLP) are two different programs. FE(L)TP refers to both.

³³ This section on "Other Global Health Programs" was summarized by CRS from E-mail correspondence with Anstice Brand, Program Analyst, CDC Washington Office, February 2, 2009 and CDC, <http://www.cdc.gov/smdp/about.htm>.

in conjunction with local health leaders to ensure sustainability and ultimately hand-off the trainings to local officials (typically after four to six years). From 1980 to 2008, CDC has consulted with and supported 30 FE(L)TPs and similar programs in 40 countries. CDC is currently supporting FETP programs in 13 countries, FE(L)TP operations in 23 countries, and is developing 10 new programs.

The Sustainable Management Development Program, established in 1992, also aims to strengthen public health systems by bolstering leadership and management capacity of health workers. SMDP participants take part in a six-week Management for International Public Health (MIPH) course that trains managers from developing countries in the basic management skills of planning, priority setting, problem solving, budgeting, and supervision. The program also works with its partners to analyze the quality of organizational leadership, assess management skills, and identify performance gaps in health systems. CDC helps the health leadership to create an action plan for capacity development that includes a budget, a timeline, and measurable outcomes. After concluding the program, CDC provides post-course technical assistance to support the development of sustainable management development programs and post-training incentives to stimulate lifelong learning. These incentives include website access, regional networking among alumni, conferences, fellowships, and career development opportunities.³⁴

Non-earmarked Global Health Activities

CDC's activities related to improving global health outcomes expand beyond those funded through the Center for Global Health. CDC also leverages other resources to respond to global requests for technical assistance related to disease outbreak response; prevention and control of injuries and chronic diseases; emergency assistance and disaster response; environmental health; reproductive health; and safe water, hygiene, and sanitation.³⁵ Specifically, CDC supports global TB and pandemic flu programs, which are a key priority for the Administration and Congress. In addition, in FY2011 the Administration proposes that other programs previously funded through other sources be transferred to the Center for Global Health, such as the Afghan Health Initiative and the Health Diplomacy Initiative. The section below highlights those activities.

Global Tuberculosis

CDC collaborates with U.S. and multilateral partners to provide technical support in the global effort to eliminate tuberculosis (TB).³⁶ Bilateral partners include the National Institutes of Health (NIH) and USAID; multilateral partners include the Global Fund and WHO. Key activities in CDC's bilateral TB interventions include

- operations research;³⁷
- improvement of TB screening and diagnostics;

³⁴ For information on outcomes of SMDP, see CDC, *FY2009 CBJ*, p. 338, http://www.cdc.gov/fmo/topic/Budget%20Information/appropriations_budget_form_pdf/FY09_CDC_CJ_Final.pdf.

³⁵ For more information on other global health efforts, see <http://www.cdc.gov/globalhealth/>.

³⁶ For background information on CDC's efforts to address tuberculosis globally and on TB drug resistance, see CRS Report RL34246, *Tuberculosis: International Efforts and Issues for Congress*, by Tiaji Salaam-Blyther.

³⁷ CDC defines operations research as the application of scientific methods and models to improve decision-making, resource allocation, and processes to predict and improve program performance.

- surveillance of TB/HIV prevalence and multi-drug resistant TB (MDR-TB) prevalence;
- laboratory strengthening; and
- infection control.

CDC also provides technical assistance to multilateral efforts to contain TB, including the Directly Observed Therapy Short Course (DOTS) program and the Green Light Committee Initiative, which helps countries access high-quality second-line anti-TB drugs for those infected with MDR-TB and extensively drug resistant TB (XDR-TB).³⁸ Multilateral partnerships also include joint efforts with WHO to conduct surveillance of drug-resistant TB.

Pandemic and Avian Influenza

CDC works in over 35 high-risk countries around the world to prevent the spread of avian influenza to humans and to help countries prepare and respond to any pandemic influenza that might arise, including the 2009 H1N1 pandemic flu (discussed below). CDC influenza work is implemented bilaterally and in cooperation with WHO, CDC's GDD centers, Department of Defense (DOD) international field stations and other groups. In this capacity, CDC helps governments and WHO respond to and control avian influenza outbreaks, and to develop rapid response teams in high-risk countries. Additional related activities include

- helping foreign governments detect novel influenza viruses by building laboratory capacity;
- strengthening epidemiology and avian influenza surveillance;
- enhancing laboratory safety;
- developing and training rapid response teams; and
- supporting the establishment of influenza treatment and vaccine stockpiles.

In FY2005, Congress provided emergency supplemental funds for U.S. efforts related to global pandemic influenza preparedness and response. In each appropriation year since, Congress has funded U.S. efforts to train health workers in foreign countries to prepare for and respond to a pandemic that might occur from any influenza virus, including H5N1 avian flu and H1N1. The U.S. Department of State announced in October 2008 that since FY2005, the United States has pledged about \$949 million for global avian and pandemic influenza efforts, accounting for 30.9% of overall international donor pledges of \$3.07 billion.³⁹ The United States is the largest single donor to global avian and pandemic preparedness efforts.⁴⁰ The funds have been used to

³⁸ For more information on DOTS, see <http://www.who.int/tb/dots/en/> and for more information on the Green Light Committee Initiative, see <http://www.who.int/tb/challenges/mdr/greenlightcommittee/en/>.

³⁹ Correspondence with Jeffrey Lutz, Avian Influenza Action Group, U.S. Department of State, April 28, 2009 and U.S. Department of State press release, "U.S. International Avian and Pandemic Influenza Assistance Approaches \$950 Million," October 25, 2008, <http://2001-2009.state.gov/r/pa/prs/ps/2008/oct/111241.htm>. Also see, State Department, *Avian and Pandemic Influenza*, October 2008. For information on domestic spending on pandemic preparedness, see CRS Report RS22576, *Pandemic Influenza: Appropriations for Public Health Preparedness and Response*, by Sarah A. Lister. For information on domestic spending on H1N1, see CRS Report R40554, *The 2009 Influenza Pandemic: An Overview*, by Sarah A. Lister and C. Stephen Redhead.

⁴⁰ U.N. System Influenza Coordinator and World Bank, *Responses to Avian Influenza and State of Pandemic Readiness*, Fourth Global Progress Report, October 2008, p. 83, <http://un-influenza.org/files/081006-Synopsis2008.pdf>.

support international efforts in more than 100 nations and jurisdictions. The assistance focused on three areas: preparedness and communication, surveillance and detection, and response and containment. The \$949 million was provided for the following efforts:

- \$319 million for bilateral activities;
- \$196 million for support to international organizations, including WHO, the U.N. Food and Agriculture Organization (FAO), the U.N. Development Program (UNDP), the International Federation of the Red Cross and Red Crescent Societies (IFRC), the U.N. System Influenza Coordinator (UNSIC), the World Organization for Animal Health (OIE), and the U.N. Children's Fund (UNICEF);
- \$123 million for regional programs, including disease detection sites;
- \$83 million for a global worldwide contingency, available to address the evolving nature of the threat;
- \$77 million for international technical and humanitarian assistance and international coordination;
- \$71 million for international influenza research (including vaccines and modeling of influenza outbreaks) and wild bird surveillance, including the U.S. launch of the Global Avian Influenza Network for Surveillance (GAINS) for wild birds, with a collection of tens of thousands of samples for H5N1 analysis;⁴¹
- \$67 million for stockpiles of non-pharmaceutical supplies, including over 1.6 million PPE kits, approximately 250 laboratory specimen collection kits and 15,000 decontamination kits for use in surveillance, outbreak investigation and emergency response and containment efforts; and
- \$13 million for global communications and outreach.

The cumulative pledge of \$949 million consists of the following contributions, by agency:

- USAID: \$542 million.
- HHS, including CDC, the National Institutes of Health (NIH), and the Food and Drug Administration (FDA): \$353 million.
- U.S. Department of Agriculture (USDA): \$37 million.
- Department of Defense (DOD): \$10 million.
- Department of State (DOS): \$7 million.

In April 2009, an influenza virus that had never circulated among humans before began to spread around the world. The virus is called Influenza A/H1N1; it is mostly treatable, and less than 1% of those who have contracted the virus have died. By June 2009, WHO declared that the virus had spread so pervasively that it had become a pandemic. The characterization was based on the reach of the virus, not its virulence. As of August 12, 2009, WHO has confirmed 177,457 human H1N1 cases, including 1,462 deaths. About 87% of those fatalities occurred in the Americas, though the WHO European region reported the highest number of cases—more than 32,000. WHO and HHS maintain that the laboratory-confirmed cases are far lower than the actual number of cases, given

⁴¹ For more information about GAINS, see <http://www.gains.org/>.

that countries are no longer required to test and report individual cases. Many countries use laboratory tests to confirm H1N1 only in patients who are severely ill or have other high-risk health conditions.

CDC has been engaged in international H1N1 pandemic responses since the virus was identified. As one of four WHO collaborating centers around the world, the CDC influenza laboratory in Atlanta routinely receives viral samples from many countries, including Mexico.⁴² CDC creates or develops reagents that are used to detect subtypes of influenza that are sent to national influenza centers around the world.⁴³ Once the subtype of influenza is identified, CDC generates testing kits that are sent to public health laboratories worldwide at no cost. At the onset of the outbreak, CDC sent experts out to the field to help strengthen laboratory capacity and train health experts to control the spread of a virus.

CDC has deployed 16 staff to Mexico and one health expert to Guatemala, including experts in influenza epidemiology, laboratory, health communications, and emergency operations, including distribution of supplies and medications, information technology, and veterinary sciences. These teams work under the auspices of the WHO/Pan American Health Organization Global Outbreak Alert and Response Network and a trilateral team of Mexican, Canadian, and American experts. The teams aim to better understand the clinical illness severity and transmission patterns of H1N1 and improve laboratory capacity in Mexico. CDC's Emergency Operations Center also coordinates and collaborates with the European Centre for Disease Prevention and Control (ECDC) and the China CDC.

HHS Secretary Kathleen Sebelius announced on April 30, 2009, that the department “began moving 400,000 treatment courses—valued at \$10 million—to Mexico, which represent less than 1% of the total American stockpile.”⁴⁴ In July 2009, Secretary Sebelius announced at a high-level meeting held in Cancun, Mexico, with Mexican President Felipe Calderon, WHO Director-General Margaret Chan, Pan American Health Organization (PAHO) Director Mirta Roses, and other health ministers from throughout the Americas to discuss strategies to combat influenza that the United States would donate an additional 420,000 courses of Tamiflu to countries in Latin America and the Caribbean.⁴⁵ In total, the Administration aims to distribute 2 million courses in Latin America and the Caribbean.

As of May 18, 2009, the United States has provided more than \$16 million to assist countries in Latin America and the Caribbean respond to the H1N1 pandemic (**Table 1**). These funds are used for H1N1 responses specifically, and build on influenza pandemic preparedness efforts that began in earnest after the 2003 severe acute respiratory syndrome (SARS) outbreak and were expanded

⁴² The other collaborating centers are in Britain, Japan, and Australia. For more information on WHO Collaborating Centers, see <http://www.who.int/csr/disease/influenza/collabcentres/en/>.

⁴³ Taken from CDC, “Press Briefing: CDC Media Availability on Human Swine Influenza Cases,” press release, April 27, 2009, <http://www.cdc.gov/media/transcripts/2009/t090427.htm>.

⁴⁴ HHS, “Secretary Sebelius Takes Two Key Actions On Strategic National Stockpile,” press release, April 30, 2009, <http://www.hhs.gov/news/press/2009pres/04/20090430a.html>. For information about the value of the 400,000 treatment courses, see USAID, *Global—Influenza A/H1N1*, Fact Sheet # 3, May 18, 2009, p. 2, http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/countries/pandemic_influenza/template/fs_sr/pandemic_influenza_fs03_05-18-2009.pdf.

⁴⁵ PAHO, press release, “PAHO Recognizes Important US Contribution of Antivirals for Latin America and Caribbean,” July 3, 2009

at the peak of H5N1 outbreaks. U.S. international responses to the H1N1 pandemic are conducted mostly by CDC and USAID, though the Department of Defense (DOD) also provides support.

Table I. U.S. Assistance for International H1N1 Responses, FY2009
(U.S. \$ thousands)

Agency/Implementing Partner	Activity	Location	Amount
HHS/Government of Mexico	Health	Mexico	10,000.0
USAID/Government of Mexico	Emergency Relief Supplies	Mexico	875.0
USAID/Pan American Health Organization (PAHO)	Emergency Relief Supplies	Panama	262.0
USAID/PAHO	Health	Central America	2,500.0
USAID/World Health Organization	Health	Central America	2,500.0
USAID	Administrative Support	Mexico	100.0
USAID Total			6,237.0
DOD/Ministries of Health	Emergency Relief Supplies	Central America	234.7
Total U.S. Assistance			16,471.7

Source: USAID, *Global—Influenza A/H1N1*, Fact Sheet # 3, May 18, 2009.

In response to President Obama's request for supplemental funding for U.S. domestic and international pandemic preparedness and response activities,⁴⁶ Congress made available \$50 million for USAID pandemic preparedness activities and \$200 million to CDC for domestic and international H1N1 activities through the FY2009 Supplemental Appropriations (P.L. 111-32). Officials from CDC's Budget Office indicate that CDC spent \$50.9 million on global pandemic flu preparedness efforts in FY2009 (**Table 4**).⁴⁷

Afghan Health Initiative

According to the United Nations Children's Fund (UNICEF), Afghanistan has the highest child mortality rate in the world.⁴⁸ In 2008, an average of 65 children younger than five years died for every 1,000 born worldwide. In sub-Saharan Africa, the child mortality rate reached 144; in Afghanistan, it was 257. Similarly, in 2004, of every 1,000 children born in Afghanistan, 60 died within their first month. In contrast, the average global neonatal rate was 28 and 38 for sub-Saharan Africa. Statistics for maternal health in Afghanistan are equally abysmal. In 2005, UNICEF estimated that 18 of every 1,000 Afghan mothers died from pregnancy-related causes, and that over an Afghan mother's lifetime, one of every eight is likely to die from pregnancy-related causes. Meanwhile, in that same year, the average global maternal mortality rate was 4.0 and 8.2 for sub-Saharan Africa. Similarly, one of every 92 women worldwide is likely to die from pregnancy-related causes, and one of every 22 in sub-Saharan Africa.

⁴⁶ The White House, "Letter from the President to the Speaker of the House," press release, April 30, 2009, http://www.whitehouse.gov/the_press_office/Letter-from-the-President-to-the-Speaker-of-the-House-of-Representatives/. Also see CRS Report R40531, *FY2009 Spring Supplemental Appropriations for Overseas Contingency Operations*, coordinated by Stephen Daggett and Susan B. Epstein.

⁴⁷ E-mail from Elizabeth Crosby, Program Analyst, CDC Atlanta, January 2010.

⁴⁸ Statistics taken from UNICEF, *State of the World's Children, Special Edition*, Statistical Tables, November 2009, http://www.unicef.org/rightsite/sowc/pdfs/statistics/SOWC_Spec_Ed_CRC_Statistical_Tables_EN_111809.pdf.

The Afghan Health Initiative aims to improve the skills of health workers in Afghanistan and improve health outcomes in the country. The FY2011 budget request includes a proposal to transfer the daily management of the Afghan Health Initiative from the HHS Office of Global Health Affairs to the Center for Global Health. Specifically, HHS sought to reduce by 20% the number of maternal and neonatal (the first month of life) deaths in targeted Afghan hospitals by the end of 2008. The FY2011 CBJ reported mixed results in key measures taken to reach this goal.

Health Diplomacy

CDC's health diplomacy activities aim to bolster ongoing efforts to control, eradicate, and eliminate diseases worldwide. In particular, the objective is to strengthen the public health capacity of partner organizations and governments globally and improve international responses to natural and manmade disasters. For example, CDC proposes for FY2011 that it conduct trainings in Latin American countries on adopting evidence-based approaches to health, including chronic diseases, and that it support national field epidemiology training programs in the region.

CDC Global Health Spending: FY2001-FY2011

From FY2001 to FY2010, Congress provided CDC more than \$3 billion for global health activities—increasing funding for global health activities by about 50% in that time period. Since PEPFAR was launched in 2004, the United States has apportioned the bulk of its global health spending on the plan. In light of the dominant role that PEPFAR has played in shaping U.S. global health assistance, analysis about funding for CDC's global health programs in this section is organized to reflect changes that occurred before and after PEPFAR authorization.

CDC Global Health Spending: FY2001-FY2003

From FY001 to FY2003, Congress made available nearly \$900 million to CDC for global health work (**Table 2**). During this time period, spending by CDC on global health increased by more than 50%. About half of that growth was targeted at HIV/AIDS interventions and about 40% at immunizations. At that time, there was vigorous debate about whether HIV/AIDS treatments could be safely and effectively used in low-resource settings, particularly in sub-Saharan Africa. In FY2002, Congress began to fund the International Mother and Child HIV Prevention Initiative, which included the provision of HIV/AIDS medication that prevented mother-to-child HIV/AIDS transmission (PMTCT). During this period, GDD had not yet been created and Congress had not yet funded interventions against the reemergent H5N1 bird flu or the FE(L)TP programs. Global efforts to detect infectious diseases and strengthen health systems were underway, however.

Table 2. CDC Global Health Spending: FY2001-FY2003

(current U.S. \$ millions, actual)

Program	FY2001	FY2002	FY2003	FY2001- FY2003	% Change: FY2001- FY2003	% of Total Global Health
Global HIV/AIDS	104.5	168.7	182.6	455.8	74.7%	51.6%
PMTCT/Global AIDS Trust Fund	<i>n/s</i>	25.0	39.7	64.7	<i>n/a</i>	<i>n/a</i>
Global Immunization	106.6	133.7	147.8	388.1	38.6%	44.0%
<i>Polio</i>	91.2	102.3	105.7	299.2	15.9%	33.9
<i>Other Global/Measles</i>	15.4	31.4	42.1	88.9	173.4%	10.1
Global Malaria	13.0	13.0	12.6	38.6	-3.1%	4.4%
Global Disease Detection (GDD)	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
Other Global Health	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
Total Global Health	224.1	315.4	342.9	882.5	53.1%	100.0%
Global Tuberculosis	0.8	1.0	1.1	2.9	37.5%	

Source: Appropriations legislation and correspondence with Anstice Brand, CDC Washington, and Julie Racine-Parshall, CDC Atlanta.

Note: *n/a* means not applicable.

CDC Global Health Spending: FY2004-FY2008

From FY2004 to FY2008, Congress made available about \$1.7 billion to CDC for global health work and global health spending by CDC increased by about 6% (excluding funds provided for PMTCT efforts). During that time period, Congress became increasingly concerned about the spread of infectious diseases, such as SARS and H5N1 avian flu, and began funding GDD. Congress also appropriated funds for pandemic/avian flu preparedness and response efforts through Labor, HHS, and Education appropriations acts, though legislation did not specify how much CDC should spend on global efforts.

With mounting concerns about the global spread of infectious diseases, provisions for HIV/AIDS comprised a smaller proportion of CDC's global health budget. While Congress apportioned about 52% of CDC's global health appropriations on HIV/AIDS efforts from FY2001 to FY2003; from FY2004 to FY2008, spending on HIV/AIDS interventions amounted to about 46% of CDC's global health budget (excluding PMTCT efforts) and funding for GDD amounted to about 8% of CDC's global health budget (**Table 3**).

Although funds for HIV/AIDS efforts comprised a smaller portion of CDC's global health budget through direct appropriations, due to transfers provided to CDC from OGAC for its role in PEPFAR, spending on programs to combat the virus internationally accounted for about 82% of CDC's global health spending from FY2004 through FY2008, while the transfers alone comprised about 69% of CDC's total global health budget during that five-year period. Transfers from OGAC also included funds for CDC to continue ongoing PMTCT activities. In FY2004, when PEPFAR was launched, Congress provided its last appropriation to CDC for PMTCT activities and directed the funds at OGAC to coordinate.

In FY2006, USAID began to transfer funds to CDC for its work as an implementing partner of PMI. When transfers for PEPFAR and PMI are included, CDC spent about \$6.6 billion on global health activities from FY2004 through FY2008. Transfers for HIV/AIDS and malaria programs from FY2004 through FY2008 (\$3.4 billion) exceeded congressional appropriations for all CDC global health activities (\$1.5 billion) by nearly \$2 billion.

Table 3. CDC Global Health Spending: FY2004-FY2008

(Current U.S. \$ millions, actual)

Program	FY2004	FY2005	FY2006	FY2007	FY2008	FY2004-FY2008 (Total)	Change: FY2004-FY2008	% of Global Health: FY2004-FY2008
Global HIV/AIDS	266.9	123.8	122.6	121.0	118.9	753.2 ^a	-4.8%	40.5%
<i>PMTCT^a</i>	<i>142.0</i>	<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>	<i>142.0</i>	<i>n/a</i>	<i>n/a</i>
Global Immunization	137.9	144.3	144.3	142.3	139.9	708.7	1.5%	47.0%
<i>Polio^b</i>	<i>96.8</i>	<i>101.2</i>	<i>101.1</i>	<i>99.8</i>	<i>98.0</i>	<i>496.9</i>	<i>1.2%</i>	<i>32.9%</i>
<i>Other Global/Measles^b</i>	<i>41.0</i>	<i>43.2</i>	<i>43.2</i>	<i>42.6</i>	<i>41.8</i>	<i>211.8</i>	<i>2.0%</i>	<i>14.0%</i>
Global Malaria	9.2	9.1	9.0	8.9	8.7	44.9	-5.4%	3.0%
Global Disease Detection	11.6	21.4	32.4	32.0	31.4	128.8	170.7%	8.5%
Other Global Health	2.4	3.4	3.4	3.3	3.5	16.0	45.8%	1.1%
Total Global Health	428.0	302.0	311.7	307.5	302.4	1,509.6	5.73%	100.0%
Total Global Health w/out PMTCT	286.0	302.0	311.7	307.5	302.4	1,651.6	16.2%	<i>n/a</i>
Transfers for HIV/AIDS	184.5	436.3	603.1	916.9	1,262.7	3,403.6	584.2%	<i>n/a</i>
Transfers for Malaria	<i>n/a</i>	<i>n/a</i>	2.8	9.6	12.6	25.0	350.0%	<i>n/a</i>
Total w/Transfers, including PMTCT	612.5	738.3	914.8	1,224.4	1,565.1	4,913.2	155.5%	<i>n/a</i>
Global Tuberculosis ^c	2.0	2.3	2.2	1.9	2.0	10.4	0.0%	<i>n/a</i>
Pandemic/Avian Influenza ^c	0.0	15.0	132.0	22.0	67.8	236.8	353.3%	<i>n/a</i>

Sources: Appropriations legislation and correspondence with Anstice Brand and Rebecca Miller, CDC Washington Office.

Notes: *n/a* means not applicable.

Spending levels on HIV/AIDS programs after FY2004 is lower because Congress began to include funds for the International Mother and Child HIV Prevention in appropriations to the Global HIV/AIDS Initiative (GHAI).

- Although PMTCT funds are included in the totals, they are not included in the calculations for changes in fiscal years and proportions of global health budget as they are not a sustained part of CDC's global health budget.
- The figures for polio, and "other global/measles" are italicized to indicate that they are included in the Global Immunization total.
- Congress does not appropriate funds for global TB efforts and global pandemic/avian influenza activities to the Center for Global Health. As such, those figures are not included in the global health totals. They are included in this chart, however, because they are an important part of CDC's global health work.

CDC Global Health Funding: FY2009-FY2011

Global health has emerged as a key foreign policy goal early in the Obama Administration. When releasing his FY2010 budget request, President Obama indicated that his Administration would increase investments in global health programs.⁴⁹ On May 5, 2009, President Obama announced his new Global Health Initiative, a six-year plan to spend \$63 billion using an integrated approach to fight the spread of infectious diseases while addressing other global health challenges.⁵⁰ In announcing the initiative, the President stated,

In the 21st century, disease flows freely across borders and oceans, and, in recent days, the 2009 H1N1 virus has reminded us of the urgent need for action. We cannot wall ourselves off from the world and hope for the best, nor ignore the public health challenges beyond our borders. An outbreak in Indonesia can reach Indiana within days, and public health crises abroad can cause widespread suffering, conflict, and economic contraction. We cannot simply confront individual preventable illnesses in isolation. The world is interconnected, and that demands an integrated approach to global health.

Publicly available documents do not indicate to what extent CDC will contribute to GHI.

In FY2010, Congress made available \$336.2 million for CDC's global health programs. The Administration requests that Congress provide about \$350 million for CDC's global health programs in FY2011, some 5% more than FY2010 enacted levels (**Table 4**).⁵¹ The bulk of the increase is attributed to the "other global health category," which is more than double the FY2010 enacted level. The President also requested a \$49,000 increase for the Global Disease Detection (GDD) program. This is not evident in the table below, however, due to rounding. Although FY2011 requested levels are lower than FY2010 enacted levels for all other categories, CDC officials indicate that this reduction reflects decreased spending on travel and contract investments rather than programming expenses.⁵² Suggested spending on travel and contracting services through global health programs declined by about \$4.5 million from FY2010 enacted levels.⁵³

⁴⁹ The White House, *A New Era of Responsibility: Renewing America's Promise*, FY2010 Budget, February 26, 2009, p. 32, http://www.whitehouse.gov/omb/assets/fy2010_new_era/A_New_Era_of_Responsibility2.pdf.

⁵⁰ The White House, "Statement by the President on Global Health Initiative," press release, May 5, 2009, http://www.whitehouse.gov/the_press_office/Statement-by-the-President-on-Global-Health-Initiative/.

⁵¹ For background on CDC's global health programs, see CRS Report R40239, *Centers for Disease Control and Prevention Global Health Programs: FY2001-FY2010*, by Tiaji Salaam-Blyther.

⁵² E-mail from Elizabeth Crosby, Health Policy Analyst, CDC, March 5, 2010.

⁵³ See the FY2011 CBJ for CDC, p.18.

Table 4. CDC Global Health Funding: FY2009-FY2011

(current \$ U.S. millions and %)

Program	FY2009 Estimate	FY2010 Request	FY2010 Estimate	Change FY2009-FY2010	FY2011 Request	Change FY2010-FY2011
Global AIDS Program	118.9	119.0	119.0	0.0%	118.1	-0.8%
Global Immunizations	143.3	153.5	153.7	7.3%	152.8	-0.6%
<i>Polio</i>	<i>101.5</i>	<i>101.6</i>	<i>101.8</i>	<i>0.3%</i>	<i>101.6</i>	<i>-0.2%</i>
<i>Other/Measles</i>	<i>41.8</i>	<i>51.9</i>	<i>51.9</i>	<i>24.2%</i>	<i>51.2</i>	<i>-1.3%</i>
Global Malaria	9.4	9.4	9.4	0.0%	9.2	-2.1%
Global Disease Detection	33.7	33.8	37.8	12.2%	37.8	0.0%
Other Global Health	13.8	13.8	16.3	18.1%	35.1	115.3%
<i>Afghanistan Health Initiative</i>	<i>5.8</i>	<i>5.8</i>	<i>5.8</i>	<i>0.0</i>	<i>5.8</i>	<i>0.0%</i>
<i>Health Diplomacy Initiative</i>	<i>4.5</i>	<i>4.5</i>	<i>2.0</i>	<i>-55.6%</i>	<i>2.0</i>	<i>0.0%</i>
Total CDC Global Health	319.1	329.5	336.2	5.4%	353.0	5.0%
Global Tuberculosis	1.6	n/s	n/s	n/s	n/s	n/s
Global Pandemic/Avian Flu	50.9	n/s	49.9	-2.0%	n/s	n/s

Source: Congressional Budget Justifications, appropriations legislation, and CDC officials.

Notes: n/s means not specified. Transfers for the Afghanistan Health and Health Diplomacy programs will not occur until FY2011; the FY2009 and FY2010 budgets are adjusted for comparability purposes.

Priorities in the FY2011 Budget

In the FY2011 Congressional Budget Justification (CBJ) for CDC, the Administration highlighted key priorities for CDC's global health programs including the goal of eradicating polio in the remaining four polio-endemic countries through a partnership with the Organization of the Islamic Conference (OIC).⁵⁴ Other areas of emphasis include increasing efforts to address and contain infectious disease. Key proposals include the following:

Other Global Health

The FY2011 budget includes \$35.1 million for global health programs funded through the "other global health" line, some \$19 million more than FY2010 enacted levels. According to the CBJ, the additional funds will be used to develop at least three new Field Epidemiology and Laboratory Training Programs (FELTP) and expand capacity at four existing programs. The Administration also proposes spending the additional resources on programs related to improving global water, sanitation, and hygiene (\$10 million); and maternal, newborn, and child health (\$2 million).

⁵⁴ See the White House, "Remarks by the President on a New Beginning," press release, June 4, 2009, <http://www.whitehouse.gov/the-press-office/remarks-president-cairo-university-6-04-09>, and United Nations Children's Fund, "United States and Organization of the Islamic Conference Join Forces Against Polio," press release, December 3, 2009, http://www.unicef.org/immunization/index_51990.html.

The HHS Office of Global Health Affairs (OGHA) also proposes transferring \$5.8 million for implementation of the Afghanistan Health Initiative, which aims to improve the capacity of clinicians, particularly in the areas of logistics and health management. In addition, OGHA suggests transferring \$2.0 million for the Health Diplomacy Initiative, which uses U.S. government and private sector resources to deliver direct patient care and train local health workers. This effort is being initiated in Central America.

Global Disease Detection and Humanitarian Health

The Administration proposes spending \$37.8 million on GDD. Though not evident due to rounding, the FY2011 budget request is \$49,000 higher than FY2010 enacted levels. The additional funds will be used to increase oversight activities in Atlanta.⁵⁵ In addition, the FY2011 budget includes \$6.3 million for global health efforts targeted at populations affected by humanitarian emergencies. These activities are funded through the International Emergency and Refugee Health Branch (IERHB). As part of ongoing reorganization efforts, IERHB will become part of the Center for Global Health.

Related Policy Issues

On May 15, 2009, President Obama appointed Dr. Tom Frieden to be the new Director of CDC. Some health experts indicate that the recent appointment of Dr. Tom Frieden signals the Obama Administration's intention to raise the stature of CDC, expand its workforce, and address some of the world's most neglected health challenges, particularly those that CDC is most adept at confronting. The section below discusses some issues the 111th Congress, the Obama Administration and the incoming CDC Director might face.

CDC Reorganization

Dr. Julie Gerberding, over her seven-year term as the Director of CDC, conducted a comprehensive restructuring of CDC through the Futures Initiative.⁵⁶ One of the key changes that she made was to create coordinating centers that would "help CDC's scientists collaborate and innovate across organizational boundaries, improve efficiency so that more money can be redirected to science and programs in our divisions, and improve the internal services that support and develop CDC staff."⁵⁷ There was considerable debate, however, about this change. Arguments centered on whether the restructuring was politically motivated and effective.

Dr. Frieden has already begun to reorganize CDC. Although complete details about the reorganization are not yet available, some information has been made publically available. For example, Dr. Frieden has eliminated the coordinating centers that Dr. Gerberding established.⁵⁸

⁵⁵ E-mail from Elizabeth Crosby, Health Policy Analyst, March 26, 2010.

⁵⁶ See the CDC webpage on the Futures Initiative at <http://www.cdc.gov/futures/> and CRS Report RL34098, *Public Health Service (PHS) Agencies: Background and Funding*, coordinated by Pamela W. Smith.

⁵⁷ CDC, "Letter from Dr. Gerberding," press release, April 21, 2005, http://www.cdc.gov/futures/g_letter_04-21-05.htm.

⁵⁸ See HHS, "Statement of Organization, Functions, and Delegations of Authority," 74 *Federal Register* 68630-68631, December 28, 2009.

This decision was reportedly made following recommendations by an internal panel, which concluded, among other things, that CDC would function more efficiently if it had fewer bureaucratic levels.⁵⁹ The inclusion of key programs, such as the Afghanistan Health Initiative, in the FY2011 CBJ seem to indicate that activities funded through the Center for Global Health (formerly the Coordinating Office for Global Health under Dr. Gerberding) might be expanded. It remains to be seen what role, if any, the Center for Global Health will play in the implementation and coordination of other global health activities managed under other centers, such as safe water and sanitation programs overseen by the National Center for Environmental Health/Agency for Toxic Substances and Disease Registry.

What Role Should CDC Play in U.S. Global Health Assistance?

The Administration's emphasis on disease detection in the FY2011 global health budget request reflects CDC's goal of "protecting people worldwide from infectious, occupational, environmental, and terrorist threats."⁶⁰ The FY2011 proposal includes a \$49,000 increase on activities that would strengthen the capacity of foreign health ministries to "to identify and mitigate emerging public health threats"⁶¹ through the Global Disease Detection program. Nonetheless, some health experts would like more resources to be allotted to enhancing and expanding CDC's work in disease detection and surveillance. Despite the emergence and re-emergence of diseases such as severe acute respiratory syndrome (SARS), pandemic and avian flu, and MDR-TB and XDR-TB over the past decade, funding for GDD has consistently ranked third among the five global health areas—exceeding malaria and "other global health" but receiving less than HIV/AIDS and immunizations. Those expressing concern about GDD funding levels assert that higher funding levels for GDD would enable CDC to expand its global efforts to strengthen laboratory capacity, improve disease surveillance, prevent the spread of diseases, and identify and contain disease outbreaks before they become pandemics.

Some observers would like to see CDC's significant experience in monitoring and evaluating health programs more widely applied to U.S. global health programs. CDC's expertise in this area could be used to evaluate U.S. global health programs, as well as to identify data gaps. Evaluations could be used to determine the most efficient use of U.S. global health funds, particularly as it relates to identifying which health interventions would have the greatest impact on overall health outcomes, both within regions and within countries.

Global Health Initiative

On May 5, 2009, President Obama announced his new Global Health Initiative (GHI), a six-year, \$63 billion from FY2009 to FY2014 to better coordinate the U.S. government's approach to global health programs.⁶² For example, the GHI looks to accelerate the integration of services

⁵⁹ Robert Koenig, "New Chief Orders CDC to Cut Management Layers," *Science*, August 7, 2009, <http://news.sciencemag.org/scienceinsider/2009/08/new-chief-order.html>. Also see, Sheila Poole, "Science, efficiency to drive CDC changes," *Atlanta Journal-Constitution*, January 1, 2010, <http://www.ajc.com/health/science-efficiency-to-drive-264238.html>.

⁶⁰ For more on CDC's health protection goals, see <http://www.cdc.gov/osi/goals/index.html>, and CDC, *State of CDC*, 2008, <http://www.cdc.gov/about/stateofcdc/pdf/SOCDC2008.pdf>.

⁶¹ HHS, *FY2011 CBJ for CDC*, p. 242.

⁶² The White House, "Statement by the President on Global Health Initiative," press release, May 5, 2009, http://www.whitehouse.gov/the_press_office/Statement-by-the-President-on-Global-Health-Initiative/.

related to family planning, maternal health, and HIV/AIDS.⁶³ In announcing the initiative, the President stated,

In the 21st century, disease flows freely across borders and oceans, and, in recent days, the 2009 H1N1 virus has reminded us of the urgent need for action. We cannot wall ourselves off from the world and hope for the best, nor ignore the public health challenges beyond our borders. An outbreak in Indonesia can reach Indiana within days, and public health crises abroad can cause widespread suffering, conflict, and economic contraction. We cannot simply confront individual preventable illnesses in isolation. The world is interconnected, and that demands an integrated approach to global health.

The Administration has indicated that it intends to apply the integrated approach of GHI to all global health programs. However, key documents published by the Administration on the Global Health Initiative focus primarily on global health programs implemented through USAID and the Department of State.⁶⁴ Little is known about the role other agencies, including CDC, might play in its implementation. CDC's FY2011 Congressional Budget Resolution indicates that CDC, along with other HHS agencies, will play a key role in GHI, but no further information is provided.

⁶³ Hillary Rodham Clinton, U.S. Department of State Secretary, "Remarks on the 15th Anniversary of the International Conference on Population and Development," January 9, 2010, <http://www.state.gov/secretary/rm/2010/01/135001.htm>

⁶⁴ For more information on the GHI, see <http://www.pepfar.gov/ghi/>.

Table 5. CDC Global Health Spending: FY2001-FY2011

(current U.S. \$ millions and %)

Program	FY2001 Actual	FY2002 Actual	FY2003 Actual	FY2004 Actual	FY2005 Actual	FY2006 Actual	FY2007 Actual	FY2008 Actual	FY2009 Estimate	FY2010 Estimate	Change FY2009- FY2010	FY2001- FY2010 Total	Change FY2001- FY2010	FY2011 Request	Change FY2010- FY2011
Global AIDS Program	104.5	168.7	182.6	266.9	123.8	122.6	121.0	118.9	118.9	119.0	0.1%	1,446.9	13.9%	118.1	-0.8%
<i>PMTCT/Global AIDS Fund^a</i>	<i>n/s</i>	<i>25.0</i>	<i>39.7</i>	<i>142.0</i>	<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>	<i>State</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
Immunizations	106.6	133.7	147.8	137.9	144.3	144.3	142.3	139.9	143.3	153.7	7.3%	1,393.8	44.2%	152.8	-0.6%
<i>Polio^b</i>	<i>91.2</i>	<i>102.3</i>	<i>105.7</i>	<i>96.8</i>	<i>101.2</i>	<i>101.1</i>	<i>99.8</i>	<i>98.0</i>	<i>101.5</i>	<i>101.8</i>	<i>0.3%</i>	<i>999.4</i>	<i>11.6%</i>	<i>101.6</i>	<i>-0.2%</i>
<i>Other Global/Measles^b</i>	<i>15.4</i>	<i>31.4</i>	<i>42.1</i>	<i>41.0</i>	<i>43.2</i>	<i>43.2</i>	<i>42.6</i>	<i>41.8</i>	<i>41.8</i>	<i>51.9</i>	<i>24.2%</i>	<i>394.4</i>	<i>237.0%</i>	<i>51.2</i>	<i>-1.3%</i>
Malaria	13.0	13.0	12.6	9.2	9.1	9.0	8.9	8.7	9.4	9.4	0.0%	102.3	-27.7%	9.2	-2.1%
Global Disease Detection	0.0	0.0	0.0	11.6	21.4	32.4	32.0	31.4	33.7	37.8	12.2%	200.3	n/a	37.8	0.0%
Other Global Health	0.0	0.0	0.0	2.4	3.4	3.4	3.3	3.5	13.8	16.3	18.1%	46.1	n/a	35.1	115.3%
<i>Afghanistan Health Initiative^c</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>5.8</i>	<i>5.8</i>	<i>0.0%</i>	<i>11.6</i>	<i>n/a</i>	<i>5.8</i>	<i>0.0%</i>
<i>Health Diplomacy Initiative^c</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>4.5</i>	<i>2.0</i>	<i>-55.6%</i>	<i>6.5</i>	<i>n/a</i>	<i>2.0</i>	<i>0.0%</i>
Total	224.1	315.4	343.0	428.0	302.0	311.7	307.5	302.4	308.9	328.4	5.4%	3,189.4	46.5%	353.0	5.0%
Tuberculosis ^d	0.0	1.0	1.1	2.0	2.3	2.2	1.9	2.0	1.6	TBD	n/a	n/a	n/a	n/a	n/a
Pandemic/Avian Flu ^d	0.0	0.0	0.0	0.0	15.0	132.0	22.0	67.8	50.9	TBD	n/a	n/a	n/a	n/a	n/a
Transfers for PEPFAR	n/a	n/a	n/a	184.5	436.3	603.1	916.9	1,262.7	TBD	TBD	n/a	n/a	n/a	n/a	n/a
Transfers for PMI	n/a	n/a	n/a	n/a	n/a	2.8	9.6	12.6	13.2	TBD	n/a	n/a	n/a	n/a	n/a

Sources: Appropriations legislation and correspondence CDC officials.

Notes: Although FY2011 requested levels are lower than FY2010 enacted levels for all other categories, CDC officials indicate that this reduction reflects decreased spending on travel and contract investments rather than programming expenses.

PMTCT means Prevention of Mother-to-Child HIV Transmission; n/a means not applicable.

- a. Global AIDS Fund refers to the appropriation that Congress provided for the Global Fund to Fight AIDS, Tuberculosis, and Malaria. The Global Fund had not yet been named. Congress began to direct funds to CDC for PMTCT activities in FY2003; the “n/s” in the FY2001 column indicates that Congress did not specify funds for that activity. After FY2004, Congress funded PMTCT activities through the State Department, which oversees all global HIV/AIDS funds, though CDC continues to implement PMTCT programs. “State” reflects this change.
- b. Figures related to polio and “other global/measles” are italicized to indicate that they are included in the Global Immunization total.
- c. Transfers for the Afghanistan and Health Diplomacy programs will not occur until FY2011; the FY2009 and FY2010 budgets have been adjusted for comparability purposes.
- d. Congress does not appropriate funds to CDC for global TB and pandemic/avian influenza activities. CDC allots a portion of its TB and pandemic/avian Influenza appropriations to global programs. Spending on combating these diseases is included here, however, because the related interventions are critical parts of CDC’s global health efforts.

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