Centers for Disease Control and Prevention
Global Health Programs: FY2001-FY2010

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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 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.

From FY2001 to FY2009, Congress provided about $3.3 billion to CDC for global health programs. In addition, CDC received transfers from the Office of the Global AIDS Coordinator (OGAC) as an implementing partner of PEPFAR, and transfers from the U.S. Agency for International Development (USAID) for PMI. Including these transfers, CDC’s spending on global health activities from FY2004 to FY2008 totaled $5.2 billion, of which 78% was targeted at HIV/AIDS programs. Data on FY2009 transfers have not yet been provided to CRS.

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 FY2010, Congress approve $9.1 billion for all global health programs, including $479.8 million to CDC for global health programs—an estimated 3.4% increase over FY2009 enacted levels for CDC global health activities. In the House (H.Rept. 111-220) and Senate Appropriations Committee (S.Rept. 111-66) reports accompanying the FY2010 Labor, HHS, Education Appropriations (H.R. 3293), funds for CDC’s global health activities exceed the President’s request by some $4 million and $14 million, respectively.

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. 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 FY2009, highlights FY2010 budget proposals from the Administration, House, and Senate Appropriations Committee, 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. As CDC’s mission expanded, so have the authorities under which it operates. 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 through five main budget lines: Global HIV/AIDS, Global Malaria, Global Disease Detection, Global Immunization, and Other Global Health. In practice, CDC does not
treat its domestic and global programs separately. Instead, it uses the same experts to address domestic and global health issues. As such, CDC is engaged in a wider range of activities than what Congress appropriates for global health initiatives.

CDC programs are implemented bilaterally and in cooperation with other U.S. agencies, international organizations, foreign governments, foundations, and nonprofit organizations. In addition to the funds Congress provides to CDC for global health programs, the Office of the Global AIDS Coordinator (OGAC) at the U.S. Department of State transfers funds to CDC as an implementing partner of PEPFAR, which is implemented by a number of agencies and departments. U.S. Agency for International Development (USAID) also transfers funds to CDC as an implementing partner of PMI. The section below describes global health activities that Congress funds CDC to implement.

Global HIV/AIDS

CDC launched its Global AIDS Program (GAP) in 2000 under the LIFE Initiative. GAP supports HIV/AIDS interventions in 41 countries and offers technical assistance in an additional 29 others. 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.

For more information on CDC’s partnerships, see http://www.cdc.gov/cogh/partnerships.htm.


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.


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

Congressional Research Service 2
President’s Emergency Plan for AIDS Relief (PEPFAR)

CDC’s spending and engagement on addressing HIV/AIDS expanded 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. As an implementing partner of PEPFAR, CDC also receives funds from the Office of the Global AIDS Coordinator (OGAC) to combat HIV/AIDS globally. These transferred funds account for the majority of CDC spending on international HIV/AIDS efforts. 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. OGAC has not yet released how much it will transfer to each PEPFAR implementing agency or department in FY2009.

Global Malaria

Through its malaria programs, CDC conducts research and engages in prevention and control efforts. 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; 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. 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;

(...continued)


11 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.

• 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. USAID has not yet released how much it will transfer to CDC for global malaria programs in FY2009.

Global Tuberculosis

CDC collaborates with U.S. and multilateral partners to provide technical support in the global effort to eliminate tuberculosis (TB). 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;¹⁴
• improvement of TB screening and diagnostics;
• 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 multi-drug resistant TB (MDR-TB).¹⁵ Multilateral partnerships also include joint efforts with WHO to conduct surveillance of drug resistant TB. From 2000 through 2004, CDC and WHO (with support from USAID) conducted research to determine the extent of TB-drug resistance.¹⁶ Just two months after releasing its findings, in May 2006, South African officials invited CDC and WHO officials to investigate an outbreak of extremely drug-resistant (XDR-TB), which caused several deaths in KwaZulu-Natal, South Africa. Many health experts were alarmed by the

¹³ 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.

¹⁴ 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.

¹⁵ 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/.

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.” 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 six 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 Thailand, Kenya, Guatemala, China, Egypt and Kazakhstan—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. 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.

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.\(^2^0\) The United States is the largest single donor to global avian and pandemic preparedness efforts.\(^2^1\) The funds have been used to 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;\(^2^2\)
- $67 million for stockpiles of non-pharmaceutical supplies, including over 1.6 million PPE kits, approximately 250 laboratory specimen collection kits and


\(^{22}\) For more information about GAINS, see http://www.gains.org/.
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/HIN1; 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 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.\(^23\) CDC creates or develops reagents that are used to detect subtypes of influenza that are sent to national influenza centers around the world.\(^24\) 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

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\(^23\) 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/.

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.”25 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.26 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 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) has also provided support. Foreign assistance efforts largely focus on commodity delivery and disease detection and surveillance.

Table 1. U.S. Assistance for International H1N1 Responses, FY2009
(U.S. $ thousands)

<table>
<thead>
<tr>
<th>Agency/Implementing Partner</th>
<th>Activity</th>
<th>Location</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHS/Government of Mexico</td>
<td>Health</td>
<td>Mexico</td>
<td>10,000.0</td>
</tr>
<tr>
<td>USAID/Government of Mexico</td>
<td>Emergency Relief Supplies</td>
<td>Mexico</td>
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<td>USAID/Pan American Health Organization (PAHO)</td>
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<td>USAID/PAHO</td>
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<td>Central America</td>
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<tr>
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<tr>
<td>DOD/Ministries of Health</td>
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<tr>
<td>Total U.S. Assistance</td>
<td></td>
<td></td>
<td>16,471.7</td>
</tr>
</tbody>
</table>

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, 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). The conference report did not specify, however, how much of the $200 million CDC should spend on international efforts.

**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). 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 FY1991 to $143.3 million in FY2009. 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.

In partnership with WHO and UNICEF, CDC developed the Global Immunization Vision and Strategy for 2006-2015 (GIVS) 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

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28 WHO Website, [Vaccine-Preventable Diseases](http://www.who.int/immunization_monitoring/diseases/en/).

