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Emerging Pandemic Threats Program

December 2012



Focus countries for USAID's Emerging Pandemic Threats program.

The Emerging Pandemic Threats (EPT) program strengthens capacities in developing countries to prevent, detect, and control infectious diseases in animals and people with an emphasis on early identification of, and response to, dangerous pathogens from animals before they can become significant threats to human health.

U.S. Agency for International Development
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BACKGROUND

Nearly 75 percent of all new, emerging, or re-emerging diseases affecting humans at the beginning of the 21st century are zoonotic (i.e. originated in animals). Notable reminders of how vulnerable the increasingly interconnected world is to the global impact of new emergent diseases include HIV/AIDS, severe acute respiratory syndrome (SARS), the H5N1 strain of avian influenza, and the 2009 pandemic H1N1 influenza virus. The speed with which these diseases can emerge and spread presents serious public health, economic, and development concerns. It also underscores the need for the development of comprehensive disease detection and response capacities, particularly in “hot spot” areas such as central Africa, South and Southeast Asia, and Latin America where a confluence of risk factors may contribute to disease emergence. Recognizing this need, the U.S. Agency for International Development (USAID) launched the Emerging Pandemic Threats (EPT) program in 2009 to aggressively pre-empt or combat diseases that could spark future pandemics. These activities are focused in 20 countries and complement existing pandemic preparedness and H5N1 avian influenza activities supported by USAID.

THINK GLOBALLY, ACT LOCALLY

Composed of four complementary projects—PREDICT, PREVENT, IDENTIFY, and RESPOND—with technical assistance from the U.S. Centers for Disease Control and Prevention (CDC), the EPT global program draws on expertise from across the animal and human health sectors to build regional, national, and local “One Health” capacities for early disease detection, laboratory-based disease diagnosis, rapid response and containment, and risk reduction. The EPT program coordinates closely with other U.S. Government agencies, international organizations, and donors.

At the country level, the EPT partners are working with governments and other key in-country and regional partners to enhance the understanding of viral distribution and key drivers of disease emergence—from deforestation and land use change to wildlife trade and livestock product demands. This information, along with other EPT investments to strengthen country-level capacities for routine infectious disease detection and outbreak response, will be used to improve surveillance and response as well as risk-mitigation strategies. These efforts will safeguard human and animal health and livelihoods in locations in Africa, Asia, and Latin America where new pandemic threats are likely to emerge.

CONTINUES >



Photo: A. Clements/USAID

Surveillance for new pandemic threats in “hot spot” countries in Africa, Asia, and Latin America focuses on wildlife (particularly non-human primates, bats, and rodents) as well as people with close contact with wildlife.



Photo: A. Clements/USAID

The EPT program is strengthening laboratory capacity to detect and report common infectious diseases in humans and wildlife as well as new disease threats.

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PARTNERS AND ACTIVITIES

PREDICT project: implementing partners are University of California-Davis, EcoHealth Alliance, Metabiota Inc. (formerly Global Viral Forecasting Inc.), Smithsonian Institution, and Wildlife Conservation Society with support from Columbia and Harvard universities.

PREDICT focuses on detection and discovery of zoonotic diseases at the wildlife-human interface. Specific activities include: strengthening surveillance and laboratory capacities in order to monitor wildlife and people in contact with wildlife for novel pathogens that may pose a significant public health threat; characterizing human and ecological drivers of disease spillover from animals to people; strengthening and optimizing models for predicting disease emergence and using this information to improve surveillance; and supporting outbreak response when requested.

PREVENT project: implementing partners are FHI 360 and Metabiota Inc.

PREVENT focuses on characterizing risks associated with disease transmission between animals and people and developing risk-mitigation strategies. Specific activities include: characterizing specific practices and behaviors (e.g. bushmeat hunting and butchering, raising wildlife for trade and consumption) that expose people to zoonotic diseases; and developing and deploying risk-mitigation strategies, including a tool for extractive-industry workers to decrease their exposure to emerging zoonoses.

IDENTIFY project: implementing partners are Food and Agriculture Organization (FAO) of the United Nations, World Health Organization (WHO), and World Organization for Animal Health (OIE).

IDENTIFY focuses on strengthening laboratory capacity to safely diagnose and report common animal and human pathogens. Specific activities include: improving laboratory assessment tools to allow for better targeting of technical support and training; developing and rolling out training modules on diagnosing highly-infectious diseases; improving laboratory management practices related to biosafety and biosecurity; "twinning" labs with developed country labs; and expanding monitoring of antimicrobial resistance rates among priority bacterial pathogens.

RESPOND project: implementing partners are Development Alternatives Inc., Tufts University, University of Minnesota, Ecology and Environment, and Training Resources Group.

RESPOND focuses on pre-service workforce training and strengthening outbreak response capacity. Specific activities include: networking 28 schools of public health, veterinary medicine, and environment in both Africa and Southeast Asia to promote a “One Health” approach among future graduates; developing an outbreak response algorithm for health events where the cause has not yet been identified; and supporting outbreak response when requested.

CDC

CDC focuses on pathogen detection as well as outbreak investigation and response. Specific activities include: strengthening surveillance and lab capacity; enhanced monitoring for zoonotic pathogens in people with frequent contact with wildlife; in-service Field Epidemiology Training Programs (FETP); and supporting outbreak response when requested.