

CHAPTER 4 — INTERNATIONAL EFFORTS

Introduction

Pandemic influenza is a global threat. Given the rapid speed of transmission, the universal susceptibility of human populations, and even a modest degree of lethality, an outbreak of pandemic influenza anywhere poses a risk to populations everywhere. Our international effort to contain and mitigate the effects of an outbreak of pandemic influenza beyond our borders is a central component of our strategy to stop, slow, or limit the spread of infection to the United States.

To meet this important international challenge, all nations and the broader international community must be able to detect and respond rapidly to outbreaks of animal or human influenza with pandemic potential to contain the infection and delay its spread. Many countries, however, do not have sufficient resources or expertise to detect and respond to outbreaks independently. International mechanisms to support effective global surveillance and response, including coordinated provision of accurate and timely information to the public, are also inadequate.

For these reasons, through the International Partnership on Avian and Pandemic Influenza (the Partnership), established by President George W. Bush in September 2005, and other bilateral and multi-lateral international engagement, the Federal Government is heightening awareness of the threat on the part of foreign governments and publics, and promoting development of national and international capacity and commitment to prevent, detect, and limit the spread of animal and human pandemic influenza within and beyond national borders. We are elevating pandemic influenza on national agendas, coordinating efforts among donor and affected nations, mobilizing and leveraging global resources, increasing transparency in global disease reporting and surveillance, and building global public health capacity. The United States is also offering bilateral assistance to strengthen capacity to fight pandemic influenza in the countries at highest risk.

Key Considerations

With the ever-present threat that a newly emerging strain of animal influenza could spark a human pandemic, it is essential that highly pathogenic viruses in animals, wherever they appear, be carefully monitored for changes that could indicate an elevated threat to humans. An outbreak of a novel strain or subtype of influenza capable of sustained and efficient human-to-human transmission, which could occur in the United States or abroad, would spread quickly within an affected community, doubling in size approximately every 3 days. Thorough preparedness, robust surveillance, and strong response on the part of all countries are critically important, as the probability of containing an outbreak of a pandemic virus at its site of origin depends on how quickly a country detects and reports it, shares and tests viral samples, distributes effective countermeasures, and implements public health measures to limit spread.

There are significant challenges to a rapid response to an incipient human pandemic in many countries at risk. The threat of pandemic influenza may not be widely recognized or understood. Many countries at risk lack robust public health and communications infrastructure, pandemic preparedness plans, and proven logistics capability. In many developing countries the livelihood of families is linked to the animals they own, and reporting an outbreak of animal influenza can result in the destruction of a family's animals and, therefore, a threat to their livelihood. Lack of infrastructure and expertise to detect

an outbreak in a remote location and quickly transport a sample to a laboratory with appropriate diagnostic capability can impede timely and effective application of countermeasures. Many countries at risk also do not have the veterinary, medical, and non-medical countermeasures, including antiviral medications, to contain a confirmed outbreak.

To promote an effective global response to a pandemic outbreak, donor countries and relevant international health organizations should assist countries that have less capacity and expertise as well as fewer of the necessary resources.

Limited International Capacity

In many of the countries in which the risk of emergence of pandemic influenza is considered to be high, the animal and human health sectors lack the expertise, resources, and infrastructure necessary to effectively detect and contain animal cases and prevent human cases. Recent outbreaks of avian influenza in Asia, Europe, and Africa highlight critical shortcomings in national human and animal disease surveillance and reporting. Early warning and clinical surveillance systems are insufficient to detect changes in an influenza virus that could lead to emergence of a pandemic strain. Key gaps include lack of understanding of the nature of the threat and ways to prevent it, scarcity of well-trained laboratory, epidemiologic, medical, and veterinary staff to provide effective in-country surveillance, and the need for greater commitment and capacity to share data, specimens, and viral isolates rapidly and transparently with national and international animal and human health authorities. International animal and human health mechanisms and resources also need to be strengthened.

Because the risk to public health from an animal influenza virus with human pandemic potential is directly related to the ability to detect and control such viruses in animal populations, the effectiveness of national veterinary services of affected, high-risk, and at-risk countries is critical to minimize human exposure to threatening animal viruses. The objective of controlling or eliminating an animal influenza virus with pandemic potential can only be attained, and then maintained, through concurrent strengthening of national veterinary services. This will require international support for the development of sustainable veterinary services in affected, high-risk, and at-risk countries, and the domestic will of those countries to make such development a priority. Support for development should be based on a unified assessment approach that can be applied in a consistent manner to individual countries to help determine what must be done to create an adequate and sustainable animal health infrastructure.

Likewise, in many countries, limited capacity to detect and control outbreaks of respiratory diseases among humans also adversely impacts on international ability to detect and control the emergence of an influenza pandemic. Countries must give priority to strengthening their public health and respiratory disease case management capacities. The international community must support this prioritization in a consistent and coordinated manner.

As a key part of the U.S. Government's international efforts in support of the *National Strategy for Pandemic Influenza (Strategy)*, under the coordination of the Department of State (DOS) and the U.S. Agency for International Development (USAID), the Department of Health and Human Services (HHS), the Department of Agriculture (USDA), the Department of Homeland Security (DHS), the Department of Transportation (DOT), and the Department of Defense (DOD) are working in cooperation, through complementary strategies, to build capacity in countries at risk to address aspects of avian influenza related to human and animal health.

Preparedness and Planning

Comprehensive preparation including the development and exercise of national and regional plans to respond to a pandemic will facilitate containment efforts and should help mitigate social impacts when containment fails. HHS, DOS, USAID, and USDA are working together to assist priority countries, especially those in which highly pathogenic H5N1 avian influenza is endemic or emerging, to develop, and exercise plans for effective response to a possible extended human pandemic outbreak. We also are supporting public education and risk communication on best practices to prevent and contain animal and human infection.

Surveillance and Response

A country's ability to respond to a human outbreak quickly, requires a broad surveillance network to detect cases of influenza-like illnesses in people, coupled with rapid diagnostic and response capabilities. To help address these challenges, HHS and USAID, in collaboration with DOS, DOD, and international partners, will work together and with the WHO Influenza Network to assist countries at risk, including those that are experiencing outbreaks of H5N1 highly pathogenic avian influenza, to build and improve infrastructure at the central, provincial, and local levels to provide timely notification of suspected human cases of influenza with pandemic potential. Building this capability in countries at risk will facilitate monitoring of disease spread and rapid response to contain influenza outbreaks with pandemic potential. HHS, USAID, DHS, and DOS will support development of rapid response teams, coordinated logistics capability, and new modeling efforts to support containment; increase involvement of the private sector in prevention and control of animal influenza, pandemic planning, and risk management; and improve the ability of the health care sector to control infection and manage cases.

Donor Coordination

To fully address the needs of countries at risk, increased assistance from other countries and international organizations is necessary. In addition, donors must coordinate international assistance resources and activities to avoid duplication of effort and maximize results. DOS, with relevant U.S. Government agencies, is working through the Partnership and other multilateral and bilateral diplomatic contacts to encourage increased, coordinated, international assistance. The United States also will intensify efforts to engage the private sector on the role it can play in preparing for and responding to a pandemic outbreak.

In our bilateral assistance efforts, the United States takes into account assistance pledged by other donors. We target bilateral assistance and expertise to build global veterinary and public health capacity in the countries we believe to be at highest risk, taking into account existing country capacities and needs, and the likelihood that U.S. Government funding will have an impact in a particular country or region given the disease situation, population size, and existing capacities and needs, which vary from country to country. U.S. assistance abroad is intended to protect the health of the American people abroad.

Strengthening International Animal Health Infrastructure

To address needs related to developing sustainable animal health infrastructures in affected, high-risk, or at-risk countries, we will work with the World Organization for Animal Health (OIE), the United Nations (UN) Food and Agriculture Organization (FAO), and other members of the Partnership to develop a unified and consistent approach for such infrastructure development in all countries. The approach will include an assessment of needs for the reduction of animal influenza with human pandemic potential in countries where it exists, and of needs that individual countries may have in making the building of their

national veterinary services capacity a domestic priority. Potential options for funding to meet those needs will also be identified. The ultimate goal will be to implement a program through the OIE and FAO and other partners to develop stronger international coordination and support for the animal health response to the current H5N1 avian influenza outbreak in Asia, Europe, and Africa, and for prevention and containment of any future animal disease outbreaks of international concern or consequence.

Key Elements of Effective International Response and Containment

To contain an outbreak of influenza with pandemic potential or delay its spread, a coordinated response by the international community in support of national efforts is key. Many affected countries or regions will require international assistance to detect cases early and respond quickly and effectively to prevent spread. Instituting countermeasures to prevent or slow the spread of infection, including exit and entry screening, restrictions on movement across borders, and rapid deployment of international stocks of antiviral medications, requires international preparation and coordination to be most effective. The U.S. Government is working with WHO, the Partnership, and through diplomatic contacts to strengthen international mechanisms to respond to an outbreak of influenza with pandemic potential, including finalization of WHO's doctrine of international response and containment which lays out the responsibilities of the international community and countries with human outbreaks, and includes provisions to develop and deploy critical resources needed to contain the virus. The U.S. Government considers the following to be key elements of an international response effort.

Agreed Epidemiological "Trigger" for International Response and Containment

While WHO has stated that the first potential signal of early pandemic activity cannot be known in advance and precise "triggering" activity cannot be fully developed ahead of time, WHO also has stated that containment will be strongly considered in the following circumstances:

- Moderate-to-severe respiratory illness (or deaths) in three or more health care workers who have no known exposure other than contact with ill patients, and laboratory confirmation of infection (novel influenza virus) in at least one of these workers.
- Moderate-to-severe respiratory illness (or deaths) in 5 to 10 persons with evidence of human-to-human transmission in at least some, and laboratory confirmation of infection (novel influenza virus) in more than two of these persons.
- Compelling evidence that more than one generation of human-to-human transmission of the virus has occurred.
- Isolation of a novel (influenza) virus combining avian and human genetic material or a virus with an increased number of mutations not seen in avian isolates from one or more persons with moderate-to-severe respiratory illness (acute onset), supported by epidemiological evidence that transmission patterns have changed.

The WHO also has stated that containment will not be attempted in any of the following circumstances:

- Laboratory studies fail to confirm infection caused by a novel influenza virus.
- The number or geographical distribution of affected persons is so large at time of detection that it renders containment impracticable for logistic reasons (i.e., the number of persons requiring prophylactic administration of antiviral drugs exceeds available supplies, or the size of the

affected community makes it impossible to ensure adequate supplies of food and shelter, and the provision of medical care and emergency services during a containment operation).

- More than 4 to 6 weeks have passed since detection of the initial cluster, thus decreasing the likelihood that containment would be successful.

The feasibility of rapid containment will further depend on the number of contacts of the initial cases and the ability of the government authorities and international teams to ensure basic infrastructure and essential services to the affected population. Such services include shelter, power, water, sanitation, food, security, and communications with the outside world.

With disease confirmation, the WHO Director-General would announce a human outbreak of an influenza virus with pandemic potential, after consultation with experts from HHS and scientists from other governments. As outlined above, the basis for announcing a human outbreak of pandemic potential would consider a number of factors, including the number of individuals affected, the rapidity of spread, and the virulence of the disease. An outbreak of an influenza virus with pandemic potential is considered a Public Health Emergency of International Concern under the revised International Health Regulations, adopted by the World Health Assembly in May 2005.

Rapid, Transparent Reporting and Sharing of Samples

Countries should immediately take certain actions in response to a suspected outbreak, including prompt reporting of the outbreak to the WHO Secretariat, sharing of viral isolates and/or tissue samples with WHO-designated laboratories for confirmation and vaccine development, activation of national response plans in an effort to contain the outbreak, implementation of public health measures including prophylaxis, vaccination, and social distancing measures (e.g., school closures, snow days, quarantines) in the affected area, epidemiological investigation to identify additional cases and pinpoint the source of the infection, and implementation of screening of passengers. The United States will work with the international community to develop capacity and resources to encourage these actions by countries and regions affected by human outbreaks.

Rapid Response Teams

The international community should develop international Rapid Response Teams to investigate and respond to the suspected beginning of a pandemic. The United States is identifying experts to commit to the teams and encouraging other countries with significant veterinary and public health capacity to do the same. The international community should encourage and assist the WHO Secretariat, the FAO, and the OIE to organize, train, equip, exercise, and deploy these teams.

Stockpiles of Countermeasures

Medical and non-medical countermeasures should be stockpiled and pre-positioned for rapid deployment to help ensure that countries affected by an outbreak of pandemic influenza can launch an effective effort to contain the incipient pandemic. The WHO Secretariat has called for the establishment of an international stockpile of medical countermeasures and the development of an agreed international plan to allocate and deploy them in the event of a pandemic outbreak. WHO is now working with health experts to determine the size, composition, and locations of stockpiles needed for a rapid and effective response and to develop a doctrine of deployment. The U.S. Government has identified medical countermeasures it is prepared to commit for deployment to the international stockpile when needed, and is

urging other countries to do the same. We also are supporting international efforts to stockpile non-medical countermeasures, both goods and services, to support containment of animal or human influenza outbreaks with pandemic potential, including transportation of personnel and materiel, personal protective equipment, screening and isolation equipment, disinfectants, temporary shelters, and technical and logistical resources needed to implement an effective containment response.

Logistical Support for an International Response

The international community needs to develop a plan and to identify resources to rapidly transport personnel, supplies and other materiel to support an international containment response, including in geographically remote or underdeveloped locations. The U.S. Government is determining its capabilities in this regard, and will encourage the international community to explore the logistical needs for a coordinated international response and how to address them.

Surveillance to Limit Spread

Early outbreak detection with continued surveillance of travelers and institution of appropriate measures, including social distancing, isolation of infected individuals, quarantine of suspected cases, or treatment with antiviral medications can help delay or limit the spread of a virus once a case occurs. Well-coordinated international implementation of entry and exit restrictions is an important component of an effective global response to contain cases and prevent a pandemic. All countries should prepare to implement steps to limit spread, including local, regional, and national entry and exit restrictions based on veterinary and health monitoring, screening and surveillance for humans, animals, and animal products, and information sharing and cooperation to manage borders. Recognizing the significant costs to implementing border restrictions and the need for international coordination to achieve maximum efficacy, the U.S. Government is examining which surveillance steps will be most effective in limiting spread, including pre-departure exit screening for travelers from affected areas, a reduction of the number of entry and exit points to the United States for international travelers, disease surveillance and entry screening at U.S. borders, and exit screening for travelers leaving the United States in the event of a case occurring here. The international community should provide technical assistance and support personnel to countries that need it to implement screening quickly and effectively. We will endeavor to establish agreements and arrangements with our international partners to ensure the international community takes coordinated action on screening, that such measures are tailored as narrowly as possible to be consistent with efficacy, and that they are lifted quickly when their utility has ended.

Development of Vaccines and Rapid Diagnostics

Vaccines when they become available will be a major means of controlling the spread of a pandemic and reducing associated mortality and morbidity. The vaccine industry, however, faces many risks and uncertainties, including unpredictable market demand and pricing, liability and intellectual property considerations, and regulatory and tax issues. As a result, global and domestic vaccine research and manufacturing capacity is limited. Strong public/private partnerships are needed among government, academia, and industry globally as well as nationally to build vaccine production capacity to levels necessary to address a pandemic and establish a reliable vaccine supply. In addition to its efforts to increase domestic vaccine production capacity, the United States is working through several programs to provide direct and indirect support to multinational vaccine manufacturers, foreign academic institutions, and foreign governments to increase global vaccine production capacity. HHS is supporting advanced development of cell-based influenza vaccines, the evaluation of new H5N1 vaccine candidates, and

development of global capacity to produce large quantities of pre-pandemic vaccine (i.e., a vaccine against human infection with the strain of influenza A (H5N1) that is currently circulating among poultry) on a commercial scale through the award of contracts to U.S. and international companies. HHS also is supporting development of H5N1 vaccines in Vietnam and other countries at risk, and beginning discussions with health officials in Southeast Asia concerning possible joint clinical evaluation of avian influenza vaccines in human subjects. HHS also will continue to support development of pandemic influenza vaccines at eligible international as well as domestic research institutions. HHS, USDA, and the Department of the Interior (DOI) are supporting additional efforts to sequence influenza viruses from wild birds, live bird markets, and pigs in Asia and North America, with plans to expand surveillance and collection sites in the future.

The development of rapid diagnostic tests and the distribution of diagnostic reagents and tests are also critical components of pandemic influenza preparedness. USDA has developed and applied a real-time diagnostic protocol to analyze influenza in animal specimens and is assisting countries to adopt and apply this protocol in support of surveillance and response programs for avian influenza among animals. The HHS Centers for Disease Control and Prevention (CDC) and the private sector have developed high-throughput rapid diagnostic kits that can provide results in 4 hours and will undergo field testing by U.S. and Southeast Asian scientists and public health officials to ascertain the utility and robustness of these products in real-time scenarios for detection and reporting of influenza and other viruses in humans and animals.

Effective Public Communication

Public audiences in affected countries and countries at risk will require targeted communications in local languages to understand the threat of influenza with pandemic potential in animals and of human pandemic influenza, the preventive measures that should be taken now, and what actions must be taken if a pandemic occurs. The WHO Secretariat requires the resources to develop and implement international media and risk communications strategies. The Federal Government is pursuing a two-track approach. HHS, USAID, USDA, DOD, and DOS are implementing coordinated, complementary communication plans to reach their respective constituencies with focused and consistent messages. In addition, the Federal Government is working with the WHO Secretariat to coordinate U.S. Government messages with those of other countries so the public receives the same message from their governments, WHO, and U.S. public health authorities. In addition to executing a comprehensive risk communication strategy in the United States, HHS also is working with health officials overseas to develop effective local language health-based messages for the foreign audiences. USAID and USDA are targeting behavior change communications to poultry farmers and the general public in affected regions and DOS is implementing broad-based domestic and international communications plans that inform U.S. and foreign audiences about international initiatives and plans to address the threat of avian and pandemic influenza.

Assistance to United States Citizens Traveling or Living Abroad

The Federal Government will provide U.S. citizens living and traveling abroad with timely, accurate information on avian influenza, through websites, travel information, and meetings. U.S. Embassies and Consulates in countries in which a virus with pandemic potential has been found in wild and/or domestic birds, or where human cases have occurred, will use town hall meetings and their local warden system information networks to disseminate information and enable U.S. citizens to make informed decisions. U.S. Embassies and Consulates are also working to identify local medical capabilities and resources that would be available to Americans in the event of a “stay in place” response to a pandemic,

noting WHO and HHS advice that the close physical proximity entailed by air travel poses a particular risk of human-to-human transmission. The Federal Government's ability to provide consular assistance to U.S. citizens who are living and traveling abroad in the event of a pandemic may be limited because travel into, out of, or within a country may not be possible, safe, or medically advisable.

Assistance to the United States

We will develop policies to request, accept, and utilize foreign aid, both material and personnel, quickly in the event that a pandemic outbreak first occurs in the United States, or elsewhere in North America or the Western Hemisphere.

Roles and Responsibilities

The responsibility for preparing for, detecting, and responding to an outbreak of influenza with pandemic potential is global. An outbreak anywhere is a threat to populations everywhere. All nations and relevant international organizations have a responsibility to prepare to respond immediately and leverage all resources, domestic and international, to contain human or animal cases, wherever they may occur. In the event of an outbreak, the government of the affected nation has an obligation to report it immediately to appropriate international organizations (e.g., WHO, OIE) and share epidemiological data and samples with relevant international organizations. In addition, the Federal Government, States, tribal entities, and localities, private sector entities with activities overseas, and international health organizations all have key roles to play in fighting pandemic influenza.

The Federal Government

The Federal Government will encourage engagement by other governments, relevant international organizations, and the private sector to strengthen international capacity and commitment to prepare for, detect, and respond to animal or human outbreaks of influenza with pandemic potential.

Department of State: DOS leads the Federal Government's international engagement, bilateral and multilateral, to promote development of global capacity to address an influenza pandemic. With technical support from HHS and USDA, DOS also leads coordination of the Federal Government's international efforts to prepare for and respond to a pandemic, including the interagency process to identify countries requiring U.S. assistance, identify priority activities, and ensure Federal Government assistance reflects those priorities. DOS is also the coordinating agency for the International Coordination Support Annex to the *National Response Plan* (NRP), with assistance provided by other Federal agencies. DOS is responsible for providing consular services to American citizens who are traveling or residing abroad, including endeavoring to inform American citizens abroad where they can obtain up-to-date information and pandemic risk level assessments to enable them to make informed decisions and take appropriate personal protective measures. DOS sets policies for Federal employees who are working abroad under Chief of Mission authority, including in the event of a pandemic.

In carrying out these responsibilities, DOS works closely with other Federal departments and agencies that bring critical expertise to bear and play a key role in our international prevention and containment efforts, including through engagement with their counterparts in foreign governments and with relevant international organizations. Overseas, in particular, Federal Government departments and agencies cooperate under the authority of the Chief of Mission to bring their respective expertise and resources to bear in a coordinated Federal Government effort.

U.S. Agency for International Development: USAID leads on international disaster response, the development of health capacity abroad, including public health capacity, the training of non-health professionals, and operational coordination for the provision of U.S. international health and development assistance. USAID plays a critical role in bridging between the human and animal health sectors to ensure a comprehensive and cross-sectoral international response to the threat of avian influenza. With technical guidance from HHS and USDA respectively, USAID will work closely with WHO and FAO to ensure strong coordination and standardization of efforts to prepare for, identify, and respond to outbreaks of influenza with pandemic potential in either animal or human populations. In addition, working through non-governmental organizations (NGOs) and the private sector, USAID will expand capacities for the early detection of outbreaks, and support behavior change communications and public efforts in affected countries. A key part of these efforts will be to provide direct financial and commodity support to country-level rapid response teams to ensure timely and effective containment of influenza outbreaks in humans and animals.

Department of Health and Human Services: HHS's primary international responsibilities are those actions required to protect the health of all Americans, in cooperation with the Secretariat of the WHO and other technical partners, including leading Federal Government efforts in the surveillance and detection of influenza outbreaks overseas; supporting rapid containment of localized outbreaks of novel human influenza viruses where and when containment is feasible; leading Federal Government participation in international collaboration on research into human influenza, including zoonotic varieties; providing training to foreign health professionals in how to recognize and treat influenza; providing training and guidance to national and local public health authorities in foreign nations on the use, timing, and sequencing of community infection control measures; and implementing any necessary travel restrictions. HHS's international roles and responsibilities are further defined in the International Coordination Support Annex to the NRP. HHS also will work with USAID in developing local-language campaigns overseas to communicate information related to pandemic influenza, and in supporting the U.S. Government's participation in international efforts to stockpile countermeasures against possible influenza pandemics, and offer our international partners recommendations related to the use, distribution, and allocation of such countermeasures. HHS is the lead Federal Government technical agency for interactions within the Global Health Security Action Initiative, manages the development of a North American Pandemic Influenza Plan under the Security and Prosperity Partnership of North America, and supports DOS in diplomatic and scientific efforts undertaken under the umbrella of the International Partnership on Avian and Pandemic Influenza.

Department of Agriculture: USDA leads the Federal Government's participation in international collaboration on animal health research, risk analyses, transboundary movement of animals and animal products, governance of international agricultural organizations (e.g., FAO, OIE), and delivery of veterinary and agricultural expertise to other countries. USDA personnel at U.S. missions throughout the world collect information, facilitate policy dialogue, and encourage host countries' cooperation with the United States and compliance with international standards on matters concerning animal health. USDA conducts agricultural research and technical and policy outreach with its established public (e.g., land-grant universities) and private stakeholders, strategically coordinating with international, domestic, and other Federal Government participants. USDA analyzes the short- and long-term economic impact of influenza outbreaks among animals, as well as the impact of a potential pandemic on the agricultural sector, while pursuing prevention and control strategies to support international agricultural systems and commerce.

Department of Homeland Security: DHS coordinates overall Federal domestic incident management in accordance with the NRP and supports implementation of the International Coordination Support

Annex to the NRP. With respect to the U.S. Government's international efforts to fight pandemic influenza, DHS supports DOS as the coordinating agency for the international component of an incident under the NRP. DHS, in coordination with DOT, will engage the international transportation industry via the various industry associations and groups. DHS, in collaboration with DOS and HHS, leads the effort to engage foreign entities in sharing passenger manifest information on travelers exposed to pandemic influenza. DHS supports DOS, DOT, and HHS efforts with foreign governments to screen and limit travel to the United States of travelers exposed to pandemic influenza.

Department of Transportation: DOT will support DOS efforts to coordinate with other Federal Government participants on international pandemic response. DOT will collaborate with DHS to implement transportation and border measures, conduct outreach with its public and private stakeholders, and provide emergency management and guidance for civil transportation resources and systems. In its role in the global transportation network, DOT will support international efforts by marshaling transportation planning and emergency support activities.

Department of Defense: DOD supports DOS in international engagement to promote global capacity to address an influenza pandemic consistent with its national security mission. DOD is responsible for the protection of its forces, including providing up-to-date information and pandemic risk-level assessments to enable DOD forces abroad to make informed decisions and take appropriate personal protective measures. The first priority of DOD support, in the event of a pandemic, will be to provide sufficient personnel, equipment, facilities, materials, and pharmaceuticals to care for DOD forces, civilian personnel, dependents, and beneficiaries to protect and preserve the operational effectiveness of our forces throughout the globe. DOD sets policies for deployed military forces working abroad in the Geographic Combatant Commander's area of responsibility and under the commander's command authority, consistent with the responsibilities outlined in the Unified Command Plan. DOD, in conjunction with DOS and HHS, will utilize its existing research centers to strengthen recipient nation capability for surveillance, early detection, and rapid response to animal and human avian influenza.

Department of the Treasury: Treasury assists in analyzing potential economic impacts and monitoring and preparing policy responses to pandemic-related international economic developments. Treasury also leads the U.S. Government's engagement with the multilateral development banks (MDB) and international financial institutions (IFI), including encouraging MDB and IFI efforts to assist countries to address the impact of pandemic influenza.

Department of Commerce: DOC facilitates the expedited interagency review for any export licenses needed for items necessary for overseas shipment in response to an avian influenza pandemic. DOC coordinates, as needed, with HHS/CDC to expedite export licenses of strains, test kits/equipment, and technology to specified destinations in order to allow rapid identification of strains, and provide on ground support to contain/mitigate a pandemic to support development of scientific and epidemiological expertise in affected regions to ensure early recognition of changes in pattern of outbreak.

State, Local, and Tribal Entities

State, local, and tribal authorities ensure that foreign diplomatic and consular personnel in the United States are kept informed of developments relevant to their rights and responsibilities under international and domestic law and that they can perform their authorized functions, including functions of consular protection and assistance. In the event of a pandemic, personal inviolability and other privileges and immunities need to be taken into account when protective measures such as quarantine are being consid-

ered, and it will be important that States, localities, and tribal entities afford consular communication and access to non-official foreign nationals who may be quarantined. State, local, and tribal entities, especially those along a U.S. border, should work with DOS on these matters and more generally in pandemic preparedness planning, including engaging with foreign countries and the broader international community on measures to prevent and contain pandemic influenza. The interaction between U.S. States/Tribal Nations and their Canadian and Mexican counterparts, under DOS coordination, will be crucial during implementation of the North American Pandemic Influenza Plan under the Security and Prosperity Partnership.

The Private Sector and Critical Infrastructure Entities

The U.S. Government works with the private sector to leverage its presence and resources overseas to prepare for, detect, and respond to a pandemic.

Individuals and Families

Private Americans who are living or traveling abroad should make personal plans relating to their medical care, ability to address a “stay-in-place” response, and the possibility that international movement will be restricted for public health reasons.

International Partners

Three international organizations play key roles with respect to preparing for, detecting, and containing an outbreak of animal or pandemic influenza. The WHO Secretariat and its Regional Offices and the WHO Influenza Network help build international public health capacity, encourage and assist countries to develop and exercise pandemic preparedness plans, and set international public health standards. The WHO leadership coordinates the international response to an outbreak of pandemic influenza, including through its Global Outbreak Alert and Response Network (GOARN), consistent with the revised International Health Regulations (IHRs) as adopted by the World Health Assembly in May 2005 for entry into force in June 2007, which will govern the obligations of WHO member states to report public health emergencies of international concern to the WHO Secretariat and describe steps countries may take to limit international movement of travelers, conveyances, or cargo to prevent the spread of disease. The OIE and the FAO share the lead on animal health and work with the United States and other nations to detect, respond to, and contain outbreaks of influenza with pandemic potential in animals. The Senior UN System Coordinator for Avian and Human Influenza, appointed by the UN Secretary General in September 2005, will coordinate the efforts of WHO and the full range of UN organizations that may be tapped in the fight against pandemic influenza.

MDBs are preparing to provide loans and technical assistance to help borrowing member countries assess the potential economic impact of and develop action plans to respond to an influenza pandemic. The Asian Development Bank has approved a line of credit and approved grants to fight infectious diseases in Asia, including avian influenza, and has conducted initial economic analysis on the impact that a wider avian influenza outbreak could have on the regional economy. The World Bank has opened a line of credit to fight an influenza pandemic and is establishing a unit to track donor financial commitments and spending.

Actions and Expectations

4.1. Pillar One: Preparedness and Communication

Preparedness is key to an effective effort to contain an outbreak of influenza with pandemic potential at home or abroad. The United States will work to improve the international community's capacity and the commitment to take coordinated, effective action to contain an outbreak at its site of origin if possible and if not, to slow or limit its spread; to provide and coordinate assistance to nations that lack the capacity to detect independently and respond to an outbreak of animal or human influenza with pandemic potential; to develop and exercise pandemic response plans; to increase medical, veterinary, and scientific capacity and national and international supplies of countermeasures; and to communicate clearly and effectively with all stakeholders before and during a pandemic. These international activities will benefit or advance the health of the American people.

a. Planning for a Pandemic

4.1.1. Support the development and exercising of avian and pandemic response plans.

- 4.1.1.1. DOS, in coordination with HHS, USAID, DOD, and DOT, shall work with the Partnership, the Senior UN System Coordinator for Avian and Human Influenza, other international organizations (e.g., WHO, World Bank, OIE, FAO) and through bilateral and multilateral initiatives to encourage countries, particularly those at highest risk, to develop and exercise national and regional avian and pandemic response plans within 12 months. Measure of performance: 90 percent of high-risk countries have response plans and plans to test them.
- 4.1.1.2. USDA, USAID, and HHS shall use epidemiological data to expand support for animal disease and pandemic prevention and preparedness efforts, including provision of technical assistance to veterinarians and other agricultural scientists and policymakers, in high-risk countries within 12 months. Measure of performance: all high-risk and affected countries have in place (1) national task forces meeting regularly with representation from both human and animal health sectors, government ministries, businesses, and NGOs; (2) national plans, based on scientifically valid information, developed, tested, and implemented for containing influenza in animals with human pandemic potential and for responding to a human pandemic.
- 4.1.1.3. DOD, in coordination with DOS and other appropriate Federal agencies, host nations and regional alliance military partners, shall, within 18 months: (1) conduct bilateral and multilateral assessments of the avian and pandemic preparedness and response plans of the militaries in partner nations or regional alliances such as NATO focused on preparing for and mitigating the effects of an outbreak on assigned mission accomplishment; (2) develop solutions for identified national and regional military gaps; and (3) develop and execute bilateral and multilateral military-to-military influenza exercises to validate preparedness and response plans. Measure of performance: all countries with endemic avian influenza engaged by U.S. efforts; initial assessment and identification of exercise timeline for the military of each key partner nation completed.

4.1.2. Expand in-country and abroad, medical, veterinary, and scientific capacity to respond to an outbreak.

- 4.1.2.1. DOS shall ensure strong U.S. Government engagement in and follow-up on bilateral and multilateral initiatives to build cooperation and capacity to fight pandemic influenza internationally, including the Asia-Pacific Economic Cooperation (APEC) initiatives (inventory of resources and regional expertise to fight pandemic influenza, a region-wide tabletop exercise, a Symposium on Emerging Infectious Diseases to be held in Beijing in April 2006 and the Regional Emerging Disease Intervention (REDI) Center in Singapore), the U.S.-China Joint Initiative on Avian Influenza, and the U.S.-Indonesia-Singapore Joint Avian Influenza Demonstration Project; and shall develop a strategy to expand the number of countries fully cooperating with U.S. and/or international technical agencies in the fight against pandemic influenza, within 6 months. Measure of performance: finalized action plans that outline goals to be achieved and timeframes in which they will be achieved.
- 4.1.2.2. HHS shall staff the REDI Center in Singapore within 3 months. Measure of performance: U.S. Government staff provided to REDI Center.
- 4.1.2.3. USDA, working with USAID and the Partnership, shall support the FAO and OIE to implement an instrument to assess priority countries' veterinary infrastructure for prevention, surveillance, and control of animal influenza and increase veterinary rapid response capacity by supporting national capacities for animal surveillance, diagnostics, training, and containment in at-risk countries, within 9 months. Measure of performance: per the OIE's Performance, Vision and Strategy Instrument, assessment tools exercised and results communicated to the Partnership, and priority countries are developing, or have in place, an infrastructure capable of supporting their national prevention and response plans for avian or other animal influenza.
- 4.1.2.4. USDA, in coordination with DOS, USAID, the OIE, and other members of the Partnership, shall support FAO to enhance the rapid detection and reporting of, response to, and control or eradication of outbreaks of avian influenza, within 12 months. Measure of performance: an international program is established and providing functional support to priority countries with rapid detection and reporting of, response to, and control or eradication of outbreaks of avian influenza, as appropriate to the country's specific situation.
- 4.1.2.5. HHS, in coordination with USAID, shall increase rapid response capacity within those countries at highest risk of human exposure to animal influenza by supporting national and local government capacities for human surveillance, diagnostics, and medical care, and by supporting training and equipping of rapid response and case investigation teams for human outbreaks., within 9 months. Measure of performance: trained, deployable rapid response teams exist in countries with the highest risk of human exposure.
- 4.1.2.6. DOD, in coordination with DOS, host nations, and regional alliance military partners, shall assist in developing priority country military infection control

and case management capability through training programs, within 18 months. Measure of performance: training programs carried out in all priority countries with increased military infection control and case management capability.

- 4.1.2.7. Treasury shall encourage and support MDB programs to improve health surveillance systems, strengthen priority countries' response to outbreaks, and boost health systems' readiness, consistent with legislative voting requirements, within 12 months. Measure of performance: projects that fit relevant MDB criteria approved in at least 50 percent of priority countries.

4.1.3. Educate people in priority countries about high-risk practices that increase the likelihood of virus transmission from animals and between humans.

- 4.1.3.1. USAID, HHS, and USDA shall conduct educational programs focused on communications and social marketing campaigns in local languages to increase public awareness of risks of transmission of influenza between animals and humans, within 12 months. Measure of performance: clear and consistent messages tested in affected countries, with information communicated via a variety of media have reached broad audiences, including health care providers, veterinarians, and animal health workers, primary and secondary level educators, villagers in high-risk and affected areas, poultry industry workers, and vendors in open air markets.
- 4.1.3.2. HHS and USAID shall work with the WHO Secretariat and other multilateral organizations, existing bilateral programs and private sector partners to develop community- and hospital-based health prevention, promotion, and education activities in priority countries within 12 months. Measure of performance: 75 percent of priority countries are reached with mass media and community outreach programs that promote AI awareness and behavior change.

b. Communicating Expectations and Responsibilities

4.1.4. Work to ensure clear, effective, and coordinated risk communication, domestically and internationally, before and during a pandemic. This includes identifying credible spokespersons at all levels of government to effectively coordinate and communicate helpful, informative, and consistent messages in a timely manner.

- 4.1.4.1. DOS and HHS, in coordination with other agencies, shall ensure that the top political leadership of all affected countries understands the need for clear, effective coordinated public information strategies before and during an outbreak of avian or pandemic influenza within 12 months. Measure of performance: 50 percent of priority countries that developed outbreak communication strategies consistent with the WHO September 2004 Report detailing best practices for communicating with the public during an outbreak.
- 4.1.4.2. DOS and HHS, in coordination with other agencies, shall implement programs within 3 months to inform U.S. citizens, including businesses, NGO personnel, DOD personnel, and military family members residing and traveling abroad, where they may obtain accurate, timely information, including risk level assess-

ments, to enable them to make informed decisions and take appropriate personal measures. Measure of performance: majority of registered U.S. citizens abroad have access to accurate and current information on influenza.

- 4.1.4.3. DOS and HHS shall ensure that adequate guidance is provided to Federal, State, tribal, and local authorities regarding the inviolability of diplomatic personnel and facilities and shall work with such authorities to develop methods of obtaining voluntary cooperation from the foreign diplomatic community within the United States consistent with U.S. Government treaty obligations within 6 months. Measure of performance: briefing materials and an action plan in place for engaging with relevant Federal, State, tribal, and local authorities.
- 4.1.4.4. USAID, USDA, and HHS shall work with the WHO Secretariat, FAO, OIE, and other donor countries within 12 months to implement a communications program to support government authorities and private and multilateral organizations in at-risk countries in improving their national communications systems with the goal of promoting behaviors that will minimize human exposure and prevent further spread of influenza in animal populations. Measure of performance: 50 percent of priority countries have improved national avian influenza communications.
- 4.1.4.5. USAID, in coordination with DOS, HHS, and USDA, shall develop and disseminate influenza information to priority countries through international broadcasting channels, including international U.S. Government mechanisms such as Voice of America and Radio Free Asia (radio, television, shortwave, Internet), and share lessons learned and key messages from communications campaigns, within 12 months. Measure of performance: local language briefing materials and training programs developed and distributed via WHO and FAO channels.

c. Producing and Stockpiling Vaccines, Antiviral Medications, and Medical Material

- 4.1.5. Encourage nations to develop production capacity and stockpiles to support their response needs, to include pooling of efforts to create regional capacity.**
 - 4.1.5.1. DOS, in coordination with other agencies, shall use the Partnership and bilateral and multilateral diplomatic contacts on a continuing basis to encourage nations to increase international production capacity and stockpiles of safe and effective human vaccines, antiviral medications, and medical material within 12 months. Measure of performance: increase by 50 percent the number of priority countries that have plans to increase production capacity and/or stockpiles.
 - 4.1.5.2. HHS and USAID shall work to coordinate and set up emergency stockpiles of protective equipment and essential commodities other than vaccine and antiviral medications for responding to animal or human outbreaks within 9 months. Measure of performance: essential commodities procured and available for deployment within 24 hours.

- 4.1.5.3. HHS shall provide technical expertise, information, and guidelines for stockpiling and use of pandemic influenza vaccines within 6 months. Measure of performance: all priority countries and partner organizations have received relevant information on influenza vaccines and application strategies.
- 4.1.5.4. USDA and USAID, in cooperation with FAO and OIE, shall provide technical expertise, information and guidelines for stockpiling and use of animal vaccines, especially to avian influenza affected countries and those countries at highest risk, within 6 months. Measure of performance: all priority countries and relevant international organizations have received information on animal vaccines' efficacy and application strategies to guide country-specific decisions about preparedness options

4.1.6. Facilitate appropriate coordination of efforts across the vaccine manufacturing sector.

- 4.1.6.1. DOS, in coordination with HHS and other agencies, shall continue to work through the Partnership and other bilateral and multilateral venues to build international cooperation and encourage countries and regional organizations to develop diagnostic, research and vaccine manufacturing capacity within 24 months. Measure of performance: global diagnostic and research capacity increased significantly compared to 24 months earlier; significant investments made to expand international vaccine manufacturing capacity.
- 4.1.6.2. HHS, in coordination with the WHO Secretariat, shall establish at least six new sites for Collaborative Clinical Research on Emerging Infectious Diseases to conduct collaborative clinical research on the diagnostics, therapeutics, and natural history of avian influenza and other human emerging infectious diseases. In addition, within 18 months it will provide in-country support for one or more partner countries for human avian influenza clinical trials. Measure of performance: cooperative programs established in six new sites, to include the initiation of research protocols and design of clinical trials.
- 4.1.6.3. USDA shall generate new information on avian vaccine efficacy and production technologies and disseminate to international organizations, animal vaccine manufacturers, and countries at highest risk within 6 months. Measure of performance: information disseminated to priority entities.

d. Establishing Distribution Plans for Vaccines and Antiviral Medications

4.1.7. Develop credible countermeasure distribution mechanisms for vaccine and antiviral agents prior to and during a pandemic.

- 4.1.7.1. DOS shall work with HHS and USAID, in collaboration with the WHO Secretariat, to coordinate the U.S. Government contribution to an international stockpile of antiviral medications and other medical countermeasures, including international countermeasure distribution plans and mechanisms and agreed prioritization of allocation, within 6 months. Measure of performance: release of proposed doctrine of deployment and concept of operations for an international stockpile.

- 4.1.7.2. The Department of Justice (DOJ) and DOS, in coordination with HHS, shall consider whether the U.S. Government, in order to benefit from the protections of the Defense Appropriations Act, should seek to negotiate liability-limiting treaties or arrangements covering U.S. contributions to an international stockpile of vaccine and other medical countermeasures, within 6 months. Measure of performance: review initiated and decision rendered.
- 4.1.7.3. USDA, in collaboration with FAO and OIE, shall develop and provide best-practice guidelines and technical expertise to countries that express interest in obtaining aid in the implementation of a national animal vaccination program, within 4 months. Measure of performance: interested countries receive guidelines and other assistance within 3 months of their request.

e. Advancing Scientific Knowledge and Accelerating Development

4.1.8. Ensure that there is maximal sharing of scientific information about influenza viruses between governments, scientific entities, and the private sector.

- 4.1.8.1. HHS shall support the Los Alamos H5 Sequence Database and the Institute for Genomic Research (TIGR), for the purpose of sharing avian H5N1 influenza sequences with the scientific community within 24 months. Measure of performance: completed H5 sequences entered into both the Los Alamos database and GenBank and annotated.
- 4.1.8.2. HHS shall enhance a regional influenza genome reference laboratory in Singapore within 9 months. Measure of performance: capacity to sequence complete influenza virus genome established in Singapore; all reported novel animal influenza samples sequenced and made available on public databases.
- 4.1.8.3. USDA and USAID shall work with international organizations, governments, and scientific entities to disseminate and exchange information to bolster and apply avian influenza prevention and response plans in priority countries, within 12 months. Measure of performance: 50 percent of priority countries have national epizootic prevention and response plans based upon pragmatic, comprehensive, and scientifically valid information.
- 4.1.8.4. HHS and DOD, in coordination with DOS, shall enhance open source information sharing efforts with international organizations and agencies to facilitate the characterization of genetic sequences of circulating strains of novel influenza viruses within 12 months. Measure of performance: publication of all reported novel influenza viruses which are sequenced.

4.2. Pillar Two: Surveillance and Detection

To increase the probability of containing a virus with pandemic potential that originates outside the United States or delaying its spread as long as possible as we activate protective measures at home, we will need early recognition of the problem. We will work to ensure effective surveillance, rapid detection, and transparent reporting of outbreaks internationally by strengthening scientific and epidemiological expertise abroad; enhancing laboratory capacity and diagnostic

capabilities; and establishing international mechanisms and commitment to ensure transparent and rapid reporting. We will develop, enhance, and encourage early implementation of international screening and monitoring mechanisms to limit the spread of viruses with pandemic potential.

a. Ensuring Rapid Reporting of Outbreaks

4.2.1. Work through the International Partnership on Avian and Pandemic Influenza, as well as through other political and diplomatic channels such as the United Nations and the Asia-Pacific Economic Cooperation forum, to ensure transparency, scientific cooperation, and rapid reporting of avian and human influenza cases.

- 4.2.1.1. DOS, in coordination with other agencies, shall work on a continuing basis through the Partnership and through bilateral and multilateral diplomatic contacts to promote transparency, scientific cooperation, and rapid reporting of avian and human influenza cases by other nations within 12 months. Measure of performance: all high-risk countries actively cooperating in improving capacity for transparent, rapid reporting of outbreaks.
- 4.2.1.2. HHS, in coordination with DOS, shall pursue bilateral agreements with key affected countries on health cooperation including transparency, sample and data sharing, and development of rapid response protocols; and develop and train in-country rapid response teams to quickly assess and report on possible outbreaks of avian and human influenza, within 12 months. Measure of performance: agreements established with Vietnam, Cambodia, and Laos, 100 teams throughout Asia, including China, Thailand, and Indonesia, trained and available to respond to outbreaks.
- 4.2.1.3. HHS shall place long-term staff at key WHO offices and in select affected and high-risk countries to provide coordination of HHS-sponsored activities and to serve as liaisons with HHS within 9 months. Measure of performance: placement of staff and increased coordination with the WHO Secretariat and Regional Offices.
- 4.2.1.4. HHS shall, to the extent feasible, negotiate agreements with established networks of laboratories around the world to enhance its ability to perform laboratory analysis of human and animal virus isolates and to train in-country government staff on influenza-related surveillance and laboratory diagnostics, within 6 months. Measure of performance: completed, negotiated agreement, and financing mechanism with at least one laboratory network outside the United States.
- 4.2.1.5. HHS shall support the WHO Secretariat to enhance the early detection, identification and reporting of infectious disease outbreaks through the WHO's Influenza Network and Global Outbreak and Alert Response Network (GOARN) within 12 months. Measure of performance: expansion of the network to regions not currently part of the network.

- 4.2.1.6. USAID, in coordination with USDA, shall initiate a pilot program to evaluate strategies for farmer compensation and shall engage and leverage the private sector and other donors to increase the availability of key commodities, compensation, financing and technical support for the control of avian influenza, within 6 months. Measure of performance: a model compensation program measured in value of goods and services available for compensation is developed.
- 4.2.1.7. USAID, HHS, USDA, and DOS shall support NGOs, FAO, OIE, WHO, the Office of the Senior UN System Coordinator for Avian and Human Influenza, and host governments to expand the scope, accuracy, and transparency of human and animal surveillance systems and to streamline and strengthen official protocols for reporting avian influenza cases, within 6 months. Measure of performance: 75 percent of priority countries have established early warning networks, international case definitions, and standards for laboratory diagnostics of human and animal samples.

4.2.2. Support the development of the proper scientific and epidemiologic expertise in affected regions to ensure early recognition of changes in the pattern of avian or human outbreaks.

- 4.2.2.1. HHS and USDA, in collaboration with one or more established networks of laboratories around the world, including the WHO Influenza Network, shall train staff from priority countries' Ministries of Health and Agriculture, to conduct surveillance and perform epidemiologic analyses on influenza-susceptible species and manage and report results of findings, within 12 months. Measure of performance: 75 percent of priority countries have access to multi-year epidemiology and surveillance training programs.
- 4.2.2.2. HHS and USDA shall increase support of scientists tracking potential emergent influenza strains through disease and virologic surveillance in susceptible animal species in priority countries within 9 months. Measure of performance: surveillance for emergent influenza strains expanded in priority countries.
- 4.2.2.3. HHS, in coordination with DOD, shall provide support to Naval Medical Research Unit (NAMRU) 2 in Jakarta, Indonesia and Phnom Penh, Cambodia, the Armed Forces Research Institute of Medical Sciences in Bangkok, Thailand, and NAMRU-3 in Cairo, Egypt to expand and expedite geographic surveillance of human populations at-risk for H5N1 infections in those and neighboring countries through training, enhanced surveillance, and enhancement of the Early Warning Outbreak Recognition System, within 12 months. Measure of performance: reagents and technical assistance provided to countries in the network to improve and expand surveillance of H5N1 and number of specimens tested by real-time processing.
- 4.2.2.4. HHS shall enhance surveillance and response to high priority infectious disease, including influenza with pandemic potential, by training physicians and public health workers in disease surveillance, applied epidemiology and outbreak response at its GDD Response Centers in Thailand and China and at the U.S.-China Collaborative Program on Emerging and Re-Emerging Infectious

Diseases, within 12 months. Measure of performance: 50 physicians and public health workers living in priority countries receive training in disease surveillance applied epidemiology and outbreak response.

4.2.2.5. DOD shall develop active and passive systems for inpatient and outpatient disease surveillance at its institutions worldwide, with an emphasis on index case and cluster identification, and develop mechanisms for utilizing DOD epidemiological investigation experts in international support efforts, to include validation of systems/tools and improved outpatient/inpatient surveillance capabilities, within 18 months. Measure of performance: monitoring system and program to utilize epidemiological investigation experts internationally are in place.

4.2.2.6. DOD shall monitor the health of military forces worldwide (CONUS and OCONUS bases, deployed operational forces, exercises, units, etc.), and in coordination with DOS, coordinate with allied, coalition, and host nation public health communities to investigate and respond to confirmed infectious disease outbreaks on DOD installations, within 18 months. Measure of performance: medical surveillance “watchboard” reports show results of routine monitoring, number of validated outbreaks, and results of interventions.

4.2.2.7. DOD, in coordination with DOS and with the cooperation of the host nation, shall assist with influenza surveillance of host nation populations in accordance with existing treaties and international agreements, within 24 months. Measure of performance: medical surveillance “watchboard” expanded to include host nations.

4.2.3. Support the development and sustainment of sufficient U.S. and host nation laboratory capacity and diagnostic reagents in affected regions and domestically, to provide rapid confirmation of cases in animals or humans.

4.2.3.1. HHS shall develop and implement laboratory diagnostics training programs in basic laboratory techniques related to influenza sample preparation and diagnostics in priority countries within 9 months. Measure of performance: 25 laboratory scientists trained in influenza sample preparation and diagnostics.

4.2.3.2. HHS in collaboration with one or more established networks of laboratories, including the WHO Influenza Network, shall train staff from priority countries on influenza-related laboratory diagnostics, within 12 months. Measure of performance: 100 percent of priority countries have training programs established.

4.2.3.3. HHS, in cooperation with the WHO Secretariat and other donor countries, shall expand an existing specimen transport fund that enables developing countries to transport influenza samples to WHO regional reference laboratories and collaborating centers, within 6 months. Measure of performance: 100 percent of priority countries funded for sending influenza samples to WHO regional reference laboratories.

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- 4.2.3.4. HHS shall invest in the development and evaluation of more accurate rapid diagnostics for influenza to enhance the ability of the global healthcare community to rapidly diagnose influenza, within 18 months. Measure of performance: new grants and contracts issued to researchers to develop and evaluate new diagnostics.
- 4.2.3.5. HHS and USAID shall work with the WHO Secretariat and private sector partners, through existing bilateral agreements, to provide support for human health diagnostic laboratories by developing and giving assistance in implementing rapid international laboratory diagnostics protocols and standards in priority countries, within 12 months. Measure of performance: 75 percent of priority countries have improved human diagnostic laboratory capacity.
- 4.2.3.6. USDA and USAID shall work with FAO and OIE to provide technical support for animal health diagnostic laboratories by developing and implementing international laboratory diagnostic protocols, standards, and infrastructure in priority countries that can rapidly screen avian influenza specimens from susceptible animal populations, within 12 months. Measure of performance: 75 percent of priority countries have improved animal diagnostic laboratory capacity.
- 4.2.3.7. USDA and USAID shall provide technical expertise to help priority countries develop their cadre of veterinary diagnostic technicians to screen avian influenza specimens from wild and domestic bird populations, and other susceptible animals, rapidly and in a manner that adheres to international standards for proficiency and safety, within 12 months. Measure of performance: all priority countries have access to laboratories that are able to screen avian influenza specimens and confirm diagnoses in a manner that supports effective control of cases of avian influenza.
- 4.2.3.8. DOD, in coordination with HHS, shall develop and refine its overseas virologic and bacteriologic surveillance infrastructure through Global Emerging Infections Surveillance and Response System (GEIS) and the DOD network of overseas labs, including fully developing and implementing seasonal influenza laboratory surveillance and an animal/vector surveillance plan linked with WHO pandemic phases, within 18 months. Measure of performance: animal/vector surveillance plan and DOD overseas virologic surveillance network developed and functional.
- 4.2.3.9. DOD, in coordination with HHS, shall prioritize international DOD laboratory research efforts to develop, refine, and validate diagnostic methods to rapidly identify pathogens, within 18 months. Measure of performance: completion of prioritized research plan, resources identified, and tasks assigned across DOD medical research facilities.
- 4.2.3.10. DOD shall work with priority nations' military forces to assess existing laboratory capacity, rapid response teams, and portable field assay testing equipment, and fund essential commodities and training necessary to achieve an effective national military diagnostic capability, within 18 months. Measure of perform-
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ance: assessments completed, proposals accepted, and funding made available to priority countries.

b. Using Surveillance to Limit Spread

4.2.4. Develop mechanisms to rapidly share information on travelers who may be carrying or may have been exposed to a pandemic strain of influenza, for the purposes of contact tracing and outbreak investigation.

4.2.4.1. HHS and USAID shall, in coordination with regional and international multi-lateral organizations, develop village-based alert and response surveillance systems for human cases of influenza in priority countries, within 18 months. Measure of performance: 75 percent of all priority countries have established a village alert and response system for human influenza.

4.2.4.2. DOD shall incorporate international public health reporting requirements for exposed or ill military international travelers into the Geographic Combatant Commanders' pandemic influenza plans within 18 months. Measure of performance: reporting requirements incorporated into Geographic Combatant Commanders' pandemic influenza plans.

4.2.5. Develop and exercise mechanisms to provide active and passive surveillance during an outbreak, both within and beyond our borders.

4.2.5.1. HHS and USAID shall develop, in coordination with the WHO Secretariat and other donor countries, rapid response protocols for use in responding quickly to credible reports of human-to-human transmission that may indicate the beginnings of an influenza pandemic, within 12 months. Measure of performance: adoption of protocols by WHO and other stakeholders.

4.2.5.2. HHS, in coordination with DOS and other agencies participating in the Security and Prosperity Partnership, shall pursue cooperative agreements on pandemic influenza with Canada and Mexico to create and implement a North American early warning surveillance and response system in order to prevent the spread of infectious disease across the borders, within 9 months. Measure of performance: implementation of early warning surveillance and response system.

4.2.5.3. USDA and USAID shall provide technical expertise to priority countries in order to expand the scope and accuracy of systematic surveillance of avian influenza cases, within 12 months. Measure of performance: 75 percent of priority countries have expanded animal surveillance capabilities.

4.2.6. Expand and enhance mechanisms for screening and monitoring animals that may harbor viruses with pandemic potential.

4.2.6.1. DHS, USDA, DOI, and USAID, in collaboration with priority countries, NGOs, WHO, FAO, OIE, and the private sector shall support priority country animal health activities, including development of regulations and enforcement capacities that conform to OIE standards for transboundary movement of animals,

development of effective biosecurity measures for commercial and domestic animal operations and markets, and identification and confirmation of infected animals, within 12 months. Measure of performance: 50 percent of priority countries have implemented animal health activities as defined above.

4.2.7. Develop screening and monitoring mechanisms and agreements to appropriately control the movement and shipping of potentially contaminated products to and from affected regions if necessary, and to protect unaffected populations.

4.2.7.1. DOS, in coordination with DOT, DHS, HHS, and U.S. Trade Representative (USTR), shall collaborate with WHO, the International Civil Aviation Organization (ICAO), and the International Maritime Organization (IMO) to assess and revise, as necessary and feasible, existing international agreements and regulations governing the movement and shipping of potentially infectious products, in order to ensure that international agreements are both adequate and legally sufficient to prevent the spread of infectious disease, within 12 months. Measure of performance: international regulations reviewed and revised.

4.2.7.2. USDA shall provide technical assistance to priority countries to increase safety of animal products by identifying potentially contaminated animal products, developing screening protocols, regulations, and enforcement capacities that conform to OIE avian influenza standards for transboundary movement of animal products, within 36 months. Measure of performance: all priority countries have protocols and regulations in place or in process.

4.2.8. Share guidance with international partners on best practices to prevent the spread of influenza, including within hospitals and clinical settings.

4.2.8.1. HHS and USAID shall develop community- and hospital-based infection control and prevention, health promotion, and education activities in local languages in priority countries within 9 months. Measure of performance: local language health promotion campaigns and improved hospital-based infection control activities established in all Southeast Asian priority countries.

4.3. Pillar Three: Response and Containment

The United States is working now with other nations and relevant international organizations to detect and contain outbreaks of animal influenza with pandemic potential with the aim of preventing its spread to humans. We will work to ensure nations and relevant international organizations agree as soon as possible on a doctrine of international response and containment to implement in the event of a human outbreak. Once health authorities signal sustained, efficient human transmission of a virus with pandemic potential overseas, we will encourage rigorous implementation of the agreed doctrine for international containment and response and offer technical expertise and assistance as needed. Critical to this effort will be the timely implementation of a coordinated and accurate international public awareness campaign to define the facts and establish realistic expectations. We will monitor economic and social effects of a pandemic and employ appropriate measures to limit their impact on global stability and security.

a. Containing Outbreaks

- 4.3.1. Work to develop a coalition of strong partners to coordinate actions to limit the spread of a virus with pandemic potential beyond the location where it is first recognized abroad in order to protect U.S. interests.**
- 4.3.1.1. DOS, in coordination with HHS, USDA, USAID, and DOD, shall coordinate the development and implementation of U.S. capability to respond rapidly to assess and contain outbreaks of avian influenza with pandemic potential abroad, including coordination of the development, training and exercise of U.S. rapid response teams; and coordination of U.S. support for development, training and exercise of, and U.S. participation in, international support teams. Measure of performance: agreed operating procedures and operational support for U.S. rapid response, and for U.S. participation in international rapid response efforts, are developed and function effectively.
- 4.3.1.2. DOS, in coordination with HHS, shall work with WHO and the international community to secure agreement (e.g., through a resolution at the World Health Assembly in May 2006) on an international containment strategy to be activated in the event of a human outbreak, including an accepted definition of a “triggering event” and an agreed doctrine for coordinated international action, responsibilities of nations, and steps they will take, within 4 months. Measure of performance: international agreement on a response and containment strategy.
- 4.3.1.3. HHS, in coordination with DOS, and the WHO Secretariat, and USDA, USAID, DOD, as appropriate, shall rapidly deploy disease surveillance and control teams to investigate possible human outbreaks through WHO’s GOARN network, as required. Measure of performance: teams deployed to suspected outbreaks within 48 hours of investigation request.
- 4.3.1.4. DOS, in coordination with HHS, and the WHO Secretariat, and USDA, USAID, DOD, as appropriate, shall coordinate United States participation in the implementation of the international response and containment strategy (e.g., assigning experts to the WHO outbreak teams and providing assistance and advice to ministries of health on local public health interventions, ongoing disease surveillance, and use of antiviral medications and vaccines if they are available). Measure of performance: teams deployed to suspected outbreaks within 48 hours of investigation request.
- 4.3.1.5. USDA and USAID, in coordination with DOS, HHS, and DOD, and in collaboration with relevant international organizations, shall support operational deployment of rapid response teams and provide technical expertise and technology to support avian influenza assessment and response teams in priority countries as required. Measure of performance: all priority countries have rapid access to avian influenza assessment and response teams; deployment assistance provided in each instance and documented in a log of technical assistance rendered.

- 4.3.1.6. DOS shall lead U.S. Government engagement with the international community's effort to develop a coordinated plan for avian influenza assistance (funds, materiel, and personnel) to streamline national assistance efforts within 12 months. Measure of performance: commitments from countries on funds, personnel, and materiel they will contribute to an integrated and prioritized international prevention, preparedness, and response effort.
- 4.3.1.7. DOS, in coordination with and drawing on the expertise of USAID, HHS, and DOD, shall work with the international community to develop, within 12 months, a coordinated, integrated, and prioritized distribution plan for pandemic influenza assistance that details a strategy for (1) strategic lift of WHO stockpiles and response teams; (2) theater distribution to high-risk countries; (3) in-country coordination to key distribution areas; and (4) establishment of internal mechanisms within each country for distribution to urban, rural, and remote populations. Measure of performance: commitments by countries that specify their ability to support distribution, and specify the personnel and materiel for such support.
- 4.3.1.8. DOS, in coordination with HHS, USDA, USAID, and DHS, and in collaboration with WHO, FAO, OIE, the World Bank and regional institutions such as APEC, the Association of Southeast Asian Nations and the European Community, shall work to improve public affairs coordination and establish a set of agreed upon operating principles among these international organizations and the United States that describe the actions and expectations of the public affairs strategies of these entities that would be implemented in the event of a pandemic, within 6 months. Measure of performance: list of key public affairs contacts developed, planning documents shared, and coordinated public affairs strategy developed.
- 4.3.1.9. DOS and DOC, in collaboration with NGOs and private sector groups representing business with activities abroad, shall develop and disseminate checklists of key activities to prepare for and respond to a pandemic, within 6 months. Measure of performance: checklists developed and disseminated.
- 4.3.2. Where appropriate, use governmental authorities to limit movement of people, goods, and services into and out of areas where an outbreak occurs.**
- 4.3.2.1. DOS, in coordination with DHS, HHS, DOD, and DOT, and in collaboration with foreign counterparts, shall support the implementation of pre-existing passenger screening protocols in the event of an outbreak of pandemic influenza. Measure of performance: protocols implemented within 48 hours of notification of an outbreak of pandemic influenza.
- 4.3.2.2. DOD, in coordination with DOS, HHS, DOT, and DHS, shall limit official DOD military travel between affected areas and the United States. Measure of performance: DOD identifies military facilities in the United States and OCONUS that will serve as the points of entry for all official travelers from affected areas, within 6 months.

b. Leveraging International Medical and Health Surge Capacity

- 4.3.3. Activate plans to distribute medical countermeasures, including non-medical equipment and other material, internationally.**
- 4.3.3.1. DOS, in coordination with HHS, USAID, USDA, and DOD, shall work with the Partnership to assist in the prompt and effective delivery of countermeasures to affected countries consistent with U.S. law and regulation and the agreed upon doctrine for international action to respond to and contain an outbreak of influenza with pandemic potential. Measure of performance: necessary countermeasures delivered to an affected area within 48 hours of agreement to meet request.
- 4.3.4. Address barriers to the flow of public health, medical, and veterinary personnel across international borders to meet local shortfalls in public health, medical, and veterinary capacity.**
- 4.3.4.1. DOS in collaboration with the Partnership and WHO shall negotiate international instruments and/or arrangements to facilitate the flow of rapid response teams and other public health, medical, and veterinary personnel across international borders, within 12 months. Measure of performance: negotiated agreements for facilitating deployment of rapid response teams deployed across international borders using instruments and/or arrangements as detailed above, within 48 hours of request.
- 4.3.4.2. DHS shall assist in the expeditious movement of public health, medical, and veterinary officials, equipment, supplies, and biological samples for testing through U.S. ports of entry/departure. Measure of performance: delivery of persons, equipment, and samples involved in the detection of and response to outbreaks of avian or pandemic influenza within 48 hours of decision to deploy.

c. Sustaining Infrastructure, Essential Services, and the Economy

- 4.3.5. Analyze the potential economic and social impact of a pandemic on the stability and security of the international community and identify means to address it.**
- 4.3.5.1. DOS shall organize an interagency group to analyze the potential economic and social impact of a pandemic on the stability and security of the international community, within 3 months. Measure of performance: issues identified and policy recommendations prepared.
- 4.3.5.2. Treasury shall urge the IMF to enhance its surveillance of priority countries and regions, including further assessment of the macroeconomic and financial vulnerability to an influenza pandemic, within 3 months. Measure of performance: updated, expanded IMF analysis of the potential impact of an influenza pandemic on priority countries and regions, as defined above.
- 4.3.5.3. Treasury, in collaboration with the IMF and the multilateral development banks, shall take the lead on dialogue with creditor countries to ensure that financial assistance to affected economies is provided on terms consistent with the goals

of restoring economic activity and maximizing economic growth (within existing international financial agreements), within 6 months. Measure of performance: official financing strategies in place that are consistent with the goals above.

d. Ensuring Effective Risk Communication

4.3.6. Ensure that timely, clear, coordinated messages are delivered to the American public from trained spokespersons at all levels of government and assist the governments of affected nations to do the same.

- 4.3.6.1. DOS, in coordination with HHS, USAID, USDA, DOD, and DHS, shall lead an interagency public diplomacy group to develop a coordinated, integrated, and prioritized plan to communicate U.S. foreign policy objectives relating to our international engagement on avian and pandemic influenza to key stakeholders (e.g., the American people, the foreign public, NGOs, international businesses), within 3 months. Measure of performance: number and range of target audiences reached with core public affairs and public diplomacy messages, and impact of these messages on public responses to avian and pandemic influenza.
- 4.3.6.2. DOS, in coordination with HHS, shall provide at least monthly updates to its foreign counterparts, through diplomatic channels and U.S. Government websites, regarding changes to national policy or regulations that may result from an outbreak, and shall coordinate posting of such information to U.S. Government websites (e.g., www.pandemicflu.gov). Measure of performance: foreign governments and key stakeholders receive authoritative and regular information on U.S. Government avian influenza policy.
- 4.3.6.3. USDA, in coordination with DHS, USTR, and DOS, shall ensure that clear and coordinated messages are provided to international trading partners regarding animal disease outbreak response activities in the United States. Measure of performance: within 24 hours of an outbreak, appropriate messages will be shared with key animal/animal product trading partners.