

Avian/Pandemic Influenza Update

**AFEB
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(Health Affairs) Force Health Protection and Readiness



**Where is it
now?**

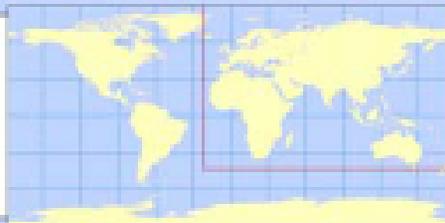




Countries Confirmed to have Avian Influenza (H5N1) in Birds and Humans

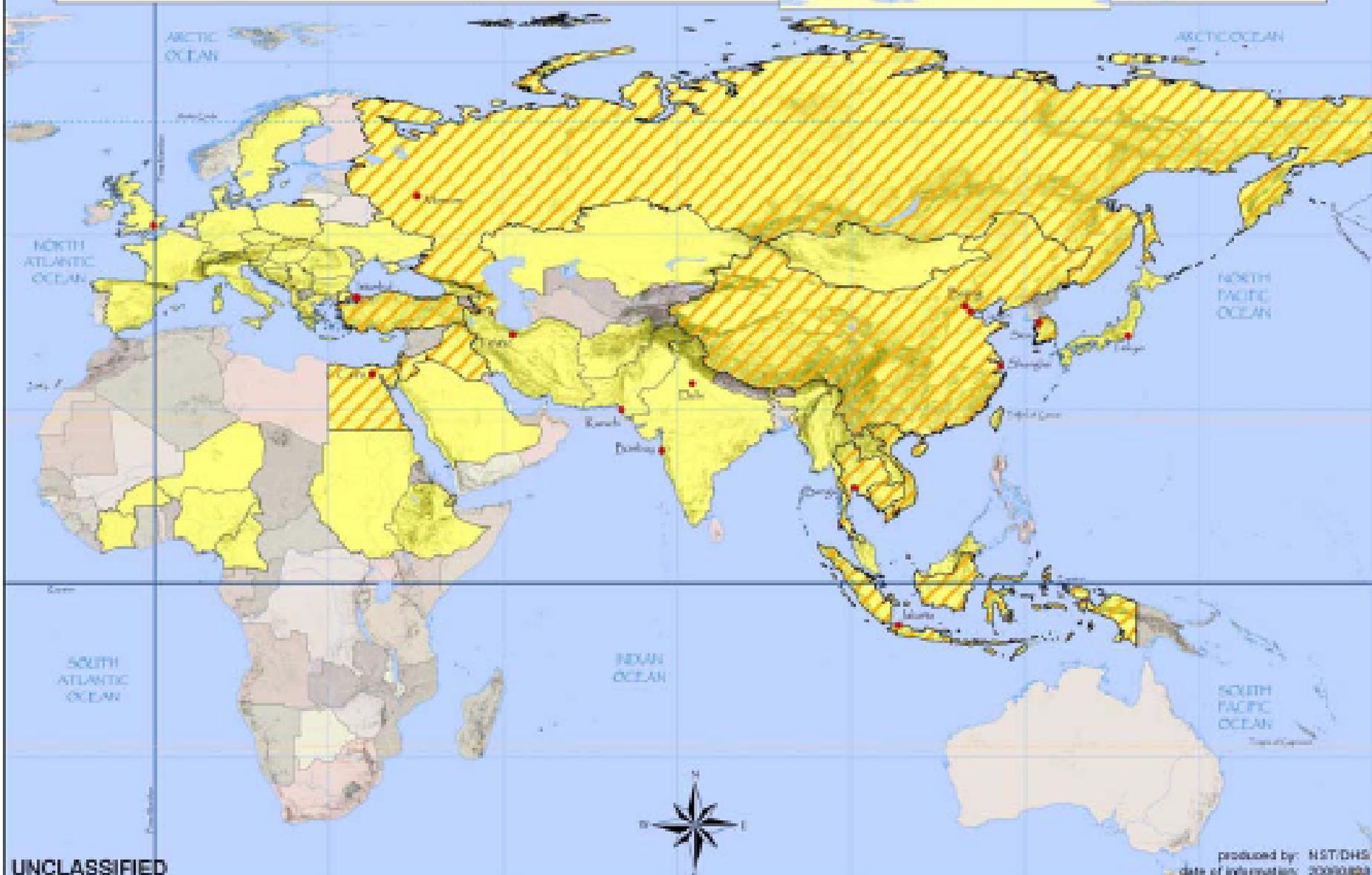
Confirmation note: "Confirmed" reports include reporting from WHO (human) and OIE (bird) as well as other official government sources at the national, regional, and/or local levels (especially involving official test results from OIE or other internationally-recognized laboratories).

Eastern Hemisphere



UNCLASSIFIED

-  Confirmed Bird
-  Confirmed Human
-  Reported Countries



UNCLASSIFIED

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Global H5N1 Situation

- 1997 emerged as poultry & human disease
- Still primarily a bird disease
- Continued spread in poultry- endemic in some areas
 - 60 countries (Africa, Asia, Europe, Middle East) since 2004
- Continued but RARE infections in people
 - 14 countries
 - Despite millions of death birds only 240 cases/141 human deaths



Has the Human Epidemiology of H5N1 Changed?

- Increase in geographic locations of cases
- No major changes in age, sex, and clinical characteristics
- Clusters continue to occur
 - In 2005, cluster size 2-3 cases
 - In 2006, cluster size 2-8 per cluster
- Most cases had prolonged and close contact with dead or ill birds.
- Human-to-human transmission has occurred over the past two years but NOT sustained
 - Recent cluster with human-to-human transmission
 - 2nd order transmission
 - Only in blood relatives



Continued Evidence of Low Transmissibility

- EID Vol 12, No. 10 Oct 2006
- Retrospective survey of poultry deaths and seroepidemiologic investigation in a Cambodian village with confirmed human H5N1
- Identified within 1Km of patient's household: 42 household flocks with likely H5N1
- 2 chickens from a property adjacent to the patient's house confirmed positive for H5N1
- 351 participants from 93 households with prolonged, close contact with poultry suspected of having H5N1
- None had neutralizing antibodies to H5N1



U.S. Risk

- Monitoring of flyways by US Department of the Interior and Department of Fish and Wildlife
 - Now over 13,000 birds sampled
 - Recent ID of LP H5N1 in Swans who were healthy up until the time of death
- Ongoing monitoring of domestic poultry population by US Department of Agriculture
- Illegal import of poultry from endemic areas
 - East Coast and Midwest recently
- Bird smuggling second only to drugs



Pre-Pandemic H5N1 Vaccine

- Vietnam 1203 H5N1 Vaccine
 - 1.7 million doses now in hand with 1.2 million bottled.
- 2006-7 Vaccine acquisition
 - Depending on national purchase, plan to acquire both Clade 1 and Clade 2 vaccines for DoD stockpile
 - GSK product based on 1203 Clade 1 strain may have cross reactivity with some Clade 2 strains and lower antigen requirement due to proprietary adjuvant (3.8mcg dose)



Clades

- Clade 1 viruses have circulated primarily in Cambodia, Thailand, and Vietnam
 - No Clade 1 human infections for at least 6 months
- Clade 2 viruses have circulated primarily in China and Indonesia and have spread westward to the Middle East, Europe, and Africa.
 - Six different subclades of Clade 2
 - Three of these are primarily responsible for recent human H5N1 cases
 - Genetically dissimilar between subclades



Antivirals

- Revised Antiviral Release and Use Policy in Staffing
 - Includes both Oseltamivir and Zanamivir
 - Includes priority matrix that considers varying levels of disease severity and antiviral supply
 - Reviewed by AFEB AI subcommittee
- Oseltamivir (Tamiflu)
 - 480K to MTF 2006
 - 520K to DoD stockpile 2006
- Zanamivir (Relenza)
 - 241K to DoD stockpile Mar 07



Additional Resources

- PPE (masks, gloves, gowns, face shields)
 - \$8 Million for services to purchase adequate supplies to ensure protection for their personnel at MTF's for 12 weeks
- Antibiotics
 - \$24 Million for antibiotics targeted to treat secondary bacterial pneumonias.
 - For outpatient, inpatient and intensive care use
 - Delivery 2006



Containment Measures

- Modeling suggest a layered nonpharmacologic and antiviral response may be effective in:
 - Delaying appearance in a community
 - Decreasing peak
 - Decreasing overall transmission rate
- Activities include
 - Social distancing
 - School closure
 - Post-exposure antiviral use
- Strategies reflected in CPG's and Antiviral Release Policy



Plans

- National strategy released Nov 2005
- National plan released 2 May 2006
 - ***DoD has 116 specific tasks***
 - lead for 32 tasks
 - ***HA has 67 specific tasks***
 - lead for 17 tasks
- DoD plan completed Aug 06
- COCOMs plan due end of 06



National Plan Tasks: HA as Primary Agency

3 Month Suspense

- DOD hospitals and health facilities shall develop, test, and be prepared to implement infection control campaigns for pandemic influenza. **Completed**
- DOD shall be postured to provide care for military personnel and eligible civilians, contractors, dependants, other beneficiaries, and veterans and shall be prepared to augment the medical response of State, territorial, tribal, or local governments and other Federal agencies consistent with their ESF #8 support roles. **Completed**



National Plan Tasks: HA as Primary Agency

6 Month Suspense

- DOD, shall maintain antiviral and vaccine stockpiles in a manner consistent with the requirements of FDA's Shelf Life Extension Program (SLEP) and explore the possibility of broadening SLEP to include equivalently maintained State stockpiles. *In Progress*
- DOD hospitals and health facilities shall have access to improved rapid diagnostic tests for influenza A, including influenza with pandemic potential, within 6 months of when tests become available. *In Progress*
- DOD shall develop and disseminate educational materials, coordinated with and complementary to messages developed by HHS but tailored for their respective departments.

Completed



National Plan Tasks: HA as Primary Agency

12 Month Suspense

- DoD shall be prepared to track and provide personnel and beneficiary health statistics and develop enhanced methods to aggregate and analyze data documenting ILI from its surveillance systems. *In Progress*
- DOD 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. *Policy in Staffing*



National Plan Tasks: HA as Primary Agency

18 Month Suspense

- DOD shall prioritize international DOD laboratory research efforts to develop, refine, and validate diagnostic methods to rapidly identify pathogens.

In Progress

- DOD shall conduct a medical materiel requirements gap analysis and procure necessary materiel to enhance Military Health System surge capacity.

In Progress

- DOD shall procure 2.4 million treatment courses of antiviral medications and position them at locations worldwide. *Completed*



National Plan Tasks: HA as Primary Agency

18 Month Suspense

- DOD shall supply military units and posts, installations, bases, and stations with vaccine and antiviral medications according to the schedule of priorities listed in the DOD pandemic influenza policy and planning guidance. ***In Progress***
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National Plan Tasks: HA as Primary Agency

18 Month Suspense

- DOD shall enhance influenza surveillance efforts
 - ensuring that medical treatment facilities (MTFs) monitor ESSENCE and provide additional information on suspected or confirmed cases of pandemic influenza through their Service surveillance activities *In Progress*
 - ensuring that Public Health Emergency Officers (PHEOs) report all suspected or actual cases through appropriate DOD reporting channels, as well as to CDC, State public health authorities, and host nations *In Progress*
 - posting results of aggregated surveillance on the DOD Pandemic Influenza Watchboard. *In Progress*



National Plan Tasks: HA As Primary Agency

18 Month Suspense

- DOD shall enhance its public health response capabilities by:
 - continuing to assign epidemiologists and preventive medicine physicians within key operational settings
 - expanding ongoing DOD participation in CDC's Epidemic Intelligence Service (EIS) Program
 - fielding specific training programs for PHEOs that address their roles and responsibilities during a public health emergency
 - measure of performance: all military PHEOs fully trained within 18 months; increase military trainees in CDC's EIS program by 100 percent within 5 years.

In Progress



National Plan Tasks: HA As Primary Agency

18 Month Suspense

- As appropriate, DOD, in consultation with its COCOM commanders, shall implement movement restrictions and individual protection and social distancing strategies (including unit shielding, ship sortie, cancellation of public gatherings, drill, training, etc.) within their posts, installations, bases, and stations. DOD personnel and beneficiaries living off-base should comply with local community containment guidance with respect to activities not directly related to the installation.

In Progress



DoD Pandemic Influenza Web Site for Medical Guidance

- Watch board
 - <https://fhp.osd.mil/aiWatchboard/index.html>
 - Access level to be designated
 - Includes
 - Disease status
 - Guidance
 - Clinical practice guidelines
 - Plans
 - Policy
 - Educational materials
 - Links to other USG agency





Department of Defense Pandemic Flu Watchboard

Current Phase: Pandemic Alert Period Phase 3 - Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.

WHO PHASES		FEDERAL GOVERNMENT RESPONSE STAGES
Interpandemic Period		National Strategy Goals
PHASE 1	No new influenza virus subtypes have been detected in humans. An influenza virus subtype that has caused human infection may be present in animals. If present in animals, the risk of human infection or disease is considered to be low.	Strengthen influenza pandemic preparedness at the global, regional, national and sub national levels.
PHASE 2	No new influenza virus subtypes have been detected in humans. However, a circulating animal influenza virus subtype poses a substantial risk of human disease.	Minimize the risk of transmission to humans; detect and report such transmission rapidly if it occurs.
Pandemic Alert Period		National Strategy Goals
PHASE 3	Human infection(s) with a new subtype, but no human-to-human spread, or at most rare instances of spread to a close contact.	Ensure rapid characterization of the new virus subtype and early detection, notification and response to additional cases.
PHASE 4	Small cluster(s) with limited human-to-human transmission but spread is highly localized, suggesting that the virus is not well adapted to humans.	Contain the new virus within limited foci or delay spread to gain time to implement preparedness measures, including vaccine development.
PHASE 5	Larger cluster(s) but human-to-human spread still localized, suggesting that the virus is becoming increasingly better adapted to humans, but may not yet be fully transmissible (substantial pandemic risk).	Maximize efforts to contain or delay spread, to possibly avert a pandemic, and to gain time to implement pandemic response measures.
Pandemic Period		National Strategy Goals
PHASE 6	Increased and sustained transmission in general population.	Maximize efforts to contain or delay spread, to possibly avert a pandemic, and to gain time to implement pandemic response measures.

Visit PandemicFlu.gov for one-stop access to U.S. Government avian and pandemic flu information. HHS is responsible for Pandemic Influenza Planning.



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