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Pandemic Influenza (U)

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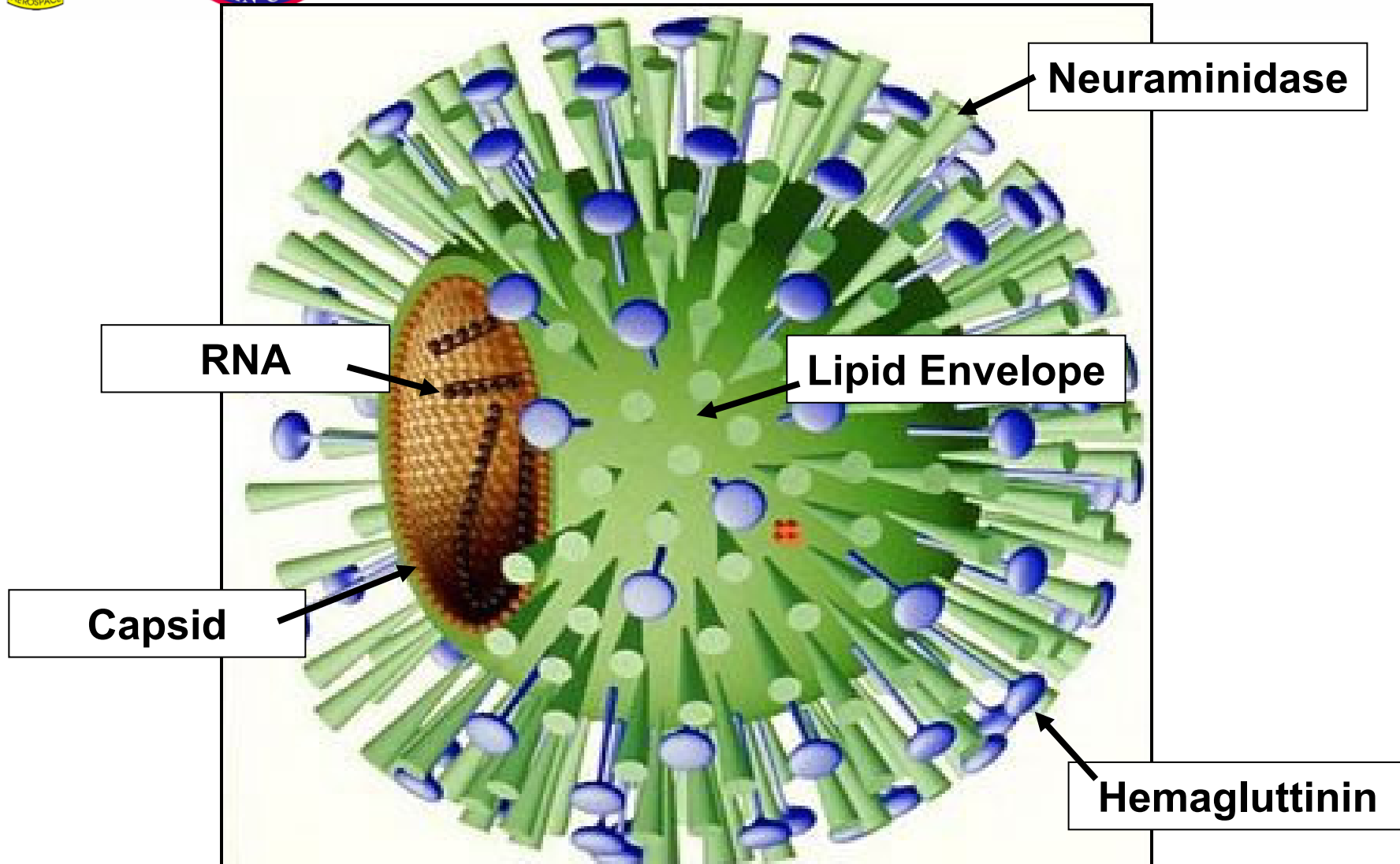
Pandemic Influenza Overview (U)

- **Seasonal influenza**
- **Influenza vaccine**
- **Pandemic influenza**
- **Social consequences**
- **Pandemic preparations**
 - **International/National**
 - **USNORTHCOM**
 - **Workplace**
 - **Personal**
 - **Family**
- **The good news**



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The Culprit (U)



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Human Influenza Disease (U)

- **Occurs mostly during fall/winter in U.S.**
- **Spread by air-borne droplets**
- **Viral shedding begins before symptoms start and may continue after symptoms begin to resolve**
- **Symptoms – fever, dry cough, aches and pains, malaise, runny nose**
 - **Nausea, vomiting and diarrhea are extremely rare**
- **Symptoms may last 5-7 days in healthy individuals**
- **Full recovery may be prolonged**
- **Young, old, and those with pre-existing illness at greatest risk**



Influenza Vaccine (U)

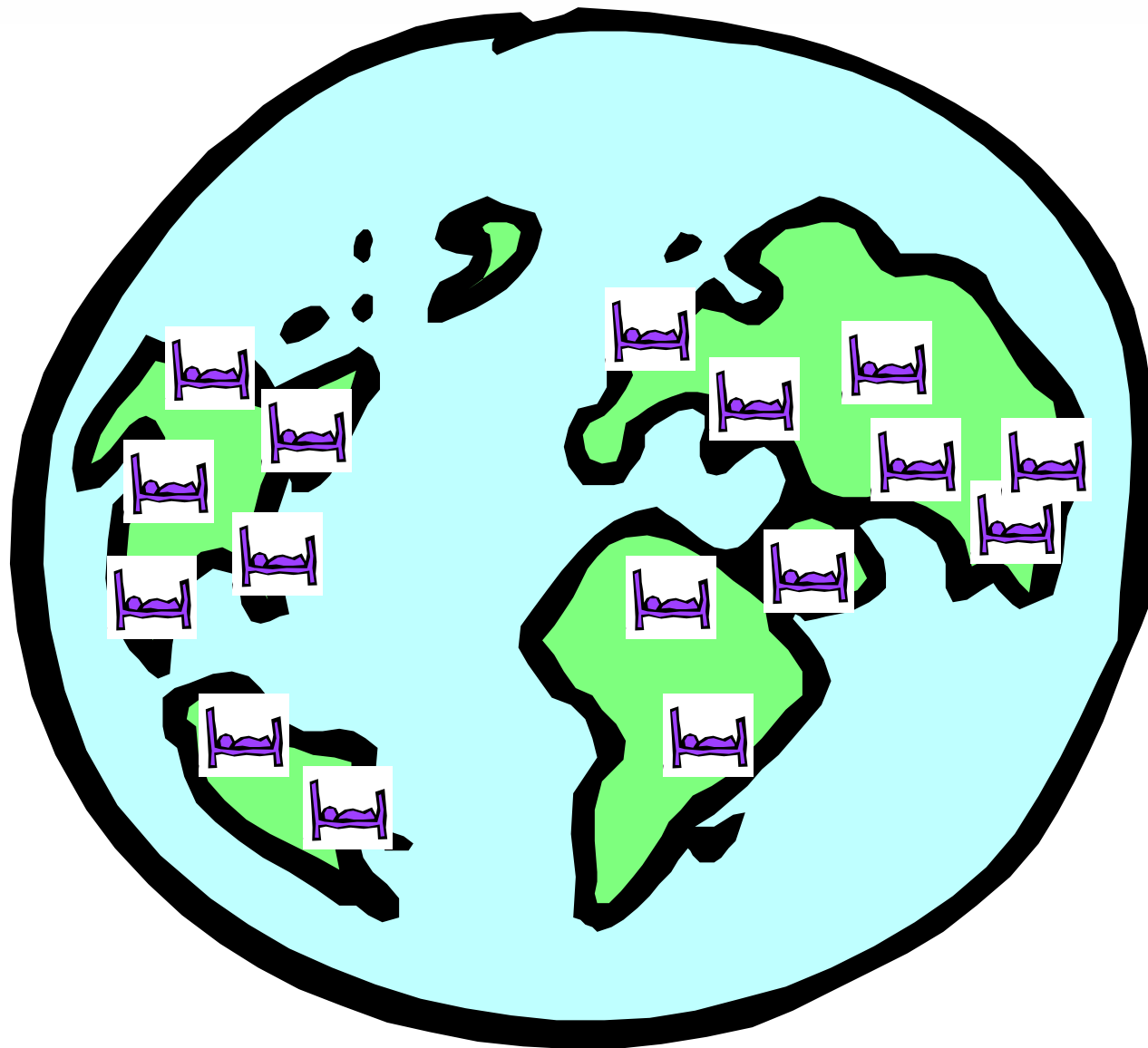
- **Flu viruses change slightly each year**
- **Each year vaccines are developed to counter new strains**
- **Seasonal flu usually causes “mild” illness but it can be severe**
 - **~ 36,000 extra deaths each year in the U.S. due to influenza-like illness and related complications**
- **Single most effective way to protect yourself**
 - **Protects against the most common and worst strains**
 - **Protects against severe illness**
 - **Protects others (if you don't get the flu, you won't give it to anyone else)**



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Pandemic Influenza (U)

- **Outbreak**
- **Epidemic**
- **Endemic**
- **Pandemic**



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Pandemic Influenza (U)

- **Overdue for an influenza pandemic**
- **Previous pandemics include plague (“Black Death”) during Middle Ages and 1918 Spanish Flu**
- **Three conditions required for a pandemic to start:**
 - ✓ **New virus is introduced to humans**
 - **Virus changes to be easily passed from person to person**
 - **People travel and move, carrying virus**

Social Consequences (U)



- **Agricultural impact**
 - Nutritional and economic
 - Vaccine production
- **Overwhelmed infrastructure**
 - Healthcare
 - Essential services
- **Global economic impact**
 - Comparable to a post-war recession for the U.S.
 - 5% decrease in real GDP
 - Multiple contributing factors
 - Longer term impact of permanent loss in workforce



Seasonal vs Pandemic Influenza (U)

• **Seasonal Influenza**

- Occurs in cooler parts of each year (winter in USA)
- Affects 10% of population
- Usually mild and not life threatening
- Very young and very old are at highest risk
- Some people have some level of pre-existing immunity
- Vaccine is available
- Antiviral drugs are available

• **Pandemic Influenza**

- Occurs historically every 10-40 years, at any time of year
- May affect 50% of population
- Often more serious
- All age groups at risk
- People have little or no pre-existing immunity
- Vaccine unlikely to be available at first; may take six months or more to develop and distribute
- Many people affected, so antiviral drugs may be in limited supply



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WHO Pandemic Influenza Phases (U)

Inter-pandemic phase	Low risk of human cases	1
	Higher risk of human cases	2
Pandemic alert	No or very limited human-to-human transmission	3
	Evidence of increased human-to-human transmission	4
	Evidence of significant human-to-human transmission	5
New virus causes human cases		
Pandemic	Efficient and sustained human-to-human transmission	6

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1918 Influenza Progression (U)

Approximate beginning of the epidemic, 1918



before
sept. 14

between
sept. 14 - 21

between
sept. 21 - 28

between
sept. 28 - oct. 5

after
oct. 5

Source: *America's Forgotten Pandemic - The Influenza of 1918 - 1989*

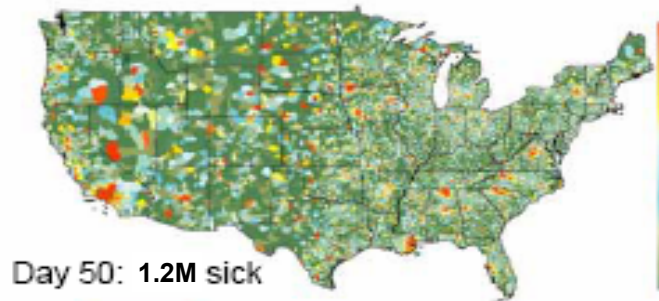
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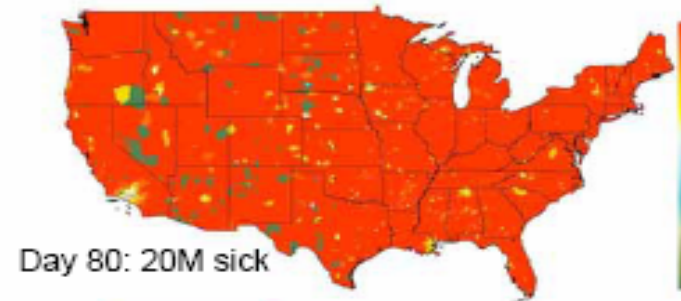
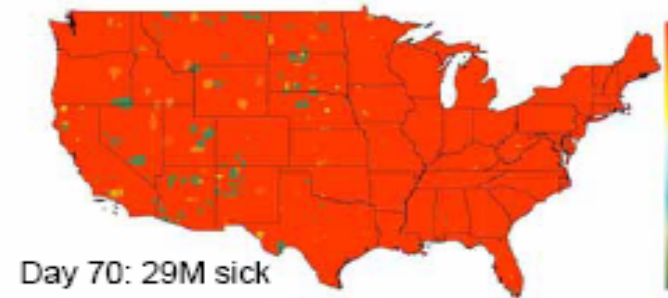
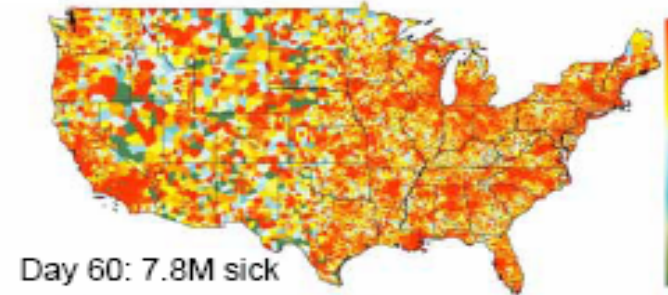
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Current Progression Estimates (U)

Los Alamos



(red: more than 3% sick)



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National/International Measures (U)

- **Preparedness & Communication**
 - Policy & planning
 - Stockpile & preposition
 - Research and development
 - Healthcare infrastructure
 - Exercise
- **Surveillance & Detection**
 - Animal & human
- **Response & Containment**
 - Movement restriction
 - Economic incentives
- **Risk Communication**





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USNORTHCOM Planning (U)

“It is only a matter of time before an Avian Flu virus, most likely H5N1, acquires the ability to be transmitted from human to human, sparking the outbreak of a human pandemic influenza.” – Lee Jong-Wook, Former Director General, WHO – 7 Nov 05

STATUS

- 251 confirmed human cases of H5N1 to date, 148 deaths; H5N1 virus does not spread efficiently from person to person *
- * Source: World Health Organization, 28 Sept 2006

POTENTIAL

- Emergence of a highly lethal pandemic influenza virus possible, with significant health, economic, and security ramifications

NATIONAL STRATEGY, 1 Nov 2005 – outlines use of all elements of national power. Three pillars :

1. Preparedness and Communication
2. Surveillance and Detection
3. Response and Containment

National
Implementation
Plan

April 2006

DOD
Implementation
Plan

May 2006

USNORTHCOM
CONPLAN 2591

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USNORTHCOM CONOP (U)

Mission: As directed by the President or Secretary of Defense, USNORTHCOM conducts operations in response to pandemic influenza within the designated Joint Operations Area to mitigate the impact on our nation's welfare.

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Impact on Military Operations (U)

Training and Readiness

- Significant portions of DoD population may contract influenza; 40% of workforce may be absent
- Troop rotations adversely impacted/halted, exercises and certain operations limited/cancelled

Support of Civil Agencies & Global Commitments

- Competing demand for low-density units (medical, mortuary) complicates range of options
- Activation of Reserve medical personnel may undermine private health care capacity
- Military treatment facilities potentially overwhelmed
- State Emergency Management Assistance Compact (EMAC) will be limited in application
- Coalition partners, allies, and other nations will request multiple forms of support from DoD



Impact on Military Operations (U)

Effect on coalition partner operations

- **Military movements constrained (personnel, logistics, basing, overflight)**
- **Reduction of partner nations' contributions to the WOT – increasing US demands OCONUS**

Economic impacts on DoD operations

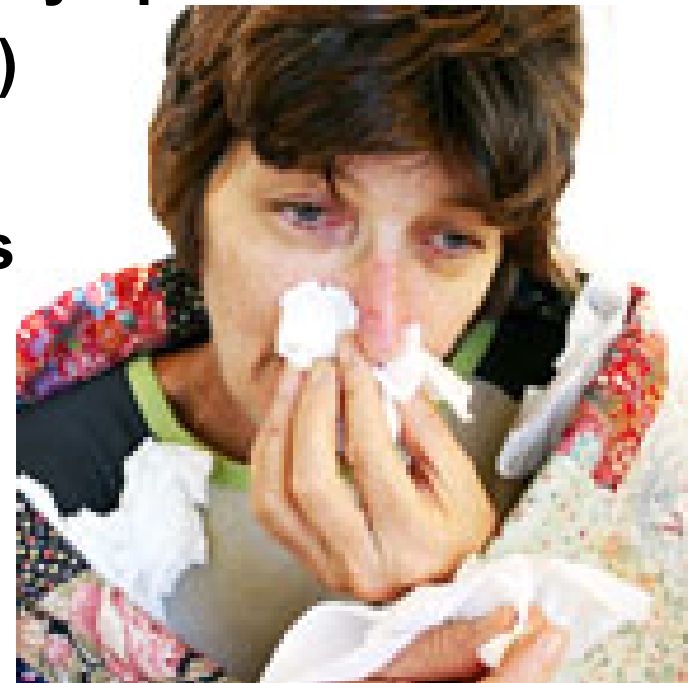
- **Consumer goods - surge in private demand (stockpiling) may cause DoD shortfalls**
- **Production - reduced capacity/output of goods from absenteeism**
- **Transportation - reduction in transportation capacity will affect DoD acquisition/distribution**
 - **Civil aviation support to strategic deployment reduced**
 - **Access to goods OCONUS impacted**
 - **DoD assets used to offset private sector shortfalls (ports, transport, security, medical)**



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Workplace Measures (U)

- **Continuity of operations plan**
- **Employer support for personal protective measures**
- **Annual influenza immunization**
- **Mandatory sick leave for those with flu-like symptoms or household contacts with flu-like symptoms**
- **Social distancing (work from home)**
- **Deferral of non-essential travel**
- **Disinfecting contaminated surfaces**

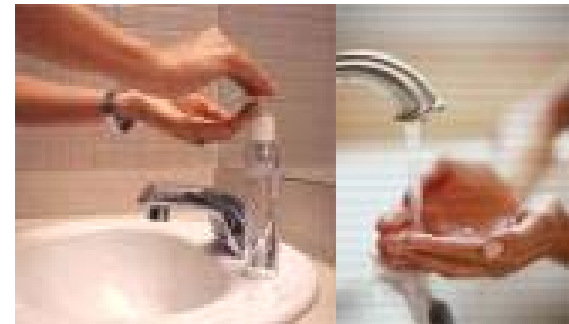


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Personal Measures (U)

- **Wash hands frequently with soap and warm water**
 - Alcohol-based hand gels are not sufficient
- **Use “cough etiquette”—cover mouth and nose when coughing and sneezing with tissues or sleeve**
 - Avoid touching your mouth, nose & eyes.
- **Maintain a healthy lifestyle**
 - Exercise, rest, and eating balanced meals maintains body’s ability to fight infection
- **Do not drink or smoke excessively**
- **Do not share personal items**
- **Stay home when sick & avoid sick people**





Family Preparations (U)

- **Prepare your family as you would for natural disasters**
- **Plan for worst-case scenarios such as several family members becoming ill**
- **Discuss and make alternate plans, including:**
 - **Plan family and child care**
 - **Plan for pet care**
 - **Plan for additional food and water storage**
 - **Stock medications, diapers, formula and other crucial items**
 - **Plan for utility outages (power, water, trash collection, etc.)**
 - **Assemble first aid kits and medications**
 - **Designate emergency meeting places and points of contact for family members if they become separated**
 - **Ensure routine immunizations are current**
 - **List and share all important contact phone numbers**
 - **Coordinate with your service's family support groups for help as needed**

What's the good news? (U)



- Improved public/personal hygiene
- Improved individual health and nutrition
- Increased public awareness
- Improved access to medical care – antivirals, antibiotics, vaccines, ventilators, blood chemical/gas monitoring
- Improved laboratory capabilities
- Increasing surveillance & response capabilities
- Coordinated international surveillance, planning, and response
- Electronic communications



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Resources

- **Centers for Disease Control (CDC)**
 - <http://www.cdc.gov/flu/>
 - <http://www.cdc.gov/flu/avian/index.htm>
- **World Health Organization (WHO)**
 - http://www.who.int/csr/disease/avian_influenza/en/
- **Center for Infectious Disease Research And Policy (CIDRAP)**
 - <http://www.cidrap.umn.edu/cidrap/>
- **National Institute of Allergy and Infectious Diseases (NIAID)**
 - <http://www3.niaid.nih.gov/news/focuson/flu/default.htm>
- **United Nations Food and Agriculture Organization (FAO)**
 - http://www.fao.org/ag/againfo/subjects/en/health/diseases-cards/special_avian.html
- **Pandemic Flu Checklist for children and families**
 - <http://www.pandemicflu.gov/planguide/checklist.html>
- **U.S. pandemic influenza information and plan**
 - www.pandemicflu.gov

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