Avian Influenza: The Public Health Perspective

One World – One Health Symposium
September 29 2004

Nina Marano DVM MPH Dipl ACVPM
Associate Director for Veterinary Medicine and Public Health
National Center for Infectious Diseases
Centers for Disease Control and Prevention

Influenza in the United States, 2003-04

Flu, and fear, run rampant

By Kevin Moloney for U

High risk: Kai Stobbe with son Keegan, 20 months, who was brought to The Children's Hospital in Denv

No one knows when tough season will end

By Anita Manning and
USA TODAY

Emergency rooms
people. Supplies of f

New Mexico, Texas and Oklahoma. "We're seeing record numbers of patients with flu," says Denver emergency doctor Dennis Beck, including an alarming number of children, "many of whom are quite ill."

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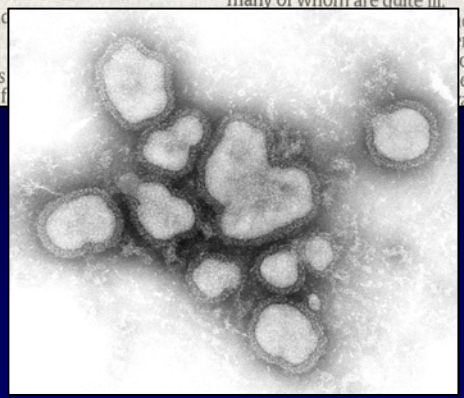


Flu vaccine makers say no more is left

Early cases set off rush to get shots

By CHARLES SEABROOK
cseabrook@ajc.com

The nation's two makers of flu vaccine said Friday they have run out of the drug as Americans rush to get shots in a worsening flu outbreak.

The U.S. Centers for Disease Control and Prevention and state health officials across the country, including in Georgia, scrambled to assess how much vaccine is still available and how it could be redistributed to hard-hit areas, if needed.

On ajc.com

➤ Cold and flu guide, including questions and answers, on our health channel.

neighboring county might have it.

Effectiveness uncertain

Even as the flu outbreaks triggered heavy immunization demand, health officials said they are not certain of the effectiveness of the vaccines, produced by drug companies Chiron and Aventis Pasteur. The strain of influenza implicated around the country differs somewhat from the three strains that this year's vaccine is designed to combat.

Chiron and Aventis said recent years received a flu shot in October and November, and that there is unusually high interest in getting flu shots into December.

"The fact that so many Americans have acted on the recommendations to receive a flu shot is encouraging," Gerberding said.

The sudden late demand for vaccinations apparently was triggered by reports of an especially bad flu season, especially for children.

The outbreak has been particularly intense in Colorado, where more than 6,300 people were stricken in the last month and six children under age 16 have died. Colorado is one of 10 states with a widespread flu outbreak, the highest designation given by the CDC. The others are Texas,

2003-04 Domestic Influenza Season

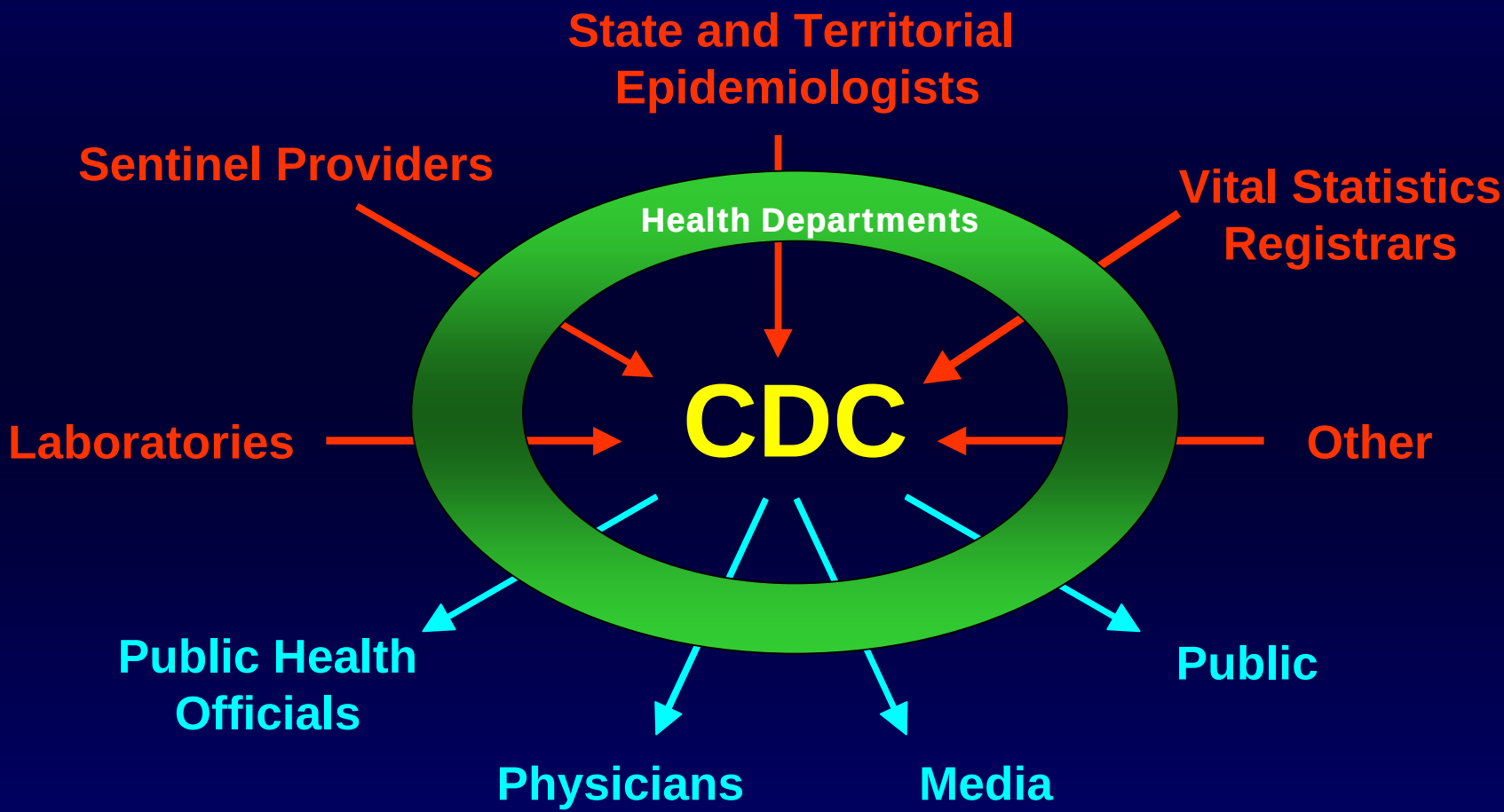
- Why was this season so challenging?
  - New recommendations for pediatric vaccination (6-23 month old), pregnancy vaccination (1st trimester)
  - Early onset
  - Public & media concerns about deaths in children
  - Mismatch between vaccine and circulating A(H3N2) strain
  - Perception of increased severity
  - Shortage of inactivated vaccine at time of high demand
  - Concern about avian influenza

2003-04 U.S. Influenza Activity

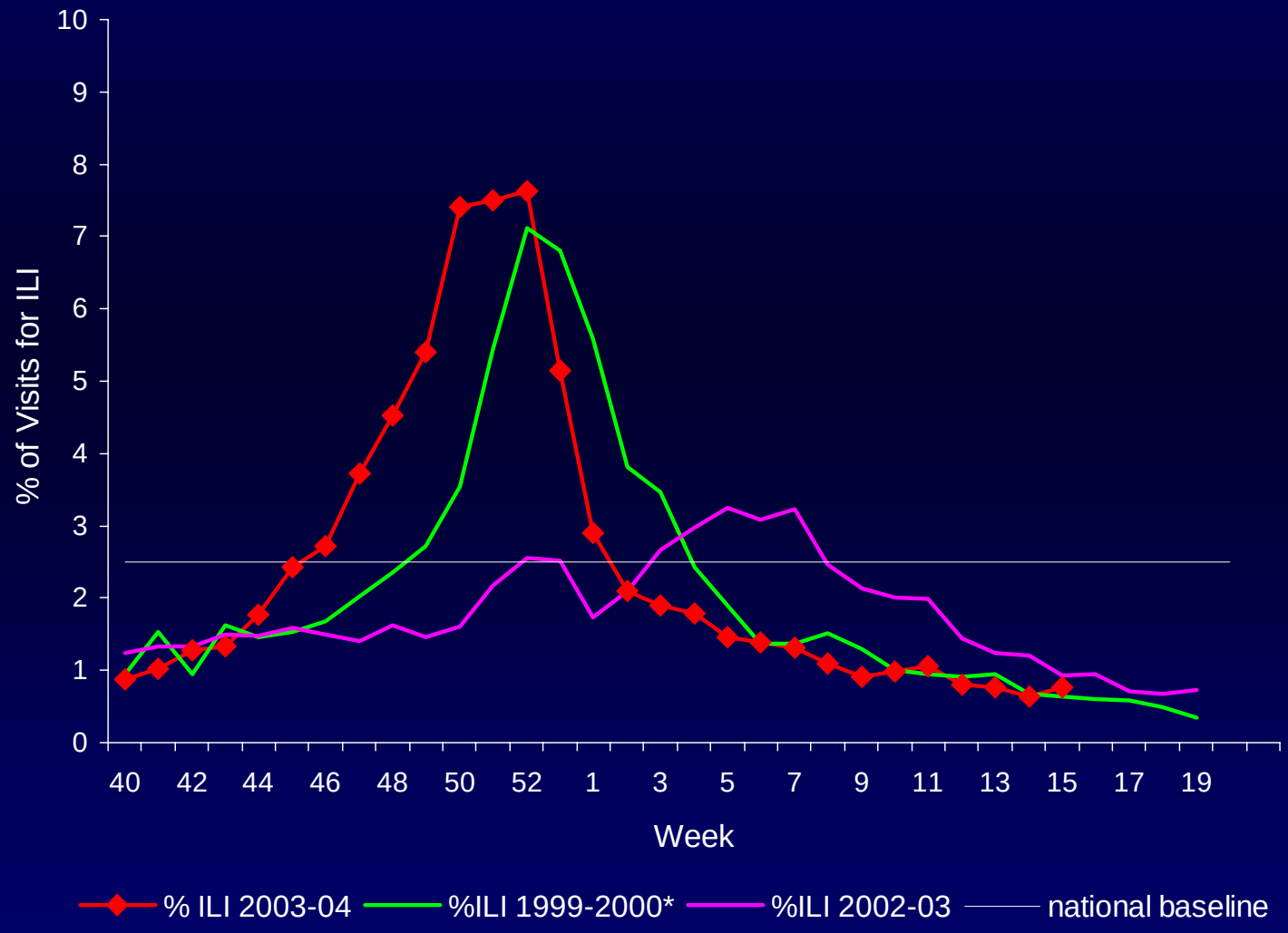
- Activity began unusually early
- For week ending Dec. 20, 2003, number of states reporting widespread influenza activity was higher than for any week during past 10 years
- Influenza-related deaths* were higher than for last three “mild” influenza seasons but lower than for previous season in which H3N2 viruses predominated
- Highest ILI attack rates were among children and young adults: 134 lab-confirmed deaths in children <16 years of age

*As estimated by reports from 122 cities reporting system

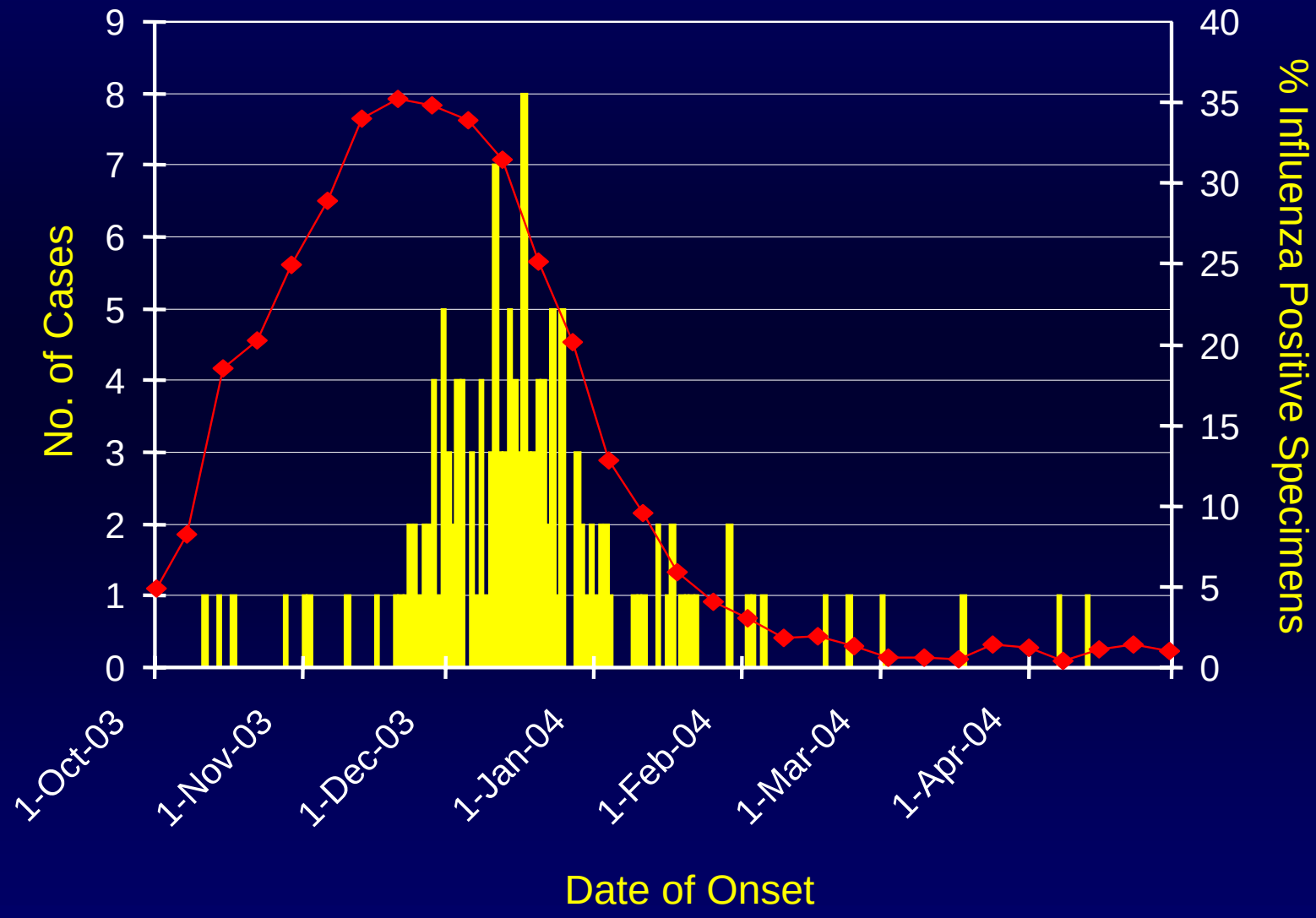
U.S. Influenza Surveillance



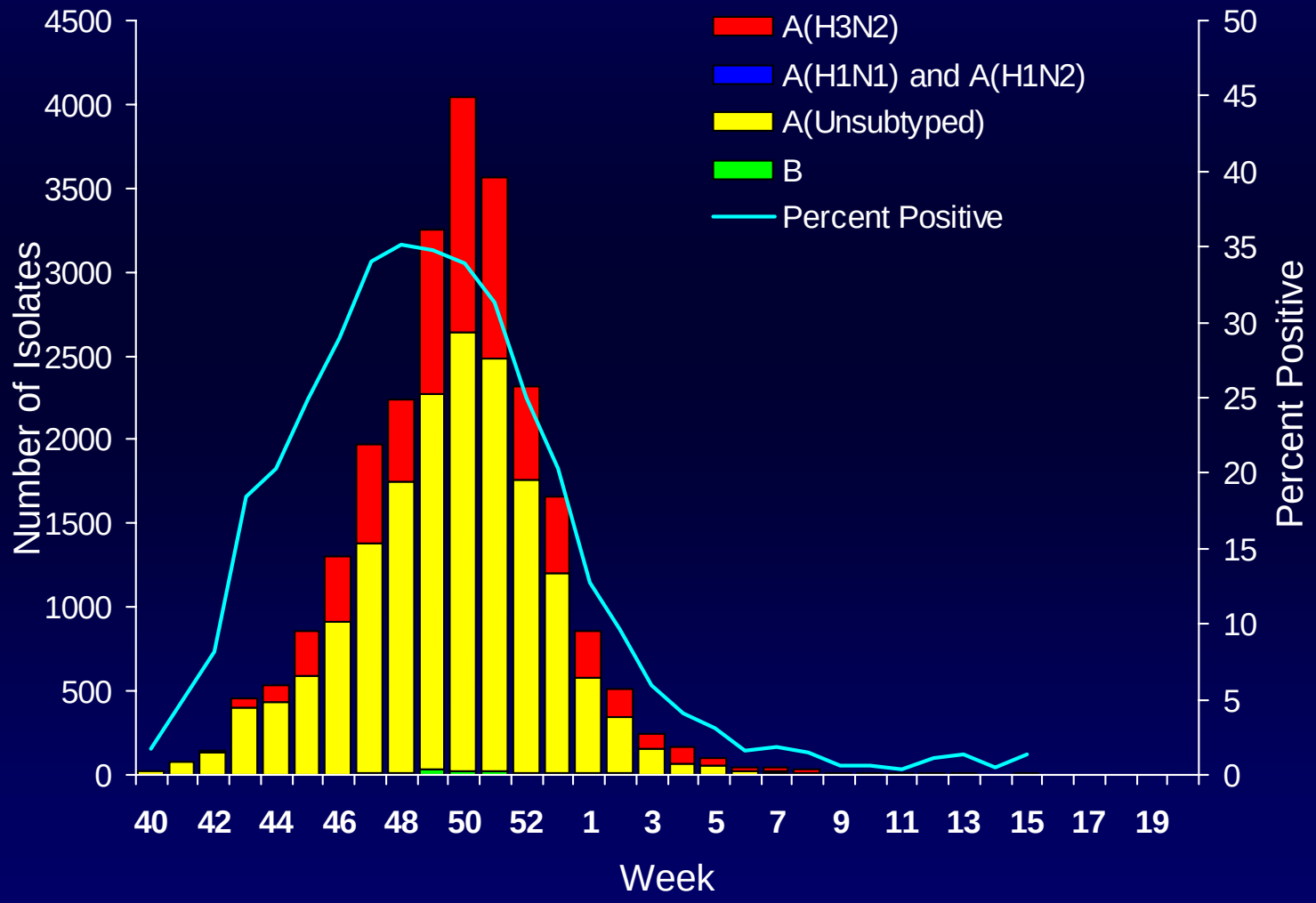
Influenza-like Illness Reported by Sentinel Providers



Pediatric Influenza-Associated Mortality and Virologic Activity, U.S. 2003-04 Season

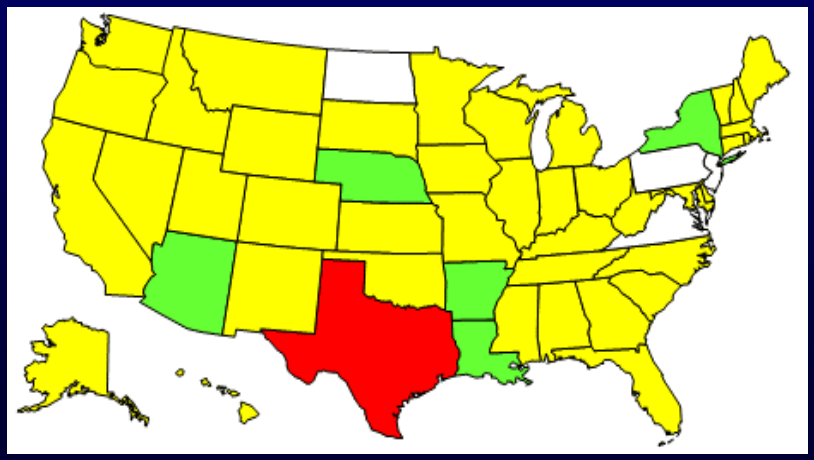


WHO/NREVSS Collaborating Laboratories National Summary, 2003-04

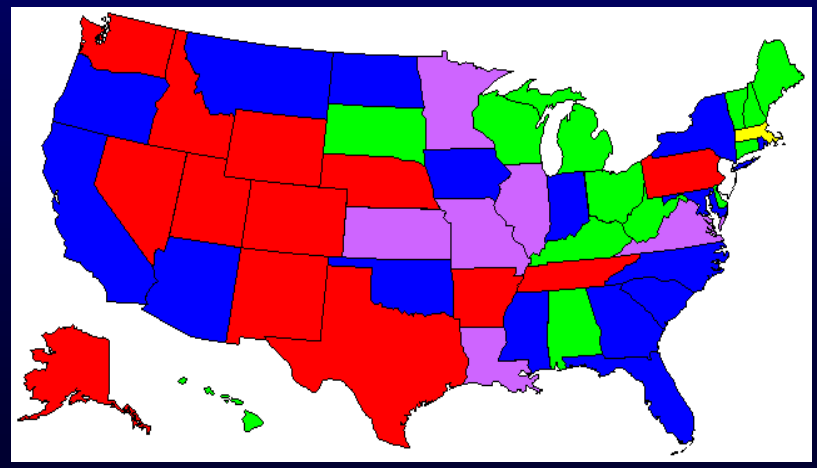


Reported Influenza Activity

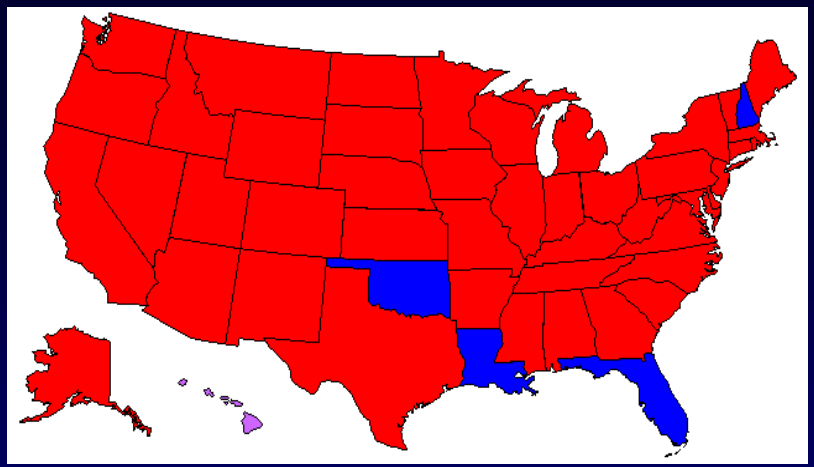
Week ending October 18, 2003



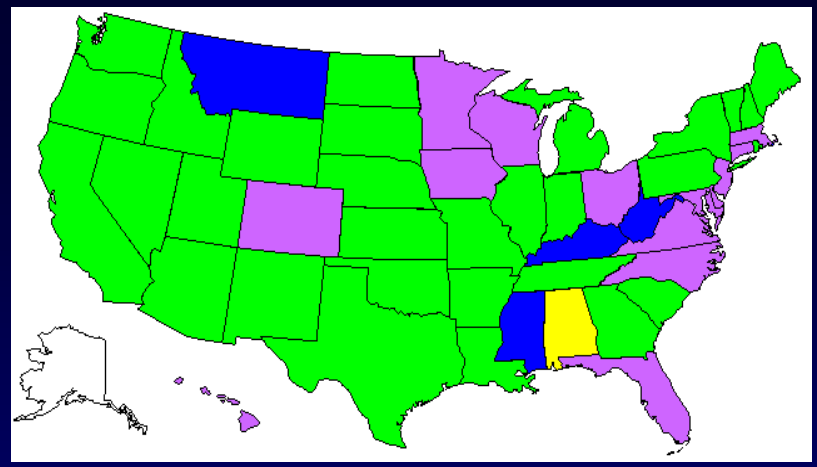
Week ending November 29, 2003



Week ending December 20, 2003



Week ending February 7, 2004



No Report | No Activity | Sporadic | Local | Regional | Widespread


www.timeasia.com
FEBRUARY 9, 2004
TIME
BIRD FLU
Is Asia hatching the next human pandemic?

Department of Health and Human Services
Centers for Disease Control and Prevention

CDC en Español

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- Treatment
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Influenza (Flu)

Protect Yourself & Your Loved Ones

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Interim Guidance for Protection of Persons Involved in U.S. Avian Influenza Outbreak Disease Control and Eradication Activities

February 17, 2004

Español

Download PDF version formatted for print (165 KB/4 pages)

Objective

This document provides interim guidance for protection of persons involved in activities to control and eradicate outbreaks of avian influenza among poultry in the United States. Activities that could result in exposure to avian influenza-infected poultry include euthanasia, carcass disposal, and cleaning and disinfection of premises affected by avian influenza. This interim guidance, developed in cooperation with the U.S. Department of Agriculture (USDA), should be considered complementary to avian population disease control and eradication strategies as determined by the state government, industry, or the USDA. These guidelines will be updated as necessary.

Background: Avian Influenza

Influenza viruses that infect birds are called "avian influenza viruses." These are type A influenza viruses that are genetically distinguishable from influenza viruses that usually infect people. There are many subtypes of avian influenza A viruses, including H7 and H5. Avian influenza viruses can be distinguished as "low pathogenic" and "high pathogenic" forms based on genetic features of the virus and the severity of the illness they cause in poultry.

Birds that are infected with avian influenza viruses can shed virus in saliva, nasal secretions, and feces. Contact with feces or respiratory secretions is important in the transmission of infection among poultry. Between flocks, infection usually spreads due to movement of infected birds and the actions of humans in moving feedstuff, personnel, equipment, and vehicles into and from premises that are contaminated with

Avian Flu

Overviews and Updates
- Bird Flu Fact Sheet
- Basic Information About Avian Influenza
- Information about Influenza A H7 Viruses
- Embargo of Birds
- Interim Report: Human Infection with Avian H7 Influenza Viruses, North America

Travel
- Guidelines for Airlines Arriving from Areas with Avian Influenza
- Interim Guidance about Avian Influenza for Americans Living Abroad
- Travel Precautions

Professional Guidance
- Interim Recommendations for Persons with Possible Exposure to Avian Influenza During Outbreaks Among

http://www.cdc.gov/flu/avian/protectionguid.htm

Worker Protection Recommendations

- Use of personal protective equipment
- Vaccination for influenza
- Administration of antivirals
- Surveillance among poultry workers
- Evaluation of workers who develop a febrile respiratory illness with 7 days of last exposure

Enhanced U.S. Surveillance, Diagnostic Evaluation, and Infection Control Precautions for Avian Influenza A (H5N1)

Testing for avian influenza A (H5N1) is indicated for hospitalized patients with:

- Radiographically confirmed pneumonia, acute respiratory distress syndrome (ARDS), or other severe respiratory illness for which an alternate diagnosis has not been established, AND
- History of travel within 10 days of symptom onset to a country with documented H5N1 avian influenza in poultry and/or humans

Enhanced U.S. Surveillance, Diagnostic Evaluation, and Infection Control Precautions for Avian Influenza A (H5N1)

Testing for avian influenza A (H5N1) should be done for hospitalized or ambulatory patients with:

Documented temperature of >38°C (>100.4°F), AND ≥ of the following:
Cough, sore throat, shortness of breath, AND
History of contact with poultry (e.g., visited a poultry farm, a household raising poultry, or a bird market) or known or suspected human case of influenza A (H5N1) in an H5N1-affected country within 10 days of symptom onset.

DRAFT
PANDEMIC INFLUENZA PREPAREDNESS AND RESPONSE PLAN

Department of Health and Human Services

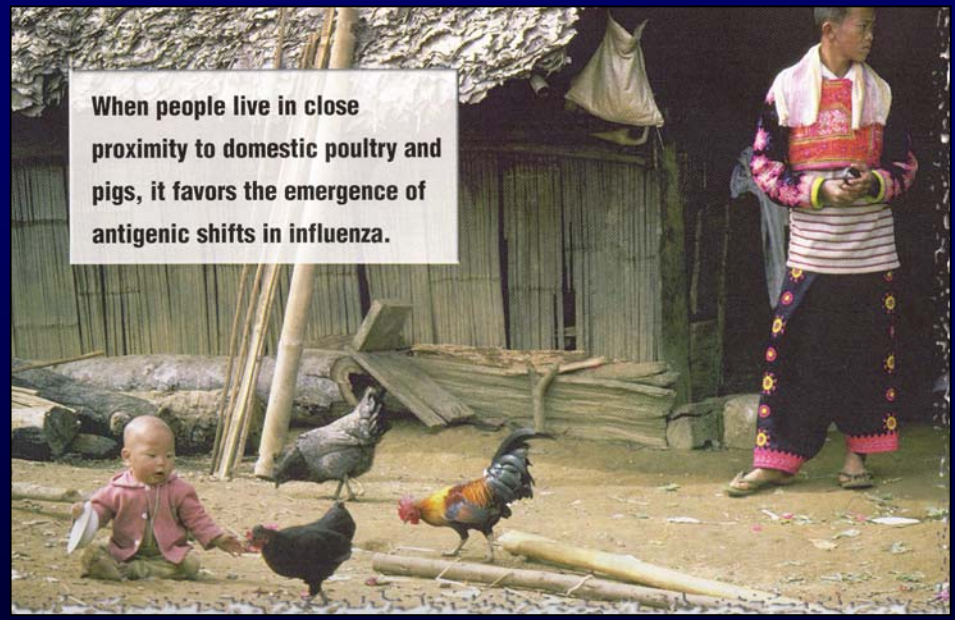
Core Document
August 2004

DRAFT

Comments on this draft plan should be forwarded to:

National Vaccine Program Office
Office of the Assistant Secretary for Health
Department of Health and Human Services
Hubert H. Humphrey Building
200 Independence Ave, SW -- Room 725H
Washington, DC 20201-0004

e-mail: pandemicinfluenza@osophs.dhhs.gov

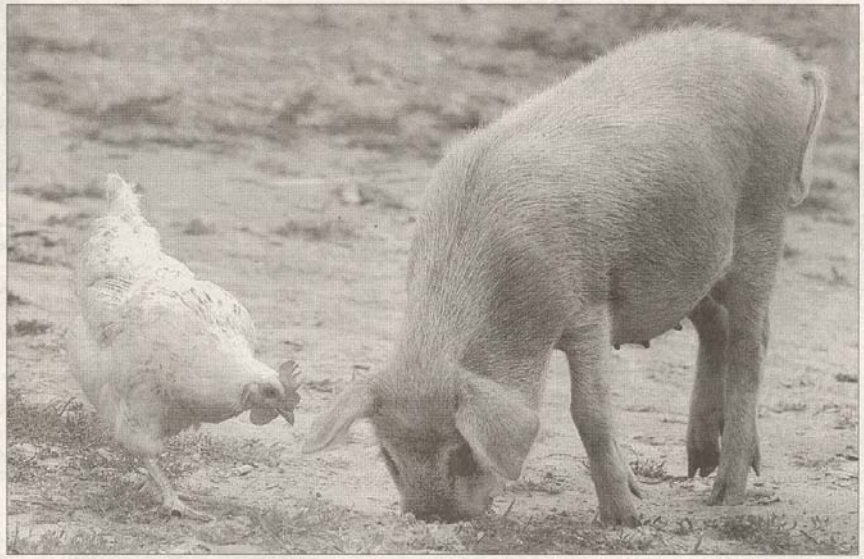


Health officials fear flu pandemic

Asian avian strain may be mutating

By M.A.J. McKENNA
mmckenna@ajc.com

International health officials are increasingly concerned that the elements giving rise to a long-feared international epidemic of influenza are falling into place in Asia, piece by piece.



Associated Press
China is trying to defuse international reaction to the disclosure that it knew in 2003 that pigs were infected with avian flu. The animals pictured are in Hebei, China.

http://www.hhs.gov/nvpo/pandemicplan

U.S. Newswire
Medialink Worldwide

To: National Desk
Contact: U.S. Department of Health and Human Services Press Office, 202-690-6343

WASHINGTON, Sept. 21 /U.S. Newswire/ -- U.S. Department of Health and Human Services (HHS) Secretary Tommy G. Thompson announced today the awarding of a contract to Aventis Pasteur Inc. to manufacture and store two million doses of avian influenza H5N1 vaccine, an important initial acquisition to better prepare the nation for an influenza pandemic.

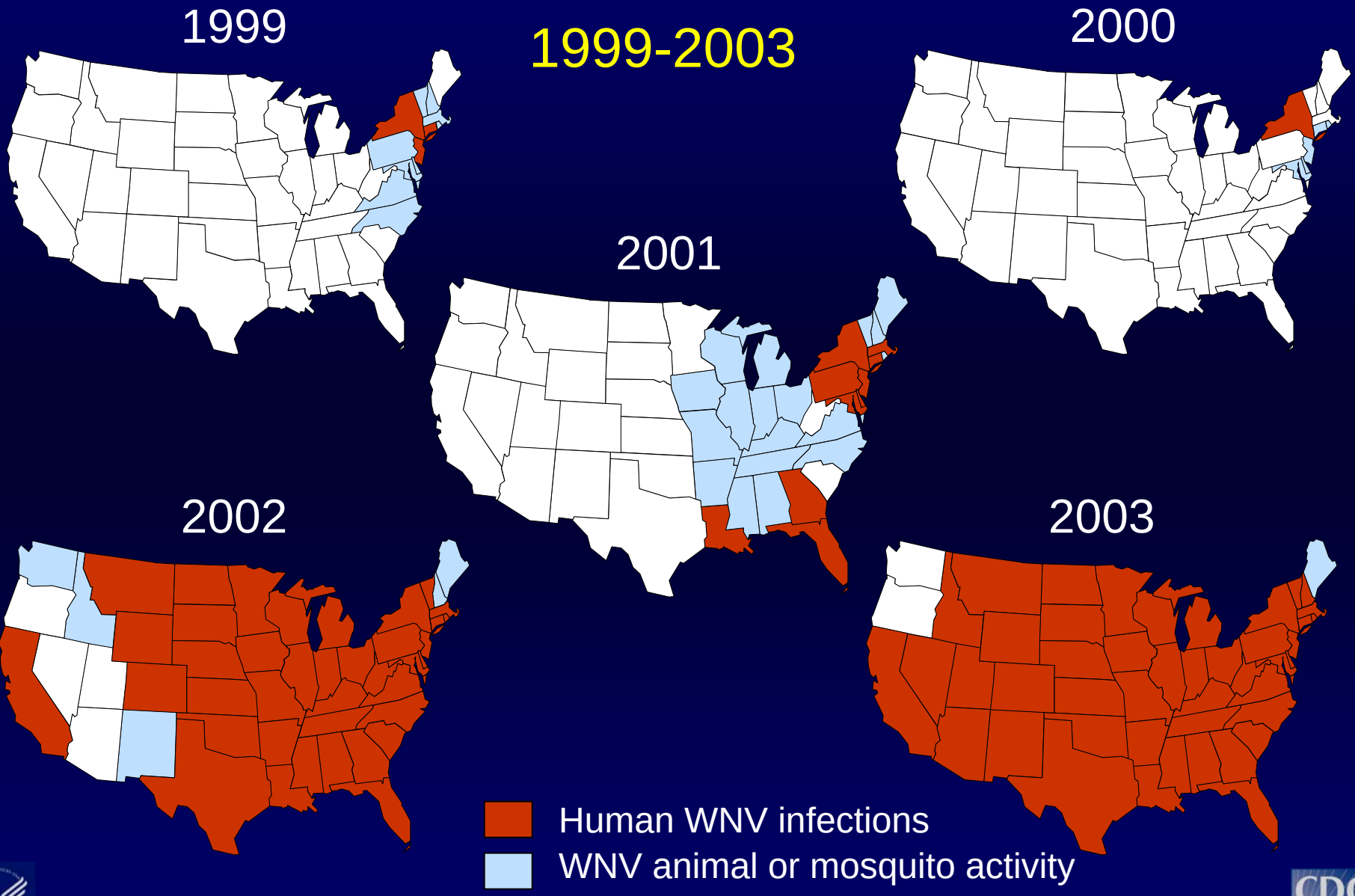
The vaccine that is being made is designed to match the H5N1 influenza virus that has killed 29 people in Thailand and Vietnam this year. If a pandemic of avian influenza virus H5N1 occurred in humans, the new vaccine would be used to protect laboratory workers, public health personnel, and, if needed, the general public.

"This is an important first step toward preparing our nation to respond to a pandemic influenza outbreak," Secretary Thompson said. "The reemergence of the avian flu in Asia this year is another sign that we have to develop and produce vaccines against the threat of a pandemic flu. The United States is the first nation to undertake this preventive measure on this scale."

The amount of the contract is nearly $13 million. The purchase of the new vaccine follows Secretary Thompson's announcement last month of the National

ArboNet Surveillance for West Nile Virus

1999-2003



Concern over Reassortment of Avian Influenza Viruses

Needed:

- A swine surveillance system
  - To detect antibody to H5 and other influenza viruses
    - Serum samples for antibody
    - Respiratory swabs for virus isolation
  - Confidentiality of country of origin protected
  - Regional laboratories be used for testing; isolates would be shared with WHO Reference laboratories for genomic sequencing to look for evidence of reassortment

Thai woman develops bird flu

Officials investigate two recent deaths in family

By KEITH BRADSHER
New York Times

Hong Kong — Officials in Thailand announced on Monday that a 32-year-old woman had been hospitalized with avian influenza and that two of her family members had already died of a flulike illness, raising the possibility that

But little is known about how quickly an avian virus can develop the ability to pass easily from person to person.

Many scientists think that an avian influenza strain that jumped to people was responsible for the Spanish influenza of 1918-19, which is believed to have killed from 20 million to 100 million people at a time when the world had a quarter of its current population of more than 6 billion.

Thailand has identified 146 possible human cases of bird flu since July. Of those, two have turned out to have the disease, 16 cases are under investigation, and 128 turned out to be false alarms.

Speculation about bird flu cases has reached such a frenzy in Southeast Asia that considerable attention was paid in the region's news media over the weekend to five Malaysian sailors who fell ill after visiting an island between the southern Philippines and peninsular Malaysia, where they saw some dead swallows. The sailors, who were isolated but quickly recovered, tested negative for bird flu.

Summary

- We must be prepared to face the next flu pandemic and preparedness plans are essential
- Humans:
  - Occupational safety, surveillance, infection control and prophylactic measures are key components to contain spread
- Animals:
  - Swine studies are needed to assess viral reassortment
  - An integrated human – animal AI surveillance system is needed

Acknowledgements

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USDA

Tom Gomez, DVM

http://www.cdc.gov/flu/