

EPI MONTHLY REPORT

FLORIDA DEPARTMENT OF HEALTH IN MIAMI-DADE COUNTY
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Epidemiology, Disease Control & Immunization Services

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Novel Influenza A (H7N9)

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Overview

A novel influenza A (H7N9) was found circulating among both humans and poultry in China at the end of March. H7N9 is the designation for a subtype of influenza that is primarily found in birds and that does not normally infect humans. This Avian Influenza A virus is reported as being very different from previously seen strains.^{1,2}

The new avian influenza a virus (H7N9) continues to circulate among humans in China. To date, 109 laboratory-confirmed cases of human Avian Influenza A virus (H7N9) including 22 deaths have been reported to the World Health Organization (WHO). Despite no indications that human to human transmission is occurring; contacts of the ill individuals are being closely monitored.^{1,2}

Background

H7N9 is a subgroup among the larger group of H7 viruses. Human infections have occurred among the H7N2, H7N3, and H7N7 viruses in the Netherlands, Italy, Canada, United States, Mexico and United Kingdom. The majority of these infections have been related to poultry outbreaks, and infections remained mild with most individuals reporting conjunctivitis and mild upper respiratory symptoms. China is the first country to report human infection with H7N9.

Epidemiology

Laboratory-confirmed cases have been reported in multiple provinces in eastern China and most recently one laboratory-confirmed case was reported in Taiwan by the Taipei Centers for Disease Control. Two family clusters have also been reported, however beyond those two, no other cases

have been reported among contacts or health care workers connected with confirmed cases.¹

Both the source of infection and mode of transmission have yet to be identified. There have not been any reports of association with outbreaks of disease among animals or any clear exposure to animals. Despite many cases reporting contact with animals or exposure to environments where animals are located, some cases have no known animal exposure. The possibility of animal-to-human transmission, as well as human-to-human transmission is being investigated. Because of the two family clusters, the possibility of human-to-human transmission has been raised, though two of the cases in that cluster have not been laboratory confirmed and there is currently no evidence of sustained transmission among people.¹

Unlike other H7 viruses, H7N9 infection has caused respiratory disease resulting in severe pneumonia. Other symptoms include fever, cough and shortness of breath. Some patients have required care in intensive care units and mechanical ventilation has been reported in multiple cases. Laboratory testing piloted in China has shown that influenza A (H7N9) viruses are sensitive to the anti-influenza drugs oseltamivir and zanamivir (neuraminidase inhibitors). Despite these drugs effectiveness when given early to patients with seasonal influenza virus and influenza A (H5N1) virus infection, their effectiveness treating H7N9 has not been evaluated.¹



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Prevention

There is currently no vaccine available to prevent infection from influenza A (H7N9) and no tests available over the counter or at doctors' offices that can distinguish between seasonal influenza and H7N9 in the United States. The Centers for Disease Control and Prevention (CDC) in Atlanta has developed a test that specifically tests for H7N9 for use by public health laboratories in the United States and internationally. The test utilizes samples collected from the respiratory tract (nose, throat or lungs) of an infected individual and undergoes rRT-PCR (real-time reverse transcriptase polymerase chain reaction). This process is usually completed within 4 hours.²

Because H7N9 is not spreading easily from person to person, the CDC and WHO are not recommending that people cancel travel to China. However they are asking that individuals traveling to China take increased precautions that include avoiding any contact with birds and other animals, employing proper hand washing techniques often and ensuring any poultry products are thoroughly cooked before consumption.^{1,2}

The CDC is asking individuals who do travel to China to monitor their health during and after their trip and anyone with fever, cough or shortness of breath

within 10 days of travel to China should see a doctor and mention their recent travel history.²

Conclusion

At this time no reported cases of H7N9 have been reported in the United States. The CDC is closely monitoring the situation and coordinating with both domestic and international partners. In addition, the CDC has taken the following preparedness measures:

- Developing a candidate vaccine virus that could be used to make vaccine if it becomes necessary.²
- Creating a test kit to detect this virus that could be used by other public health laboratories.²
- Conducting studies on blood samples to see whether there is any existing immunity to this virus in the population.²
- Conducting ongoing testing to determine H7N9 susceptibility to the licensed influenza antiviral drugs, oseltamivir (commercially known as Tamiflu®) and zanamivir (Relenza®) as well as investigational antiviral drugs.²

CDC also is gathering more information to make a more thorough public health risk assessment. This is an evolving situation and there is still much to learn.² The investigation for the source of infection and transmission are ongoing and it is expected that further human infection with this virus will occur.

References:

1. World Health Organization: http://www.who.int/influenza/human_animal_interface/latest_update_h7n9/en/index.html Accessed 4/25/2013.
2. Centers for Disease Prevention and Control: <http://www.cdc.gov/flu/avianflu/h7n9-faq.htm> Accessed 4/26/2013.

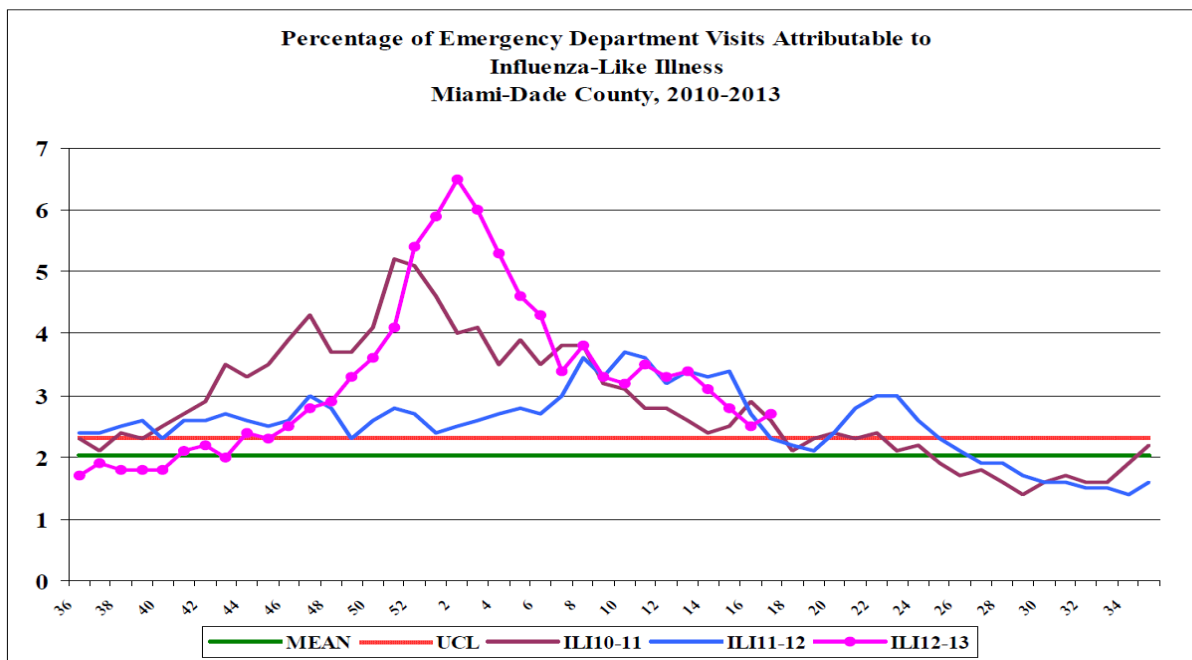


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Influenza-Like-Illness, All Age



During this period, there were 22,790 ED visits; among them 618 (2.7%) were ILI. At the same week of last year, 2.3% of ED visits were ILI.

PARTICIPATE IN INFLUENZA SENTINEL PROVIDER SURVEILLANCE

Florida Department of Health in Miami-Dade County NEEDS Influenza Sentinel Providers!

Sentinel providers are key to the success of the Florida Department of Health's Influenza Surveillance System. Data reported by sentinel providers gives a picture of the influenza virus and ILI activity in the U.S. and Florida which can be used to guide prevention and control activities, vaccine strain selection, and patient care.

- Providers of any specialty, in any type of practice, are eligible to be sentinel providers.
- Most providers report that it takes **less than 30 minutes a week** to compile and report data on the total number of patients seen and the number of patients seen with influenza-like illness.
- Sentinel providers can submit specimens from a subset of patients to the state laboratory for virus isolation **free of charge**.

For more information, please contact
Lakisha Thomas at 305-470-5660.

TO REPORT ANY DISEASE AND FOR INFORMATION CALL:
Epidemiology, Disease Control & Immunization Services

Childhood Lead Poisoning Prevention Program305-470-6877
Hepatitis305-470-5536
Immunizations or outbreaks305-470-5660
HIV/AIDS Program305-470-6999
STD Program305-575-5430
Tuberculosis Program305- 575-5415
Immunization Service305-470-5660
To make an appointment.....786-845-0550

About the Epi Monthly Report

The Epi Monthly Report is a publication of the Florida Department of Health in Miami-Dade County: Epidemiology, Disease Control & Immunization Services. The publication serves a primary audience of physicians, nurses, and public health professionals. Articles published in the Epi Monthly Report may focus on quantitative research and analysis, program updates, field investigations, or provider education. For more information or to submit an article, contact Esther Bell at (305) 470-6918.



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Miami-Dade County Monthly Report Select Reportable Disease/Conditions March 2013

Diseases/Conditions	2013 Current Month	2013 Year to Date	2012 Year to Date	2011 Year to Date
HIV/AIDS				
AIDS*	140	385	303	347
HIV	65	195	140	156
STD				
Infectious Syphilis*	27	73	85	80
Chlamydia*	838	2412	2346	2079
Gonorrhea*	211	599	639	515
TB				
Tuberculosis**	6	15	14	25
Epidemiology, Disease Control & Immunization Services				
Epidemiology				
Campylobacteriosis	21	57	69	77
Ciguatera Poisoning	0	0	1	4
Cryptosporidiosis	2	5	4	5
Cyclosporiasis	0	1	0	0
Dengue Fever	4	9	1	3
E. coli, O157:H7	0	0	3	4
E. coli, Non-O157	0	0	0	0
Encephalitis, West Nile Virus	0	0	0	0
Giardiasis, Acute	31	63	37	82
Influenza Novel Strain	0	0	0	0
Influenza, Pediatric Death	0	0	2	0
Legionellosis	1	8	3	7
Leptospirosis	0	0	0	0
Listeriosis	0	0	1	0
Lyme disease	0	0	0	0
Malaria	0	5	2	6
Meningitis (except aseptic)	0	4	6	8
Meningococcal Disease	4	8	5	2
Salmonellosis	35	89	82	62
Shigellosis	6	11	9	24
Streptococcus pneumoniae, Drug Resistant	13	32	28	24
Toxoplasmosis	0	0	0	0
Typhoid Fever	0	0	1	1
Vibriosis	0	0	1	1
West Nile Fever	0	0	0	0
Immunization Preventable Diseases				
Measles	0	0	0	0
Mumps	0	0	1	0
Pertussis	8	9	10	4
Rubella	0	0	0	0
Tetanus	0	0	0	0
Varicella	19	28	13	10
Hepatitis				
Hepatitis A	2	7	6	10
Hepatitis B (Acute)	1	3	3	2
Lead				
Lead Poisoning	10	26	13	30

*Data is provisional at the county level and is subject to edit checks by state and federal agencies.

** Data on tuberculosis are provisional at the county level.

