Volume XII, Issue I

THE TUSCOLA TRACKER

Tuscola County Health Department

January, February, March, 2008

Inside this issue:

TCHD Announces New Medical Director

Russell L. Bush, M.D., M.P.H., joined the staff of the Health Department as Medical Director on January 1, 2008. He is also currently working as Medical Director for Huron and Lapeer County Health Departments, as well as the Deputy Health Officer for Tuscola. He has attended many universities and received numerous degrees: Wayne State University Medical School (M.Ed), Michigan State University (BS), UTESA in the Dominican Republic (MD), ATSU-SHM (MPH, MHA, MGH), Excelcior College in New York (BA, BSN), Mott Community College AAS (RN), and Ashworth University AAS (Criminal Justice). TCHD is proud to welcome Dr. Bush.

Outbreak of Severe Pneumonia Traced to Adenovirus 14

Adenoviruses most commonly cause respiratory illness, however depending on the infecting serotype, they may also cause various other illnesses, such as gastroenteritis, conjunctivitis, cystitis, a rash illness. Symptoms of respiratory illness caused by adenovirus infection range from the common cold syndrome to pneumonia, croup, and bronchitis.

Clinicians should keep their eyes peeled for a mutated form of adenovirus 14 that has caused at least 10 deaths, most of them among adults. Noting that control of adenovirus is "challenging," the CDC urges heath care practitioners to take extra care if they suspect an adenovirus infection and to follow the 2003 guidelines for pneumonia care. Forty nine adenoviruses are known and most cause non-life threatening disease in adults, although severe disease—including pneumonia and gastrointestinal disease—can occur in newborns, the elderly, and those with an underlying medical condition.

In May 2006, an infant in New York aged 12 days died from respiratory illness caused by Ad14. During March –June 2007, a total of 140 additional cases of confirmed Ad14 respiratory illness were identified in clusters of patients in Oregon, Washington and Texas. Fifty-three (38%) of these patients were hospitalized, including 24 (17%) who were admitted to intensive care units; nine (5%) died. Ad14 isolates from all four states were identical. However, the isolates were distinct from the Ad14 strain from 1955 suggesting the emergence and spread of a new Ad14 variant in the United States.

What are the symptoms of adenovirus infection?

Adenoviruses cause a wide range of illnesses and symptoms, including colds, pharyngitis (sore throat), bronchitis, pneumonia, diarrhea, conjunctivitis (eye infection, fever, cystitis (bladder inflammation or infection, rash illness, neurologic disease. Since Ad14 infections are not common and most Ad14 infections are not serious, the emergence of Ad14 should not be a concern to the general public.

How is adenovirus infection spread?

Adenoviruses are spread like the common cold. The virus can be spread from person to person via coughing or sneezing. People may also become infected by touching something with adenovirus on it and then touching their

Safe Sleep Guidelines

Michigan State University's Institute for Health Care Studies, in collaboration with the Michigan Department of Community Health, Tomorrow's Child, and the Michigan Public Health Institute has developed a web-based Safe Sleep Course to provide individuals caring for pregnant women, infants and care-givers with education strategies and interventions to promote a consistent safe sleep environment.

Development of the course is one of many steps multiple state agencies are taking in response to a rise in the preventable infant deaths. Every year in Michigan, close to 50 infants, or one child every week, dies due to unsafe sleep practices. Risk factors identified by local Child Death Review Teams include:

* Infants not sleeping in cribs;
* Infants placed to sleep in soft or heavy bedding
* Infants sharing a sleep surface with one or more persons; and
* Infants not sleeping on their backs.

By making training readily available to providers, more mothers and families will receive the consistent unified messages on how to keep their babies safe while sleeping. Registered nurses who successfully complete the Safe Sleep Course and submit an evaluation will receive .50 nursing continuing education contact hours through MSU, an approved provider of continuing education by the Michigan Nurses Association.

The Web-based Safe Sleep Course can be accessed for free by going to http://learning.mihealth.org. For more information, call Debra Darling (517)432-9822 or Rosemary Fournier (517)335-8416.

Source: www.michigan.gov

Adenovirus 14 (continued from page 1)

mouth, nose, or eyes. To prevent spread of disease, it is important to practice good health habits.

What steps can healthcare providers and people take to protect their health?

People can protect themselves against all respiratory diseases by washing their hands and covering their mouth with a tissue or using one's sleeve when coughing or sneezing. Get vaccinated for flu or pneumonia.

Physicians should be aware that Ad14 can cause severe pneumonia and consider it in the differential diagnosis if the cause of infection is unknown.

Clinicians should contact their local health department for guidance in testing patients with a serious illness that they suspect may be an Ad14 infection. Testing for generic adenoviruses should precede any testing for specific serotypes, including Ad14.

Health departments should report unusual clusters of severe adenoviral respiratory disease or cases of Ad14 to CDC.

Health officials should be aware that Ad14 has been detected occasionally in military bases since 2005. Adenovirus infections in the military have been a concern for many years.

Diagnosis:

Antigen detection, polymerase chain reaction (PCR) assay, virus isolation, and serology can be used to identify adenovirus infections. Since adenovirus can be excreted for prolonged periods, the presence of virus does not necessarily mean it is associated with disease.

Treatment:

Most infections are mild and require no therapy or only symptomatic treatment. Because there is no virus-specific therapy, serious adenovirus illness can be managed only by treating symptoms and complications of the infection.

For more information:

www.cdc.gov/mmwr Nov. 16, 2007 issue
www.cdc.gov
www.tchd.us
www.michigan.gov/mdch

Cold Weather Safety

Winter in Michigan is a celebrated season despite the extreme drops in temperature posing serious risks and hazards. To combat these potential dangers, there are specific guidelines citizens can follow to stay safe and healthy throughout the cold weather months.

Be extremely careful if you use a wood stove, fireplace or space heater in your home. Always keep a multipurpose, dry chemical fire extinguisher near the area you are heating. Do not burn paper in your fireplace or wood stove and do not leak flue gas indoors. If you are using an indoor gas heater, be sure it is located in a well-ventilated space and only use the type of fuel recommended by the manufacturer.

Regardless of the type of heating device you are using, be sure that it is up to date and meets all safety standards. Toxic fumes, such as carbon monoxide, from old or faulty heaters can cause unconsciousness or death from lack of oxygen.

While inside, monitor the indoor temperature carefully. Because they lose body heat much faster than adults, infants should never sleep in a cold room. It is also necessary for older adults to take extra home heating precautions, as they tend to have slower metabolisms and therefore make and retain less heat than other adults.

If you are caring for an infant or senior citizen, be sure to frequently check that their homes are adequately heated. If heating is not at a safe level, making alternative housing arrangements is recommended.

When the weather is extremely cold, and especially if there are high winds, try to stay indoors. Making trips outside as brief as possible can help to reduce the potential dangers associated with cold weather.

To remain healthy and safe this winter, please follow these cold-weather tips while outdoors:

- Dress warmly and stay dry: Be sure to dress in layers in wind resistant clothing. Wool, silk or polypropylene inner layers will hold more body heat than cotton. If your clothing is wet, go inside as soon as possible. When inside, remove the wet clothing as soon as possible.

- Avoid exertion: Cold weather can put extra strain on the heart. If you have heart disease or high blood pressure, follow your doctor's advice about shoveling snow or other hard work in the cold. The body is already working hard to stay warm, so extra work can cause an overload.

- Cover exposed skin: Always wear a warm hat that covers ears, gloves or mittens that cover the full wrist, and a scarf or ski mask to protect face and neck.

- Be Safe During Recreation: Notify friends and family where you will be before you go hiking, camping, or skiing. Avoid perspiring or becoming overtired. Be prepared to take emergency shelter. Pack dry clothing, a two-wave radio, waterproof matches and paraffin fire starters with you. Do not use alcohol and other mood altering substances, and avoid caffeinated beverages. Carefully watch for signs of cold-weather health problems.

It is important to be aware of any changes in exposed skin during cold weather periods. Frostbite and hypothermia are very serious conditions that can be lessoned by early recognition and treatment. Shivering can be a good indicator that it's time to go in, as it is the first sign that the body is losing heat.

Frostbitten skin is hard, pale, cold and has no feeling. When the frostbitten skin is in warm air, it will become red and painful. Very severe frostbite can cause blisters, gangrene (blackened dead tissue), and deep tissue damage in tendons, muscles, nerves and bones.

Hypothermia is a life-threatening condition that is caused by short exposure to extreme cold or long exposure to mild cold. Symptoms of hypothermia include trembling, stiffness of muscles, puffiness in the face, poor coordination, confusion, and low consciousness and reactivity.

If you suspect frostbite, hypothermia or other complications surrounding extreme weather, seek emergency medical care immediately.

Source: www.michigan.gov

HEALTH DEPARTMENT INFORMATION

School Reports

October, November, December 2007

Bronchitis	1	Chickenpox	4
Croup	1	Fifth Disease	1
Flu	233	Head Lice	66
Mono	1	MRSA	1
Pinkeye	59	Pneumonia	1
Scabies	2	Shingles	2
Sinusitis	2	Strep	70

Please note: Diagnosis is not always made by a health care professional.

www.tchd.us

for the latest information on our programs, hours, clinic schedules, etc.

Immunization Update:

During October, November, and December 2007, 787 children received 1830 vaccinations at the health department.

Communicable Disease Update:

During October, November, and December 2007, the following were reported to the health department:

- One case each of giardia, salmonella, hepatitis A, hepatitis B, cryptococcus, coccidiosis, and food-borne illness
- Two cases each of MRSA and aseptic meningitis
- Six cases of chronic hepatitis C

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The Tuscola Tracker is a quarterly newsletter providing local health department reports and information about communicable diseases and community health issues. Our resources include publications by the Centers for Disease Control and Prevention (CDC), such as the Morbidity and Mortality Weekly Report (MMWR) and other sources. If you'd like more information, or have questions regarding the above topics or other public health issues, please contact Ann Hepfer at 989-673-8114, ext. 117.

MI FluFocus

Influenza Surveillance and Avian Influenza Update

Bureau of Epidemiology
Bureau of Laboratories

Michigan Department of Community Health
Jennifer M. Granholm, Governor
Janet Olszewski, Director

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February 21, 2008
Vol. 5; No. 8

New updates in this issue:

- **Michigan Surveillance:** Indicators show continued elevated activity, but are decreasing in some areas
- **National Surveillance:** Elevated activity still seen across nation; 44 states are widespread for Week 6 (2/9)
- **Avian Influenza:** New human cases in Vietnam, China, and Indonesia; new poultry outbreaks in SE Asia

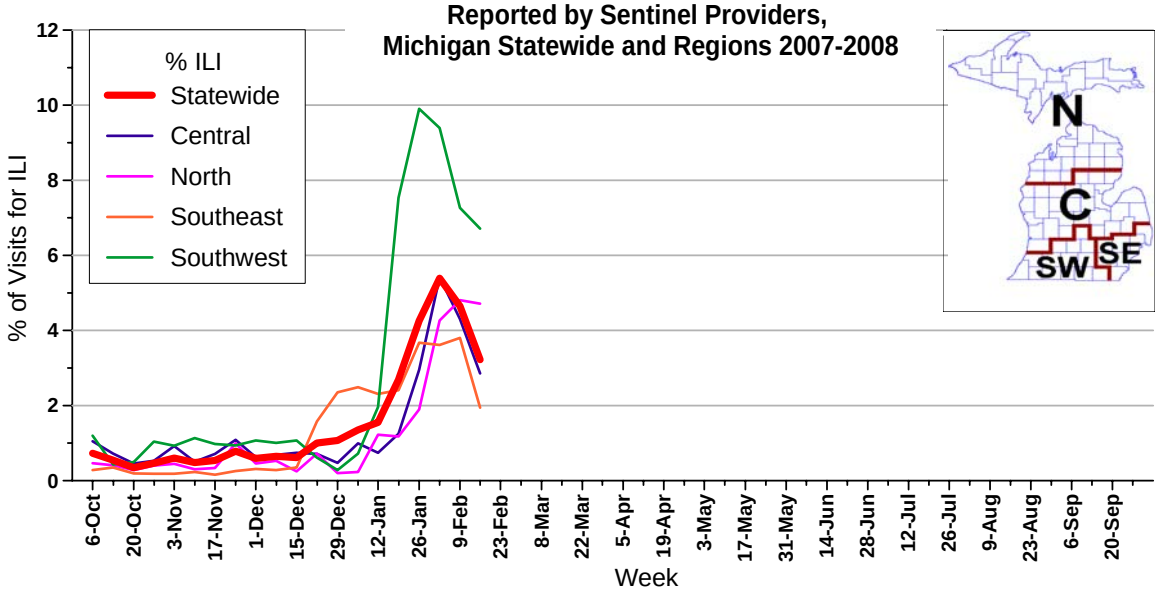
Michigan Disease Surveillance System: The week ending February 16 saw both aggregate flu-like illness and individual influenza reports decrease following an ongoing upward trend seen since the start of the year. Aggregate flu-like illness reports are comparable with numbers seen this time last year where individual influenza reports are considerably higher.

Emergency Department Surveillance: Emergency department visits due respiratory complaints leveled off this past week where constitutional complaints dropped slightly. Both respiratory and constitutional complaints are slightly higher than numbers that were seen this time last year. Nine constitutional alerts in the C(3), N(5) and SW(1) Influenza Surveillance Regions and three respiratory alerts in the N(1), C(1) and SW(1) Influenza Surveillance Regions were generated last week.

Over-the-Counter Product Surveillance: Overall, OTC product sales activity was steady overall last week. Only thermometer sales showed a slight decrease overall. The indicator levels are comparable to those seen at this time last year.

Sentinel Surveillance (as of February 21): The proportion of visits due to influenza-like illness (ILI) in Michigan remains elevated but is decreasing, and is at 3.2% for the week ending Feb. 16. This represents 355 cases of ILI out of 11001 total patient visits; 41 sentinels provided data for this report. Sentinels throughout the state are reporting high activity. The proportion of visits due to ILI was 2.9% in the Central region, 4.7% in the North region, 1.9% in the Southeast region, and 6.7% in the Southwest region. Note that these rates may change as additional reports are received.

Percentage of Visits for Influenza-like Illness (ILI) Reported by Sentinel Providers, Michigan Statewide and Regions 2007-2008



As part of pandemic influenza preparedness, CDC and MDCH highly encourage year-round participation from all sentinel providers. New practices are encouraged to join the sentinel surveillance program today! Contact Rachel Potter at 517-335-9710 or potterr1@michigan.gov for more information.

Laboratory Surveillance (as of February 21): For the 2007-2008 influenza season, the MDCH Bureau of Laboratories has identified 174 influenza isolates:

- 116 A/H3N2: Southeast (41); Central (35); Southwest (23); North (17)
- 3 A/H1N1: Southeast (2); North (1)
- 37 A subtype pending: Southwest (8); Central (15); Southeast (5); North (9)
- 18 B: Southeast (12); North (3); Central (1). 16 have been typed as B/Shanghai/361/2002-like and 2 are pending subtyping.

Sentinel laboratories continue to report elevated levels of positive influenza A tests and very small numbers of positive influenza B tests. Sentinel labs in some regions are beginning to show decreases in flu activity. RSV activity continues to be steady to slightly rising.

***As a reminder, the positive predictive value of influenza rapid tests decreases during times of low influenza prevalence. MDCH suggests that during periods of low influenza activity in your community, all positive rapid tests results be confirmed by sending in a specimen for viral culture; this can be arranged through your local health department.

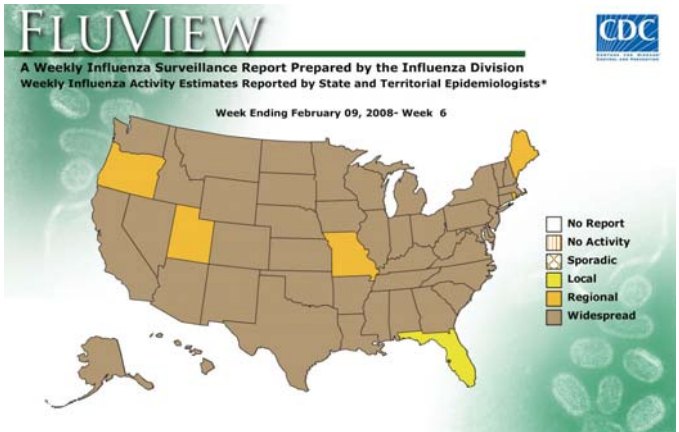
Influenza-Associated Pediatric Mortality (as of February 21): For the 2007-2008 season, there are no confirmed reports of influenza-related pediatric mortality in Michigan.

***The CDC has asked all states to collect information on any pediatric death associated with influenza infection. This includes not only any death in a child (<18 years) resulting from a compatible illness confirmed to be influenza by an appropriate diagnostic test, but also any unexplained death with evidence of an infectious process in a child. See www.michigan.gov/documents/fluletter_107562_7.pdf for the complete protocol. Please immediately call MDCH to ensure that proper clinical specimens are obtained.

Congregate Settings Outbreaks (as of February 21): Congregate setting outbreaks are being reported in all regions of the state. One influenza outbreak has been culture-confirmed at MDCH for the 2007-2008 influenza season, but additional results are still pending.

National (CDC, February 15): During week 6 (February 3 - 9, 2008), influenza activity continued to increase in the United States. Two thousand one hundred twenty-six (33.3%) specimens tested by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories were positive for influenza. The proportion of deaths attributed to pneumonia and influenza was above the epidemic threshold for the fifth consecutive week. The proportion of outpatient visits for influenza-like illness (ILI) and acute respiratory illness (ARI) was above national baseline levels. ILI increased in eight of the nine regions compared to week 5, and was above region-specific baselines in all nine regions. The East North Central, East South Central, Mountain, Pacific, West North Central, and West South Central regions reported ARI above their region specific baselines. Forty-four states reported widespread influenza activity; five states reported regional influenza activity; one state and the District of Columbia reported local influenza activity; and Puerto Rico reported sporadic influenza activity.

To access the entire CDC weekly surveillance report throughout the influenza season, visit http://www.cdc.gov/flu/weekly/fluactivity.htm



National, Current 2007-2008 Vaccine Strain Match (CDC, February 9): The CDC is indicating that protection against circulating influenza A/H3N2 and influenza B virus strains may not be optional this season as the H3N2 and B virus strains are different from those contained in the current vaccine. However, nearly all H1N1 viruses tested to date were well matched to the vaccine. It is still important to remember that even when the viruses are not closely matched that the vaccine can provide cross-protection against related strains of influenza virus thus preventing some illnesses and flu-related complications.

International, 2008-2009 Vaccine Strain Selection (WHO, February 14): It is recommended that vaccines for use in the 2008-2009 influenza season (northern hemisphere winter) contain the following: an A/Brisbane/59/2007 (H1N1)-like virus, an A/Brisbane/10/2007 (H3N2)-like virus, and a B/Florida/4/2006-like virus. A/Brisbane/10/2007 is a current southern hemisphere vaccine virus. B/Florida/4/2006 and B/Brisbane/3/2007 (a B/Florida/4/2006-like virus) are current southern hemisphere vaccine viruses.

International (WHO, February 8): During weeks 4–5, the level of overall influenza activity in the world increased. A considerable increase in both influenza activity and the number of viruses detected was observed in most countries of the northern European and North America, where mostly influenza A (H1N1) circulated, as well as A (H3N2) and B viruses.

The entire report can be found online at http://www.who.int/csr/disease/influenza/update/en/

MDCH reported **WIDESPREAD ACTIVITY** to the CDC for the week ending February 16, 2008.

For stakeholders interested in additional information regarding influenza vaccination and education, the MDCH publication *Michigan FluBytes* is available online at http://www.michigan.gov/mdch/0,1607,7-132-2940_2955_22779_40563-125027--,00.html. *FluBytes* is published weekly during the influenza season.

End of Seasonal Report

Avian Influenza Activity

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

International, Human (WHO, February 15): The Ministry of Health in Viet Nam has confirmed a new case of human infection of H5N1 avian influenza. The case has been confirmed by the National Institute of Hygiene and Epidemiology (NIHE). The case is a 40 -year old male from Gia Loc district, Hai Duong province. He developed symptoms on 2 February was hospitalized on 8 February and died on 13 February. The case had contact with sick and dead poultry prior to his illness. The Ministry of Health and local health units have implemented control measures and close contacts have been identified. All remain healthy and will continue to be monitored. Of the 103 cases confirmed to date in Vietnam, 49 have been fatal.

International, Human (WHO, February 20): The Ministry of Health in China has reported a new case of human infection with the H5N1 avian influenza virus. The case is a 22-year old male from Jianghua County, Yongzhou Prefecture, Hunan Province. He developed symptoms on 16 January was hospitalized on 23 January and died on 24 January. The case was confirmed by the national laboratory on 17 February. Investigations into the source of his infection are ongoing. Of the 28 cases confirmed to date in China, 18 have been fatal.

International, Human (WHO, February 21): The Ministry of Health of Indonesia has announced two new cases of human H5N1 avian influenza infection. The first is a 16-year-old male from Sragen district, Central Java Province who developed symptoms on 3 February, was hospitalized on 7 February and died on 10 February. Prior to his illness, the case was exposed to sick and dead poultry at his home, where he slaughtered a sick chicken.

The second case is a 3-year-old boy from South Jakarta District, Jakarta Province who developed symptoms on 3 February, was hospitalized on 10 February and died on15 February. The investigation

team found that chickens & a pet bird had died in the neighborhood in the two weeks prior to the case's onset of symptoms. Of the 129 cases confirmed to date in Indonesia, 105 have been fatal.

International, Human (WHO, February 21): The Ministry of Health in Viet Nam has confirmed a new case of human infection of H5N1 avian influenza. The case has been confirmed by the National Institute of Hygiene and Epidemiology (NIHE). The case is a 27 -year old male from Ninh Nhat district, Ninh Binh province . He developed symptoms on 3 February was hospitalized on12 February and died on 14 February. The case had contact with sick and dead poultry prior to his illness. Of the 104 cases confirmed to date in Vietnam, 50 have been fatal.

National, Human Surveillance (The Associated Press, February 13): Officials of the Centers for Disease Control and Prevention are looking for 200 Anchorage-area sport hunters who have handled wild birds in the last two years.

They want blood samples from hunters for a study of the spread of avian influenza.

Researchers will look for the potentially deadly H5N1 strain of bird flu as well as low-pathogenic strains of influenza.

The H5N1 strain has not been detected in the United States and the principal investigator for the study, Dr. Michael Bruce, does not expect to find it among hunters.

Low-pathogenic strains of bird flu could appear, he said, and studying how people contracted them will help researchers understand risk factors that led to exposure.

``Some of the birds that fly through Asia fly through Alaska, so we theorized that if anyone is at risk in Alaska, it would be the hunters,'' Bruce said.

The study involves people from across the state who may have contracted avian influenza by different means, he said.

The study calls for a sample of 400 subsistence hunters, 200 sport hunters, 75 wildlife biologists and researchers and a control group of 200 people who have not handled wild birds, Bruce said.

People who have been infected with avian influenza in the past will have developed antibodies that show up in the blood, he said.

The study is being done in partnership with the Alaska Native Tribal Health Consortium and the Yukon-Kuskokwim Health Corp.

It could show experts where people are contracting influenza, what precautions should be taken when handling wild fowl, and how easily the viruses are transmitted to people. The study also seeks to establish a benchmark for future studies, Bruce said.

``Even if we don't find any antibodies to any avian influenza, I think it gives us at least a good baseline,'' he said.

Hunters from Girdwood to Wasilla who have handled wild birds in the past two years are eligible to give blood and answer questions, a process that will take about 15 minutes.

So far, about 80 hunters have given blood and the CDC needs about 120 more.

Participants will be paid $25.

International, Poultry (ProMed, February 15): Bird flu is on the rise in East Lampung, Indonesia, prompting local authorities to order backyard farmers to keep their chickens inside their coops, local media reported on 13 Feb 2008.

The avian influenza virus had spread through 8 sub districts in East Lampung District, Antara news agency quoted the head of the Participatory Disease Surveillance (PDS) team, Dewanto, as saying.

The virus was detected earlier this month [February 2008] in 6 sub districts, but [now] it has struck poultry in 12 villages in 8 sub districts, Dewanto said, adding it is possible that the poultry will spread the virus to other sub districts.

Lampung is a province of Indonesia, located on the southern tip of Sumatra Island. East Lampung District, Central Lampung District, and Bandarlampung city of the province have seen several bird flu outbreaks over the past few years.

International, Poultry (Reuters [edited], February 19): Dead poultry have been found in rivers and streams in northern Vietnam, a sign of a possible new bird flu outbreak during a prolonged cold spell, officials said on Tuesday.

The Agriculture Ministry said in a report that callers to an animal health department hotline reported large numbers of dead birds in five provinces, but was not specific.

The H5N1 strain of bird flu killed three men in northern Vietnam between Jan. 18 and Feb. 14 during a record-long cold spell. The H5N1 virus seems to thrive best in cool temperatures.

"In recent days the Animal Health Department has received many reports about poultry dying in large numbers in provinces," the Agriculture Ministry-run department said in a report on its Web site (www.dah.gov.vn).

"A bird flu outbreak is forecast to emerge in the northern region when cold days extend," it said.

The department, in a separate report, said that bird flu has killed nearly 2,500 ducks and chickens in the northern provinces of Hai Duong, Nam Dinh and Tuyen Quang, bringing to seven the provinces on the government's bird flu watchlist.

Animal health workers have slaughtered the remaining 1,900 birds at the three infected farms.

International, Poultry (Reuters [edited], February 19): China has reported a bird flu outbreak in poultry in Tibet, the second in the Himalayan region in two weeks.

The outbreak, which started on Feb. 6 in a village outside the regional capital Lhasa, has killed 132 poultry and led to the culling of 7,698 birds, the Agriculture Ministry said.

The National Avian Influenza Reference Laboratory confirmed on Sunday that the virus the birds contracted was a subtype of the H5N1 strain, the ministry said in a statement posted on its Web site (www.agri.gov.cn) late on Monday.

Authorities have taken emergency measures to bring the epidemic under "effective control", it said.

An outbreak of the H5N1 strain in Tibet's Gongga county on Jan. 25 killed 1,000 chickens and ducks. More than 13,000 birds were culled at the time.

Michigan Wild Bird Surveillance (USDA, as of February 21): For the 2007 testing season, 1931 Michigan samples have been taken so far, comprised of 100 live bird samples, 1384 hunter-killed birds, 172 morbidity/mortality samples, and 275 environmental samples.

HPAI subtype H5N1 has not been recovered from any Michigan samples tested to date, or from the 84,530 birds or environmental samples tested nationwide. The 2007 testing season will run from April 1, 2007-March 31, 2008. For more information, visit the National HPAI Early Detection Data System website at http://wildlifedisease.nbii.gov/ai/.

To learn about avian influenza surveillance in Michigan wild birds or to report dead waterfowl, go to Michigan's Emerging Disease website at http://www.michigan.gov/emergingdiseases.

Please contact Susan Vagasky at VagaskyS@Michigan.gov with any questions regarding this newsletter or to be added to the weekly electronic mailing list.

Contributors

MDCH Bureau of Epidemiology - Sally Bidol, MPH; Edward Hartwick, MS; Elizabeth Lewis, MHS; Kyle Enger, MPH

MDCH Bureau of Laboratories – Patricia Clark, MPH

Table 1. H5N1 Influenza in Poultry (Outbreaks up to February 18, 2008)

(Source: http://www.oie.int/downld/AVIAN%20INFLUENZA/A_AI-Asia.htm Downloaded 2/20/2008)

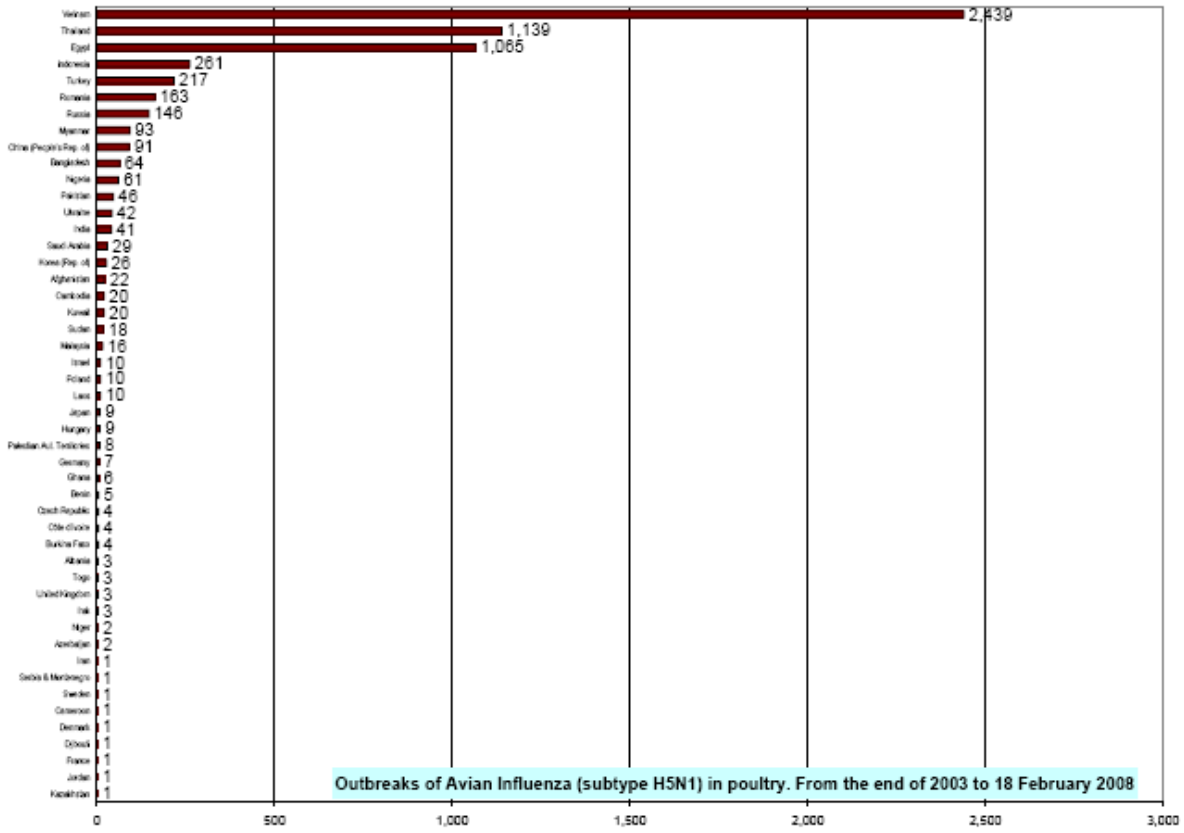


Table 2. H5N1 Influenza in Humans (Cases up to February 21, 2008)

(http://www.who.int/csr/disease/avian_influenza/country/cases_table_2008_02_21/en/index.html Downloaded 2/21/2008)

Cumulative number of lab-confirmed human cases reported to WHO. Total number of cases includes deaths.

Country	2003		2004		2005		2006		2007		2008		Total	
	cases	deaths	cases	deaths	cases	deaths	cases	deaths	cases	deaths	cases	deaths	cases	deaths
Azerbaijan	0	0	0	0	0	0	8	5	0	0	0	0	8	5
Cambodia	0	0	0	0	4	4	2	2	1	1	0	0	7	7
China	1	1	0	0	8	5	13	8	5	3	1	1	28	18
Djibouti	0	0	0	0	0	0	1	0	0	0	0	0	1	0
Egypt	0	0	0	0	0	0	18	10	25	9	0	0	43	19
Indonesia	0	0	0	0	20	13	55	45	42	37	12	10	129	105
Iraq	0	0	0	0	0	0	3	2	0	0	0	0	3	2
Lao People's Democratic Republic	0	0	0	0	0	0	0	0	2	2	0	0	2	2
Myanmar	0	0	0	0	0	0	0	0	1	0	0	0	1	0
Nigeria	0	0	0	0	0	0	0	0	1	1	0	0	1	1
Pakistan	0	0	0	0	0	0	0	0	1	1	0	0	1	1
Thailand	0	0	17	12	5	2	3	3	0	0	0	0	25	17
Turkey	0	0	0	0	0	0	12	4	0	0	0	0	12	4
Viet Nam	3	3	29	20	61	19	0	0	8	5	3	3	104	50
Total	4	4	46	32	98	43	115	79	86	59	16	14	365	231