

# Public Health Views... and News

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*From the desk of:*

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### **AVIAN INFLUENZA**

Avian influenza (bird flu) is in the news. Why? Birds, like humans can contract influenza. Common avian influenza A viruses are not too serious and cause no illness or only mild illness in animals. Rarely have humans become infected with bird influenza when people have close contact with poultry. In cold, dry weather the virus can remain viable for long periods of time in animal feces, on eggs, or on surfaces. The problem arises when a non-human *highly pathogenic* avian influenza virus gains access to the human population. If this virus then obtains the ability to spread rapidly among humans, a devastating pandemic could occur.

Three types of influenza virus are recognized. The types are differentiated based on unchanging internal structural proteins (types A, B, C). The

surface glycoproteins, however, mutate year to year (antigenic drift). For Influenza A there are 15 of these surface glycoprotein (H) types. Certain of these (H1, H2, H3) circulate predominantly in humans, while other have reservoir in birds and other mammals. Apathogenic and mildly pathogenic avian (bird flu) influenza A viruses occur worldwide. There is evidence that H5 (avian) viruses of low pathogenicity may mutate and become *highly pathogenic* (HPAI). HPAI infections are very rarely seen, and should not be confused with viruses of low pathogenicity, which may also be of H5 or H7 subtypes. Highly pathogenic avian influenza A (HPAI) viruses of the H5 and H7 HA subtypes have been isolated occasionally from free-living birds. Type A influenza viruses can infect several other animal species, including pigs, horses, seals, and whales. Birds are an especially important species because all known subtypes of influenza A viruses circulate among *wild birds*, which are considered the *natural hosts* for influenza A viruses.

Domesticated birds (chickens and turkeys) seem to become more ill than wild birds.

Although highly pathogenic avian influenza viruses do not usually directly infect humans or circulate among humans, several instances of human infections and outbreaks have been reported since 1997. When such infections occur, public health authorities monitor the situation closely because of concerns about the potential for more widespread infection in the human population. In Hong Kong in 1997, avian influenza A (H5N1) infected both chickens and humans. This was the first time an avian influenza virus had been definitely shown to transmit from birds to humans. During this outbreak, 18 people were hospitalized and 6 of them died. To control the outbreak, authorities killed about 1.5 million chickens to attempt to remove the source of the virus. Since then HPAI has been found in poultry in numerous Asian countries including Viet Nam, Thailand, Japan, Taiwan, Cambodia, China, Pakistan and Indonesia. As of February 2004 there have been 20 confirmed human deaths in Asia from avian influenza. One death has been reported from an outbreak in the Netherlands (H7) involving 80 people. Millions of chickens and waterfowl have been culled (killed) in attempt to control these viruses. In February 2004 over 80,000 chickens were culled from poultry farms in Delaware. Eight of the farms were quarantined by health officials. Several countries have banned import of chickens from the US. The US has banned importation of any birds from the countries experiencing H5N1 outbreaks.

Every year human influenza viruses cause a rapidly spreading epidemic. In the US during the winter months,

approximately 20% of the population contract "the flu". The serious complications are most generally viral or bacterial pneumonia (Staphylococcus aureus pneumonia this year has been responsible for many deaths in children and adults). If a strain of HPAI (bird flu) enters the human population and mutates to become rapidly contagious (antigenic **shift**), virtually no people would have immunity to the new strain. This virus could be quite deadly and spread rapidly to the entire susceptible population. An influenza pandemic is a global outbreak of influenza that occurs when the new influenza virus emerges, spreads, and causes disease worldwide. Past influenza pandemics have led to high levels of illness, death, social disruption and economic loss.

There were 3 pandemics in the 20th century. All of them spread worldwide within 1 year of being detected. The viruses responsible contained gene segments closely related to those of avian influenza (bird flu) viruses. The first was the 1918-19 "Spanish flu," [A (H1N1)]. It caused the highest number of known flu deaths: more than 500,000 people died in the United States, and 20 million to 50 million people may have died worldwide. Many people died within the first few days after infection and others died of complications soon after. Nearly half of those who died were young, healthy adults. The second was the 1957-58 "Asian flu," [A (H2N2)]. It caused about 70,000 deaths in the United States. The most recent pandemic was the 1968-69 "Hong Kong flu," [A (H3N2)]. It caused approximately 34,000 deaths in the United States and the Type A (H3N2) viruses still circulate today.

In January 2004 the Centers for Disease Control recommended US physicians be on heightened alert for possible human cases of avian influenza. A travel history should be taken from patients with influenza-like symptoms and cultures taken for viral typing if there is a high index of suspicion. In January of 2004 a WHO official stated that avian influenza could become more of a threat than SARS. Some officials have discussed possible stockpiling of antiviral drugs in case of a pandemic. Preliminary work is being done on avian influenza vaccine development, but it is unlikely that the vaccine would be available if a 2004-2005 pandemic occurred. Fortunately the human cases have thus far shown little tendency for person to person transmission. The CDC has issued warnings for travellers to avoid areas in countries experiencing H5N1 avian influenza where poultry is being raised or sold. Precautions for airline travel from these countries to the US have been issued which include the possible quarantine of persons arriving with respiratory illness. Hand washing, face mask use, covering of cough have been emphasized.

For more information on Avian Influenza see the BHSJ Community Health Agency Web Site:

[www.bhsj.org](http://www.bhsj.org)

or the CDC Website:

[www.cdc.gov/flu/avian/](http://www.cdc.gov/flu/avian/)

or the WHO website:

<http://www.who.int/en/>

## Pregnant and smoking...what now?

Smoking, especially among pregnant mothers in our tri-county area, is something we are all attempting to impact.

The Michigan Department of Community Health (MDCH) has



researched and developed two methods, a smoker's quit kit and a coaching helpline, that will help your patients in the difficult task of tobacco cessation. **And both are available completely free of charge!**

The "Smokers Quit Kit" is like a toolbox with all the tools that your patient needs to quit smoking for good. It is broken down into three easy to follow steps and each step is broken down into ten phases that build towards the ultimate goal of tobacco cessation. In addition, the kit contains \$5 coupons for the Nicotrol or Nicoderm patch, Nicorette gum and Commit lozenge and information regarding the hazards of secondhand smoke. For pregnant women, a special "Expectant Mothers Quit Kit" is available that contains helpful information and motivation for expectant mother's to quit smoking. Both of these kits are available on line at [www.michigan.gov/mdch](http://www.michigan.gov/mdch) or by calling 1-800-537-5666.

The MDCH "I Can Quit" helpline includes up to seven sessions with a personal health coach who will call and work with your patient in the comfort of their home or office in order to assist them in the development of

a personal plan for success. The number for the hotline is 1-800-480-QUIT (7848).

Locally, our Agency provides sample copies of the Quit Kits as well as brochures and pamphlets pertaining to the hazardous effects of tobacco usage and secondhand smoke. For more information or to order materials contact our Agency's Tobacco Reduction Action Coalition Coordinator, Vivian R. Frudakis, at 517-279-9561 ext. 123.

## Radon concerns?

Do you have patients who are concerned about radon gas in their home? Residents of Branch, Hillsdale, and St. Joseph counties can obtain a free radon testing kit at the Community Health Agency. Radon is a colorless, odorless radioactive gas that occurs naturally in soil and rocks and can enter homes through cracks and opening in floors and walls. Radon is the leading cause of lung cancer among people who do not smoke. If your office would like to have a few of these radon test kits on hand in order to give to your patients please contact us. For details about the kits call any of our offices. In Branch County call 517-279-9561 ext 106. In Hillsdale County call 517-437-7395 ext 111. In St. Joseph County call 269-273-2161 ext 233 or visit our web site at [www.bhsj.org](http://www.bhsj.org).

## Emergency Preparedness What's happening

The Branch-Hillsdale-St. Joseph Community Health Agency is



charged with protecting the health of Branch-Hillsdale-St. Joseph counties citizens against chemical, biological, nuclear and/or radiological threats. The agency focuses on minimizing the threat to health from terrorist acts, accidents and other incidents, in collaboration with local, state and federal authorities to stay ahead of forces that threaten the health of our jurisdictions.

We have collaborated with the local hospitals, County Emergency Management officials, police and fire departments, and other community agencies to ensure that we are all prepared to contend with any possible incident that could threaten our communities.

We are currently using a new system called the Michigan Health Alert Network, better known as the "MI-HAN" to receive messages from the Michigan Department of Community Health and Center for Disease Control, on emerging or eminent threats that need immediate attention. Shortly, we will be implementing the Michigan Disease Surveillance System (MDSS), a real time disease reporting method that will keep us at the forefront in disease observation.

If you would like to receive additional information on the MI-HAN, MDSS or learn how you can participate in the "War on Terror", please contact our agencies Emergency Preparedness Coordinator, Janet Breneman, RN, BSN in our Hillsdale office. You can also view and download information relating to our emergency preparedness efforts on our web site at [www.bhsj.org](http://www.bhsj.org). Just click on the button on the left side of our home page.

**Branch- Hillsdale- St. Joseph Community Health Agency**  
**Communicable Disease Report**  
 Branch County – St. Joseph and Hillsdale Counties also available on-line  
 Available on [www.bhsj.org](http://www.bhsj.org)

To the right is the monthly communicable disease report. Health Care professionals by law must report all communicable disease. Why report them? The Public Health system depends on reports such as these to monitor the health of the community and to provide the basis for preventive action. Public Health utilizes this data to:

1. Identify disease outbreaks
2. Enable preventive treatment
3. Target prevention programs
4. Evaluate control efforts
5. Facilitate research
6. Assist with surveillance

Accurate and complete reporting is essential for our community's health. This table refers to the diseases that have been reported in the tri-county area. Totals for the previous 3 months and the previous calendar year are included for trend analysis.



**Branch-Hillsdale-St. Joseph Community Health Agency**

To view or download this table from our website, go to [www.bhsj.org](http://www.bhsj.org), and follow the link for Health Data on the left side of the home page.

| Disease Category         | January    | December   | November   | Calendar    |
|--------------------------|------------|------------|------------|-------------|
|                          | 2004       | 2003       | 2003       | Year 2003   |
|                          |            |            |            | Totals      |
| AIDS                     | 0          | 0          | 0          | 0           |
| Amebiasis                | 0          | 0          | 0          | 1           |
| Animal Bite              | 0          | 0          | 2          | 20          |
| Blastomycosis            | 0          | 0          | 0          | 0           |
| Campylobacter            | 1          | 0          | 0          | 6           |
| Chicken Pox              | 2          | 0          | 0          | 23          |
| Chlamydia                | 8          | 3          | 2          | 55          |
| Cryptococcosis           | 0          | 0          | 0          | 0           |
| Cryptosporosis           | 0          | 0          | 0          | 0           |
| Encephalitis - Primary   | 0          | 0          | 0          | 0           |
| Encephalitis - St. Louis | 0          | 0          | 0          | 0           |
| E Coli 0157              | 0          | 0          | 0          | 1           |
| Flu like disease         | 340        | 550        | 211        | 3447        |
| Giardiasis               | 0          | 4          | 2          | 15          |
| Gonorrhea                | 1          | 0          | 0          | 9           |
| Guillain Bar             | 0          | 0          | 0          | 0           |
| Head lice                | 23         | 42         | 28         | 200         |
| Hepatitis A              | 0          | 0          | 0          | 3           |
| Hepatitis C - Chronic    | 4          | 0          | 0          | 20          |
| Hepatitis C - Unknown    | 0          | 0          | 0          | 0           |
| Hepatitis B              | 0          | 0          | 0          | 0           |
| Hepatitis B - Chronic    | 0          | 0          | 0          | 1           |
| Hepatitis C              | 0          | 0          | 0          | 0           |
| Histoplasmosis           | 0          | 1          | 0          | 4           |
| HIV Infection            | 0          | 0          | 0          | 2           |
| Kawasaki                 | 0          | 0          | 0          | 0           |
| Legionellosis            | 0          | 0          | 0          | 1           |
| Lyme Disease             | 0          | 0          | 0          | 1           |
| Malaria                  | 0          | 0          | 0          | 0           |
| Meningitis - Aseptic     | 0          | 0          | 1          | 2           |
| Meningitis - Bacterial   | 0          | 0          | 0          | 1           |
| Pertussis                | 0          | 0          | 0          | 0           |
| Rabies - Human           | 0          | 0          | 0          | 0           |
| Salmonellosis            | 0          | 2          | 1          | 13          |
| Shigellosis              | 0          | 0          | 0          | 0           |
| Strep Pneumonia Inv Ds.  | 0          | 0          | 0          | 2           |
| Staph Infections         | 0          | 0          | 0          | 0           |
| Strep Invasive Gp A      | 0          | 0          | 0          | 2           |
| Strep throat             | 18         | 18         | 11         | 240         |
| Syphilis                 | 0          | 0          | 0          | 0           |
| Tuberculosis             | 0          | 0          | 0          | 1           |
| <b>Total Reportable</b>  | <b>397</b> | <b>620</b> | <b>258</b> | <b>4070</b> |