LOS ANGELES UNIFIED SCHOOL DISTRICT

PEST OF THE MONTH PROGRAM No. 30

CURRENT INFORMATION ON AVIAN INFLUENZA A OR H5N1 (BIRD FLU)

PLEASE REFER TO LAUSD PEST OF THE MONTH PROGRAM NO. 26 ENTITLED: ASIAN INFLUENZA (bird flu). Much of the information in that program is still relevant today.

The outbreak and spread of Asian Influenza A or H5N1 (commonly called bird flu) is causing serious concern throughout the world. There are constant reports in the media about this disease. In an effort to **inform and educate** District employees about this disease and in response to inquiries received about this potential health threat, Pest of the Month Program No. 30 is being issued. This program simply states the facts about this disease as **we know them today**. This is a rapidly emerging and evolving infectious disease and by the time it reaches North America, the situation may be different from what it is today. Nevertheless, we need to be aware of the facts about this disease, as we know them today, so that we can be better prepared to respond when this disease gets here. Being informed enables one to take necessary precautions. The experts believe that it is not a matter of if this disease will arrive in North America but when it is going to get here.

Some of the facts about this disease, as they are reported here, may be frightening to some people. It is not the purpose of this paper to alarm people but simply to state the facts. By being informed and educated about this disease ahead of time, we will be better prepared to deal with it once it gets here.

HERE ARE THE FACTS AS WE KNOW THEM TODAY ABOUT BIRD FLU

- The disease first appeared in Hong Kong in 1997 where it infected 18 people and killed six of them.
- 1.6 million ducks, quails, partridges, and geese were killed in Hong Kong to eliminate the virus.
- Four years later, the disease resurfaced in Vietnam and Thailand where tens of millions of chickens and ducks were killed to control the spread.
- In the last seven weeks, the disease spread to 29 new countries – one of the biggest outbreak since the disease emerged 9 years ago.
- There has been 186 human cases and 105 deaths since 2003 according to the World Health Organization. More than a quarter of the deaths (twenty nine) have occurred this year.

- Health Officials in the United States are predicting that bird flu is likely to arrive in North America this summer. Wild birds migrating thousands of miles to their summer breeding grounds will bring the disease here. Migrating birds could arrive in North America this summer via bird flyways that encompass Alaska and northeastern Canada.
- The outbreak of the virus in Europe and Africa is traced to the discovery last spring of thousands of dead migratory birds at Qinghai Lake in a remote area of western China. The lake is a crucial stopover for many birds that ultimately mix with others and migrate through Europe, Asia, and Africa.
- Migratory birds can't be stopped and they cannot all be killed. Once the disease gets into migratory wild bird populations, the spread of the disease cannot be contained. Nature will run its course on this.
- In the first week of March 2006, bird flu again demonstrated it genetic plasticity, variability, and adaptability, by infecting a weasel-like mammal called a stone marten on the Baltic island of Ruegen in Germany. The animal was found alive but sick on March 2. It had to be euthanized. Stone martens are nocturnal predatory mammals with feeding habits similar to those of domestic cats. This is the same place where 3 domestic cats were previously found infected with the virus. Like the cats, the marten was assumed to have picked up the virus by eating infected birds. This offers considerable opportunities for exposures to occur in small mammals that feed on birds.
- In July 2005, tests on three rare Owston palm civets that died in captivity in Vietnam confirmed that they were infected with bird flu (civets or civet cats are a group of nocturnal mammals of the Old World family Viverridae (civet family), which also includes the mongoose. Civets are not true cats, but the civet family is related to the cat family (Felidae). Most civets have catlike bodies, long tails, and weasel-like faces).
- Large cats, including tigers and leopards, kept in captivity and fed infected poultry carcasses, have been infected and developed severe bird flu disease. Ferrets are another mammalian species known to be susceptible to infection.
- Nine other mammal species besides humans and stone martens have been known to contract bird flu, either naturally or in experiments. These mammals are:- Palm civet, domestic cats, cynomolgus macaque(a monkey), ferret (a relative of stone marten), New Zealand white rabbit, leopard, tiger, rat, and pig.
- Further investigations are needed to determine whether evidence of bird flu in new mammalian species has any significance for the risk of human infection or the potential of this virus to adapt to mammals, including humans.
- As is the case with humans, infections in animal species other than birds are **rare events**. **To date, only domestic poultry are known to have played a role in the transmission cycle of the virus from animals to humans.**

SOME OTHER INTERESTING FACTS ABOUT BIRD FLU

- Many virologists and epidemiologists are legitimately concerned that bird flu virus will mutate into a form that is more easily transmitted among people, introducing a deadly flu strain to the human immune system.

- The above is a valid concern as mutations, genetic anomalies, and aberrations are common in viruses. This group of microorganisms replicates so rapidly that evolution, genetic changes, and adaptations are real possibilities. What are the implications of genetic changes? A vaccine that is being developed by the Centers for Disease Control is based on a strain of bird flu virus that was circulating in Vietnam in 2004. This vaccine may be irrelevant if a genetically different strain of virus arrived in the United States. In recognition of this, researchers have begun work on another human vaccine based on a more recent strain of the virus. This vaccine is based on a virus strain that was obtained from Indonesia in 2005. Which strain will arrive in the United States is anybody's guess. Is there enough time to develop an effective vaccine in enough quantities to be used successfully in North America in the event of a bird flu outbreak? That also is anybody's guess.
- How about vaccinating poultry? The magnitude of this task in the US is mind-boggling. It would be a logistical nightmare. Can it be done economically? Is it worthwhile? Many countries have hesitated to vaccinate domestic fowl because vaccinated birds could pick up the virus but not show any symptoms. Those seemingly healthy birds could sicken other birds or poultry workers. Some experts suspect that the use of substandard poultry vaccines in China in the past helped bird flu virus to circulate there undetected.

THE WORLD HEALTH ORGANIZATION HAS STATED THAT THERE IS NO DANGER IN EATING INFECTED FOWL MEAT IF IT IS PROPERLY COOKED.

The Los Angeles Emergency Preparedness Department has been brainstorming since April 2005 in anticipation of bird flu infection among city employees and their families. "We're planning for an absenteeism rate as high as 30%," said Jim Sims, an emergency planner.

In an interview on television last week, the virologist who originally identified the bird flu virus stated that he anticipated a 50% mortality rate in humans in North America if a contagious and virulent strain of this virus gets here. That is a troubling prediction.

A CONCERN

Rats have been mentioned as a mammal that could have a connection to bird flu. Why should we be concerned about this? The roof rat and the Norway rat are omnivorous predators and scavengers. Both of these animals are good climbers and they are commonly observed in trees where they feed on fruits such as avocados. Both of these rats will feed on arboreal and ground nesting birds, bird eggs, fledgling birds, live birds, and bird carcasses. As you may recall, domestic cats, a stone marten, civets, tigers, and leopards, are believed to have acquired bird flu by eating infected birds. Because rats live in close association with humans, we will have to keep an eye on them as this situation evolves. Also domestic and feral cats are commonly encountered on school campuses throughout LAUSD. Small birds are commonly eaten by these cats. Birds such as crows, sparrows, starlings, blackbirds, pigeons, and gulls are commonly found on school campuses. At schools, pigeons are in close association with children and they often defecate while feeding thus depositing fresh feces near students. As things develop in the United States with this disease, we will be better informed and prepared on how to deal with this issue.

PLEASE REVIEW LAUSD PEST OF THE MONTH PROGRAM NO. 26. Asian Influenza, for disease transmission information, etc.

In order to put this program in perspective, a brief review of how bird flu is spread is necessary here.

Infected birds shed virus in their saliva, nasal secretions, and feces. Susceptible birds become infected when they contact contaminated excretions or surfaces that are contaminated with excretions. It is believed that **most cases of bird flu infections in humans have resulted from contact with infected poultry or contaminated surfaces**. The spread of Asian influenza virus from one ill person to another has been reported **very rarely**, and transmission has not been found to continue beyond one person. **However, all of this could change if the virus mutated to a strain that could be transmitted from person to person.**

NO CASE OF BIRD FLU HAS BEEN REPORTED IN THE UNITED STATES AS OF THIS DATE, SO THERE IS NO REASON FOR PANIC.

A WORD OF CAUTION

LAUSD pest of the month programs are for informational purposes only. They are not meant to be the definitive, all-encompassing source of information on these subject matters. If you have further questions on infectious diseases etc, please contact your doctor.

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