

BIRD FLU

Fact Sheet



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What is Avian Influenza?

Avian influenza or “Bird Flu”, is a contagious diseases of animals caused by viruses that normally infect only birds and , less commonly, pigs. While all bird species are thought to be susceptible to infection, domestic poultry flocks are especially vulnerable to infections that can rapidly reach epidemic proportions.

The disease in birds has two forms. The first causes mild illness, sometimes expressed only as ruffled feathers or reduced egg production. Of greater concern is the second form, known as “ Highly Pathogenic Avian Influenza” (HPAI). This form which was first recognized in Italy in 1878, is extremely contagious in birds and rapidly fatal, with a mortality approaching 100%. Birds can die on the same day. There are at least 15 different types of avian influenza that routinely infect birds around the world. The current outbreak is caused by a strain known as H5N1, which is highly contagious among birds and rapidly fatal. Unlike many other strains of avian influenza, it can be transmitted to humans and causing severe illness and death.

Public health officials are alarmed by the unprecedented outbreaks in poultry for several reasons. There is a mounting evidence that H5N1 strain has a unique capacity to jump the species barrier and cause severe disease, with high mortality, in humans. A second and even greater concern is the possibility that the present situation could give rise to another influenza pandemic in humans.

Incidence of Outbreak

Outbreaks of bird flu, especially the highly pathogenic form, can be devastating for the poultry industry and for farmers. For example, an outbreak in USA in 1983-1984, largely confined to the state of Pennsylvania, resulted in the destruction of more than 17 million birds at a cost of nearly US \$65 million.

The disease can spread from country to country through international trade in live poultry, migratory birds, including wild waterfowl, sea birds, and shore birds can carry virus for long distances. Migratory waterfowls - most notably wild ducks- are natural reservoir of bird flu viruses. Domestic ducks, likewise, are susceptible to lethal infections, as are turkeys, geese, and several other species that are raised on commercial or backyard premises.

Since Mid-December 2003, a growing number of Asian countries have reported outbreaks of HPAI in chickens and ducks. Infections in several species of wild birds and in pigs have also been reported.

Factors contributing to the virus outbreak:

- Densely populated livestock areas are vulnerable to the introduction and spread of infectious diseases.

- In addition to livestock density, there are other critical factors that may cause widespread infection of virus, such as, the presence of forest reserves and open water bodies in the populated area, movement of animals, contamination of lorries, feed, and other supplies, and of course the hygiene on the farm, the food processing chain and the markets
- Asian countries is known to form an influenza epicenter where birds, other animals and humans live closely together in conditions where viruses have the greatest opportunity to pass from one species to another.
- A number of conditions make transmission of the virus to humans more likely, such as, due to poor sanitation of the chicken stalls, in the retail outlets, the presence of markets in the proximity to living areas, absence of central slaughtering facilities, and the practice of slaughtering chickens at the retail outlets.
- Traffic and trade dynamics create conditions for viruses, bacteria and parasites to hitch-hike around the world, affecting people, animals and the ecosystems
- Avian influenza usually spreads when live birds carrying infection are bought and sold, and by contact of birds with bird droppings on dirty equipment, cages, feed, vehicles or shoes/clothings.
- The main risks of virus entry are: bringing in live birds, bringing in objects such as animal and bird cages or feed that has been contaminated by birds, bringing in dirty (faeces contaminated), footwear, vehicles, clothing, that has recently passed through animal markets or chicken or duck farms.
- The main risks of virus leaving a region to another are: sale of birds to markets, exit of wild waterfowl which have visited backyard poultry units, people working or selling poultry carrying dirty footwear, clothes, cages, to markets or bird farms

What are the Control Measures?

The most important control measures are rapid destruction (“culling” or stamping out”) of all infected or exposed birds, safe disposal of carcasses, and quarantining and rigorous disinfections of farms.

The virus is killed by heat at 56 degrees Celsius ($^{\circ}\text{C}$) for 3 hours or 60 $^{\circ}\text{C}$ for 30 min and exposure to common disinfectants, such as Formalin and Iodine compounds

UAE-wide National Emergency Plan (see annex)

The Dubai Municipality’s Environment Department, under the guidance by the Asst Director General for Public Health and Environment Affairs, has formed the Emirates Emergency Task Force with all concerned stakeholders taken on board.

To combat the potential threat of this natural disaster, a country-wide Emirates Disaster Preparedness & Threat Mitigation Plan has been prepared and is now being implemented.

In general, actions to be taken with regard to controlling, marketing, imposition of movement restrictions, quarantine measures, culling, and any vaccination:-

- In an emergency with multiple outbreaks of HPAI, the level of bio-safety (prevention and containment) must immediately be raised. Appropriate protocol must be carried out for the early detection of the carrier/host, carry out rapid safe culling of the flock of birds with infected member or suspected with infection, and to quarantine of those in contact with them to prevent the spread of the disease further.
- Observance of good hygiene protocol is extremely important safety measure to prevent infection entering domesticated poultry. All persons keeping or working with poultry must follow a strict hygiene procedure.
- Once HPAI virus is found present in the trading environment or country, all persons working with poultry should urgently increase the level of hygiene practices to avoid bringing in viruses (bio-exclusion) and to prevent virus exiting (bio-containment) if it has already entered a flock, village or region.

What can we do now?

- ☀ If you have pet bird in your house get these checked immediately by a veterinarian.
- ☀ Protect your pet birds from outside birds such as pigeons, mynas and sparrows.
- ☀ Keep all your pet birds indoor.
- ☀ In case these birds are in outside aviary or cage, cover such a cage with half an inch square welded mesh/net or one inch mesh sized fishing net or chicken mesh to prevent wild birds coming in contact with your birds.
- ☀ If you need to touch your pet birds every time wash your hands with disinfectant.
- ☀ Regularly wash feeding trays, water pots and other utensils used in a cage/aviary with disinfectant.
- ☀ If your bird or any other bird shows any symptoms mentioned as those for the AVI immediately contact UAE Government Tel number 8009990 or Dubai Municipality's control room number 04-2232323 if you are in Dubai. The number for Sharjah has been given as 993. You must not touch or allow others around you to go near any bird that you think might be suffering from AVI or any other disease.

Soapy Water and detergents are first choice of many items

- ✿ The avian influenza virus is simpler to destroy than many viruses since it is very sensitive to detergents, which destroy the fat containing outer layer of the virus. This layer is needed to enter cells of animals and therefore destroys the infectivity.
- ✿ The virus survives well in water and simple washing may assist the virus to enter into areas where it is picked up by other birds
- ✿ Therefore any washing to remove contamination should always be with detergents (soapy water) or specific disinfectants
- ✿ The biggest danger is bird droppings- the virus like moist, dirty conditions so it is essential to thoroughly disinfect items that have been in contact with bird droppings- cages, shoes, clothes before working with poultry/entry to a place where poultry are kept.

Prevent Contamination via People

Bio-security is a concept for prevention of disease entry/escape that must be practiced by all farmers, cooperatives, abattoirs etc. Lack of bio-security measures increases the risk for disease or infection entry to the production unit, market or any commercial operation.

One of the common breaks in bio-security for trans-boundary animal diseases including avian influenza, is the entry of people bringing contaminated materials (cloths, shoes, soiled hands) to where susceptible animals are housed

Solution:

- ✿ Do not allow strangers access to where the animals are housed
- ✿ Provide protective clothes to those that visit the flock, including boots;
- ✿ Provide baths with disinfectant for boots
- ✿ Ideally all farm workers and wanted visitors should take a full shower and use clothes from the farm before entering areas where poultry are kept; clothes used on farm, should not leave the farm.
- ✿ Producers who use outside workers for assistance on their farms, should ensure that these workers do not have poultry of their own;
- ✿ Animal health officials visiting affected premises should be extremely conscientious that they, through their work in epidemiological investigations or vaccination initiatives, could actually be infection and disease spreaders
- ✿ The producers should know the origin of their feed and water. The quality of these should be periodically checked

Prevent Contamination via materials

Another means of diseases entry into a flock is through the introduction of contaminated equipment or instruments such as lorries/trucks, egg trays, cages or feeders. The reuse of equipment (i.e. egg trays) or the purchase of used equipment (feeders) represents high-risk activities. Some practical measures: -

- Clean and disinfect equipment on a regular basis
- Porous materials, such as wood and fibre, are more difficult to disinfect than synthetic materials

Prevent Contamination via animals

The most common means of disease introduction is when animals that are incubating or with symptom of disease are brought into a common place and mixed with other animals

Solution:

- Ensure that any animal to be introduced to the farm/flock is healthy. If possible, a health certification should be obtained
- Vaccinate only healthy animals.
- Establish a quarantine area where new animals are not housed with poultry already on the farm. These housing areas should be separated from each other as much as possible
- Establish mechanisms to separate wildlife from poultry production farms

VACCINE

Currently available vaccines will not protect against disease caused by the H5N1 strain in humans. The World health Organization (WHO) is urgently working together with laboratories in the WHO Global Influenza Surveillance Network to develop a prototype H5N1 virus for use by leading vaccine manufacturers.

An available vaccine prototype virus, developed using the 2003 strain of H5N1 can not be used to expedite vaccine development. Initial analysis of 2004 virus, conducted by WHO network shows that the virus has mutated significantly

DRUGS

Two classes of drugs are available. These are M2 inhibitors (**amantadine and rimantadine**) and the neuraminidase inhibitors (**oseltamivir and zanamivir**). These drugs have been licensed for the prevention and treatment of human influenza in some countries, and are thought to be effective regardless of the causative strain

DOs and DON'Ts in Avoiding AVI/H5N1

- Don't get any new pet in your house as much as possible.
- Don't visit pet shops or animal markets selling birds
- If your friends and relatives have pets avoid visiting the area in their house where pets are being kept. Best is to avoid such houses for the time being.
- Avoid direct contact with your bird pet.
- If you are bound to clean your pet cages always use medical face mask, rubber hand gloves and rubber gumboot.
- After each time working with your pet birds wash your hands with powerful disinfectant available in the local pharmacy.

For Your Information

- Up to now no bird flu has been detected in the UAE.
- The eggs and chicken that we buy from the market are considered safe as these are regularly checked by the proper authorities.
- We must never eat uncooked, half cooked or partly cooked eggs or chicken whether there is bird flue scare of or not. Even in normal situation the poultry products could carry germs such salmonella and *E Coli*. So these must be cooked properly before eating. The raw meat and fish could always be a source of disease.

- *If you find any sick or dead bird, keep away from the birds and inform at once to the emergency contact given below:*

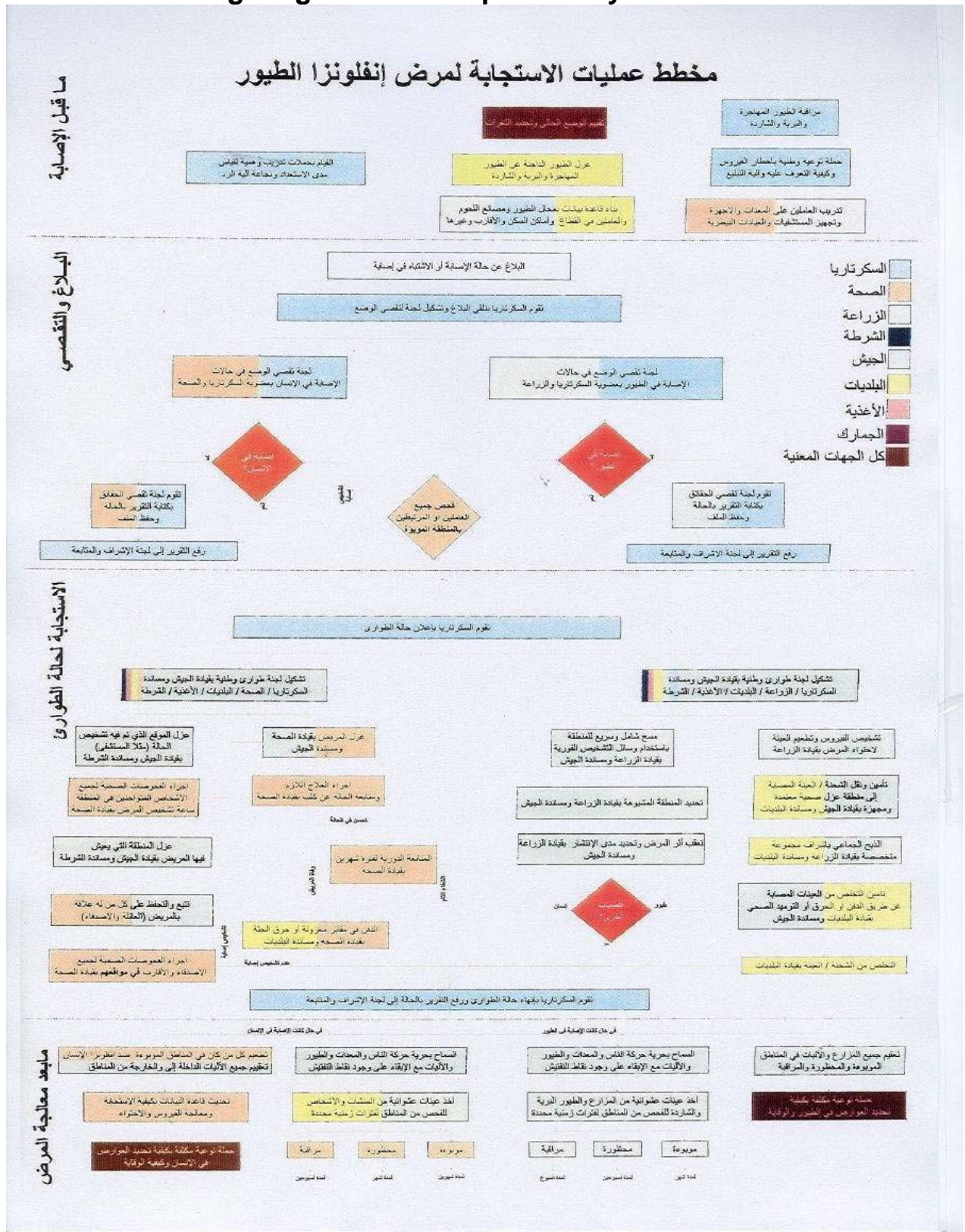
CONTACT ADDRESS FOR EMERGENCIES

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Annex-I

UAE National Organogram and Responsibility Flow Chart for Bird Flu



السكرتاريا

الصحة

الزراعة

الشرطة

الجيش

البلديات

الأغذية

الجمارك

كل الجهات المعنية