

## Management of Avian Influenza in University Hostels

Management of the university hostels should take appropriate measures to ensure maximum protection of residents and staff.

(A) Acquire an understanding of seasonal influenza / avian influenza / influenza pandemic

- INFLUENZA or 'flu' can be caused by different types of influenza viruses. It is important to differentiate the three different entities of seasonal influenza, avian influenza and influenza pandemic.
  - ◆ SEASONAL INFLUENZA occurs in human populations. In Hong Kong, influenza peaks in January to March and July to August every year. The circulating strains are currently influenza A (H1N1 and H3N2) and influenza B. Seasonal influenza viruses undergo minor changes from time to time and this explains why influenza vaccine has to be re-formulated every year. Seasonal influenza is usually not severe in most people, because they are already partly protected due to previous infection(s) by a similar virus. Seasonal influenza viruses mainly spread through droplets when infected people cough, sneeze or talk. The infection may also spread by direct contact with the secretions of infected persons.
  - ◆ AVIAN INFLUENZA mainly affects birds and poultry, such as chickens or ducks. Influenza A (subtypes H1 to H16) viruses have been detected in avian species. Avian viruses do not normally infect humans. Human cases of infection with avian influenza viruses have been reported, mostly resulting from close contact with infected birds, poultry (live or dead) or their droppings. Human-to-human transmission is inefficient, although there is a concern that the virus could change to become more easily transmissible between humans, causing an influenza pandemic.
  - ◆ INFLUENZA PANDEMIC occurs when a new influenza A viral strain emerges and spreads rapidly among the human race because they have no immunity to this new viral strain. The new viral strain usually originates partially or wholly from animal influenza virus strains. As large numbers of people may fall ill or die from it, great human, social and economic loss may result. Many people might not be able to work due to the sickness, having to stay at home to care for the sick, or upon Government's advice to reduce social contact. Community and economic activities might have to be scaled down.
- While the incubation period for normal seasonal influenza is usually 1 - 4 days, the incubation period for avian influenza A (H5N1 and H7N9) may be longer than that for normal seasonal influenza. Current data for avian influenza A (H7N9) infection indicate an incubation period ranging from 2 - 8 days and possibly as long as 17 days. The World Health Organization currently recommends that an incubation period of 7 days be used for field investigations and the monitoring of patient contacts for avian influenza A (H5N1). The incubation period of avian influenza A (H7N9) can be up to 10 days.
- For healthy individuals, seasonal influenza is usually self-limiting with recovery in 2 - 7 days. Symptoms may include fever, cough, sore throat, runny nose, muscle pain, fatigue and headache; some may also have vomiting and diarrhoea. Severe illness may occur in the very young, very old or those with underlying illness. Initial symptoms of avian influenza A (H5N1) include high fever, usually with a temperature higher than 38°C, and other influenza-like symptoms. Diarrhoea, vomiting, abdominal pain, chest pain, and bleeding from the nose and gums have also been reported as early symptoms in some patients. In many patients, the disease caused by the avian influenza A (H5N1) virus follows an unusually aggressive clinical course, with rapid deterioration and high fatality. For human infection with avian influenza A (H7N9), although some patients had mild illness, most patients reported so far have had severe chest infection, with symptoms

including fever, cough and shortness of breath.

(B) Get prepared for avian influenza

- Ensure a clean and hygienic hostel environment.
  - ◆ At least daily disinfection of hostel equipment, floor, window, door knobs and lift buttons with appropriate disinfectant or diluted household bleach (1 part of household bleach containing 5.25% hypochlorite solution in 99 parts of water for non-metallic or 70% alcohol for metallic surface), wait until dry and then rinse with water and wipe dry;
  - ◆ If places are contaminated by respiratory secretions, vomitus or excreta, use absorbent disposable towels to wipe them away. Then disinfect the surface and the neighbouring area with appropriate disinfectant or diluted household bleach (1 part of household bleach containing 5.25% sodium hypochlorite in 49 parts water for non-metallic or 70% alcohol for metallic surface), leave for 15 - 30 minutes before rinsing with water and wiping dry; proper maintenance of toilet facilities and floor drains including adequate supply of liquid soap, disposable towels or hand-dryers;
  - ◆ Provide 70 – 80% alcohol-based handrub in places where hand-washing facility is not available;
  - ◆ Hostels should refer to instructions on the container for proper usage and storage of alcohol-based handrub and follow the recommendation of Fire Services Department.
  - ◆ Maintain good indoor ventilation, including opening windows as widely and as many as possible and/or using well-maintained air conditioning system with exhaust fans running at the same time.
  - ◆ Encourage students to frequently clean their living quarters and keep the hostel clean.
- Relieve staff members from work if they are sick. Offer surgical masks to residents and staff if they have influenza-like symptoms while they arrange to see a doctor and remind them to inform the doctor of their exposure history, if they have recent history of travel (especially to affected areas with avian influenza cases) and have contact with poultry or history of visiting wet markets with live poultry.
- Keep a visitor record during serious and emergency response levels.
- Refer to the Government's 'Preparedness Plan for Influenza Pandemic 2012'.  
([http://www.chp.gov.hk/files/pdf/erib\\_preparedness\\_plan\\_for\\_influenza\\_pandemic\\_2012\\_2012080601\\_en.pdf](http://www.chp.gov.hk/files/pdf/erib_preparedness_plan_for_influenza_pandemic_2012_2012080601_en.pdf))

(C) When mode of transmission of human avian influenza remains mainly from poultry or contaminated environment to human and the transmission from human to human remains inefficient.

If there are residents / visitors / staff being affected by avian influenza

- Centre for Health Protection (CHP) of Department of Health (DH) will inform the management of the university hostels that there are residents / visitors / staff being affected by avian influenza. The role of CHP is to assess the risk of spreading the disease by the affected residents / visitors / staff during the infectious period or to identify the source of infection who may be staying at the hostel during the incubation period.
- In general, CHP will make a site visit to the affected hostel to conduct case investigation and the following may be commenced as appropriate after risk assessment:
  1. Contact tracing
  2. Quarantine and medical surveillance
  3. Chemoprophylaxis
  4. Disinfection
- Management of the university hostel should cooperate with DH in case investigation and contact tracing by
  - ◆ providing details of residents, staff and visitors who have contact with the index patient (if available);
  - ◆ providing floor plan, resident list, staff list and visitor list;
  - ◆ arranging venues for interviews with residents / staff;
  - ◆ complying with CHP's instructions regarding quarantine of residents and staff;
  - ◆ restricting visitors;
  - ◆ suspending intake of new residents to the affected floor before thorough disinfection and during quarantine period;
  - ◆ assisting in follow-up of health status of residents and medical surveillance of contacts (residents and staff) if necessary;
  - ◆ assisting in monitoring the residents' compliance to chemoprophylaxis if necessary;
  - ◆ inform CHP if any resident or staff develops influenza-like symptoms and, facilitate CHP's subsequent actions as deemed necessary;
  - ◆ refraining sick staff and staff requiring quarantine from work;
  - ◆ disinfecting the hostel with appropriate disinfectant or diluted household bleach (1 part of household bleach containing 5.25% sodium hypochlorite in 49 parts water for non-metallic or 70% alcohol for metallic surface), leave for 15 - 30 minutes before rinsing with water and wiping dry. Special attention should be paid to the disinfection of toilets, kitchens and objects which are frequently touched such as light switches, door knobs and handrails; and
  - ◆ use highly absorbent materials to preliminarily clean up surface contaminated with vomitus / excreta / secretions before performing the above disinfection procedure.
- The contacts (residents / staff) requiring quarantine are expected to
  - ◆ be stringent with personal and hand hygiene, respiratory hygiene/cough etiquette and environmental hygiene;
  - ◆ refrain from work or attending classes during the quarantine period;
  - ◆ group / assembling activities should be suspended during the quarantine period;
  - ◆ stay in areas for quarantine;

- ◆ report influenza-like symptoms to designated person / CHP; and
- ◆ comply with the chemoprophylaxis regimen.

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