

## Management of Avian Influenza in Schools

School management should take appropriate measures to ensure maximum protection of students 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 reformulated 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 (H5N1) 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 school environment.
  - ◆ Clean school environment at least daily including equipment, furniture, floor, windows, door knobs and lift buttons with appropriate disinfectant or diluted household bleach (1 part of household bleach containing 5.25% sodium 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; and
  - ◆ Provide 70 – 80% alcohol-based handrub in places where hand-washing facility is not available.
- Schools 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 together with exhaust fans running at the same time.
  - Remind your students and staff to avoid visiting wet markets with live poultry, especially when travelling to areas affected with avian influenza
  - Advise students and staff to avoid touching birds and poultry (live or dead) or their droppings
  - Support students and staff in adopting good personal and environmental hygiene (e.g. provision of liquid soap, lidded rubbish bin and regular refuse disposal).
  - Advise students and staff to observe strict hand hygiene. Wash hands frequently with soap, especially before touching the mouth, nose or eyes, handling food or eating; after going to toilet, touching public installations or equipment such as escalator handrails, elevator control panels or door knobs; or when hands are dirtied by respiratory secretions after coughing or sneezing;
  - Cover the nose and mouth while sneezing or coughing, hold the spit with tissue and put it into lidded dustbins;
  - Relieve staff members from work and advise students to stay at home if they are sick.
  - Offer surgical masks to them 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 clear staff and student sickness record.
  - Refer to the 'Preparedness Plan for Influenza Pandemic The Government of the Hong Kong Special Administrative Region'.  
([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))
  - Refer to the 'Health Advice on Prevention of Avian Influenza in School' ([http://www.chp.gov.hk/files/pdf/healthadviceavianinfluenza\\_school\\_en.pdf](http://www.chp.gov.hk/files/pdf/healthadviceavianinfluenza_school_en.pdf)) for the preventive measures.
- (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 is a case of human infection with avian influenza in school

- The Centre for Health Protection (CHP) of the Department of Health (DH) will inform the school management that there is a student/staff being affected by avian influenza.
- School management should cooperate with CHP in case investigation and contact tracing (both close<sup>1</sup> and social<sup>2</sup> contacts) by
  - ◆ providing details of staff and students who have contact with the affected student/staff, class list, staff list, activity timetables, e.g. timetables for various interest groups, recent sick leave records, school bus list, floor plan of school and other information as required by CHP;
  - ◆ arranging interviews with staff/students and parents; and
  - ◆ facilitating CHP's visits to school and other actions as deemed appropriate to help understand how the disease has been acquired, how far it spreads and what measures are needed to control it.
- Carry out thorough disinfection of potentially contaminated area in the school as soon as possible.
- Comply with CHP's advice regarding temporary suspension of school.
  - ◆ Before resumption of school,
    - the whole school and school bus should be disinfected with appropriate disinfectant or diluted household bleach ( 1 part of household bleach containing 5.25% sodium hypochlorite solution in 49 parts of water for non-metallic or 70% alcohol for metallic surface); leave for 15 – 30 minutes and then rinse with water and wipe dry.); and
    - school management should help arrange a health talk to parents/staff/students as deemed necessary.
  - ◆ After school resumption,
    - parents are required to check the body temperature of their children every day and write down details on a record sheet provided by school for inspection;
    - students should be refrained from going to school and consult a doctor if body temperature is higher than reference reading quoted below

Measuring method	Celsius scale (°C)	Fahrenheit scale (°F)
Ear (tympanic)	38.0	100.4
Oral	37.5	99.5
Armpit	37.3	99.1

- staff members should also take body temperature before going to school and to consult a doctor when sick.
  - School management should assist in the follow up of health status of the staff and students; report suspected case to CHP promptly; and take other measures as deemed necessary.
  - Sick students/staff should not be allowed to attend school nor should staff/students under quarantine be allowed to do so. Remind them to comply with the health advice and instructions issued by the Government.
2. If the family of a staff member develops avian influenza
- Accept sick leave certificates with the diagnosis of “under medical surveillance” issued by DH to the staff whose family members suffer from avian influenza if the staff requires quarantine and medical surveillance.

Footnotes:

- 1 In general, close contacts of an isolated case in school may include
- Any student or staff who has stayed in the same classroom or travelled in the same school bus as a symptomatic case
  - Any student or staff who has attended the same extra-curricular / school activity in an indoor setting as the symptomatic case
  - Any student or staff who has attended the same extra-curricular / school activity in an outdoor setting with prolonged face-to-face contact (>15 min) with a symptomatic case
- 2 Social contacts of an isolated case in school include other students and staff of the school who has contact with the case but do not meet the criteria of close contact.

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Centre for Health Protection