

# Emergency Preparedness for Influenza Pandemic in Hong Kong



Health, Welfare and Food Bureau  
The Government of the Hong Kong Special Administrative Region

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## *Emergency Preparedness for Influenza Pandemic in Hong Kong*

### *Preamble*

In human history, influenza pandemics caused by novel virus strains had led to significant morbidity, mortality and economic loss globally. Three pandemics occurred in the last century – in 1918-19 ('Spanish flu'), 1957-58 ('Asian flu') and 1968-69 ('Hong Kong flu'). The most severe – that of 1918-19 – is estimated to have killed between 20 and 40 million people worldwide, a greater toll than the whole of the World War I. In Hong Kong, we have already faced the challenge of the first avian influenza outbreak of H5N1 in 1997 which resulted in 18 people being infected of which six died. The outbreak was brought under control with intensive collaborative Government efforts on depopulation of all live chickens. Sporadic cases of avian influenza, though, have been identified: H9N2 (2 cases in 1999, 2 cases in 2000), H5N1 (2 cases in 2003).

For an influenza pandemic to occur, there should be three pre-requisites:

- emergence of a novel influenza virus subtype or re-emergence of an old subtype to which the general population has little or no immunity;
- the new virus must be able to replicate in humans and cause serious illness; and
- the new virus must be efficiently transmitted from one human to another.

Since January 2004, Thailand and Viet Nam reported their first human cases of avian influenza, caused by the H5N1 subtype of Influenza A virus. These cases were directly linked to historically unprecedented outbreaks of highly pathogenic H5N1 avian influenza in poultry that began in 2003 and rapidly affected eight Asian nations. Evidence indicates that H5N1 virus is now endemic in parts of Asia, having established a permanent ecological niche in poultry. According to the assessment by the World Health Organisation (WHO), all prerequisites for the start of an influenza pandemic were met save one: efficient human-to-human transmission. WHO called for all countries and economies to develop plans for better preparedness and response for this global threat.

The Hong Kong Special Administrative Region Government is committed to safeguarding the health of the community. Our effort in controlling the 1997 avian influenza outbreak has been commended by international experts in having averted a possible impending pandemic. The Government adopts the

following principles of preparedness, to safeguard the health of the community:

- Reduce risk of human infections,
- Early detection of influenza pandemic, and
- Enhance emergency preparedness and response for influenza pandemic.

The following chapters outline the work of the Government on each front. The list of measures will be fine-tuned as we gain more knowledge and experience on the disease and on infection and outbreak control.

## **CHAPTER ONE**

### **REDUCE RISK OF HUMAN INFECTION**

#### ***Reinforce public health infrastructure***

- A Centre for Health Protection under the Department of Health has been set up since June 2004 to strengthen the longer-term prevention and control of infectious diseases. Capabilities have been enhanced to achieve real-time surveillance, rapid intervention and responsive risk communication. (*Department of Health*)

#### ***Reduce risk of human acquiring disease from animals***

- To conduct ongoing surveillance and close monitoring at live poultry retail outlets and monitoring of poultry farms, pet bird traders, imported birds, recreational parks and wild birds.
- To monitor closely the number of live poultry present in local farms, Cheung Sha Wan Temporary Wholesale Poultry Market and at retail outlets.
- To step up farm and wholesale market bio-security measures, including the installation of bird-nets to avoid contact of poultry with wild/migratory birds.
- To communicate with farmers, poultry wholesalers, poultry retailers and poultry transporters on preventive measures.
- To keep an adequate stock of personal protective equipment (PPE) and conduct regular refresher exercises on culling operation.
- To develop an agreed protocol with the Mainland on importation of live poultry.
- To control import of live birds and poultry products.
- To implement vaccination in chickens.
- To introduce rest days to wholesale and retail markets.
- To reduce the chance of genetic reassortment between human and avian influenza viruses. Influenza vaccination is arranged for poultry workers and cullers.
- To introduce by-back scheme to poultry retailers and loan scheme to retailers to enhance hygiene conditions of their premises;
- To enforce stringent and specific requirements and conditions imposed on poultry retailers

*(Agriculture, Fisheries and Conservation Department; Department of Health; Food and Environmental Hygiene Department; Leisure and Cultural Services Department)*

## ***Promote and protect travel health***

### *Forestalling import and export of human cases*

- To enforce public health control measures including temperature screening on passengers arriving Hong Kong at the Airport. Passengers found to have fever or reporting sick will be further assessed and those suspected to have novel influenza will be referred to hospital for further management. *(Department of Health, Auxiliary Medical Service, Immigration Department, Airport Authority)*
- To distribute pamphlets in eight languages to travelers to and from selected affected areas. *(Department of Health)*
- To distribute letters of reminder providing health advice to target groups through relevant organizations working with migrant helpers and Travel Industry Council of Hong Kong. *(Department of Health)*

### *Travel health education*

- To organize talks and seminars to the tour group coordinators and disseminate travel health messages (e.g. prevention of avian influenza) via the Tourism Industry to their clients. The travel health website is updated regularly on travel health advice in response to emerging threats of avian influenza. *(Department of Health)*
- To distribute health education pamphlets on health advice relating to prevention of avian influenza at the airport, seaport and land border control points to raise awareness of passengers before leaving and upon entry to Hong Kong. *(Department of Health)*
- To task the Mobile Information Service team at the Hong Kong International Airport to assist in disseminating leaflets in minority languages to newly arrived foreign domestic helpers and migrant workers. *(Home Affairs Bureau)*

## ***Prevention in the Health Care Sector***

### *Public health system*

#### Prevent infection in the healthcare settings

- To provide trainings on infection control to stakeholders in the community, selected government departments and healthcare workers in public and private sectors. (*Hospital Authority, Department of Health, Auxiliary Medical Service*)
- To enforce stringent infection control policy in hospitals and clinics to reduce the spread of infectious diseases. Risk-based clinical management and infection control guidelines are provided to health care professionals. (*Hospital Authority, Department of Health*)
- To encourage health care workers to receive influenza vaccination in order to maintain a healthy workforce and avoid opportunities of reassortment of seasonal influenza viruses with that of novel subtypes through human as a “mixing vessel”. Influenza vaccination is arranged for the health care workers working in DH, HA or other public services. (*Hospital Authority, Department of Health*)
- To put in place more than 1400 isolation beds. A new infectious disease block is being constructed at the Princess Margaret Hospital and is expected to be completed in 2006. (*Hospital Authority*)
- To facilitate the evaluation of different treatment modalities by experts so as to ensure that treatment options are clinically effective and safe. A number of therapeutic regimes, including Chinese medicine, are being vetted vigorously, applying an evidence-based approach and ethically sound principles. (*Hospital Authority*)
- To implement risk-based management of patients in public hospitals so that suspected patients will be segregated and isolated in Accident and Emergency Departments and isolation wards of hospitals to avoid cross infections. (*Hospital Authority*)
- To maintain contact with overseas health authorities with a view to securing backup epidemiological support when necessary. (*Department of Health*)
- To enhance manpower capacity for infection control and epidemiological studies. (*Department of Health*)
- To maintain a state of heightened preparedness, including (a) an adequate stock of Personal Protective Equipment; and (b) infection control measures, which will be further upgraded if any sign of a single case of novel influenza emerges. (*Hospital Authority*)

### Provide laboratory support and prevent infection in the laboratory

- To provide confirmatory testing for influenza to both public and private sectors. (*Department of Health*)
- To perform typing and subtyping of all influenza isolates at the Public Health Laboratory Services Branch (PHLSB) of Department of Health. Antigenically atypical isolates would be genetically characterized and forwarded to the WHO Collaborating Centres for further analysis. (*Department of Health*)
- To update laboratory biosafety guidelines. (*Hospital Authority, Department of Health*)

### Capacity building

- To put in place a field epidemiology training programme with attachment programmes to other health authorities with a view to substantially enhancing the Department of Health's capacity in disease surveillance, investigation and control. (*Department of Health*)
- To set up an Infectious Disease Control Training Centre to identify and develop suitable training programmes on infection control and infectious disease for healthcare workers in Hong Kong and community carers across all disciplines. Training on infection control and infectious diseases is provided and being audited. (*Hospital Authority*)
- To provide structured training programmes on infection control and emergency response to frontline healthcare workers. (*Department of Health*)
- To recruit overseas expertise in training staff. (*Department of Health*)

### Conduct research to guide response measures

- To conduct regular reviews of documented evidence of and recommend applied research on the effectiveness of public health control actions under the Scientific Committees.
- To assess risks and emergency preparedness for influenza pandemic and issues recommendations and guidelines pertaining to the prevention and control of influenza pandemic under the Scientific

Committee on Emerging and Zoonotic Diseases.

- To set up under the Health, Welfare and Food Bureau the Research Fund for the Control of Infectious Diseases to support research related to prevention and control of influenza pandemic.

*(Health, Welfare and Food Bureau, Department of Health)*

*Private practitioners*

- To maintain close liaison with private practitioners and to remind them, from time to time–
  - to take appropriate infection control measures in their clinics;
  - to assess the requirement for Personal Protective Equipment (PPE) and to maintain adequate stock;
  - to educate patients about novel influenza and its prevention;
  - to refer promptly patients suspected of having novel influenza to hospital for further investigation and management; and
  - to notify the Department of Health of suspected novel influenza patients.
- To draw up a list of volunteers for surge capacity in public health services.
- To advise them to maintain stockpile of antivirals.

*(Department of Health, Hospital Authority, Hong Kong Medical Association, Hong Kong Doctors Union, Practising Estate Doctors' Association, Hong Kong Chinese Medical Association, Association of Licentiates of Medical Council of Hong Kong)*

*Chinese medicine practitioners*

- To maintain close liaison with Chinese medicine practitioners; to inform them of the pandemic preparedness plan, and advise them to remain vigilant and take appropriate infection control measures in their clinics.

*(Department of Health)*

*Private hospitals*

- To maintain close liaison with private hospitals and to remind them, from time to time–
  - to maintain a high degree of alertness when acting as the initial point of receiving patients whose illness may be eventually diagnosed with avian influenza/pandemic influenza;
  - to assist in the surveillance of novel influenza by actively monitoring respiratory illness among hospital staff;
  - to assess the requirement for Personal Protective Equipment and to maintain adequate stock;

- to audit infection control measures from time to time;
- to report patients suspected of having contracted novel influenza to the Department of Health on a daily basis; and
- to have in place an effective and healthy workforce through implementing adequate infection control measures and providing training and Personal Protective Equipment to staff.

*(Department of Health)*

- To advise private hospitals to maintain stockpile of antivirals. *(Department of Health)*
- To share with private hospitals guidelines on infection control and information on infectious diseases. *(Department of Health, Hospital Authority)*
- To arrange for public /private initiatives such that non-urgent cases can be transferred to private hospitals for clinical management when the public health system is overwhelmed. *(Hospital Authority)*

### ***Prevention in the Community***

#### *Schools*

- To require parents to take the temperature of their children daily before letting them go to school. *(Education and Manpower Bureau)*
- To require schools –
  - to clean and disinfect their premises and facilities daily;
  - to provide adequate facilities and cleaning materials for hand-washing; and
  - to maintain good indoor ventilation and wash the dust filters of air-conditioners frequently.

*(Education and Manpower Bureau)*

- The Education and Manpower Bureau has issued a Handbook on Prevention of SARS in Schools which sets out clearly the respective roles and responsibilities of parents, students, staff and schools. The measures for keeping school premises hygienic and healthy therein are also applicable to situations under avian / pandemic influenza. An extract of the main measures are set out in Annex A. The full text of the handbook is available on the Education and Manpower Bureau homepage at <http://www.emb.gov.hk>.
- To issue circulars to schools from time to time whenever appropriate to remind them to step up precautionary measures to prevent the spread of communicable diseases in schools. *(Education and Manpower Bureau)*

*Residential care homes for the elderly and people with disabilities*

- To issue updated guidelines on infection control for residential care homes for the elderly and people with disabilities. (*Department of Health*)
- To implement an enhanced information exchange mechanism among relevant parties to enable early detection of infectious disease, timely notification and prompt action to combat any infectious disease outbreaks. (*Department of Health, Hospital Authority, Social Welfare Department*)
- To arrange influenza vaccination for all elderly/disabled residents in the institutions. To further protect the residents in residential care settings, influenza vaccination will be arranged for health care workers of the residential homes from 2005/06 onwards. (*Department of Health, Social Welfare Department*)
- To advise and assist residential care homes for the elderly to make available suitable space in subvented homes for cohorting arrangements in the event of an outbreak of infectious disease. (*Social Welfare Department*)
- To designate an Infection Control Officer (ICO) in each residential care home for the elderly (RCHE) and people with disabilities (RCHD) who would be responsible for dealing with infection control and prevention of communicable diseases in RCHEs and RCHDs. (*Department of Health, Hospital Authority, Social Welfare Department*)
- To conduct annual visits to all RCHEs so as to assess their capabilities in infection control, and provide on-the-spot coaching and to identify training needs. (*Department of Health, Social Welfare Department*)
- To arrange briefings and training for ICOs and staff of RCHEs and RCHDs on infection control. (*Department of Health, Hospital Authority, Social Welfare Department*)
- To institute sentinel surveillance system in RCHEs on common infectious diseases to monitor the trend of these diseases and to identify outbreaks in a timely fashion. (*Department of Health*)
- To improve surveillance in elderly homes through greater support by the Community Geriatric Assessment Teams (CGATs) for Visiting Medical Officers (VMOs) who will assist in monitoring medical surveillance for infectious diseases in RCHEs. The VMOs will provide regular on-site visits to RCHEs and manage episodic illness and subacute problems in the elderly residents. They will also attend to discharged patients with stable chronic illnesses referred to them by the assessment teams. (*Hospital Authority, Social Welfare Department*)

### *Elders in the community*

- To enhance the information exchange system for infectious diseases among parties involved in community care services. (*Department of Health, Hospital Authority, Social Welfare Department, Hong Kong Council of Social Services, Non-governmental Organizations*)
- To continue to prepare hygiene kits, conduct public health education and provide emotional support to elders through centre services, home visits as well as phone contacts by elderly service units. (*Social Welfare Department, Non-governmental Organizations*)
- To outreach vulnerable elders and assist them to improve their home living environment. (*Social Welfare Department, Non-governmental Organizations*)
- To deal with hard-core cases involving public health hazards through intensive efforts. (*Social Welfare Department*)
- To arrange free influenza vaccination to elderly with chronic illness and to elderly receiving CSSA. (*Department of Health, Hospital Authority, Social Welfare Department*)

### *Welfare service units and other needy people*

- To continue to issue updated guidelines/reminders on measures to prevent the spread of infectious diseases to welfare service units (e.g. childcare centres, children and youth centres) and have these posted on the Social Welfare Department homepage for public access. (*Department of Health, Social Welfare Department*)
- To institute sentinel surveillance system in selected childcare centres. (*Department of Health*)
- To arrange flu vaccination for all 6-23 months old children of CSSA families in 2005/06 (*Department of Health, Hospital Authority, Social Welfare Department*)

### *Public Housing*

- To step up enforcement action against misdeeds, such as littering and spitting, that may be conducive to the spread of infectious diseases. The Marking Scheme for Tenancy Enforcement that has been commenced since August 2003 will be sustained.
- To continue intensified cleansing of public housing estates. “Operation Tai Ping Tei (太平地行動)” are being held four times a year.
- To install biochemical systems to remove hazardous and odorous pollutants inside refuse collection points.
- To improve domestic refuse disposal arrangement by the provision of degradable refuse bags to tenants and the improvement of the design and

quantity of refuse collection bins.

- To inspect and repair drainage pipes at common area.
- To remind estate residents to upkeep personal hygiene through Housing Channel.
- To clean / disinfect the press buttons of lifts in public rental housing blocks three times a day.  
(*Housing Department*)

#### *Private Property Management*

- To advise and remind all property management companies from time to time to step up cleansing and other avian influenza/pandemic influenza prevention measures. (*Home Affairs Department*)
- To issue guidelines on inspection and disinfection of common parts of buildings to property management companies, owners' corporations (OCs) and mutual aid committees (MACs). (*Home Affairs Department*)
- Where there is no OC or MAC, to give advice on proper cleansing and maintenance of buildings to the owners and property management company if there is one. (*Home Affairs Department*)
- To continue to follow up the drainage repair works required of the remaining 300 odd private buildings where rectification of drainage defects are either undertaken by the government contractor or owners with work in progress. (*Buildings Department*)
- To step up publicity including holding press conference to increase public's awareness on the importance of proper installation and maintenance of U-traps and drainage pipes to guard against the spread of infectious diseases. (*Buildings Department*)
- To issue a leaflet on "What you need to know about drainage pipe maintenance" to 1.3 million households in private buildings to remind owners/occupiers of the importance of proper maintenance and repair of their drainage pipes including the need of refilling water to U-traps periodically. The leaflet will also be made available on the Buildings Department's homepage at <http://www.bd.gov.hk>. (*Buildings Department*)
- To engage Buildings Department's Patrol Consultant Teams to step up the inspection of conditions of drainage pipes in private buildings. (*Buildings Department*)
- To stand ready to deal with any problems relating to the fabric of buildings in collaboration with other government departments, and to take any actions as may be necessary under the Buildings Ordinance. (*Buildings Department*)

### *Workplace*

- To continue to disseminate health information useful for the prevention of novel influenza to employers and employees, especially the message that people with fevers should not go to work, and that employers should not require any employee who has a fever to work. A summary of the main messages is at Annex B.
- To remind employers of the importance of taking measures to prevent avian / pandemic influenza during workplace inspection visits and outreach occupational health talks.
- To appeal to employers' associations, trade unions, industry-based committees and human resources managers' clubs to seek their assistance in reminding employers and employees of the need to exercise continued vigilance.

*(Labour Department, Department of Health)*

### *Public Transport*

- To issue health advice to the public transport sector. *(Transport Department, Department of Health)*
- To monitor preventive measures taken by transport operators through experience sharing sessions at regular trade conference / meetings. The detailed preventive measures contained in the health advice issued to transport operators are available on the Transport Department's homepage at <http://www.info.gov.hk/td/>. *(Transport Department)*

### *Aviation sector*

- To continue with the existing temperature screening at the Hong Kong International Airport. *(Airport Authority)*
- To ensure staff who have a higher-than-normal temperature should not report for duty and should seek medical treatment instead. *(Airport Authority)*
- To conduct more frequent cleaning of public areas and make public announcements to remind passengers to maintain personal and environmental hygiene. *(Airport Authority)*
- To communicate with its 240-plus airport business partners to increase awareness of airport workers. Latest information and advice will be disseminated through various communication channels, including newsletters, seminars, talks and posters. *(Airport Authority)*
- Local airlines, Cathay Pacific Airways, Dragonair, Hong Kong Express, CR Airways and Air Hong Kong are advised to continue to remain vigilant and take appropriate necessary preventive measures. *(Cathay Pacific Airways, Dragonair, Hong Kong Express, CR Airways, Air Hong Kong)*

*The tourism industry, travel trade and hotels*

- To work closely with the trade (including the Travel Industry Council of Hong Kong (TIC), Hong Kong Hotels Association, Federation of Hong Kong Hotel Owners, and Hong Kong Association of Registered Tour Coordinators) to remind all businesses in this field to diligently implement all preventive measures at all times. The following efforts will continue—
  - TIC has reminded its members to follow Department of Health avian influenza/pandemic influenza prevention guidelines for inbound visitors and tour guides;
  - TIC has asked (i) tour guides to remind visitors to observe good personal and environmental hygiene; and (ii) coach drivers to ensure cleanliness of coaches; and
  - The Hong Kong Hotels Association has drawn up recommendations on best practices relating to health, safety and hygiene in hotels for its members and has reminded members to implement these best practices at all times. (*Tourism Commission, Department of Health*)

*Food premises and public markets*

- To remind operators of food premises, market stalls and cooked food centres to follow the guidelines on –
  - keeping the premises and equipment clean; and
  - hygienic practices in food handling. (*Food and Environmental Hygiene Department*)
- To put in place a loan scheme to assist restaurants, food factories, siu mei and lo mei shops and factory canteens to improve their food rooms, toilets and equipment so as to raise the overall hygiene standard. (*Food and Environmental Hygiene Department*)
- To rigorously enforce hygiene and food safety requirements such as those relating to proper protection of ready-to-eat food against contamination, pest and vermin infestation in food premises and dirty toilets. Enforcement will be carried out through regular inspections and blitz operations. Improved sanction system leading to suspension and cancellation of licences are put in place to provide sufficient deterrent effect. (*Food and Environmental Hygiene Department*)
- To encourage restaurants to provide serving chopsticks and spoons. (*Food and Environmental Hygiene Department*)
- To require market stall tenants to raise their standard of cleanliness through the enforcement of relevant laws and tenancy conditions and the implementation of monthly market cleaning days. A sanction system that

may lead to termination of tenancy agreements, has been put in place to provide sufficient deterrent. (*Food and Environmental Hygiene Department, Housing Department*)

- To arrange influenza vaccination for poultry workers. (*Department of Health, Food and Environmental Hygiene Department*)

#### *Overall environmental hygiene*

- To take rigorous enforcement action against violations of public cleanliness legislation such as littering and spitting. (*Food and Environmental Hygiene Department*)
- To encourage all cleansing staff of both the Government and its contractors to wear face masks to protect their health. (*Food and Environmental Hygiene Department*)
- To maintain all public toilets in a clean, well-ventilated and hygienic condition. (*Food and Environmental Hygiene Department*)
- To intensify street washing services in blackspots. (*Food and Environmental Hygiene Department*)

#### *Control of wild animals*

- To monitor and examine closely the scientific findings of any health risk posed by live wild animal and game meat. (*Health, Welfare and Food Bureau, Agriculture, Fisheries and Conservation Department, Food and Environmental Hygiene Department*)
- To continue the suspension of importation of birds from affected areas. (*Agriculture, Fisheries and Conservation Department*)
- To continue the suspension of importation of live poultry and / or poultry products from affected areas. (*Food and Environmental Hygiene Department*)

#### *Public education*

- To continue the public education programme on seasonal/avian/pandemic influenza and its prevention (through the media, TV and radio Announcements in the Public Interest (APIs), booklets, posters, e-Bulletin on the Internet, etc.) and refine public education materials in the light of developments in scientific information. (*Health, Welfare and Food Bureau, Department of Health, Hospital Authority, Information Services Department, Home Affairs Department*)
- To mobilise various sectors of the community, including District Councils, District Clean Hong Kong Committees, District Hygiene Squads, Area Committees, schools, non-governmental organisations and residents' organisations, to participate in cleaning, environmental improvement and

prevention of avian/pandemic influenza initiatives. (*Health, Welfare and Food Bureau, Department of Health, Home Affairs Department*)

- To contact through special meetings of the Ethnic Minorities Forum and the Committee on the Promotion of Racial Harmony and broadcast radio APIs in minority radio programme to relay messages of avian / pandemic influenza prevention. (*Home Affairs Bureau*)
- To produce publicity materials in different languages to drive message home. (*Department of Health*)

## **CHAPTER TWO**

### **EARLY DETECTION OF INFLUENZA PANDEMIC**

#### *Surveillance of the local scene*

Influenza A (H5,H7,H9) has been a statutorily notifiable disease since 2004 and all medical practitioners are required to report any suspected or confirmed cases to the Department of Health. Other initiatives are -

- To regularly review, update and disseminate the case definition of avian influenza to facilitate timely and rapid reporting of avian influenza by health care workers, laboratories and relevant service providers. *(Department of Health)*
- To commence web-based reporting of notifiable diseases. *(Department of Health)*
- To continue surveillance under the sentinel surveillance system through the established channels including general outpatient clinics, general practitioners, childcare centres, and elderly homes. Specimens are also collected from patients for isolation and typing of influenza virus. *(Department of Health)*
- To monitor hospital discharges, admission to intensive care units and deaths due to diagnosis of influenza or pneumonia from public and private hospitals on a weekly basis. *(Department of Health)*
- To monitor hospital admissions of elderly home residents with provisional diagnosis of pneumonia or chest infection. *(Department of Health)*
- To develop a new IT infrastructure, the Communicable Disease Information System to expand the surveillance network and generate early warning signals. *(Department of Health)*
- To collaborate with universities on surveillance projects. *(Department of Health, Agriculture, Fisheries and Conservation Department, Food and Environmental Hygiene Department)*

#### *Laboratory support*

- To provide public health laboratory consultation service for private hospitals and avian / novel influenza virus testing to facilitate early detection. *(Department of Health)*
- To conduct more tests in a shorter time. *(Department of Health)*

#### *Risk communication*

- To release timely and accurate information on matters relating to avian/pandemic influenza (e.g. alerts and cases in other countries/areas, development in the understanding of the disease) to the local community to

keep up a high degree of alertness. (*Department of Health*)

*Liaison with the Mainland*

- To keep in close contact with the Ministry of Health and the Guangdong and Macao health authorities on the latest situation on avian influenza
  - Monthly figures on Influenza-like-illness (ILI) are exchanged with Guangdong and Macao health authorities; and
  - Information on unusual patterns of infectious diseases is exchanged with Guangdong and Macao health authorities on an ad hoc basis.(*Health, Welfare and Food Bureau, Department of Health*)

*International exchange*

- To continue to maintain close communication and share data with WHO and health authorities in other countries. (*Department of Health*)
- To continue to maintain close communication with consular corps to obtain first-hand information about developments overseas and to explain Hong Kong's situation to foreign countries. (*Health, Welfare and Food Bureau, Department of Health*)

## CHAPTER THREE

### ENHANCE EMERGENCY PREPAREDNESS AND RESPONSE FOR INFLUENZA PANDEMIC

#### *Contingency planning*

- To develop contingency plans on influenza pandemic at all levels. (*Health, Welfare and Food Bureau, Department of Health*)

#### *Overall Government response*

- To develop an overall Government emergency response mechanism that provides a clear command structure for making strategic decisions, distinct roles and responsibilities for different parties, the line of command to launch various types of operations, and the response times where appropriate. The plan will be fine-tuned according to local and overseas experience and increased knowledge about the disease. (*Health, Welfare and Food Bureau*)
- To ensure readiness by regular testing the contingency plan through drills and exercises. (*Health, Welfare and Food Bureau*)
- To develop contingency plan under each government department. The components of these contingency plans will be documented, verified and tested. (*All government departments involved*)

#### *Hong Kong Government Response Systems*

- The Government's plan includes a three-level response system (Alert Response Level, Serious Response Level and Emergency Response Level). These levels are based on different risk-graded epidemiological scenarios relevant to Hong Kong, and each of them prescribes a given set of public health actions required. They are designed to match with the WHO's guideline for influenza pandemic planning.

#### **Alert Response Level**

- Alert Response Level depicts the scenarios of confirmation of highly pathogenic avian influenza (HPAI) outbreaks in poultry populations **outside** Hong Kong; confirmation of HPAI **in** Hong Kong in imported birds in quarantine, in wild birds, in recreational parks, in pet bird shops or in the natural environment. Upon the advice of the Director of Agriculture, Fisheries and Conservation (DAFC), the Secretary for Health, Welfare and Food (SHWF) will activate this Response Level.
- Another scenario depicts confirmation of human case(s) of avian influenza **outside** Hong Kong. SHWF will activate this Response Level upon the advice of Director of Health (DoH).

### **Serious Response Level**

- Serious Response Level depicts two possible scenarios. The first scenario depicts confirmation of HPAI outbreaks in the environment of or among poultry population in retail markets, wholesale markets or farms **in** Hong Kong due to a strain with known human health impact. Upon the advice of DAFC or Director of Food and Environmental Hygiene (DFEH), SHWF will activate this Response Level.
- The second scenario depicts the confirmation of human case(s) of avian influenza **in** Hong Kong **without** evidence of efficient human-to-human transmission. Upon the advice of DoH, SHWF will activate this Response Level.

### **Emergency Response Level**

- Emergency Response Level depicts two possible scenarios. In the first scenario, there is evidence confirming efficient human-to-human transmission of novel influenza occurring overseas or in Hong Kong. Efficient human-to-human transmission is defined as the ability of the virus to readily spread from person to person in the general population and cause multiple outbreaks of disease leading to epidemics. Clear evidence of human-to-human spread in the general population may be inferred when secondary cases result from contact with an index case, with at least one outbreak lasting over a minimum 2-week period in one country. In confirming efficient human-to-human transmission, one must not overlook other possible explanations, such as acts of terrorism, or an unusual ecological situation with an animal vector spreading virus to humans in different locations.
- The second scenario under Emergency Response Level is influenza pandemic. The declaration of pandemic comes from WHO. It means the influenza strain is beginning to cause several outbreaks in at least one country, and spread to other countries, with consistent disease patterns indicating serious morbidity and mortality is likely in at least one segment of the population.

*(Health, Welfare and Food Bureau, Department of Health)*

## *Command Structure*

### **Alert Response Level**

- At the Alert Response Level, a simplified emergency response command structure will be put in place. The Health, Welfare and Food Bureau (HWFB), Department of Health (DH), Hospital Authority (HA), Agriculture, Fisheries and Conservation Department (AFCD) and the Food and Environmental Hygiene Department (FEHD) are the main parties assessing the nature and level of risks.

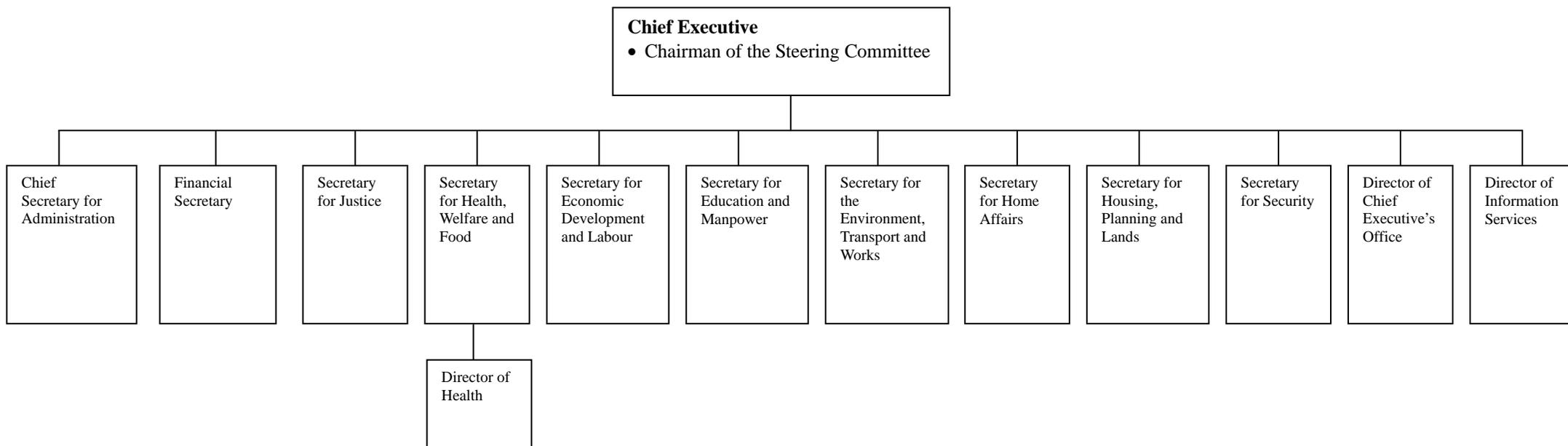
### **Serious Response Level**

- At Serious Response Level, a Steering Committee chaired by SHWF will be set up to steer Government response.
- The Steering Committee will have as its core members the Permanent Secretary for Health, Welfare and Food (PSHWF), Permanent Secretary for Education and Manpower, Permanent Secretary for Economic Development and Labour (Economic Development), Director of Agriculture, Fisheries and Conservation, Director of Food and Environmental Hygiene, Director of Health (DoH), Controller, Centre for Health Protection (Controller, CHP), Director of Home Affairs, Director of Information Services (DIS), Director of Social Welfare, Commissioner for Tourism and Chief Executive of the Hospital Authority. The committee would co-opt other senior officials and non-Government experts as circumstances warrant.

### **Emergency Response Level**

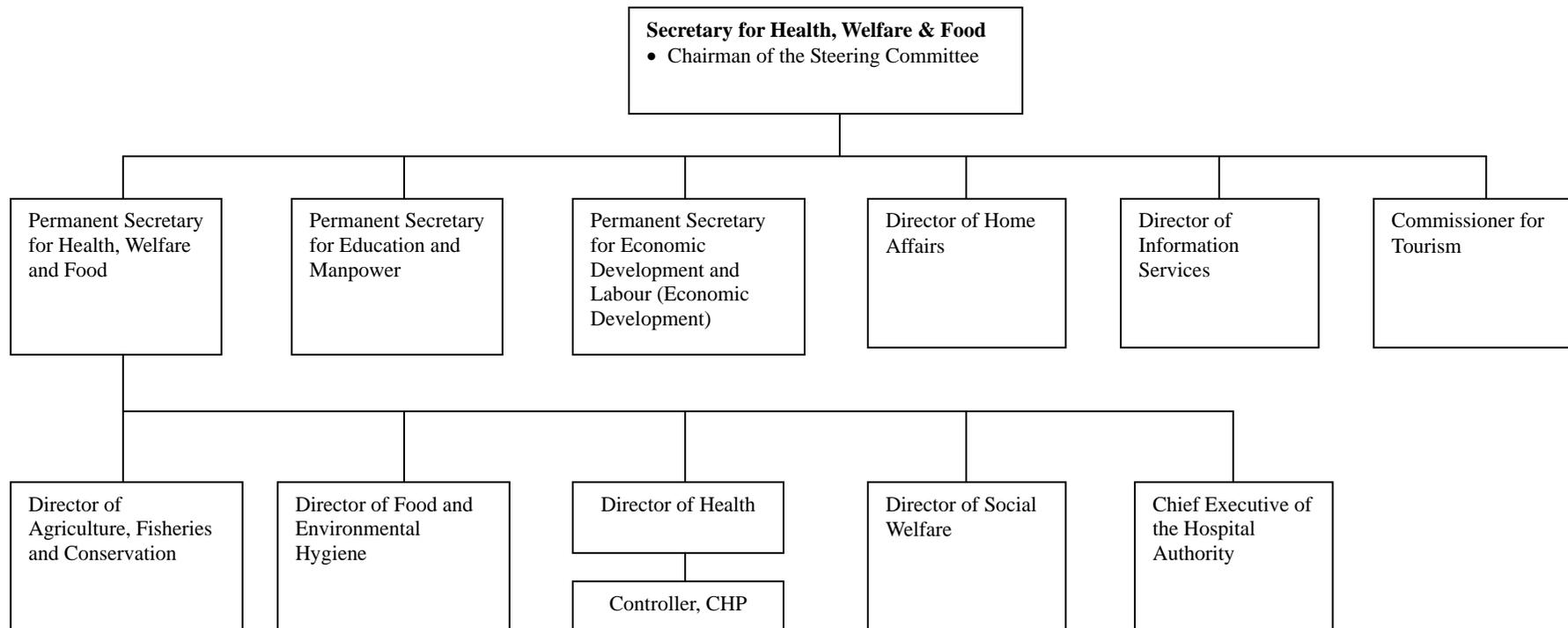
- At Emergency Response Level, the Steering Committee will be chaired by the Chief Executive.
- The Steering Committee will have the Chief Secretary for Administration, the Financial Secretary, the Secretary for Justice, SHWF, the Secretary for Economic Development and Labour, the Secretary for Education and Manpower, the Secretary for the Environment, Transport and Works, the Secretary for Home Affairs, the Secretary for Housing, Planning and Lands, the Secretary for Security, Director of Chief Executive's Office, DoH and DIS as its members; and will co-opt other senior officials and non-Government experts as circumstances warrant.

**Command Structure for Response to Influenza Pandemic during Emergency Response Level**



The committee would co-opt other senior officials and non-Government experts as circumstances warrant.

## Command Structure for Response to Influenza Pandemic during Serious Response Level



The committee would co-opt other senior officials and non-Government experts as circumstances warrant.

### *Functions of Steering Committee*

- At Serious Response Level, the Steering Committee will -
  - Formulate overall disease control strategy and make decisions on the measures to prevent spread of the disease.
  - Monitor closely developments of the situation and evaluate the effectiveness of the measures taken.
  - Co-ordinate the work of major players, e.g. the Department of Health, the Hospital Authority, universities, in combating the disease.
  - Evaluate the preparedness of Government to cope with possible deterioration of the situation and direct measures to be taken to augment any inadequacy.
  - Consider whether urgent legislation is required should there be a more serious outbreak;
  - Give directions on the overall communication strategy to ensure transparency and that the media and the community are promptly informed of the situation and of the Government's outbreak control efforts, to provide the public with clear health advice and action guidelines commensurate with this response level and to mobilise public support and cooperation in combating the disease.
  
- At Emergency Response Level, the Steering Committee will -
  - Formulate an overall disease control strategy and decide on measures to be taken, including decisions that have a wider impact on the community;
  - Monitor closely developments of the situation and evaluate the effectiveness of the measures taken;
  - Direct the mobilisation of resources and urgent legislative amendments where necessary;
  - Assess the socio-economic impact of the crisis on Hong Kong and make decisions on the measures to minimise the impact;
  - Evaluate the preparedness of Government to cope with possible deterioration of the situation and direct measures to be taken to augment any inadequacy; and
  - Direct the overall communication strategy to ensure transparency and that the media and the community are promptly informed of the situation and of the Government's outbreak control efforts, to provide the public with clear health advice and action guidelines commensurate with this response level and to mobilise public support and cooperation in combating the disease.

***Roles of the Health, Welfare and Food Bureau, the Department of Health, the Hospital Authority, the Agriculture, Fisheries and Conservation Department, the Food and Environmental Hygiene Department in the emergency response mechanism are –***

***Health, Welfare and Food Bureau***

- To co-ordinate –
  - the public health sector response actions; and
  - other inter-departmental response actionsas directed by the Steering Committee and to monitor implementation of the actions. Task Groups will be set up for this purpose where necessary;
- To assess and secure the necessary resources and to oversee the adequacy of infrastructural support;
- To re-assess the preparedness of Government Departments in coping with the situation at different stages and to take necessary actions to augment any inadequacy as directed by the Steering Committee;
- To be responsible for urgent legislative amendments;
- To co-ordinate logistical support for the Departments involved in response actions;
- To co-ordinate internal and external communication, including keeping the community informed of developments and providing clear guidance on whether there is a need to step up preventive measures.

***Department of Health***

- To liaise with affected foreign countries/areas and collect early intelligence on novel influenza cases outside Hong Kong;
- To implement public health measures in order to control the spread of disease in the community;
- To maintain an efficient surveillance system;
- To conduct prompt contact tracing as well as medical surveillance and confinement of close contacts;
- To identify and eliminate human sources of infection, where possible;
- To communicate with and disseminate the latest information to hospitals and medical professionals in the private sector and government departments;
- To review and enhance port health measures, where necessary; and
- To ensure rapid and accurate diagnostic laboratory support.

### ***Hospital Authority***

- To maintain efficient surveillance to detect novel influenza cases in the public hospital system;
- To provide appropriate medical care and isolate novel influenza cases;
- To report promptly novel influenza cases and provide information to the Department of Health to enable timely implementation of public health measures;
- To co-ordinate hospital infection control measures;
- To investigate and manage outbreaks in public hospitals; and
- To communicate closely with private sector medical professionals on clinical management and the provision of medical services.

### ***Agriculture, Fisheries and Conservation Department***

- To introduce surveillance to detect novel influenza cases in animal population which have not yet been shown to be significant but have potential risk in disease transmission;
- To report promptly novel influenza animal cases and provide information to the Department of Health to enable timely implementation of public health measures; and
- To promote education on infection control measures.

### ***Food and Environmental Hygiene Department***

- To step up the inspection of food premises, market stalls and cooked food centres and enforcement actions against contravention of food hygiene requirements;
- To enhance enforcement action against violations of public cleanliness legislation such as littering and spitting;
- To intensify street washing services in blackspots and to maintain all public toilets in a clean, well-ventilated and hygienic condition; and
- To stand ready for 24-hour operation of the six crematoria.

The actions to be taken by the Health, Welfare and Food Bureau, the Department of Health, the Food and Environmental Hygiene Department, the Agricultural, Fisheries and Conservation Department, the Hospital Authority and other government departments at the three response levels are outlined in Annexes C to E.

The Government also direct different government departments to prepare their own contingency plans and to conduct regular drills to ensure that all parties concerned are familiar with the plans.

## ***Rapid Intervention***

- To conduct regular briefings and drills so as to facilitate thorough understanding of the emergency response plans, to familiarise the various parties with the work procedures and to identify any room for improvement in the plans. (*Health, Welfare and Food Bureau, Department of Health, Hospital Authority*)
- To strengthen manpower including Auxiliary Medical Service members in contact tracing, epidemiological investigations and infection control, in terms of number and mix of expertise; (*Health, Welfare and Food Bureau, Department of Health, Hospital Authority*)
- To designate public health teams to liaise with hospital infection control teams. (*Department of Health, Hospital Authority*)
- To conduct and implement epidemiological investigation and control measures in institution outbreaks. (*Department of Health*)
- To review and improve where necessary arrangements for imposing–
  - travel restrictions on outgoing travellers suspected/confirmed to have contracted novel influenza, and their household contacts;
  - home isolation of household contacts of novel influenza patients; and
  - temporary accommodation for health care workers who have come in close contact with novel influenza patients.These measures have proved to be effective means of influenza outbreak control. (*Department of Health, Hospital Authority*)
- To review and improve where necessary arrangements for evacuation and isolation in case such measures are necessary to combat an outbreak in a particular location. (*Health, Welfare and Food Bureau, various Government Departments concerned*)
- To standardize data collection for novel influenza outbreak investigation. The information exchange scheme with Hospital Authority and other government departments are set up. (*Department of Health*)
- To stockpile antiviral agents. Strategies for administration of antiviral are developed and prioritization of target groups for antiviral administration is defined in the scenario of influenza pandemic. (*Department of Health*)
- To organize annual influenza vaccination programme around November/December each year to prevent influenza, and to develop vaccination strategies for avian / pandemic influenza epidemics with prioritization of target groups for vaccine administration, in case a vaccine is available for avian influenza (*Department of Health*)
- To secure supplies of novel influenza vaccines once they are available. (*Department of Health*)

### ***Risk communication***

- To organize health education activities and provide health advice through various means to educate the public on personal and environmental hygiene as well as self-management of influenza illness. (*Department of Health*)
- To form an advisory group on risk communication to advise on risk communication strategy and action plan. (*Department of Health*)
- To inform the medical professions through e-mails, fax and post. (*Department of Health*)
- To organize forums on influenza pandemic plans for different target groups including Government departments, health care workers, general public, community leaders, NGOs and social workers, as well as business sectors. (*Department of Health*)

### ***Conclusion***

We will keep the preventive, surveillance and contingency measures outlined in this document under constant review and improve them in the light of increased knowledge and experience on the disease, its mode of transmission and infection control.

**Health, Welfare and Food Bureau**  
**November 2005**

**Main Measures for Keeping School Premises Hygienic and Healthy to Prevent Avian/Pandemic Influenza**

<b>Parents/Students/Staff members</b>	<b>Schools</b>
<ul style="list-style-type: none"> <li>• Parents should take the temperature of their children daily, record the temperature on a record sheet and sign on the record sheet before letting them go to school;</li> <li>• If a student or staff member has a fever or is not feeling well, he/she should seek medical advice and stay at home;.</li> <li>• School staff and students should wear face masks when they have respiratory tract infection symptoms;</li> <li>• Students should wash hands before meals and after sneezing, coughing or cleaning the nose. They should also avoid sharing towels or utensils at meal times;</li> <li>• School bus/nanny van drivers and the assistants should not drive/get on the bus/nanny van if they have a fever.</li> </ul>	<p>Schools should –</p> <ul style="list-style-type: none"> <li>• clean and disinfect school premises and facilities daily with diluted household bleach. Disinfectant mats can be placed at the entrance of school premises;</li> <li>• provide adequate facilities and cleaning material for hand-washing;</li> <li>• maintain good indoor ventilation and wash dust filters of air-conditioners frequently;</li> <li>• notify the Department of Health and the Education and Manpower Bureau if unusual symptoms of infection are noticed or a large number of students are on sick leave.</li> </ul>

**Main Messages of the Health Information Disseminated to Employers and Employees to Prevent Avian/Pandemic Influenza**

<b>Keeping a clean and hygienic work environment</b>	<b>Enhancing employees' personal hygiene</b>	<b>Employers should</b>
<ul style="list-style-type: none"> <li>• maintain good ventilation, e.g. well-maintained air-conditioning system;</li> <li>• disinfect commonly-used equipment when necessary;</li> <li>• keep carpets, doors and windows clean;</li> <li>• ensure toilet facilities are clean, hygienic and properly maintained;</li> <li>• provide liquid soap, disposable towels or a hand-dryer in toilets.</li> </ul>	<ul style="list-style-type: none"> <li>• wash hands before touching the eyes, mouth or nose;</li> <li>• do not share towels or eating utensils;</li> <li>• increase body immunity by eating a balanced diet, taking regular exercise, getting adequate rest and refraining from smoking;</li> <li>• wear a mask if suffering from respiratory tract infection; and</li> <li>• consult a doctor promptly in case of fever and/or cough; and/ or respiratory symptoms.</li> </ul>	<ul style="list-style-type: none"> <li>• ensure the workplace is kept clean and hygienic;</li> <li>• provide adequate and proper face masks, gloves and other personal protective equipment when necessary. Ensure workers are using such personal protective equipment properly when required;</li> <li>• communicate relevant health advice and guidelines to employees;</li> <li>• remind staff of the importance of good personal hygiene;</li> <li>• advise employees to consult a doctor in case of fever and/or respiratory symptoms; and</li> <li>• advise employees not to go to work if they have a fever.</li> <li>• develop business continuity/contingency plans.</li> </ul>

**All organization should have its own contingency plan for keeping its workforce safe and secure as far as practical.**

What is required to maintain core operations/services – Planning considerations:

- a) Identify personnel for designated essential services and plan for them additional infection control measures and back up staffing
- b) prepare staff roster plan to meet crisis arising from staff shortage resulting from high rate of illness, or the need to take care of sick family members or absenteeism due to fear of exposure to infection;
- c) split working groups into smaller groups to work at different sites, use different access points, reduce the number of meetings and more use of video/telephone conferencing facilities;
- d) designate backup offices/workshop for countering possible contamination and facilitating cleaning;
- e) designate deputies of the management as they may become ill;
- f) specify the responsibilities of key individual team management;
- g) test and review contingency / redeployment plans regularly;
- h) establish infection control procedures;
- i) stockpile personal protective equipment (PPE) such as masks, liquid soap, disinfectants, etc; and
- j) to provide training and briefings on PPE to the staff.

**Actions to be taken by the Health, Welfare and Food Bureau (HWFB), Agriculture, Fisheries and Conservation Department (AFCD), Food and Environmental Hygiene Department (FEHD), Department of Health (DH), the Hospital Authority (HA), Home Affairs Department (HAD) and Social Welfare Department (SWD) at Alert Response Level**

**Alert Response Level**

When there is confirmation of HPAI outbreaks in poultry populations **outside** Hong Kong, or when there is confirmation of HPAI in imported birds in quarantine; in wild birds; in recreational parks, in pet bird shops or in the natural environment **in** Hong Kong, AFCD and FEHD will carry out the following activities:

- (1) When there is confirmation of HPAI outbreaks in poultry populations **outside** Hong Kong and outside the Mainland:

***AFCD***

- continue with all normal activities related to surveillance; farm and wholesale market bio-security measures; communication with farmers, poultry wholesalers, and poultry transporters.
- strategic planning in medication, personal protective equipment (PPE), training and response.

In addition, AFCD will undertake further actions related to import control:

- monitoring of outbreaks of HPAI overseas.
- liaison with animal health authority of the affected countries, overseas authorities and international animal health authorities, e.g. World Organisation for Animal Health (OIE), to ascertain the latest surveillance and epidemiological information.
- suspension of imports of live birds from countries with outbreaks of HPAI in the past 6 months.
- increased vigilance and surveillance for imported birds depending on the geographical area of the outbreak.

***FEHD***

- 
- on-going surveillance and step-up monitoring of poultry in retail outlets.
- stringent enforcement of specific requirements and conditions imposed

on poultry retailers.

- issue reminder to all poultry retailers to immediately report the presence of sick or dead poultry for collection and laboratory examination.
- ensure adequacy of provision of PPE for poultry culling operations.
- arrange for influenza vaccination for poultry workers and staff who might be potentially involved in culling operations.
- conduct culling drills for FEHD staff.
- suspend import of live poultry and/or poultry products from affected countries/area as appropriate.

➤ (2) When there is confirmation of HPAI outbreaks in poultry populations in the Mainland:

#### ***AFCD***

- increase surveillance and monitoring of local chicken farms.
- strict enforcement of farm biosecurity measures.
- issue reminder to all livestock farmers and retailers to immediately report the presence of sick and dead birds for collection and laboratory examination.
- increase monitoring of chicken numbers to ensure all birds are accounted for.
- continue avian influenza vaccination for local chickens.
- re-issue guidelines to farmers to remind them of the importance of good biosecurity and penalties for non-compliance.
- inspect and review stock of PPE for poultry culling operations.
- arrange for influenza vaccination for staff who might be potentially involved in culling operations.
- conduct appropriate culling drills and training exercises for AFCD staff.
- suspend import of live poultry (including live poultry) from the Mainland/affected area as appropriate.

#### ***FEHD***

- increase surveillance and monitoring of poultry retail outlets.
- stringent enforcement of specific requirements and conditions imposed on poultry retailers.
- issue reminder to all poultry retailers to immediately report the presence of sick or dead poultry for collection and laboratory examination.

- ensure adequacy of provision of PPE for poultry culling operations.
- arrange for influenza vaccination for poultry workers and staff who might be potentially involved in culling operations.
- conduct culling drills for FEHD staff.
- suspend import of live poultry and / or poultry products from the Mainland/affected area as appropriate.

➤ (3) When there is confirmation of HPAI in imported bird in quarantine in Hong Kong

***AFCD***

- carry out depopulation of all birds in the quarantine centre.

➤ (4) When there is confirmation of HPAI in the natural environment in Hong Kong

***AFCD***

- increase surveillance and monitoring of local chicken farms.
- strict enforcement of farm biosecurity measures.
- issue reminder to all livestock farmers and retailers to immediately report the presence of sick and dead birds for collection and laboratory examination.
- increase monitoring of chicken numbers to ensure all birds are accounted for.
- continuation of avian influenza vaccination for local chickens.
- re-issue guidelines to farmers to remind them of the importance of good biosecurity and penalties for non-compliance.
- inspect and review stock of PPE for poultry culling operations.
- arrange for influenza vaccination for staff who might be potentially involved in culling operations.

***FEHD***

- on-going surveillance and step-up monitoring of poultry retail outlets.
- stringent enforcement of specific requirements and conditions imposed on poultry retailers.
- issue reminder to all poultry retailers to immediately report the presence of sick or dead poultry for collection and laboratory examination.
- ensure adequacy of provision of PPE for poultry culling operations.

- arrange for influenza vaccination for poultry workers and staff who might be potentially involved in culling operations.
- conduct culling drills for FEHD staff.

➤ (5) When there is confirmation of HPAI in wild birds in Hong Kong

In addition to the activities carried out for local farms as in the case of confirmed HPAI in the natural environment (scenario 4 above):

*AFCD* will undertake the following measures:

- increase monitoring and surveillance of wild birds.
- consider closure of wild bird parks.
- disseminate media message for public care to avoid wild bird faeces.

➤ (6) When there is confirmation of HPAI in recreational parks in Hong Kong

In addition to the activities carried out for local farms as in the case of confirmed HPAI in the natural environment (scenario 4 above):

*AFCD* will undertake the following measures:

- increase monitoring and surveillance of birds.
- consider closure and quarantine of recreational park.
- media message for public care to avoid wild bird faeces.

➤ (7) When there is confirmation of HPAI in pet bird shops in Hong Kong

In addition to the activities carried out for local farms and retail outlets as in the case of confirmed HPAI in the natural environment (scenario 4 above):

*AFCD* will undertake the following measures:

- increase monitoring and surveillance of pet bird shops.
- quarantine and closure of affected shop as well as any adjacent pet bird shops.
- depopulation of affected pet bird shop.
- trace back of pet bird sources and contacts.
- liaise with veterinary professionals and other animal care providers (including poultry farmers, wholesalers and transporters), and liaise with NGOs involved in wild animal work, e.g. World Wide Fund for

Nature (WWF), Ocean Park, etc.

- inform local consulates, overseas authorities and international animal health authorities (e.g. the OIE) about the local situation.

**DH** will undertake the following measures:

- conduct contact tracing and medical surveillance for persons who come into contact with sick or dead bird(s) confirmed to be HPAI positive.
- depending on the risk assessment, antiviral chemoprophylaxis and home confinement may be considered for persons who have direct contact with the sick or dead bird(s).

**HAD** will:

- gauge community concerns with regard to the local situation.

➤ When there is confirmed human case(s) of avian influenza occurring outside Hong Kong:

**DH**

Surveillance

- enhance surveillance programmes.
- liaise with WHO and international health authorities to monitor the global spread and impact of the infection.
- keep in view any new surveillance definitions issued by WHO and modify local surveillance activities accordingly.

Laboratory Support

- forward all specimens from cases with clinical/epidemiological suspicion of novel influenza to the PHLSB for identification and characterization.

Antiviral

- review stockpile of antiviral.

Vaccination

- liaise with WHO on latest development on avian influenza vaccine, with a view to examine and update vaccination strategies and prioritization for target groups, should the vaccine become available.

#### Infection Control measures

- issue guidelines and health advice to residential institutions and the general public.
- review and promulgate enhanced infection control measures where necessary.
- update health care workers' knowledge on infection control measures for avian influenza.
- inspect and review stock of PPE.

#### Port Health measures

- liaise with the tourism industry and disseminate health information to outbound travelers and institute onflight health announcement to inbound travelers from affected areas.
- temperature screening at the Hong Kong International Airport
- inform Airport Authority of the arrangements.

#### Communication

- liaise with medical professionals and other health care providers.
- disseminate information and step up health advice to public through various means including press releases, pamphlets, APIs, website, partnership with the media and incorporate health messages in ongoing health education activities.

### ***HA***

#### Surveillance

- enhance surveillance programmes.

#### Laboratory Support

- review laboratory diagnosis strategy and enhance capacity in laboratory diagnostic services, with stockpile of reagents for rapid antigen testing.

#### Infection Control measures

- review and promulgate enhanced infection control measures where necessary.
- inspect and review stock of PPE.

#### Medical Services

- stockpile appropriate medications for public hospitals and clinics.
- formulate clinical management guideline on influenza-like illness and community acquired pneumonia.
- monitor daily bed occupancy, and review bed mobilization and

compliance with admission guidelines. Assess and plan for scaling down non-emergency activities.

#### Communication

- liaise with medical professionals and other health care providers.
- promulgate health advice to clients.

#### ***HAD***

##### Communication

- gauge community concerns with regard to the local situation.
- disseminate information and step up health advice to the public through various means including press releases, pamphlets, APIs, website, and incorporate health messages in ongoing health education activities.

#### ***SWD***

##### Infection Control measures

- issue guidelines and health advice to residential institutions and other welfare service units.
- inspect and review stock of PPE.

## **Annex D**

### **Actions to be taken by the Health, Welfare and Food Bureau (HWFB), Agriculture, Fisheries and Conservation Department (AFCD), Food and Environmental Hygiene Department (FEHD), Department of Health (DH), the Hospital Authority (HA), Home Affairs Department (HAD), Hong Kong Police Force (HKPF) and Social Welfare Department (SWD) at Serious Response Level**

#### **Serious Response Level**

➤ (1) Confirmation of HPAI outbreaks in the environment of or among poultry population in Hong Kong:

When there is confirmation of HPAI outbreaks in the environment of or among poultry population in retail markets, wholesale markets or farms in Hong Kong due to a strain with known human health impact, in addition to the measures related to surveillance of farms and retail outlets as in the case of confirmed HPAI in the natural environment (i.e. scenario 4 under the Alert Response Level above), the following activities will be carried out:

#### ***HWFB***

Major culling operation (Operation Season)

- Upon activation of the operational order for the culling of live poultry in Hong Kong (Operation Season) by PSHWF, AFCD will implement the culling of live poultry in farms, wholesale markets and FEHD at retail outlets. DH, HA and Environmental Protection Department (EPD) will also assist in the implementation of Operation Season.

#### ***AFCD***

- increase monitoring and surveillance of pet bird shops;
- increase monitoring and surveillance of birds in recreational parks in association with Leisure and Cultural Services Department (LCSD) and country parks and wetland parks.
- quarantine and monitor pets in contact with infected poultry cases.
- monitor and test local pig farms.
- suspend export of non-food birds from Hong Kong.

#### **Communication**

- liaise with veterinary professionals and other animal care providers (including poultry farmers, poultry traders and poultry wholesalers), and liaise with NGOs involved in wild animal work, e.g. WWF, Ocean Park, etc.

- inform local consulates, overseas authorities and international animal health authorities (e.g. the OIE); and also brief legislators, community, the media and relevant businesses about the local situation.

## ***DH***

### Surveillance

- monitor hospital admission due to flu-like illnesses for poultry workers.
- conduct surveillance for poultry workers of affected farms.
- conduct sero-prevalence study on poultry workers.
- monitor health status of cullers.

### Laboratory support

- conduct laboratory testing for rapid detection of novel influenza virus, virus isolation and characterization on specimens from human cases with epidemiological links to infected poultry and with clinical features consistent with novel influenza infection.

### Antiviral

- review stockpile of antiviral agents and other medications and make initial preparations for mobilizing stockpile.

### Communication

- set up telephone hotlines to answer enquiries from poultry workers and cullers.
- inform WHO, other health authorities outside Hong Kong and medical professionals and health care workers of the updated situation of local infection among poultry.

## ***FEHD***

- take part in poultry culling operation upon the activation of Operation Season.
- suspend the import of all live poultry

➤ (2) Confirmed human cases in Hong Kong (without evidence of efficient human-to-human transmission)

When there is confirmed human case(s) of avian influenza in Hong Kong without evidence of efficient human-to-human transmission, in addition to the activities conducted at Alert Level, the following activities would be carried out:

## ***HWFB***

### Culling Operation

- on detection of a local human case of H5N1 infection which cannot be confirmed to be an imported case, PSHWF may activate the operational order (Operation Season). AFCD, FEHD, DH, HA and EPD will assist in the implementation of Operation Season. Depending on circumstances, pet birds may also be included in the culling operation.

## ***AFCD***

### Surveillance

- enhance surveillance of birds in recreational parks in association with LCSD and wetland parks, pet bird shops and poultry.
- quarantine and monitor pets in contact with infected human cases.

## ***DH***

### Surveillance

- enhance surveillance activities, including zero reporting from public and private hospitals on cases due to influenza A (H5) or novel influenza virus.
- review surveillance criteria.
- activate “e-flu” and other information systems to monitor cases and contacts in real-time.

### Investigation and control measures

- conduct epidemiological investigation to determine whether the case is acquired locally or outside Hong Kong; identify the source of infection and ascertain the mode of transmission.
- conduct contact tracing, medical surveillance and enforce quarantine measures on contacts of cases as appropriate to the situation.
- liaise with Auxiliary Medical Services (AMS) for deployment of trained members to assist in contact tracing.

### Laboratory support

- conduct rapid novel influenza virus testing on ILI and pneumonia cases.
- transfer of rapid test technology to the Hospital Authority.
- increase laboratory capacity for rapid testing to assist diagnosis.
- confirmation of all rapid test positive test cases by PHLSB.
- perform novel influenza virus specific serology on close contacts.
- perform antiviral resistance testing on novel influenza isolates.
- coordinate with universities to perform gene sequencing on all novel influenza isolates.

- send isolates to WHO Collaborating Centres for further analysis and comparison and to discuss on diagnostic and vaccine development.

#### Infection control measures

- review stock of personal protective equipment (PPE).
- enhance and/or review infection control measures according to the latest knowledge on the transmission route of avian influenza.

#### Antiviral

- review stockpile of antiviral agents and other medications and make initial preparations for mobilizing stockpile.

#### Port Health Measures

- review and modify port health measures and enact legislation, where necessary, in the light of WHO latest guidelines.

#### Vaccination

- liaise with WHO on the latest development and supply of the new vaccine.

#### Communication

- communicate with and disseminate information to hospitals, medical professionals in the private sector and other health care workers.
- strengthen public communication including setting up telephone hotlines, conducting regular press briefings, organising briefings for legislators and community leaders, taking part in media partnership programmes, etc.
- educate the public on use of personal protective equipment and practices.
- monitor community response and concerns.
- brief Consulates and relevant businesses about the local situation.
- liaise with AMS for deployment of trained members to man the hotline.
- liaise with WHO and other health authorities on the local situation.
- liaise with WHO on international practice regarding travel advice.

#### ***FEHD***

- take part in poultry culling operation upon the activation of Operation Season;
- enhance surveillance of poultry.

## ***HA***

### Surveillance

- review surveillance criteria.
- activate “e-flu” and other information systems to monitor cases and contacts in real-time.

### Laboratory support

- increase laboratory capacity for rapid testing to assist diagnosis.

### Infection control measures

- review stock of personal protective equipment (PPE).
- review visiting policy in HA hospitals.
- enhance and/or review infection control measures according to the latest knowledge on the transmission route of avian influenza.

### Essential medical services

- set up designated clinics and protocol for triaging patients with influenza-like illness at primary care level.
- isolate and treat confirmed cases in designated hospitals.
- update / revise clinical guidelines on management and related admission criteria for various specialties. Further reduce non-urgent and non-emergency services where necessary.
- start discussion with private hospitals on patients transfer/ diversion and sharing of clinical workload.

### Communication

- educate the public on use of personal protective equipment and practices.

## ***HAD***

### Investigation and control measures

- assist in contact tracing, medical surveillance and enforce quarantine measures on contacts of cases as appropriate to the situation.

### Communication

- strengthen public communication including set up telephone hotlines, conduct regular press briefings, briefings to legislators and community leader, etc.
- monitor community response and concerns.

### ***HKPF***

#### Investigation and control measures

- maintain public order of the affected community.
- facilitate the contact tracing, quarantine / home confinement operations.

### ***SWD***

#### Supporting measures

- provide relief measures, counseling services and temporary residential placement for persons with special needs.

**Actions to be taken by the Health, Welfare and Food Bureau (HWFB), Security Bureau (SB), Agriculture, Fisheries and Conservation Department (AFCD), Food and Environmental Hygiene Department (FEHD), Department of Health (DH), the Hospital Authority (HA), Home Affairs Department (HAD), Hong Kong Police Force (HKPF) and Immigration Department (ImmD) at Emergency Response Level**

**Emergency Response Level**

When there is evidence of efficient human-to-human transmission of novel influenza occurring overseas OR in Hong Kong, in addition to the measures taken at Serious Response Level, the following activities would be conducted:

***SB***

- oversee the internal security situation.

***AFCD***

- handle animals abandoned by households who are concerned about animal involvement and conduct surveillance and monitoring on animal populations which have not yet been shown to be significant in disease transmission. Should novel animal populations become implicated in disease transmission, these will have to be dealt with on a case by case basis.

***DH***

**Surveillance**

- monitor daily the number of novel influenza isolates from PHLSB.
- monitor daily the number of patients seen at Accident and Emergency Departments of hospitals and hospital admissions due to influenza-like-illness.
- liaise with AMS for deployment of trained members to assist in contact tracing.

**Laboratory support**

- perform vaccine efficacy study if vaccine is available.

**Port Health Measures**

- review and modify port health measures and enact legislation, where necessary, in the light of WHO latest guidelines.
- require inbound travelers from affected areas to declare health status and undergo temperature check, and require transit travelers to have

temperature screened.

- require outbound travelers to declare health status and undergo temperature check.

#### Antiviral

- mobilize antiviral stockpile to provide treatment to patients in defined target groups with presumptive diagnosis of novel influenza and administer chemoprophylaxis for defined target groups.

#### Vaccination

- liaise with WHO regarding the latest development in vaccine production and supply.
- set up vaccination posts and administer vaccine according to defined priorities when new influenza vaccine is available;
- monitor vaccination reactions and adverse effect.

#### Essential medical services

- mobilize more designated clinics and/or community centres in collaboration with the private sector and voluntary agencies where necessary.
- review and update protocols on research projects in collaboration with academia, private sectors and international organizations.

#### Public Health Measures

- assess the need for closure of schools, public places, stopping public gatherings and curtailing non-essential activities and services.
- enact legislation to enable enforcement of control measures.
- prepared to set up temporary overflow mortuary to cater for the expected high mortality rate.

#### Communication

- provide daily updates of the course of the epidemic and governmental response plans and actions.
- step up public education on use of personal protective equipment and practices.
- educate the public on the use of chemoprophylaxis and vaccination programmes.
- educate the public regarding self-management of influenza like illness and when and how to seek treatment.
- liaise with AMS for deployment of trained members to man the Hotline.

## ***FEHD***

### Public Health Measures

- prepare for 24-hour operation of the six crematoria.

## ***HA***

### Surveillance

- monitor daily number of patients seen at Accident and Emergency Departments of hospitals and hospital admissions due to influenza-like-illness.

### Antiviral

- mobilize antiviral stockpile to provide treatment to patients in defined target groups with presumptive diagnosis of novel influenza and administer chemoprophylaxis for defined target groups.

### Essential medical services

- designate additional hospitals for isolation and management of confirmed and suspected cases.
- monitor closely the territory-wide utilization of public hospital services and further re-organize or reduce non-urgent services to meet the surge in workload due to the influenza epidemic.
- mobilize convalescent hospitals/wards and private sector to increase capacity to treat acute cases.
- review and promulgate updated guidelines and protocols on diagnosis, treatment and admission criteria.
- mobilize more designated clinics and/or community centres in collaboration with the private sector and voluntary agencies where necessary.
- review and update protocols on research projects in collaboration with academia, private sectors and international organizations.

## ***HAD***

### Essential medical services

- mobilize more designated clinics and/or community centres in collaboration with the private sector and voluntary agencies where necessary.

## ***HKPF***

### Investigation and control measures

- maintain public order of the affected community.
- facilitate the contact tracing, quarantine / home confinement operations.

## ***ImmD***

### Other measures

- enhance the death registration capacity.

When there is efficient human-to-human transmission occurring locally resulting in high attack rate among the population, actions taken at Emergency Response Level would be reviewed and the strategy revised as appropriate to ensure the most efficient use of health resources. As the situation evolves to epidemic with multiple communities in the population being affected, the following scenarios might occur: heavy burden of excessive morbidity and mortality overwhelming the health care system; shortage of medical supplies (e.g. antiviral); disruption of territory-wide infrastructures (including transportation, utilities, commerce and public safety). The purpose of emergency response at this stage will be to slow down progression of the epidemic, minimize loss of human lives, in order to buy time for the production of an effective vaccine against the novel influenza pandemic strain. Specifically, surveillance activities would be limited to essential elements, case investigation and quarantine measures would be scaled down or abolished, and avian influenza testing would not need to be performed on all patients with influenza symptoms. Antigenic analysis would be carried out on all isolates while gene sequencing would be performed for selected isolates.