



Strategy and Management of Human Swine Influenza A H1N1

Department of Health

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衛生署
Department of Health

Outline

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- ❖ The Disease
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Background

- ❖ It was first reported to the World Health Organisation (WHO) on 24 April 2009 that a novel human swine influenza (Influenza A/H1N1) virus had infected humans in United States and Mexico. The WHO considered this outbreak as a public health emergency of international concern on 25 April 2009
- ❖ More cases were subsequently reported in these two countries as well as some other countries
- ❖ The human swine influenza (Influenza A/H1N1) viruses characterized in this outbreak have not been previously detected in humans

Background

- ❖ On 30 April 2009 (Hong Kong time), WHO raised the alert level for influenza pandemic to Phase 5, signifying that a global pandemic is imminent
- ❖ On 1 May 2009, HK had the first confirmed case.
- ❖ On 11 June 2009, WHO raised the alert level for influenza pandemic to Phase 6, signifying the world at the start of the 2009 influenza pandemic

Background

- ❖ As of 24 January 2010, according to WHO, worldwide more than 209 countries and overseas territories or communities have reported laboratory confirmed cases of pandemic influenza H1N1 2009, including at least 14711 deaths
- ❖ WHO stated that the reported number of fatal cases is an under representation of the actual numbers as many deaths are never tested or recognized as influenza related
- ❖ Latest situation available at <http://www.chp.gov.hk>

The Disease

❖ Agent

☞ The Human Swine Influenza A/H1N1 infection is caused by a new virus containing genetic components of avian flu, human flu and swine flu

The Disease

❖ Clinical features

- ❧ Similar to seasonal flu i.e. fever, cough, sore throat and runny nose, muscle pain and headache
- ❧ Some may have nausea, vomiting and diarrhea

❖ Mode of transmission:

- ❧ Human-to-human
- ❧ By droplet, e.g. through coughing or sneezing of infected people
- ❧ By touching objects soiled with the virus and then touching mouth, nose or eyes

Risk Assessment

- ❖ Based on the situation in Hong Kong
 - ❧ The virus has been widely circulating in Hong Kong and has become the dominant strain of influenza virus
 - ❧ Relatively mild disease in the majority of cases
 - ❧ 242 severe cases reported as of 27 January 2010, of these 64 were fatal.
 - ❧ No evidence for large-scale environmental transmission
 - ❧ Cumulatively, five isolated cases of Tamiflu-resistant HSI had been reported in Hong Kong, of which, four were local cases.

Risk Assessment

- ❖ Based on the situation in Hong Kong
 - ∞ A few pig samples were tested positive for HSI
 - ❖ No gene reassortment has occurred
 - ❖ Experts opined possible transmission from humans to pigs in this case
 - ❖ Findings echo similar reports in other countries
 - ❖ It is safe for the public to eat pork and pork products that are handled properly and cooked thoroughly

Risk Assessment

- ❖ Based on information by WHO
 - ∞ The pandemic has spread internationally with unprecedented speed
 - ❖ In past pandemics, influenza viruses have needed more than six months to spread as widely as the new H1N1 virus has spread in less than six weeks.

Risk Assessment

- ❖ Global Situation (week ending 15 Jan, 2010):
 - ❧ In the US, influenza activity slightly decreased
 - ❧ In Canada, influenza indicators were continuing to be either at baseline or under the expected level for this time of the year
 - ❧ Pandemic influenza (H1N1)2009 is returning to low levels in Europe
 - ❧ Influenza activity continued to decline in Japan
 - ❧ According to the WHO, in the temperate region of the southern hemisphere, sporadic cases of pandemic influenza have been reported
 - ❧ In Australia, influenza activity remained low

Risk Assessment

- ❖ Based on information by WHO
 - ☞ Novel H1N1 is now the dominant virus strain globally
 - ☞ No signs that the virus has mutated to a more virulent or lethal form
 - ☞ Majority of patients experience mild symptoms and make a full recovery within a week, often in the absence of any form of medical treatment

Risk Assessment

- ❖ Based on information by WHO
 - ❧ Risk factors for severe disease
 - ❖ Infants and young children, in particular <2 years
 - ❖ Pregnant women
 - ❖ Persons of any age with chronic pulmonary disease (e.g. asthma)
 - ❖ Persons of any age with chronic cardiac disease
 - ❖ Persons with metabolic disorders (e.g. diabetes)
 - ❖ Persons with chronic renal disease, chronic hepatic disease, certain neurological conditions, hemoglobinopathies, or immunosuppressive conditions, such as HIV infection and immunosuppressive medication or malignancy
 - ❖ Children receiving chronic aspirin therapy
 - ❖ Persons aged 65 years and older

Risk Assessment

- ❖ Based on information by WHO
 - ❧ A higher risk of severe complications has also been reported:
 - ❖ In persons who are obese (in particular, morbidly obese)
 - ❖ Among disadvantaged and indigenous populations

Risk Assessment

❖ WHO cautions

- ❧ As many countries have stopped counting individual cases, particularly of milder illness, the case count is significantly lower than the actual number of cases that have occurred
- ❧ The inherent virulence of the virus can change over time as the pandemic goes through subsequent waves of national and international spread
- ❧ Prepare for the second wave as large numbers of people in all countries remain susceptible to infection
- ❧ Larger numbers of severely ill patients requiring intensive care are likely to be the most urgent burden on health services

Public Health Strategies

- ❖ Community spread of human swine influenza is now evident in Hong Kong and the virus has been widely circulating locally
- ❖ Moved from the containment phase into the mitigation phase of our strategy
- ❖ Aim at relieving disease burden through hygiene measures, social distancing, medical resource mobilization, self-care and other measures.
- ❖ Continue to refine the strategy and measures based on latest knowledge and risk assessment to make it sustainable

Public Health Strategies

- ❖ Implementation of mitigation measures depends on
 - ❧ Epidemic progression
 - ❧ Disease severity (e.g. proportion of those infected with complications, requiring hospitalization and case fatality)
 - ❧ Burden to medical services, resource capacity
 - ❧ Effectiveness of containment
 - ❧ Broader considerations in the community

Public Health Strategies

- ❖ Mitigation measures employed at present
 - ⌘ Activation of 8 Designated Flu Clinics (DFCs) for managing patients with fever and influenza-like illnesses (ILI)
 - ⌘ Revised clinical management guidelines for patients in relation to HSI based on clinical assessment and to target patients with high risk factors

Test for HSI

Not a routine for ILI patients in general but with the objective of targeting those with a more severe condition and receiving in-patient care.

Test for HSI for specific groups: pregnant women, children \leq 12 months old, healthcare workers including staff from residential homes, patients living in institutions without outbreak and influenza patients with persistent fever or whose condition deteriorates 48 hrs after treatment.

Public Health Strategies

❖ Mitigation measures employed at present

Hospitalization	Hospital admission for clinically more serious, pregnancy, children <2y, presence of medical risk factors (triaged in designated flu clinics). <i>Home care for others</i>
Treatment	Antivirals for (1) clinically more serious, (2) medical risk factors, (3) pregnancy (following specialists' assessment), (4) community acquired pneumonia (if preceded by ILI OR known contact of confirmed HSI OR failure to respond after 48 hrs of conventional medical treatment). Patients who have risk factors and chronic illnesses, and residents of residential institutions presenting with ILI will be offered antiviral treatment on presentation with no need for laboratory testing. <i>Symptomatic treatment for other patients with mild condition.</i>



Public Health Strategies

❖ Mitigation measures employed at present

❧ Focus epidemiological investigations on severely ill patients as well as outbreaks involving schools and institutions

❧ Port health measures

❖ Temperature screening and broadcast of health messages at the control points

❖ Travellers with mild symptoms and intercepted at all boundary control points would be provided with face mask and guidance notes for seeking medical consultation

Public Health Strategies

- ❖ Mitigation measures employed at present
 - ⌘ Provide relevant information and guidelines to different sectors and stakeholders in the community, and mobilize them to initiate response plans such as:
 - ❖ Guideline on school functions and extra-curricular activities
 - ❖ Guidelines for organizers & participants of public functions
 - ❖ Handbook on Prevention of Human Swine Influenza in Schools
 - ⌘ Active promotion and adoption of basic measures on personal and environmental hygiene
 - ⌘ To further step up the cleansing and environmental hygiene efforts of the community

Public Health Strategies

- ❖ Arrangements at the school level
 - ❧ All kindergartens, kindergarten-cum-child care centres, special schools, primary and secondary schools started the new school year (2009/10) as scheduled
 - ❧ Schools to stay alert and pay close attention to announcements by the DH regarding HSI and take preventive measures in accordance with the relevant guidelines after class commencement
 - ❧ Indicators for class suspension due to influenza:
 - ❖ Students' sick leave rate $\geq 10\%$
 - ❖ Rate of hospitalization of students surpassing 1%
 - ❖ Admission of ≥ 2 students to the intensive care unit
 - ❖ Death of an otherwise healthy student in the school
 - ❧ General period for class suspension is seven days but the period may be extended taking other factors into account

Public Health Strategies

- ❖ Latest laboratory surveillance data reveals that HSI is the predominant influenza virus strain circulating in Hong Kong, representing >80% of all circulating influenza viruses
- ❖ WHO recommends that for countries already experiencing community-wide transmission, the focus of surveillance activities may shift to reporting against the established indicators for the monitoring of seasonal influenza activity
- ❖ New surveillance indicators for HSI:
 - ❧ % tested positive for HSI among patients in Designated Flu Clinics (DFC)
 - ❧ Number of DFC attendances for influenza-like-illness (ILI)
 - ❧ Consultation rates of ILI at sentinel private doctors' clinics
- ❖ The new weekly reporting of surveillance indicators has replaced the previous daily reporting of laboratory confirmed cases
- ❖ CHP and Hospital Authority will continue to report daily information of ILI outbreaks in schools and fatal / severe cases

Vaccination Strategy

- ❖ The Scientific Committees of CHP have recommended the following target groups to receive HSI vaccination:
 - (a) healthcare workers
 - (b) persons with chronic illnesses and pregnant women
 - (c) children between the age of 6 months and less than 6 years
 - (d) elderly persons aged 65 years or above
 - (e) pig farmers and pig-slaughtering industry personnel

Health Advice for the Public

- ❖ Step up hygienic practices like washing hands frequently, attending to sneeze and cough manners, keeping the environment clean and maintaining good ventilation
- ❖ Avoid touching the mouth, nose and eyes
- ❖ Avoid visiting crowded or poorly-ventilated places. If you must do so, step up personal hygiene and put on a mask
- ❖ If influenza-like symptoms develop, put on a mask and seek medical attention as soon as possible. Rest at home, avoid contact with others and do not go to work or school when sick
- ❖ Pay attention to advice and guidelines issued by the Government with respect to provision of medical services, travelling, border health control, suspension of schools and public events



Advice for Healthcare Workers

- ❖ Healthcare workers should take proper infection control measures to protect themselves and patients
- ❖ Public sector workers have ample supplies of protection gear and training in infection control. Guidelines on infection control in clinics are available on CHP's website
- ❖ The private medical sector and elderly care sector are advised to follow these guidelines closely to minimise their risk

Advice for High Risk Groups

❖ Young children

- ❧ Avoid contact with other children who are unwell or when he/she is unwell himself/herself
- ❧ Avoid sharing toys, towels, eating utensils etc. with other children
- ❧ Sick children should stay home
- ❧ Parents should be watchful about fever and flu-like symptoms in young children, bring them to see a doctor early if the child is sick
- ❧ Do not take aspirin unless prescribed by a doctor
- ❧ Take extra precaution with children who may have an underlying medical condition or are maintained on long-term medications

Advice for High Risk Groups

❖ Persons with chronic diseases

- ❧ Maintain good personal hygiene, especially handwashing
- ❧ Avoid contact with persons with flu-like symptoms
- ❧ Avoid overcrowded places. Maintain good ventilation of indoor environments
- ❧ Be mindful of fever and flu-like symptoms, seek medical attention early
- ❧ Inform doctor of your medical condition when you consult him for flu-like illness
- ❧ Do not smoke



Advice for High Risk Groups

❖ Elderly

- ❧ Same as for persons with chronic diseases
- ❧ The elderly should be watched closely because they may not present with typical symptoms of influenza
- ❧ Elderly homes should remain highly vigilant of infection control measures and report influenza outbreaks to the Centre for Health Protection promptly



Advice for Public Transport and Utility Companies

❖ Public transport companies

- ❧ Step up vehicle cleaning and disinfection
- ❧ Advise staff and passengers to maintain good personal hygiene, and wear masks if not feeling well

❖ Public utilities companies

- ❧ Step up cleaning and disinfection
- ❧ Advise staff to maintain good personal hygiene
- ❧ Initiate pandemic preparedness plans to ensure no disruption to essential services

Advice for Employers

- ❖ Acquire an understanding of human swine influenza, and take appropriate steps to ensure maximum protection of staff and business
 - ❧ Ensure a clean and hygienic work environment
 - ❧ Support staff in adopting good personal and environmental hygiene
 - ❧ Relieve staff members from work if they are sick, and offer surgical masks to staff with flu symptoms while they arrange to see a doctor
 - ❧ Keep a clear staff sick leave record
 - ❧ Take heed of travel advice and timely information about the local and global situation and control measures for staff or business partners
 - ❧ Develop business continuity plan for activation anytime

Advice for Employers

❖ Business continuity plan

- ☞ To maintain core operations/services
- ☞ Identification of personnel for designated essential services and specifications of responsibilities
- ☞ Preparation of a staff roster plan, split of working groups into smaller groups, designation of deputies of the management and backup staff
- ☞ Preparation of fallback office
- ☞ Conduct exercises/drills
- ☞ Stockpiling of personal protective equipment
- ☞ Engagement of medical practitioners for advice on antiviral stockpiling and administration

Advice for Employees

- ❖ Follow advice for public and adopt good personal and environmental hygiene practice.
- ❖ Cooperate with employer/management in implementation of contingency or business continuity plan, and comply with instructions and guidelines on prevention and control of workplace infection
- ❖ If develop influenza-like symptoms such as fever, sore throat and cough:
 - ❧ Wear a surgical mask;
 - ❧ Consult doctor promptly; and
 - ❧ Take rest at home

Advice for Event Organisers

- ❖ All conferences, exhibitions and public events may continue as usual
- ❖ Organisers must ensure all participants observe good personal hygiene and disinfect all public places of the relevant premises properly
- ❖ Organisers must advise those with influenza-like-illness not to participate, stay at home, wear masks and seek medical attention



Advice for Travellers

- ❖ Watch out for the latest developments in the swine flu outbreak when planning travel
- ❖ Prepare adequate face masks and alcohol-based handrub
- ❖ During the trip
 - ☞ Maintain good personal hygiene
 - ☞ Wash hands or use handrub frequently
 - ☞ Avoid contact with sick people

Advice for Travellers

❖ Before returning

❧ Do not get on board an airplane when influenza-like symptoms develop. Put on a mask and seek medical attention where you are.

❖ After returning

❧ Avoid going to crowded places

❧ Pay close attention to health

❧ Seek medical consultation if influenza-like symptoms appear

End of Presentation

Thank you

