

1 Title

Interim Guidance on Antiviral Treatment, Chemoprophylaxis and Pneumococcal Vaccination for Human Swine Influenza* (HSI) / Influenza A (H1N1) Infection.

[The guidance is jointly Developed by the Central Committee on Infectious Diseases and Emerging Responses of Hospital Authority (HA CCIDER) and the Infection Control Branch of Centre for Health Protection (ICB, CHP)]

2 Susceptibility to Antiviral Drugs

Available information suggested that the current strain of HSI virus is susceptible to neuraminidase inhibitors (oseltamivir and zanamivir) and resistant to adamantanes (amantadine and rimantidine).

3 Indications of Antiviral Therapy

3.1 As treatment

Anti-virals should be considered for use as soon as possible for patients fulfilling the clinical and epidemiological criteria for HSI. The standard duration of therapy is five days.

3.2 As chemoprophylaxis

The following recommendations are based on the current epidemiological information and risk assessment. It will be reviewed regularly and subject to change as the epidemiological picture of the disease evolves.

i. Recommended

Prophylaxis should be given for a duration of 10 days, starting as soon as possible within seven days after the last unprotected exposure, i.e. did not use PPE or inappropriate use of PPE during close contact (within 1 metre) with a confirmed case of HSI during the case's infectious period.

ii. Considered

Prophylaxis is considered for health care workers working in high risk areas where cases of HSI are being cared for.

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- iii. When WHO declares a pandemic
CCIDER will decide on use of prophylaxis for all HA healthcare workers.

4 Summary of Antiviral Regimes for Treatment and Prophylaxis for HSI:

Agent, group		Treatment	Chemoprophylaxis
<i>Oseltamivir</i>			
Adults		75mg BD	75mg daily
Children (aged 12 months or older), weight:	≤ 15 kg	30mg BD	30mg daily
	15 – 23 kg	45mg BD	45mg daily
	24 – 40 kg	60mg BD	60mg daily
	> 40 kg	75mg BD	75mg daily
<i>Zanamivir</i>			
Adults		Two 5mg inhalations BD	Two 5mg inhalations (10 mg in total) once per day
Children		Two 5mg inhalations BD (aged ≥ 7 yrs)	Two 5mg inhalations (10 mg in total) once per day (aged ≥ 5 yrs)

5 Special Issues

5.1 Pregnant women

Both oseltamivir and zanamivir are FDA Pregnancy Category C medications for use in pregnant women. To date, no adverse effect has been reported among women who received oseltamivir or zanamivir during pregnancy or among infants born to women who have received oseltamivir or zanamivir. Antivirals should be used only if potential benefit justifies the potential risk to the embryo or fetus, and proper counseling before commencement of therapy is necessary. Zanamivir is an inhaled medication and has less systemic absorption, it is preferred over oseltamivir for treatment unless there is evidence of lower respiratory infection or systemic complication. It is also a preferred agent for prophylaxis unless contraindicated.

5.2 Women who ate breastfeeding

The benefit of using antiviral drugs outweighs the risk for both treatment and prophylaxis. For both treatment and prophylaxis, the preferred medicine is oseltamivir. However, if a woman's baby is born and breastfeeding is started while the woman is taking zanamivir, she should complete the course and it is not necessary to switch to oseltamivir.

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5.3 Children under 1 year of age

The US Food and Drug Administration (FDA) has just issued Emergency Use Authorizations (EUAs) on use of oseltamivir for children under one year of age. Since this indication is not licensed in Hong Kong, **informed consent** should be obtained before commencement of treatment. Clinicians are advised to take reference to the document from US CDC on a detailed description of the management of HSI virus infections in young children (available at <http://www.cdc.gov/swineflu/childrentreatment.htm>).

Regimes are summarized in the following table:

Age	Treatment	Prophylaxis
< 3 months	12mg BD	Not recommended unless situation judged critical due to limited data on use in this age group
3 – 5 months	20mg BD	20mg daily
6 – 11 months	25mg BD	25mg daily

6 Pneumococcal Vaccination

6.1 The main purpose of pneumococcal vaccination is prevention of invasive pneumococcal diseases, namely meningitis, bacteraemia, and bacteraemic pneumonia.

6.2 According to the USA Centers for Disease Control and Prevention (CDC), Health care workers are not at greater risk for pneumococcal disease than the general population.

6.3 The Scientific Committee on Vaccine Preventable Diseases of the Centre for Health Protection (CHP) reviewed the use of the pneumococcal vaccination in 2007 and the latest version was issued in 2009. Taking into account the local and overseas recommendations, adults at risk in which pneumococcal vaccination are recommended for personal protection, include:

- i. History of invasive pneumococcal disease
- ii. Immunocompromised states
 - Asplenia or splenic dysfunction (e.g. sickle cell anaemia)
 - HIV infections
 - Primary immunodeficiency
 - Immunodeficiencies related to malignancies and transplantation
 - Immunodeficiencies related to use of immunosuppressive drugs / systemic steroid

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- iii. Chronic disease
 - Chronic liver diseases (cirrhosis, chronic hepatitis, biliary atresia)
 - Chronic renal diseases (nephrotic syndrome, chronic renal failure)
 - Diabetes mellitus (exclude the diabetes that is diet controlled)
 - Chronic cardiac diseases that require regular medications and/ or follow-up (ischaemic heart disease, congenital heart disease, hypertension with cardiac complications, chronic heart failure)
 - Chronic pulmonary disease (COPD, bronchiectasis, cystic fibrosis, interstitial lung fibrosis, pneumoconiosis, bronchopulmonary dysplasia, neuromuscular diseases that lead to impaired respiratory function or aspiration risk like cerebral palsy or myasthenia gravis, asthma that requires continuous or frequently repeated use of systemic steroids)
 - iv. CSF leakage
 - v. With Cochlear implants
- 6.4 With the current threat of influenza pandemic, pneumococcal vaccinations may confer benefit in reducing the complication of secondary bacterial infections, especially among the “at risk” people as listed in bullet 6.3.
- 6.5 HA recommends for the following actions on the vaccination against pneumococcus for healthcare workers:
- i. Staff in the risk groups who have concerns are advised for medical consultation at staff clinics.
 - ii. Vaccination against pneumococcus will be given to staff with informed consent.

Key References

- 1 Scientific Committee on Emerging and Zoonotic Diseases, Centre for Health Protection. General guide to doctors: antiviral use for novel influenza treatment and prophylaxis. Available at http://www.chp.gov.hk/files/pdf/20080131_SCEZD.pdf
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- 3 US Food and Drug Administration. FDA News (27 Apr 2009): FDA authorizes emergency use of influenza medicines, diagnostic test in response to swine flu outbreak in humans. Available at <http://www.fda.gov/bbs/topics/NEWS/2009/NEW02002.html>
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- 6 US Centre for Disease Control and Prevention. Immunization of Health-care Workers, Recommendations of the Advisory Committee on Immunization Practices (ACIP) and the Hospital Infection Control Practices Advisory Committee (HICPAC). Morbidity and Mortality Weekly Report. Dec 26, 1997. Vol. 46. No. PR-18.
- 7 Centre for Health Protection. Recommendations on the Use of Pneumococcal Vaccines. Scientific Committee on Vaccine Preventable Diseases. Updated in March 2009
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