

# **CLINIC INFLUENZA A (H1N1-2009) PREVENTIVE MEASURES**

## **Standard Operating Procedures**

Update of Version issued on 2 May 2009

6 May 2009

**COLLEGE OF FAMILY PHYSICIANS SINGAPORE**  
**SINGAPORE MEDICAL ASSOCIATION**  
**MINISTRY OF HEALTH, SINGAPORE**

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This advisory is prepared in response to the Mexican influenza A (H1N1-2009) Flu outbreak preparedness to provide guidance to family physicians. It is based on recommendations issued by MOH and other agencies where relevant. Current practices instituted by various primary care providers are also taken into consideration in the preparation of this advisory.

All family physicians are advised to study this advisory, communicate it to their staff and institute measures to their respective situation and available resources.

This would be a time to operationalise the MOH initiated pandemic influenza preparedness plan where pertinent. The information for your reference is given in Annex A.

Family Physicians who have not signed up to be in the MOH Pandemic Influenza Preparedness Plan should now do so, in order to be in the information loop.

## **CHAPTER I - CLINICAL: HOW SHOULD I MANAGE MY PATIENTS?**

### **BACKGROUND INFORMATION**

#### **Clinical Symptoms**

The symptoms of the present A (H1N1-2009) influenza outbreak (synonym – swine influenza in humans) are similar to human seasonal influenza. These include fever, sore throat, cough and rhinorrhoea. Some patients may also complain of nausea, vomiting, diarrhoea, myalgia, and headache. The disease may be complicated by pneumonia. Most of the cases have been in younger adults but older adults have not been spared.

#### **Laboratory Investigation**

The diagnosis of swine influenza may be confirmed by laboratory identification and sub-typing of the virus in naso-pharyngeal swabs obtained from suspected cases.

#### **Treatment and Vaccination**

It is likely that the current seasonal influenza vaccine will not provide protection from the new subtype of influenza A of H1N1-2009 circulating in Mexico. The viruses in the US patients have demonstrated antiviral resistance to amantadine and rimantadine. However, they are susceptible to oseltamivir (Tamiflu®) and zanamivir (Relenza®).

### **INFECTION CONTROL PRECAUTIONS**

Clinicians should observe strict infection control precautions when handling patients:

- (a) Presenting with influenza-like symptoms (fever, cough, sore throat, rhinorrhoea); AND
- (b) Have a history of travel to affected areas (i.e. Mexico, and the states of California and Texas in the United States)\* in the 7 days prior to the onset of symptoms; OR have been in contact with ill persons who had a history of travel to these areas in the 7 days prior to the onset of symptoms.

\* = the initial infected areas

As of 6 May there are 21 countries with confirmed H1N1-2009 cases, and 43 countries with suspected cases. Outside Mexico and USA, there continues to be no hospitalizations for severe H1N1-2009 disease reported. Hospitalisations in other countries have been for quarantine reason.

Any patient who meets the case definition in Paragraphs (a) and (b) above should be referred immediately to the Emergency Medicine Department at Tan Tock Seng Hospital. Medical practitioners should arrange for these patients to be transferred by ambulance by calling the dedicated ambulance service at 993 or 65860237 (available 24 hours).

The Ministry of Health should also be notified immediately of suspected cases. Please contact the Communicable Diseases Division at 98171463 (available 24 hours). MOH will inform the notifying doctor of the need for contact tracing and prophylaxis for close contacts of the case once the diagnosis has been established.

### **HOME QUARANTINE ORDER**

The Home Quarantine Order came into effect 4 May 2009. Travellers entering Singapore with a travel history to Mexico over the past seven days will be quarantined for seven days when they enter Singapore from when they were last in Mexico. See Annex 3 for more details.

### **ADVICE TO PATIENTS**

Physicians should advise family members and other close contacts of suspected cases to be vigilant for early symptoms of influenza, and to seek medical advice as early as possible if unwell.

### **FURTHER INFORMATION**

An FAQ sheet for patients is attached at Annex 1.

### **TRIAGE AND PATIENT DECLARATION ON REGISTRATION**

- Triage of patients at Reception to separate Flu/Febrile patients from other patients by checking symptoms and taking body temperature.
- Instruct patients to declare symptoms, contact and travel history in Patient Declaration Form.
- Instruct Flu/Febrile patients to wear surgical masks.
- Ensure Flu/Febrile patients are separated from other patients while in clinic.
- Keep list of all patients in clinic namely all healthcare workers, patients, and accompanying persons for contact tracing should suspect H1N1-2009 case be diagnosed.

### **REFERRAL AND NOTIFICATION OF SUSPECT INFLUENZA A (H1N1-2009) CASES**

- Send suspect H1N1-2009 patient to Emergency Medicine Department at TTSH by dedicated ambulance service at 993 (24 hours)
- Designate the route for patient to go from clinic to H1N1-2009 ambulance pick-up point.
- Notify MOH immediately by contacting the Communicable Diseases Division at 98171463 (24 hours).
- MOH will inform the notifying doctor of the need for contact tracing and prophylaxis for close contacts of the case once the diagnosis has been established.

### **ATTENDING TO SUSPECT OR PROBABLE INFLUENZA A (H1N1-2009) CASES AND DISINFECTION**

- Keep number of staff attending to suspect or probably H1N1-2009 cases to minimum.
- Wear N95 masks or its equivalent, gloves and disposable gowns.
- Wear visors or goggles when examining patient, performing procedures or resuscitation.
- Avoid use of nebulisers.
- Perform proper hand washing after contact with these patients.
- Disinfect instruments used for examination or procedures.
- Disinfect all surfaces, objects, furniture, and fixtures that potentially contaminated.

### **REFERENCES**

MH 34:03 (25 April 2009). MOH CIRCULAR 17/2009 ALERT: SWINE INFLUENZA A (H1N1)

## CHAPTER 2 - LOGISTICS: HOW SHOULD I PREPARE MY CLINICS

### ADMINISTRATIVE SURVEILLANCE OF HEALTHCARE WORKERS

- Monitor flu symptoms and temperature of all staff for at least twice a day – before work and at least once more during the day.
- All staff in the clinic who have fever (oral temperature more than 37.5 deg C are not allowed to work.

### INFECTION CONTROL MEASURES

- Ensure staff are trained to use personal protective equipment (PPE), including N95 mask, hand washing, cleaning of clinic and disposal of PPE.
- Practise hand washing or alcohol rub after each consultation to prevent transmission from doctor to patient.
- Clean contact surfaces of instruments used for examining patient e.g. stethoscope, with alcohol wipes after each use.
- Dispose of sharps, biohazard waste including PPE masks and sheaths, properly.
- Clean surfaces to reduce level of contamination and minimize transmission of infection by indirect contact. Disinfectant should be applied to surfaces using a damp cloth, rinse with water, and then dried. Use diluted bleach\* of 1% sodium hypochlorite) for 10 minutes but no longer than 30 minutes, thoroughly rinse off and dry the area (\*Household bleachers are generally 3-6% sodium hypochlorite.)

Please refer to Annex in A Guide to Organising a Primary Care Clinic During an Influenza Pandemic Version 2 (Mar 2008) for further details.

## CHAPTER 3 - SUPPORT AND FEEDBACK: WHERE CAN I GET HELP

### DOCTORS' INFORMATION HOTLINES

- **Hotline for GPs –**  
CFPS: 6221 8608  
SMA : 6223 1264 (open 8:30am to 6:00pm Mon to Fri)  
To speak to doctor colleagues for clarification and assistance when faced with perplexing situations on the ground.
- **Health Professional's Portal –**  
URL: [http://www.hpp.moh.gov.sg/HPP/HPP\\_Home.html](http://www.hpp.moh.gov.sg/HPP/HPP_Home.html) to check out for latest updates.
- **Email Enquiry –**  
CFPS: [gpflu@cfps.org.sg](mailto:gpflu@cfps.org.sg)  
SMA : [swineflu@sma.org.sg](mailto:swineflu@sma.org.sg)  
MOH: [MOH\\_conversations@moh.gov.sg](mailto:MOH_conversations@moh.gov.sg)

## **ANNEX I: CLINICAL: HOW SHOULD I MANAGE MY PATIENTS?**

### **FAQS ON SWINE VIRUS INFLUENZA (INFLUENZA A (H1N1-2009))**

#### **1. What is Swine Flu (Swine Influenza)?**

Swine flu is a respiratory disease affecting pigs that is caused by type A influenza virus. Swine influenza viruses may circulate among swine throughout the year, but most outbreaks occur during the late fall and winter months similar to influenza outbreaks in humans. It causes high levels of illness but low death rates in pigs.

#### **2. Does Swine Flu affect humans?**

Swine flu viruses that cause disease in pigs very rarely affect humans. However, sporadic human infections with swine flu have occurred. Most commonly, these cases occur in persons with direct exposure to pigs but there have also been documented cases of human-to-human spread of swine flu.

#### **3. How does Swine Flu spread to humans?**

Swine flu spreads to humans mainly through contact with infected pigs, which shed the virus in their saliva, nasal secretions and faeces. Limited human-to-human transmission can also occur in the same way as seasonal flu occurs in people.

#### **4. Can people catch Swine Flu from eating pork?**

There is currently no evidence to suggest that swine flu can be transmitted to humans from eating pork or pork products that have been thoroughly cooked.

#### **5. What are the symptoms of Swine Flu in humans?**

The symptoms of swine flu in people are expected to be similar to the symptoms of regular human seasonal influenza. An early symptom is high fever, and this is followed by cough, sore throat, runny nose, and sometimes breathlessness a few days later.

#### **6. How can human infections with swine flu be diagnosed?**

To diagnose swine flu, a respiratory specimen would generally need to be collected within the first 4 to 5 days of illness (when an infected person is most likely to be shedding the virus). However, some persons, especially children may shed the virus for 10 days or longer.

#### **7. What medications are available to treat swine flu infection in humans?**

There are four different antiviral drugs that are licensed for use in Singapore for the treatment of influenza: amantadine, rimantadine, oseltamivir and zanamivir. While most swine flu viruses have been susceptible to all four drugs, the most recent swine flu viruses isolated from humans are resistant to amantadine and rimantadine. At this time, the US CDC recommends the use of oseltamivir (Tamiflu®) or zanamivir (Relenza®) for the treatment and/or prevention of infection with swine flu viruses.

**8. Are there any cases of Swine Flu in Singapore?**

As of 30 April 2009, there have been no human cases of swine flu detected in Singapore.

**9. Is there any cause for alarm in Singapore?**

No human swine flu cases have been reported in Singapore. MOH is monitoring the situation closely and will update the public should the situation change.

**10. What is MOH doing to ensure that the disease is not transmitted here?**

MOH maintains a comprehensive and well established disease surveillance system for the early detection of human cases of novel influenzas such as swine flu. In addition, MOH has sent a medical alert to all medical practitioners and staff in hospitals, national centres, private medical clinics and polyclinics to update them on the outbreak of swine flu in the USA and Mexico and to advise them to be vigilant for any suspect cases. When the situation warrants, MOH will step up public health measures e.g. quarantine of contacts, issue public health advisories, and work with other government agencies to screen visitors at our border checkpoints. Further, MOH has an influenza pandemic preparedness plan in response to a pandemic situation.

**11. Is it safe to visit countries with cases of Swine Flu and will I be quarantined when I return? What travel precautions should I take?**

There are currently no travel restrictions or quarantine advised by the World Health Organisation for swine flu. If you intend to travel to areas which have cases of swine flu (currently – Southern California and Texas in the United States; and Mexico), you should take note of the following measures to minimize your risk of acquiring swine flu:

- Avoid contact with persons with symptoms of influenza
- Avoid crowded areas and maintain good ventilation.
- Observe good personal and environmental hygiene. Wash hands thoroughly with soap and water frequently and when they are contaminated by respiratory secretions e.g. after sneezing.
- Maintain good body resistance through a balanced diet, regular exercise, having adequate rest, reducing stress and not smoking.

**12. What should I do if I suspect I have swine flu after returning to Singapore?**

You should consult your doctor as soon as possible and inform your doctor if you have symptoms of swine flu and had recently travelled to areas which have cases of swine flu (currently – Southern California and Texas in the United States; and Mexico).

**13. What should I do if I fall ill overseas?**

You should consult a local doctor as soon as possible and refrain from travelling until you are certified fit by the doctor.

**14. Does influenza vaccination help in preventing Swine Flu?**

Vaccines are available to be given to pigs to prevent swine influenza. There is no vaccine to protect humans from swine flu. The seasonal influenza vaccine is unlikely to protect against H1N1 swine flu viruses.

**15. Is it safe to come into contact with live pigs in nature reserves and the wildlife reserves?**

So far, there are no known cases of swine flu in Singapore. However, proper hygiene practices, such as washing of hands after contact with animals including pigs, should be maintained.

## **ANNEX 1: CLINICAL: HOW SHOULD I MANAGE MY PATIENTS?**

### **(2A) DETAILS OF THE INFLUENZA PANDEMIC PLAN**

URL: <http://www.moh.gov.sg/mohcorp/currentissues.aspx?id=20764>

Main Document: Influenza Pandemic Readiness & Response Plan (158KB)

Annex A: Summary of Key Control Measures (59KB)

Annex B: Surveillance (23KB)

Annex C: Management of Cases (68KB)

Annex D: Control Measures in Healthcare Setting (18KB)

Appendix 1: Guidelines for the Use of PPE in relation to Protection Against Influenza in Healthcare Settings Before and During an Influenza Pandemic (32KB)

Appendix 2: Cleaning Guidelines for Healthcare Facilities (31KB)

Annex E: Management of Contacts (17KB)

Annex F: Contact Tracing (13KB)

Appendix 1: Institution Contact Tracing (40KB)

Annex G: Quarantine (10KB)

Annex H: Use of Anti-virals (25KB)

Annex I: Management of the Dead (39KB)

Annex J: Border Health Control Measures (17KB)

Annex K: Crisis Communications (26KB)

### **(2B) A GUIDE TO ORGANIZING A PRIMARY CARE CLINIC DURING AN INFLUENZA PANDEMIC. VERSION 2 (MARCH 2008)**

URL: <http://cfps.org.sg>

And URL: <http://sma.org.sg>

National Response – Treatment strategy

Primary Care Response Framework

Organising a primary care clinic

Primary care clinic work processes

### **ANNEX 3 – HOME QUARANTINE ORDER (HQP)**

The Home Quarantine Order is issued under the Infectious Diseases Act to contacts and suspected contacts of the Influenza A (H1N1-2009) virus, with the aim of limiting the spread of Influenza A (H1N1-2009) in the community. It can be issued to any person who is a known or suspected close contact of a probable or confirmed case of Influenza A (H1N1-2009), as well as persons who arrived in Singapore within 7 days after having departed from Mexico. Travellers who are unable to be quarantined at their own residential homes, or are without a residential home in Singapore, will be quarantined in alternative housing such as government chalets, i.e., the Aloha Chalets located at Loyang. While under HQO, the person must stay at home throughout the quarantine period, monitor their temperature twice daily and check for flu-like symptoms.

They should minimise contact with other family members and practice good personal hygiene. Persons under home quarantine who develop symptoms will be referred to the CDC for a thorough assessment. A dedicated ambulance service (993) is in place to convey them to TTSH Emergency Department. The public is urged to call this number only if they have a travel history to affected areas.

Any person guilty of breaking the HQO shall be liable to a maximum fine of \$10,000, or imprisonment of six months, or both. In the case of a second or subsequent offence, the person will be liable to a maximum fine of \$20,000, or imprisonment of 12 months, or both.

For travellers who are returning from other areas with evidence of community transmission of Influenza A (H1N1-2009) (i.e., the states of California, New York and Texas in the United States, and the state of Nova Scotia in Canada), MOH advises them to stay at home for seven days, monitor their temperature daily and check themselves for symptoms of flu-like illness. They should refrain from joining mass gatherings, e.g., going to the cinemas, shopping malls, supermarkets, etc. Those who develop respiratory illness with fever (temperature > 38 deg C) within seven days after their return should put on a surgical mask and call 993 for an ambulance. They should also disclose their travel histories to their doctors.