

MH 34:85

1 July 2009

All Registered Medical Practitioners
Licensees of Medical Clinics

Dear colleagues,

**MOH Circular 79/2009
UPDATES ON MANAGEMENT OF INFLUENZA A (H1N1-2009)**

1. Thank you for helping Singaporeans cope with the Influenza A H1N1-2009 pandemic.

SITUATION GLOBALLY AND IN SINGAPORE

2. The outbreak began in North America in early April 2009 and has since spread across the globe with WHO declaring a pandemic on 11 June 2009. In the initial period, Singapore adopted a containment strategy to delay the entry of the virus into Singapore. As the risk of getting the disease was highest from returning travelers, we introduced robust containment measures at borders, treated all confirmed cases with isolation in hospitals and tracked down and isolated every close contact of imported cases. These measures were unlike those in North America, which was ground zero for the outbreak. They had no opportunity to contain the outbreak and were forced into mitigation measures immediately.

3. Two months into the outbreak, despite their containment measures many countries, including Japan and Australia have already moved into full scale mitigation phase as community spread has gone into full swing.

4. Singapore has avoided community spread for seven weeks. This has bought us time to learn more about the virus and adapt our measures accordingly. The outbreak has since progressed from merely imported cases to local community transmission.

5. As of 25 Jun 09, MOH's biosurveillance programme showed that Influenza A (H1N1-2009) made up 5% of all samples from patients with influenza-like illness (ILI). We expect to see an increasing trend. When the risk of getting the disease locally progressively outstrips the risk of getting it from imported cases, containment measures become less useful and mitigation measures become the priority.

MITIGATION PHASE

6. We are in the process of moving from containment to mitigation. In the mitigation phase, GPs are expected to clinically assess suspected Influenza A (H1N1-2009) cases, risk stratify them and manage accordingly. Most patients

can recover in their own homes on medical leave. GPs are expected to take a social history including home environment e.g. presence of those that are at higher risk of complications from Influenza A (H1N1-2009) infection such as pregnant women etc., and advise on the appropriate social distancing measures to minimize the risk of infecting others.

7. Tests to confirm the diagnosis of Influenza A (H1N1-2009) infection would only be required in patients where the result is necessary for clinical management (e.g. severely ill patients) and/or in situations where it will be of significant public health importance. As such GPs will **not** need to refer all cases of suspected Influenza A (H1N1-2009) to Restructured Hospitals.

8. Tamiflu is recommended for high risk patients with ILI when the prevalence of Influenza A (H1N1-2009) in the community is significant. **We will inform you when our bio-surveillance shows significant community levels of Influenza A (H1N1-2009).**

MEASURES IN TRANSITION PHASE

9. Currently we are in transition and not in the mitigation phase yet. We are still trying to slow down the community spread especially as schools have just re opened. We should however start preparing to manage the disease in a more targeted and risk-stratified manner. For example we have allowed our hospitals to use their discretion and not swab cases where the risk of Influenza A (H1N1-2009) is assessed to be low and not to hospitalise very mild cases but to place them on home quarantine orders. There will therefore be occasions when some of your referred cases may appear to receive different treatments in different hospitals. We seek your understanding on such apparent anomaly.

10. Similarly, medical clinics should start to introduce the following risk stratified measures (please refer Annex A for guidelines on patient management):

a. All clinics must have stringent triage procedures to separate patients with ILI from those without ILI to prevent cross infection.

b. Based on our latest bio-surveillance data of 5% (where only 1 in 20 patients with ILI would have Influenza A (H1N1-2009)), we would not in general recommend that patients with ILI be treated with Tamiflu. Doctors should therefore carefully consider the risks and benefits of antiviral treatment for each suspected Influenza A (H1N1-2009) patient in deciding whether to proceed with anti-viral treatment¹.

¹ Anti-viral treatment could be considered for contacts of confirmed cases of Influenza A (H1N1-2009) or patients with travel history to affected areas or those with links to local clusters and who develop ILI symptoms and who are at high risk of developing complications.

- c. Most suspected Influenza A (H1N1-2009) patients can recover at home² with the advice to return if still unwell or to call 995 if condition deteriorates (e.g. becomes breathless) and needs urgent medical attention.
- d. The duration of medical leave for suspected³ cases should be 7 days for adults and 10 days from onset of symptoms for those below 13 years to cover the infectious period.
- e. Pregnant women, immuno-suppressed persons and renal dialysis patients are at much higher risk of influenza-related complications. For all such patients with symptoms of ILI, please contact their primary specialists for advice on further management. When the patients do not have a primary specialist, please arrange with a relevant specialist to assist in the management.

CONCLUSION

11. As the situation is dynamic, we would need to calibrate our measures over time based on the level of assessed risk. We seek your understanding amidst this challenging time and thank you for participating in this national fight against H1N1.



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cc:
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President, Singapore Medical Association
President, College of Family Physicians, Singapore

² Patients should be given a surgical mask when returning home and avoid public transport where possible.

³ When Influenza A (H1N1-2009) prevalence in the community is low (<15% of ILI) suspected cases will generally be contacts of confirmed cases, those with travel history to other affected areas and or links to local cluster of Influenza A (H1N1-2009) infection who develop ILI. You may wish to consider anti-viral treatment for such cases if they are at higher risks of developing influenza related complications.

GUIDELINES FOR MANAGEMENT OF INFLUENZA A (H1N1-2009)

1. Most cases of Influenza A (H1N1-2009) are mild and hence most **patients can be managed in the community as per seasonal flu**. Patients only need to be referred to hospital if they show signs of severe illness or pneumonia. A list of guidelines for referral to the hospital is found in **Appendix I**. Patients can be referred to any acute hospital by dialing 995 for the ambulance.
2. Antiviral treatment can potentially reduce morbidity and mortality. However, as the severity of Influenza A (H1N1-2009) appears to be mild (the case fatality rate in cases outside Mexico is about 0.1 - 0.3%), doctors should exercise clinical judgment in prescribing anti-virals on a case by case basis for patients. They should take into account patients risk of developing influenza related complications (please see **Appendix II** for list of such patients), prevalence of Influenza A (H1N1-2009) in our community as reported by MOH's bio-surveillance programme and after weighing the risks and benefits of treatment. Laboratory testing for Influenza A (H1N1-2009) is NOT necessary before commencement of treatment.
3. In general, anti-virals need not be given for pre-exposure prophylaxis. Post exposure prophylaxis could however be considered for contacts of confirmed cases who are at higher risk for influenza-related complications or other circumstances where the clinician feels that it is clinically appropriate. The adult dose is 75mg om for 10 days.
4. Medical practitioners should give a Medical Certificate to patients with suspected¹ Influenza A (H1N1-2009) for 7 days (for adults) and 10 days (for children below 13 years old), who should be advised to stay home during this time.

RECOMMENDED DOSAGE FOR TREATMENT

5. Treatment should begin as soon as possible ie within 48 hours of onset of symptoms. The recommended dosage for treatment is as follows:

Agent, group		Treatment for 5 days
Oseltamivir		
Adults		75 mg capsule bd
Children ≥ 12 months	15 kg or less	30 mg capsule (or 2mL solution) bd
	>15-23 kg	45 mg capsule (or 3mL solution) bd
	>23-40 kg	60 mg capsules (or 4mL solution) bd
	>40 kg	75 mg capsules bd
Zanamivir		
Adults		Two 5-mg inhalations (10 mg total) bd
Children ≥ 5 years		Two 5-mg inhalations (10 mg total) bd

Table 1: Antiviral treatment using Oseltamivir or Zanamivir

¹ Clinically suspected cases include contacts of confirmed cases of Influenza A (H1N1-2009) or patients with travel history to affected areas or those with links to local clusters and who develop ILI symptoms

6. For children: Please note that while GPs can prescribe for children < 40kg the Oseltamivir suspension, prescriptions for the suspension have to be filled at KKH/NUH and all polyclinic pharmacies². GPs should not prescribe for **Children < 1 year of age:** they should be referred to KKH/NUH or be managed by paediatricians in the private sector.

7. For elderly patients: No change in dose, provided there is no renal impairment.

SPECIAL CONSIDERATIONS

- Pregnant women
- Immunosuppressed persons: This includes those on active cancer treatment
- Patients on dialysis
- Children < 1 year of age

As the above groups of people are at higher risk of influenza-related complications or at risk of neurological side effects with Tamiflu treatment, it is recommended that for all such patients with ILI, GPs should contact their primary specialists for advice on further management. When the patients do not have a primary specialist please arrange with a relevant specialist to assist in the management.

NOTIFICATION INSTRUCTIONS

9. Medical practitioners are no longer required to call the MOH Surveillance Hotline for notification purposes. However, they are required to notify **clinically suspected³ cases who are seriously ill and who need to be referred to hospitals or laboratory-confirmed** Influenza A (H1N1-2009) cases within 24 hours of referral or diagnosis. Medical practitioners are also required to submit the Notification of Death from Influenza A (H1N1-2009) within 24 hours of death. Notifications should be done **via the Communicable Diseases Live & Enhanced Surveillance System (CDLENS)** at <http://www.cdLens.moh.gov.sg> or by fax to 62215538. The MD131 can also be downloaded from the MOH website at <http://www.moh.gov.sg>.

CLARIFICATION

10. For further clarifications, please e-mail moh_conversations@moh.gov.sg

² Please note that these pharmacies will be dispensing Tamiflu capsules only for their own patients.

³ Clinically suspected cases include contacts of confirmed cases of Influenza A (H1N1-2009) or patients with travel history to affected areas or those with links to local clusters and who develop ILI symptoms.

GUIDELINES FOR REFERRAL TO HOSPITAL

- **One** of the following indicating severe illness:
 - Dyspnoea or chest pain
 - Severe and persistent vomiting
 - Deterioration of symptoms since onset of illness
 - Flu-like symptoms improve but then return with fever & worse cough
 - Altered mental status
 - Physical examination or CXR findings consistent with pneumonia

- **In children** (further considerations)
 - Poor feeding
 - Drowsiness or irritability

PERSONS AT INCREASED RISK FOR INFLUENZA-RELATED COMPLICATIONS

1. Persons aged 65 years and older
2. Children < 5 years
3. Adults and children who have chronic pulmonary or heart disease
4. Adults and children who have required regular medical follow-up or hospitalisation during the preceding year because of chronic metabolic diseases (including diabetes mellitus), renal dysfunction, haemoglobinopathies or immunosuppression (including immunosuppression caused by medications or by the Human Immunodeficiency Virus)
5. Children and teenagers aged 6 months to 18 years who are receiving long-term aspirin therapy and therefore might be at risk for developing Reye syndrome after influenza infection
6. Pregnant women