

Revised**Antiviral treatment for cases of influenza A (H1N1) infection**

Center for Community Health and Disease Control, Maldives

This is the revised recommendation for use of antivirals in the Maldives. This recommendation may change as new data become available or the country situation changes.

Table TR1: Use of antivirals for treatment of influenza

Population	Pandemic (H1N1) influenza virus 2009
Mild to moderate uncomplicated clinical presentation	
At-risk^a population	Oseltamivir or Zanamivir
Otherwise healthy^b	Need not treat
<p>a Infants and children aged less than 5, the elderly (>65 years), patients who have had drug treatment for asthma within the past three year, pregnant women, patients with chronic co-morbid conditions such as cardiovascular, respiratory, renal or liver disease, diabetes, and those with immunosuppression related to malignancy, HIV infection or other diseases.</p> <p>b All those not covered by the at-risk definition above.</p>	
Severe or progressive clinical presentation^c	
At-risk^a population	Oseltamivir (zanamivir should be used where virus is known to be resistant to oseltamivir, or if oseltamivir is unavailable)
Otherwise healthy^b	

^c refer to 'case description' given below

Recommendations - use of antivirals for treatment of pandemic (H1N1) 2009 influenza virus infection.

Context: Treatment of patients with confirmed or strongly suspected infection with influenza pandemic (H1N1) 2009, where clinical presentation is severe or progressive and antiviral medications for influenza are available. (Refer to the case definition guideline G-D09)

Rec 01: Patients who have severe or progressive clinical illness should be treated with oseltamivir. Treatment should be initiated as soon as possible. Consideration may be given to the use of higher doses up to 150 mg bid, and longer duration of treatment depending on clinical response.

This recommendation applies to all patient groups, including pregnant women, and young children <5 years, including neonates.

Rec 02: In situations where (1) oseltamivir is not available or not possible to use, or (2) if the virus is resistant to oseltamivir but known or likely to be susceptible to zanamivir, patients who have severe or progressive clinical illness should be treated with zanamivir.

Context: Treatment of patients with confirmed or strongly suspected but uncomplicated illness due to pandemic influenza virus infection, and antiviral medications for influenza are available

Rec 03: Patients not in 'at-risk' groups who have uncomplicated illness due to confirmed or strongly suspected influenza virus infection need not be treated with antivirals

Rec 04: Patients in 'at-risk' groups, with uncomplicated illness due to influenza virus infection, should be treated with oseltamivir or zanamivir. Treatment should be initiated as soon as possible following onset of illness.

Table TR-D1: Dosage recommendations – treatment

Agent	Duration	Age 1-4yrs	5-9yrs	10-12yrs	13-64yrs	≥65yrs
Oseltamivir	5 days	Weight-adjusted doses ^a : - 30 mg twice daily for ≤ 15 kg - 45 mg twice daily for >15 to 23 kg - 60 mg twice daily for >23 to 40 kg - 75 mg twice daily for >40 kg			75 mg ^a twice daily	75 mg ^a twice daily
Zanamivir	5 days	Not licensed for use	10 mg (2 inhalations) twice daily	10 mg (2 inhalations) twice daily	10 mg (2 inhalations) twice daily	10 mg (2 inhalations) twice daily

^a Reduction in dose of oseltamivir is recommended for persons with creatinine clearance <30 ml/min.

Case description

Presentation of influenza virus infection can vary from asymptomatic infection through to serious complicated illness that may include exacerbation of other underlying conditions and severe viral pneumonia with multi-organ failure. Since a wide range of pathogens can cause influenza-like illness, a clinical diagnosis of influenza will be guided by epidemiologic data and confirmed by laboratory tests. However, on an individual patient basis, initial treatment decisions should be based on clinical presentation and epidemiological data.

Uncomplicated influenza

- ❖ Influenza-like illness symptoms: fever, cough, sore throat, rhinorrhea, headache, muscle pain, malaise, but no shortness of breath, no dyspnoea. Patients may present with some or all of these symptoms.
- ❖ Gastrointestinal illness may also be present, such as diarrhoea and/or vomiting, especially in children, but without evidence of dehydration.

Complicated or severe influenza

- ❖ Presenting clinical (shortness of breath, dyspnoea, tachypnea, hypoxia) and/or radiological signs of lower respiratory tract disease (e.g. pneumonia), CNS findings (e.g. encephalopathy), severe dehydration or presenting secondary complications, renal failure, multi-organ failure, and septic

shock. Other complications can include musculoskeletal (rhabdomyolysis) and cardiac (myocarditis).

- ❖ Exacerbation of underlying chronic disease, including asthma, chronic obstructive pulmonary disease, chronic hepatic or renal failure, diabetes or other cardiovascular conditions.
- ❖ Any other condition or clinical presentation requiring hospital admission for clinical management.
- ❖ Any of the signs of disease progression listed below.

Signs and symptoms of progressive disease

Patients who present initially with uncomplicated influenza may progress to more severe disease. Progression can be rapid. The following are some of the indicators of progression, which would necessitate an urgent review of patient management:

- ❖ Symptoms and signs suggesting oxygen impairment or cardiopulmonary insufficiency:
 - shortness of breath (with activity or at rest), difficulty in breathing, turning blue, bloody or coloured sputum, chest pain, low blood pressure;
 - in children, fast or laboured breathing.
 - Hypoxia as indicated by pulse oximetry
- ❖ Symptoms and signs suggesting CNS complications:
 - altered mental status, unconscious, drowsiness, or difficult to awaken; recurring or persistent convulsions (seizures), confusion, severe weakness or paralysis.
- ❖ Evidence of sustained virus replication or invasive secondary bacterial infection:
 - based on laboratory testing or clinical signs (e.g. persistent high fever and other symptoms beyond three days).
- ❖ Severe dehydration:
 - decreased activity, dizziness, decreased urine output, lethargy.