Options for use of antivirals for influenza A(H1N1) cases

NOTE: The purpose of this paper is to provide options on the use of antivirals when considering the influenza interventions. This paper may be subject to change based on the developing situation.

Background of influenza A(H1N1) and antivirals

Antiviral recommendations are expected to be revised as more information becomes available.

A decision on the administration of antivirals should take into account the current situation or the expected impact on the country and the amount of antivirals stockpiled in country.

- Transmission mode: Similar to other influenza viruses, influenza A(H1N1) is transmitted between persons primarily through large-particle respiratory droplets.
- Symptoms: A majority of influenza A(H1N1) cases are mild at this point.
- Based on laboratory data, the novel influenza A(H1N1) is sensitive to zanamivir and oseltamivir. It is resistant to amantadine and rimantadine.
- Inappropriate use of antivirals could cause the virus to become resistant to the antivirals.
- Zanamivir and oseltamivir may reduce the symptoms and duration of illness (as they do for seasonal influenza). They also may contribute to preventing severe disease and death. Treatment with zanamivir and oseltamivir should be initiated as soon as possible (within 48 hours) after the onset of symptoms.
- It is important that all persons who are receiving antivirals are monitored for side effects. Nausea and vomiting were reported more frequently among adults receiving oseltamivir for treatment. Rare transient neuropsychiatric events (self-injury or delirium) have been reported among adolescents and adults living in Japan. Inhaled zanamivir has been temporally associated with bronchospasm and acute deterioration during treatment, particularly in influenza patients with pre-existing airway disease.

TREATMENT

Treatment principles:

- Either oseltamivir or zanamivir can be used or administered if there is no contraindication. Oseltamivir is the treatment of choice for lower respiratory tract complications due to higher systemic distribution of the drug.
- Decision to treat should be based on clinical judgement.
- Persons with influenza A(H1N1) infection who present with an uncomplicated febrile illness do not require treatment unless they are at increased risk of influenza-related complications.
- Priority use of antivirals is recommended for treatment of patients at increased risk of influenza-related complications (extracted from US CDC).
- People considered as “at increased risk of influenza-related complications” are:
  - persons with chronic diseases or with suppressed immune systems,
  - children younger than five years old,
- adults 65 years and older, and
- pregnant women.
- These groups may change as the situation evolves.

Treatment options:

**Administration of Zanamivir and Oseltamivir for TREATMENT**

<table>
<thead>
<tr>
<th>PATIENT</th>
<th>COUNTRY SCENARIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confirmed case</td>
<td>Only imported cases have been confirmed in the country*</td>
</tr>
<tr>
<td>Probable case</td>
<td>Case numbers have increased but have not yet expanded outside of defined institutions**</td>
</tr>
<tr>
<td>Suspected case</td>
<td>Clusters have occurred in locations outside of defined institutions***</td>
</tr>
</tbody>
</table>

1. **Confirmed case**: Refer to WHO surveillance definition.
2. **Probable case**: Refer to WHO surveillance definition.
3. **Suspected case**: Taken from DRAFT Advice for the Detection of Suspect Cases of Newly Identified Influenza A(H1N1) in the Western Pacific Region:

   **Individual with**:
   - acute febrile respiratory illness (fever >38°C) with the spectrum of disease from influenza-like illness (sudden onset of fever of ≥38 °C and cough or sore throat in the absence of other diagnoses) to pneumonia
   - a history of international travel in the seven days before onset of symptoms or exposure through contact with a confirmed case

* Consider maximum measures to mitigate the situation.
** A ‘defined institution’ may be a school, household, long-term care facility. Attempt to stop transmission, but reserve antivirals for persons at high risk in the community.
*** Prioritize patients at higher risk of complications.

**PROPHYLAXIS**

NOTE: WHO is not currently recommending prophylaxis. Where countries choose to use antiviral prophylaxis they should be clear on the purpose of this action so that resources (including antivirals) are applied in the best way.
Prophylaxis principles:

- Either oseltamivir or zanamivir may be used or administered if there is no contraindication.
- If the contact happened after infectious period (currently one day prior to onset and seven days after), it may not be necessary to administer post-exposure prophylaxis.
- Consideration of post-exposure antiviral prophylaxis for the following (extracted from US CDC):
  - close contacts of cases (confirmed, probable) who are at high risk for complications of influenza; and
  - health care personnel, public health workers with unprotected exposure to confirmed or probable case during the case’s infectious period.
- Pre-exposure antiviral prophylaxis should be considered only for people in close contact with high risk for influenza complication or health care facility workers who are exposed to confirmed influenza A(H1N1) without proper use of PPE.
- Antiviral use should be prioritized for treatment, not prophylaxis.

Prophylaxis options:

### Administration of Zanamivir and Oseltamivir for PROPHYLAXIS

<table>
<thead>
<tr>
<th>COUNTRY SCENARIO</th>
<th>Only imported cases have been confirmed in the country*</th>
<th>Case numbers have increased but have not yet expanded outside of defined institutions**</th>
<th>Clusters have occurred in locations outside of defined institutions***</th>
</tr>
</thead>
<tbody>
<tr>
<td>PATIENT</td>
<td>General population</td>
<td>No</td>
<td>Consider based on risk and available resource</td>
</tr>
<tr>
<td></td>
<td>Close contacts of confirmed cases</td>
<td>At low risk of influenza complications</td>
<td>No (following up necessary)</td>
</tr>
<tr>
<td></td>
<td>Health care personnel, public health workers</td>
<td>At increased risk of influenza complications</td>
<td>Consider for persons at increased risk of influenza-related complications</td>
</tr>
<tr>
<td></td>
<td>Exposed with proper PPE</td>
<td></td>
<td>Only consider based on risk and available resources</td>
</tr>
<tr>
<td></td>
<td>Exposed unprotected</td>
<td></td>
<td>Consider for persons at increased risk of influenza-related complications</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Only consider based on risk and available resources</td>
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