

THE PATHCARE NEWS

INFLUENZA UPDATE: 2019



South Africa carries a heavy influenza burden with more than 12000 deaths each year due to influenza associated severe acute respiratory illness. Deaths in females of childbearing age in South Africa occur mostly in HIV-infected individuals with the mortality 3-fold higher in pregnant compared to non-pregnant women. The most effective strategy to prevent influenza is vaccination.

Vaccination

Administer the vaccine each year because the virus continuously evolves. Vaccinate preferably before the influenza season (which can start any time from the last week in April to the first week in July). An adequate immune response takes about 2 weeks to develop.

- The trivalent vaccines for use in the 2019 southern hemisphere influenza season contain the following:
 - an A/Michigan/45/2015 (H1N1)pdm09-like virus; and
 - an A/Switzerland/8060/2017 (H3N2)-like virus; and
 - a B/Colorado/06/2017-like virus (B/Victoria/2/87 lineage).

Influenza vaccine should be administered to:

1. Pregnant women irrespective of stage of pregnancy and up to 2 weeks after delivery
2. Persons at high risk for influenza and its complications (adults and children):
 - a. Pulmonary diseases (e.g. asthma, COPD, Tb)
 - b. Cardiac diseases (e.g. congestive cardiac failure), except hypertension
 - c. Metabolic disorders (e.g. diabetes)
 - d. Renal disease
 - e. Hepatic disease
 - f. Certain neurologic and neurodevelopmental conditions, including disorders of the brain, spinal cord, peripheral nerve and muscle such as cerebral palsy; epilepsy (seizure disorders); stroke; mental retardation; moderate to severe developmental delay; muscular dystrophy; spinal cord injury
 - g. Haemoglobinopathies (e.g. sickle cell disease)
 - h. Immunosuppression (e.g. HIV, immunosuppressive medication, malignancy)
3. Healthcare workers
4. Residents of old-age homes and chronic care and rehabilitation institutions
5. Persons > 65 years of age
6. Persons aged 6 months to 18 years on long-term aspirin therapy
7. Children 6 months to 59 months of age
8. Adults and children who are family contacts of high risk patients
9. Any person wishing to minimise the risk of influenza, especially in industrial settings, where large-scale absenteeism could cause significant economic losses

Contraindications for the vaccine are:

1. A history of **SEVERE (anaphylactic) hypersensitivity** to any component of the vaccine, including egg protein, or after a previous dose of any influenza vaccine.
 - Anaphylaxis is rare and a careful history will distinguish between anaphylaxis and an allergic reaction (e.g. a rash)
2. Children < **6 months** of age

Disease and Treatment

Base the decision to treat on disease severity and progression, age, underlying medical conditions, likelihood of influenza, and time since onset of symptoms. Early treatment is indicated for some patients. Ideally start within 48 hours of onset of symptoms. It might still be beneficial in hospitalised patients or patients with severe, complicated or progressive illness when started after 48 hours of onset.

People with high risks for influenza complications (see above) as well as people who are morbidly obese (BMI ≥ 40) should trigger a decision to treat rather than delay treatment. Do not wait for laboratory confirmation of influenza infection. Use clinical judgement.

Influenza patients may be infectious from a few days before symptoms to about 5-7 days after onset. Young children and adults with severe disease may shed for > 10 days. Severely immunocompromised persons can shed for weeks to months.

Influenza is an important potential cause of community acquired pneumonia (CAP). During influenza season 20-40% of all people hospitalised for pneumonia can be caused by influenza.

Treat with neuraminidase inhibitors (oral oseltamivir (Tamiflu) and inhaled zanamivir (Relenza) are two options). This class of medication has activity against both influenza A and B. Do not use adamantanes (e.g. amantadine and rimantadine) due to high levels of resistance.

Routine antiviral chemoprophylaxis is NOT recommended by the WHO. In some high risk individuals (e.g. transplant patients or severe immunosuppression) post-exposure antiviral treatment may be of benefit.

Laboratory testing of uncomplicated illness is NOT routinely recommended. When indicated, request a molecular test (PCR) on combined nasopharyngeal and oropharyngeal swabs in viral/universal transport medium. Rapid point-of-care tests frequently lead to false negative results and is not recommended. A negative rapid point-of-care test should not preclude starting empiric antiviral treatment.

Recommended dosages of influenza antiviral agents for treatment

| Age Group | Oseltamivir dosage * | Zanamivir dosage* |
|---|---|---|
| Adults | 75 mg twice per day | Two 5 mg inhalations (10 mg total) twice per day |
| Neonates < 38 weeks postmenstrual age 38-40 weeks postmenstrual age | 1mg/kg twice per day 1.5 mg/kg twice per day | |
| Neonates and infants (1 day [§] – 12 months) | 3 mg/kg twice a day | |
| Children | | Two 5 mg inhalations (10 mg total) twice a day (only in children ≥ 7 yrs) |
| ≤ 15 kg | 30 mg twice a day | |
| > 15 -23 kg | 45 mg twice a day | |
| > 23 – 40 kg | 60 mg twice a day | |
| > 40 kg | 75 mg twice a day | |

* Recommended duration of treatment is 5 days. Zanamivir is recommended for children ≥ 7 years of age.

§ US FDA approves > 14 days old; experts agree should be used from 1 day old

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