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சுகாதாரம் மற்றும் சுதேச வைத்திய அமைச்சு
Ministry of Health & Indigenous Medicine

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Revised Summary Guidelines for Clinical Management and Laboratory Investigation of Patients with Seasonal Influenza Virus Infection

Influenza A viral strains A(H1N1)pdm09 and A(H3N2) and Influenza B have been identified as circulating influenza virus strains causing seasonal influenza infections presently in the country. Seasonal influenza presents usually with a flu-like illness which is self limiting. However in a small percentage of patients this infection may result in severe outcomes.

This guideline is aimed to direct case management principles for patients with seasonal influenza infection and it highlights salient points on policies for hospital admission, antiviral therapy, laboratory investigation and chemoprophylaxis for seasonal influenza patients. It also summarizes the infection control guidelines.

All patients attending hospitals with signs and symptoms of influenza should be screened to assess the severity of their illness. A system most suitable and practical for an individual institution should be in place in the Out Patient Departments in government and private hospitals so that persons with symptoms/signs of Influenza infection could be directed to a counter/room where they would be assessed to decide on the course of management (if he/she would be admitted).

1. Only patients with severe or progressive symptoms should be admitted to hospitals for laboratory confirmation of diagnosis and/or treatment with anti virals.
2. Those with mild illness should be managed as out-patients with supportive symptomatic treatment and advice.

Case definition to be used:

An Individual presenting with acute febrile illness (fever ≥ 38 °C) with the spectrum of respiratory symptoms ranging from influenza-like illness (cough, sore throat, rhinorrhoea) to pneumonia

Persons at High Risk to develop Severe Disease

Those <2 years and >65 years old, pregnant women, those with chronic lung, heart (excluding hypertension), metabolic, renal, liver or neurological disease and immunosuppressed patients

Hospital Admission

1. Patients that do not belong to high risk groups with uncomplicated illness (i.e. those with fever, cough, sore throat, runny nose, headache, muscle pain and malaise but **NO** shortness of breath or difficulty in breathing), could be directed for home care with supportive therapy and health

education advice. **Please note that Oseltamivir should not be prescribed for patients who are eligible for OPD care.**

2. Patients with symptoms and signs of severe/complicated or progressive illness (i.e. those with shortness of breath or difficulty in breathing with respiratory rate >25/mt, measured hypoxia with oxygen saturation <92% on room air, clinical or radiological signs of pneumonia, CNS involvement, severe dehydration, signs of other organ failure, worsening of underlying chronic disease conditions should be **immediately** admitted to hospitals to consider **immediate** initiation of antiviral treatment.
3. Patients in high risk groups presenting with symptoms and signs of **severe/complicated or progressive illness** should be **immediately** admitted to hospitals to initiate treatment with anti virals.
4. **All pregnant mothers with suspected influenza should be referred to a center with specialist care for assessment and management.**
5. **Those in other high risk groups with uncomplicated illness should be carefully assessed for admission and anti viral therapy.**
6. Patients in high risk groups with uncomplicated illness could be directed for home care after thorough assessment with supportive therapy and health education advice with instructions on a **compulsory follow up visit within 48 hours even in the absence of worsening of the disease.**
7. All patients should be instructed to seek medical attention if they develop any signs or symptoms of progressive disease or if they fail to improve within 72 hours of the onset of symptoms after taking treatment.

Anti Viral Therapy

1. **Chemoprophylaxis with Oseltamivir is NOT INDICATED for seasonal influenza.**
2. Anti viral therapy should be limited for patients admitted to hospitals. Immediate initiation of Anti viral therapy with the anti viral agent Oseltamivir should be considered for all admitted patients with severe disease. This decision should be taken by the treating physician on his/her clinical judgment.
3. Treatment for indicated patients should be started as soon as possible without waiting for lab investigations.
4. Influenza diagnostic testing should not delay antiviral treatment.
5. Please note that indiscriminate use of Oseltamivir may result in development of drug resistance.

Treatment Recommendations.

For Adolescents over 13 years of age and Adults: **Oseltamivir 75mg twice a day for 5 day**

For children over 1 year of age to 12 years of age: **Oseltamivir to be given twice a day for 5 days, dosage based on child's weight.**

≤ 15 kg	→	30 mg twice daily
15 - 23 kg	→	45 mg twice daily
24 - 40 kg	→	60 mg twice daily
> 40 kg	→	75 mg twice daily

In patients with severe or progressive illness not responding to normal treatment regimens, higher doses of oseltamivir and longer duration of treatment may be appropriate. In adults, doses up to 150 mg twice daily for 10 days could be used.

Guidance for Laboratory Diagnosis for Confirmation of Cases

1. Diagnostic samples should be collected on clinical judgment from admitted patients only
2. All diagnostic samples should include a detailed clinical history indicating the justification for doing the investigation in the special request form developed by the MRI for this purpose (attached).
3. Samples received would be screened at the MRI and those prioritized on the given clinical history would be processed depending on the availability of logistics.
4. For all requests from private hospitals a special authorization from the head of the institution or a similar authorizing officer will be required by the MRI.

5. **MRI would be open to receive specimens for 24 hours.**

6. Patients presenting to the General Practitioners who may require laboratory investigations and/or treatment should be directed to a government or a private hospital where these facilities are available.

Samples to be taken:

1. A combination of a nasal swab from both nostrils and a deep throat swab and/or nasopharyngeal aspirate should be taken from a patient
2. A bronchoalveolar aspirate is preferable from patients with pneumonia
3. Sample should be kept in Viral Transport medium (VTM), properly labeled and packed in ice to be transported with the request form to MRI within 24 hours.
4. Viral transport media could be obtained from the MRI.

Special considerations in care of pregnant mothers are as follows:

Protection against infection

- a. Pregnant women who have no symptoms of influenza should be educated on early clinical manifestations of Influenza Virus Infection (fever along with cough, sore throat, rhinorrhea, headache, muscle pain and malaise).
- b. They should avoid unnecessary travel, crowded public places and public transport as much as possible.
- c. They should be advised to stay at home and to practise cough and sneeze etiquette (covering mouth and nose when coughing or sneezing) or wear a mask (at least a home-made mask) if they have fever and flu-like symptoms.
- d. Pregnant women and new mothers should avoid providing care for persons with influenza-like illnesses except for their own infants.
- e. Antenatal clinic visits should be reduced to the minimum required and women with low-risk pregnancies should be advised to postpone clinic visits in early pregnancy.
- f. Preventive measures to avoid transmission of infection should be taken by health care workers when attending to pregnant women
- g. Care for symptomatic pregnant women (with fever and flu-like symptoms) should be organized in a separate area in the clinic or OPD whenever possible.

Seeking medical care

- a. Pregnant mothers should consult a qualified physician (either in government or private sector) immediately if they have flu-like symptoms and need to be carefully assessed for admission.
- b. All pregnant mothers presenting with flu like symptoms should be referred to a specialist for further assessment and management.**
- c. Pregnant mothers should be admitted to a hospital for specialized care, if they present with features of complicated influenza or progressive disease (i.e. manifestations of cardio-respiratory distress (e.g. shortness of breath either during mild physical activity or while resting/dyspnoea, tachypnoea, hypoxia, low blood pressure), radiological signs of lower respiratory tract disease (e.g. pneumonia), central nervous system involvement (e.g. altered mental status, unconsciousness, drowsiness, recurring or persistent convulsions, confusion, severe weakness or paralysis), severe dehydration, presenting with high fever **even on day 01** and worsening of cough or shortness of breath)
- d. A compulsory follow up visit in 2-3 days time should be arranged even in the absence of worsening of the disease

Medical Officers of Health and other health care workers involved in provision of care to pregnant mothers should highlight Influenza illness in all health education activities and especially in routine antenatal clinics.

Public Health Midwives and other field health officials should refer any pregnant mother with fever and flu-like symptoms for proper medical care without delay.

All pregnant mothers should be admitted to the hospital, if they develop any signs or symptoms of progressive disease or danger signs or if they fail to improve within 48 hours of the onset of symptoms.

Management in the hospital

- a. Provide a disposable/surgical face mask to the patient
- b. Ask her to practise hand hygiene
- c. Isolation/cohorting - Care for symptomatic patients should be organized in a separate area of the antenatal ward whenever possible
- d. Consultant or the clinician of the highest rank (Senior Registrar/Registrar/SHO) should be informed immediately on admission
- e. Institutions managing pregnant women should request adequate stocks of Oseltamivir and consider transferring the patients if they need specialized care only. Most of the pregnant women can be managed if Oseltamivir is started early. When indicated Oseltamivir should be started without waiting for laboratory confirmation
- f. It should be arranged to make Oseltamivir available within the hospital and/or obstetric and gynaecological wards
- g. The antiviral drug is categorized as Class C and is considered safe for use even in the first trimester
- h. Non-Steroidal Anti Inflammatory Drugs (NSAIDs) should be avoided

Labour

- a. Organize separate areas for labour and delivery for these patients
- b. Provide routine intrapartum and postpartum care
- c. Provide appropriate interventions where indicated for specific complications related to childbirth, the postpartum/postnatal period or the newborn
- d. Tocolytics can be used as for any other obstetric case. However consider potential harms related to tachycardia, hypotension and other side effects
- e. Since there is a higher risk of fetal distress, discuss with anaesthesiologist the risks and benefits of vaginal delivery and caesarean delivery. Consider the risks of anaesthesia in a severely ill woman
- f. Reduce the length of stay in the postnatal ward to the minimum required by maternal and newborn condition

Newborn care

- a. Do not separate the baby from the mother even if the mother has seasonal influenza infection. Institute rooming-in.
- b. Mothers should wear a disposable/surgical face mask and practice hand hygiene before feeding or handling the baby
- c. Support mothers to initiate breastfeeding within one hour of giving birth and to breastfeed frequently and exclusively on demand. If mother is ill, she should be helped to express her breast milk and feed it to the infant. ***(Treatment with antivirals to a lactating mother is not a contraindication for breastfeeding)***
- d. Newborns of infected mothers should be observed for development of infection.
- e. Mothers who are breast feeding may continue breastfeeding while ill and receiving oseltamivir.
- f. Newborn infants are unlikely to have typical influenza signs. Influenza or its complications in newborn infants may begin with less typical signs such as apnoea, fever, fast breathing, cyanosis, excessive sleeping, lethargy, feeding poorly and dehydration. Newborn infants with severe or deteriorating illness and those at risk of more severe or complicated illness should promptly be treated with antiviral drugs

Maternal Deaths following Seasonal Influenza Infection - please see end of document

Infection Control and Waste Management

1. Practice respiratory hygiene and hand hygiene at all times.
2. Practice cohorting of patients with suspected or confirmed influenza infection together at all possible times.
3. Apply Standard and Droplet precautions appropriately on triaging, transporting or managing patients
4. **Limit use of N95 masks only for aerosol-generating procedures** which include aspiration of respiratory tract, intubation, resuscitation, bronchoscopy and autopsy using power saws.
5. Routine waste disposal procedures should be properly adhered to on disposal of contaminated items and sharps.
6. Proper and routine infection control practices and procedures should be strictly followed for cleaning of patient care equipment, environment cleaning, linen and utensils and waste disposal.
7. Contact closest Infection Control Unit/Consultant Microbiologist for further clarifications

Standard Precautions

- Hand hygiene*
- Respiratory hygiene and cough etiquette**
- Use of appropriate personal protective equipment (PPE)
- Prevention of needle sticks/sharps injuries
- Cleaning and disinfection of the environment and equipment

*Hand hygiene

To be applied before and after any direct contact with a patient or inanimate objects in the immediate vicinity of the patient, after applying PPE, before handling an invasive device, after touching blood or body secretions or contaminated items

- Wash hands with soap and water
- Wash hands with soap and **running** water when hands are visibly dirty
- Use alcohol-based hand rubs if available and if hands are not visibly dirty

** Respiratory hygiene and cough etiquette

- Covering mouth and nose when coughing or sneezing with tissue or handkerchief
- Or covering mouth and nose when coughing or sneezing by lifting arm up and covering the nose and mouth with the inner surface of the arm or forearm
- Disposal of the tissues and masks in no-touch receptacles
- Hand hygiene after contact with respiratory secretions

Droplet Precautions

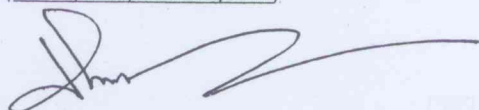
In addition to Standard Precautions:

- Encourage patient to wear a face mask
- Use a face mask during examination and direct patient care (when within <1m distance)
- Place patient in isolation or cohort with similar patients

In the Event of a Death from Suspected or Confirmed seasonal Influenza A infection

1. In the event of an influenza associated death, notify immediately to Epidemiology unit by telephone, fax or email. If it is a maternal death, notification should be sent without delay to the Family Health Bureau as well.
2. A post-mortem (preferably by a Consultant JMO) is mandatory in all maternal deaths as per the previous circulars issued by the DGHS.
3. Standard precautions should be used when handling deceased individuals from suspected or confirmed seasonal influenza infection and when preparing bodies for autopsy or transfer to mortuary services.
4. It is advised that proper hand washing with soap and water is done when direct contact with the body occur during funeral proceedings.
5. Please note that there is no indication for sealing off coffins or withholding dead bodies without release.

This document is available on official websites of Epidemiology Unit (www.epid.gov.lk) and Family Health Bureau (www.familyhealth.gov.lk)



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3rd June 2015

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