

දුරකථන) 2698475
தொலைபேசி) 2698490
Telephone) 2698507

ෆැක්ස්) 2692913
பெக்ஸ்) 2694860
Fax)

විද්‍යුත් තැපෑල)
மின்னஞ்சல் முகவரி) postmaster@health.gov.lk
e-mail)

වෙබ් අඩවිය)
இணையத்தளம்) www.health.gov.lk
website)



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சுகாதார பராமரிப்பு மற்றும் போசணை அமைச்சு
Ministry of Healthcare & Nutrition

General Circular No : 01-37/2009

Interim Guidelines for Clinical Management and Laboratory Investigation of Patients with Pandemic Influenza A (H1N1) 2009 Virus Infection in a Setting with Sustained Community Transmission

Taking into consideration the existence of community transmission of Pandemic Influenza A (H1N1) Virus Infection in the country, following new key strategies have been adopted to achieve the objective of minimizing the impact of the disease:

- All patients attending hospitals with suspected H1N1 influenza will be screened to assess the severity of their illness and only patients with severe or progressive symptoms will be admitted to hospitals for laboratory confirmation of diagnosis and treatment with anti virals.**
- Those with mild illness would be managed as out-patients with supportive symptomatic treatment and advice.**
- Medical Research Institute (MRI) will continue to process the samples for laboratory diagnosis at the requests of physicians attending to hospitalized patients.**

Case definitions

With the onset of sustained community transmission in the country, a suspected H1N1 Influenza case could present without epidemiological risk factors of overseas travel history and contact history.

Thus following case definitions must be adhered to in management and reporting of cases in future.

Suspected case:

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

Probable case:

An individual with an influenza test that is positive for influenza A, but is unsubtypeable by reagents used to detect seasonal influenza virus infection.

Confirmed case:

An individual with laboratory confirmed pandemic influenza A(H1N1) 2009 virus infection by one or more of the following tests:

- real-time (RT) PCR
- viral culture
- four-fold rise in pandemic influenza A(H1N1) 2009 virus specific neutralizing antibodies.

Patients with H1N1 infection may present with symptoms and signs of uncomplicated illness or complicated or severe disease or with those of progressive disease.

Uncomplicated influenza

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

Complicated or severe influenza

May present with:

- Clinical (e.g. shortness of breath/dyspnoea, tachypnea, hypoxia) and/or radiological signs of lower respiratory tract disease (e.g. pneumonia)
- Central nervous system (CNS) involvement (e.g. encephalopathy, encephalitis)
- Severe dehydration
- Signs of secondary complications such as renal failure, multiorgan failure and septic shock. Other complications can include rhabdomyolysis and myocarditis.
- Exacerbation of underlying chronic disease, including asthma, COPD, chronic hepatic or renal failure, diabetes, or other cardiovascular conditions
- Any other clinical presentation requiring hospital admission for clinical management

Signs and symptoms of progressive disease

Patients who present initially with uncomplicated influenza may progress to more severe disease. Progression can be rapid (i.e. within 24 hours). The presence of any of the indicators of progression listed below would necessitate urgent action.

- Symptoms and signs suggesting oxygen impairment or cardiopulmonary insufficiency
Shortness of breath (with activity or at rest), difficulty in breathing, cyanosis, haemoptysis, chest pain and reduced blood pressure
Fast/rapid or laboured breathing in children
Hypoxia, as indicated by pulse oximetry
- Symptoms and signs suggesting CNS complications
Altered mental status, unconsciousness, drowsiness, 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 3 days).
- Severe dehydration manifested as decreased activity, dizziness, decreased urine output, and lethargy

Following danger signs should also be considered:

In Adults

- Severe or persistent vomiting
- Pain or pressure in the chest or abdomen
- Sudden dizziness
- Symptoms improving to return with fever and worse cough

In Children

- Reduced fluid intake
- Severe or persistent vomiting
- Irritability
- Symptoms improving to return with fever and worse cough

Decision for clinical management of H1N1 patients attending healthcare facilities should be based on their clinical presentation and should be as follows:

- 1. Patients with uncomplicated illness could be directed for home care with supportive therapy and health education advice**
- 2. Patients in high risk groups (listed below) with uncomplicated illness could be directed for home care with supportive therapy and health education advice with instructions on a mandatory follow up visit**
- 3. Patients with complicated illness or those with progressive disease should be directed for admission**

High Risk Groups

The following groups are considered to be at higher risk for complications of H1N1 infection and therefore regardless of their clinical presentation they need to be assessed carefully by the treating physician with a view of hospitalization and in ward treatment.

- People with more severe illness e.g. evidence of lower respiratory tract infection
- Those with suspected influenza and deteriorating clinical condition
- People with suspected or confirmed influenza who are at higher risk for complications
 - Children younger than 2 years old
 - Adults 65 years and older
 - Pregnant women
 - Persons of any age with chronic pulmonary disease (e.g asthma, COPD)
 - Persons of any age with chronic cardiac disease (excluding hypertension)(e.g. congestive cardiac failure)
 - Persons with metabolic disorders (e.g. diabetes)
 - Persons with chronic renal disease, chronic hepatic disease, certain neurological conditions (including neuromuscular, neurocognitive, and seizure disorders) or, hemoglobinopathies
 - Persons with immunosuppression, whether due to primary immunosuppressive conditions such as HIV infection or secondary conditions such as immunosuppressive medication or malignancy

- People younger than 19 years of age who are receiving long-term aspirin therapy

All patients should be instructed to seek medical attention immediately, if they develop any signs or symptoms of progressive disease or danger signs listed above or if they fail to improve within 72 hours of the onset of symptoms.

1. Measures to be taken at the Out-Patient Department (OPD) of a Government or Private Hospital

As the infection spreading in the community widely, there may be a large influx of patients to hospitals and therefore hospital authorities should be geared to handle this situation. 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 suggestive of Pandemic Influenza A/H1N1 2009 infection could be directed to special counters/rooms where medical officer/s with appropriate infection control measures would assess them to decide on the course of management (if he/she would be admitted).

- Provide a disposable/surgical face mask to the patient
- Provide necessary medical attention and assess the patient carefully and to decide on the course of management

If the patient has uncomplicated disease and can be managed as an outpatient according to management criteria listed in page 3:

- Provide him/her with necessary supportive therapy and medication (eg antipyretics, antihistamines, rehydration etc) before sending home
- Aspirin or aspirin-containing products should not be administered to young patients due to the risk of Reye syndrome. Non Steroidal Anti Inflammatory Drugs (NSAIDs) should also be avoided. For relief of fever, other anti-pyretic medications such as paracetamol are recommended.
- Advise the patient to stay away from work/school/crowded places and to take bed rest, plenty of liquids, good diet and seek medical attention immediately if symptoms worsen or any of the danger signs develop or if they fail to improve within 72 hours of the onset of symptoms
- Advise the patient to avoid contact with others and also to limit the movements of his/her family members who would be his/her close contacts
- Patients should be advised to stay home for at least 24 hours after the fever has subsided without the use of antipyretic medicine.

If the patient belongs to one of the high risk groups listed above:

- Follow the above steps of action
- Instruct him/her to make a compulsory follow up visit in 3 days time even in the absence of worsening of the disease

If the patient has severe/complicated disease that requires admission:

- If the present institution is not a sentinel hospital identified under the Pandemic Influenza Preparedness Programme (Annex I) or a hospital at or above Base Hospital level which stocks the specified anti viral drug, oseltamivir, the patient needs to be

transferred to one of those institutions for admission, isolation and clinical management. This should be done after obtaining contact details of the patient. Apply necessary infection control measures during transport of the patient.

- The referring hospital should contact the hospital to which the patient is being directed to and alert on his/her arrival there
- If the present institution is a sentinel hospital or a hospital which stocks oseltamivir, the patient should be managed in its own isolation ward. Attending clinicians may decide on anti viral therapy/laboratory investigations for the patient based on the severity of the illness, his/her clinical judgment and given guidelines.

2. Measures to be taken at a General Practitioner's (GP) Setting/ Specialist in Private Sector

If a patient presents to a GP/Specialist in the private sector the following actions should be taken. The same assessment criteria listed above would apply here as well.

- Provide a disposable/surgical face mask to the patient
- Assess the patient carefully to decide on the course of management

If the patient has uncomplicated disease and can be managed as an outpatient according to management criteria listed in page 3:

- provide him/her with necessary supportive therapy and medication (eg antipyretics, anti histamines, rehydration etc) before sending home
- Aspirin or aspirin-containing products should not be administered to young patients due to the risk of Reye syndrome. Non steroidal anti inflammatory drugs (NSAIDs) should also be avoided. For relief of fever, other anti-pyretic medications such as paracetamol are recommended.
- Give necessary advice to the patient to stay away from work/school/crowded places and to take bed rest, plenty of liquids, good diet and seek medical attention if symptoms worsen or any of the above mentioned danger signs develop or if they fail to improve within 72 hours of the onset of symptoms
- Give necessary advise to the patient to avoid contact with others and also to limit the movements of his/her family members who would be his/her close contacts
- Patients should be advised to stay home for at least 24 hours after the fever has subsided without the use of anti pyretic medicine.

If the patient belongs to one of the high risk groups listed above:

- Follow the above steps of action
- Instruct him/her to make a compulsory follow up visit in 3 days time even in the absence of worsening of the disease

If the patient has severe/complicated disease that requires admission:

- The patient could be managed in a private hospital where treatment facilities are available or he/she could be directed to the closest sentinel hospital or a hospital which stocks oseltamivir for clinical management
- The GP/Specialist should contact the hospital to which the patient is being directed to and alert on his/her arrival there

3. Management of cases in hospital setting

Anti Viral Therapy

This disease is known to be mostly self limiting and most patients ill with this disease will recover without complications and do not need antiviral medications for treatment. However, it may progress to more severe disease in some people and this progression can be rapid (i.e. within 24 hours). All patients with severe/complicated disease or signs of progression of the disease should be treated with the anti viral oseltamivir. Treatment should be initiated as soon as possible. Under no circumstances should influenza diagnostic testing delay antiviral treatment. Those in high risk groups with uncomplicated disease should be carefully followed up for worsening of disease.

Clinicians should harbor high degree of suspicion for patients with varying clinical presentations which may be pandemic H1N1 2009 influenza and initiate antiviral therapy empirically. Treatment may be discontinued if the laboratory tests become negative.

The recommended antiviral Oseltamivir is available mainly through identified sentinel hospitals under the Pandemic Influenza Preparedness Programme (Annex I), other government hospitals at or above Base Hospital level and also in the private sector in a limited capacity. Anti viral therapy should be essentially limited for hospitalized patients.

Treatment Recommendations

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

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

For children less than 1 year of age:

Newborns and very young children often present with less typical ILI symptoms, such as apnoea, low grade fever, fast breathing, cyanosis, excessive sleeping, lethargy, feeding poorly, and dehydration. Diagnosis based on these non specific signs alone may be difficult. Clinicians should exercise a high index of suspicion during H1N1 2009 influenza outbreak and should be aware of occurrence of ILI in contacts of the child to assist diagnosis and to avoid delay in antiviral treatment.

To be given for 5 days with dosage based on body weight:

>3 months of age to 12 months	–	3mg/kg twice daily
3 months to 1 month of age	-	2.5mg/kg twice daily
<1 month of age*	–	2mg/kg twice daily

(* No data is available on administration of oseltamivir to this age group)

Pregnant Women and Breast Feeding Mothers

Pregnant women, especially those with co-morbidities, are at increased risk for complications from H1N1 2009 influenza virus infection. Influenza in pregnancy is associated with an increased risk of adverse pregnancy outcomes, such as spontaneous abortion, preterm birth, and fetal distress. Consequently, pregnant women with suspected or confirmed pandemic (H1N1) 2009 virus infection should be closely observed to initiate early antiviral treatment.

Mothers who are breast feeding may continue breastfeeding while ill and receiving oseltamivir.

Adverse effects of Oseltamivir

This drug is usually well tolerated. Reported adverse effects are as follows:

- Nausea and vomiting
- Transient neuropsychiatric events (self-injury or delirium). It is advisable that persons receiving oseltamivir be monitored closely for abnormal behavior.
- Oseltamivir suspension is formulated with sorbitol, which may be associated with diarrhea and abdominal pain in patients who are fructose-intolerant.
- Allergic reactions (rash, swelling of the face or tongue, anaphylaxis)

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.

Caution should be exercised when considering higher doses of oseltamivir in patients with renal impairment and in pregnancy.

Note: Patients may have co-infection with bacterial pathogens or other respiratory viruses. Therefore, investigations and/or empiric therapy for other pathogens should also be considered. A decision to treat an influenza patient with antiviral medication should not preclude consideration of other infections and their treatment, especially those endemic febrile diseases with similar presentations (e.g. dengue, malaria).

Antibiotic Therapy

Current recommendations in antibiotic therapy for community-acquired pneumonia should be followed for suspected bacterial co-infection in pandemic influenza A (H1N1) patients. Results of microbiological studies, if possible, would be useful to guide antibiotic usage since there could be an increased risk of secondary *Staphylococcus aureus* or *pneumococcus* infections which may be severe, rapidly progressive, necrotizing, and in some occasions, caused by methicillin-resistant strains. Health care-associated respiratory infections may also result during invasive ventilation and therefore antibiotic treatment should be an important part of case management.

Oxygen Therapy

Oxygen saturation should be monitored in hospitalized patients by pulse oximetry, whenever possible. Supplemental oxygen should be provided to correct hypoxaemia. For pneumonia maintaining oxygen saturations above 90% is recommended. This threshold may be increased to 92–95% in some clinical situations such as during pregnancy.

Adjunctive pharmacologic therapy

High dose systemic corticosteroids and other adjunctive therapies for viral pneumonitis are not recommended for use. Low doses of corticosteroids may be considered for patients in septic shock who require vasopressors. Generally, corticosteroids should be avoided unless indicated for another reason.

Infection Control and Waste Management

The mainstay of infection control in management of patients with pandemic H1N1 infection is as follows:

1. Avoid crowding patients together and maintain a minimum distance of ≥ 1 metre between patients
2. Promote respiratory etiquette and hand hygiene by providing necessary supplies
3. Apply Standard and Droplet precautions at all times on triaging, transporting or managing H1N1 patients
4. Consider special arrangements for vulnerable groups at high risk for complications

Standard Precautions

Hand hygiene

Respiratory hygiene and cough etiquette

Use of personal protective equipment (PPE)

Prevention of needle sticks/sharps injuries

Cleaning and disinfection of the environment and equipment

Droplet Precautions

In addition to Standard Precautions:

Use a medical mask when < 1 m of patient

Maintain a distance ≥ 1 meter between infectious patient and others

Place patient in a single room or cohort with similar patients

Limit patient movement

Following guidance should be used for indicated instances:

1. When working in direct contact with patients:

Droplet Precautions:

- Wear a medical mask, if working within or > 1 metre of the patient.
- Wash hands well with soap and water before and after patient contact, and immediately after removal of mask.

Standard Precautions:

For procedures with a risk for splashes onto the face and body use the following PPE:

- facial protection (either a medical mask and eye-visor or goggles, or a face shield)
- a gown and clean gloves
- hand hygiene before and after patient contact and after PPE removal

2. When performing aerosol-generating procedures

These include aspiration of respiratory tract, intubation, resuscitation, bronchoscopy and autopsy and health-care providers should be aware that they have been associated with increased risk of infection transmission and infection control precautions should include the following:

- wear a N95 mask, eye protection (i.e. goggles or a face shield), a clean, non-sterile, long-sleeved gown and gloves (some of these procedures require sterile gloves)
- perform procedures in an adequately ventilated room
- limit entry of unnecessary personnel into the room
- perform hand hygiene before and after patient contact and after PPE removal.

3. Collection of laboratory specimens

- use face protection (either a medical mask and eye-visor or goggles or a face shield)
- wear a gown and clean gloves
- perform hand hygiene before and after patient contact and immediately after removal of PPE

4. Placement of suspected and confirmed pandemic (H1N1) 2009 infected patients

- Cohort patients with the same diagnosis together keeping at least 1 metre distance between beds
- All persons entering the isolation area should adhere to Standard and Droplet Precautions
- Limit the number of health-care workers/family members/visitors exposed to the pandemic (H1N1) 2009 patient
- Implement rooming-in policies to keep mothers and babies together

5. Specimen transport/handling within health-care facilities

- Use Standard Precautions for specimen transport to the laboratory

6. Family member/visitor recommendations

- Family members/visitors should be limited to those essential for patient support and they should use the same infection control precautions as health-care workers

7. Patient transport within health-care facilities

- Suspected or confirmed pandemic (H1N1) 2009 patients should wear a medical mask and practice appropriate hand hygiene while being transported within health-care facilities
- Healthcare workers should use infection control precautions similar to those practiced during hospital care when transporting patients to hospital

8. Occupational health

- Health-care workers with symptoms should stay at home
- Vulnerable groups at high risk for complications of pandemic (H1N1) 2009 infection should carefully follow recommended infection-control measures. In addition, alternatives such as reassignment to other duties should be considered.

- Antiviral prophylaxis should follow local policy
- 9. Waste disposal**
- Standard Precautions should be used when handling and disposing of sharps and contaminated items.
- 10. Dishes/eating utensils**
- Wash using routine procedures with water and detergent. Use non-sterile rubber gloves.
- 11. Linen and laundry**
- Wash using routine procedure with water and usual detergent
 - avoid shaking linen/laundry during handling before washing
 - Wear non-sterile rubber gloves
- 12. Environmental cleaning**
- Ensure that appropriate and regular cleaning is performed with water and usual detergent on soiled and/or frequently touched surfaces (e.g. door handles).
- 13. Patient care equipment**
- Ensure cleaning and disinfection of reusable equipment between patients using routine disinfectants
- 14. Duration of pandemic (H1N1) 2009 infection control precautions**
- Infection control precautions should be practiced for seven days from the onset of symptoms or 24 hours after the resolution of fever and respiratory symptoms, whichever is longer, while the patient is in hospital
 - For prolonged illness with complications (i.e. pneumonia), control measures should be used during the duration of acute illness.
 - Children may shed the virus longer than adults and personal hygiene and separation from immunologically naive family members is recommended for at least one week after the resolution of fever.
 - Special attention is needed in caring for immunosuppressed patients who may shed virus for a longer time period and are also at increased risk for development of antiviral-resistant virus
- 15. Infection control on Patient discharge**
- If the pandemic (H1N1) 2009 patient is discharged before 7 days from onset of illness he/she may still be infectious and instruct family members on appropriate infection control precautions at home
- 16. Prioritization of PPE when supplies are limited**
- Medical masks and hand hygiene supplies should be prioritized for the care of all pandemic (H1N1) 2009 patients

Further details on infection control and waste disposal are specified in the circulars earlier issued on Avian Influenza Preparedness, Gen. Circular No.02-164/2005 'Guidelines for the Preparedness and Response to an Avian Influenza Pandemic Threat' dated 30/11/2005 and

Gen. Circular No.01-19/2006 'Joint Circular on Guidelines on Collection and Transport of Specimens' dated 15/03/2006 (available at <http://www.epid.gov.lk/Disease%20Situations.htm>).

Patient Discharge Policy

Patients managed in hospitals with antiviral therapy could be discharged after completion of 4 days of treatment if he/she has clinically recovered. Decision on discharging those with severe disease should be taken by the treating physicians based on their clinical judgment.

In the Event of a Death from Influenza A/H1N1

- **Handling and Transport of Deceased Persons** - Standard precautions listed above should be used when handling deceased individuals from this infection and preparing bodies for autopsy or transfer to mortuary services. These should include appropriate use of personal protective equipment (PPE)* (e.g., gowns, gloves, masks, and/or eye protection). Gloves and masks should be worn. Gowns and eye or face protection are required if there is a risk of contact with body fluids or splash incidents. Used PPE should be removed just before leaving the room and should be discarded into a non-biohazard waste bin. Hands should be washed with soap and water after leaving the room. Discarded waste should be disinfected/disposed of safely according to routine procedures. Normal disinfectants routinely applied should be used to clean equipments and surfaces that may have been contaminated. This should be done as quickly as possible. All areas 'high-touch' areas e.g. door knobs should be cleaned with normally used disinfectants regularly.

Transport of deceased persons does not require any additional precautions if bodies have been secured in a transport bag. Hand hygiene should be performed after completing transport.

- **Family Contact with the Deceased in Health Care Settings** - Contact with the body in the hospital should be limited to close family members. Direct contact with the body is discouraged; however, necessary contact may occur as long as hands are washed immediately with soap and water.
- **Family Contact with the Deceased at Funeral Houses** - Contact with the body at home or at funeral parlour should be limited to close family members. Direct contact with the body is discouraged; however, necessary contact may occur as long as hands are washed immediately with soap and water.
- **Autopsy Procedures** - Standard Precautions should be used and safety procedures for human remains infected with pandemic influenza virus should be consistent with those used for any autopsy procedure. However, additional respiratory protection is needed during an autopsy procedure that generates aerosols (e.g., use of oscillating saws). It is prudent to minimize the number of personnel participating in post mortem examinations.

***Personal protective equipment (PPE) for Autopsy Procedures**

Wear standard autopsy PPE, including a scrub suit worn under an impermeable gown or apron, eye protection (e.g. goggles, face shield), double surgical gloves preferably with an interposed layer of cut-proof synthetic mesh gloves, surgical mask and shoe covers.

Add respiratory protection if aerosols might be generated. This includes N-95 or N-100 disposable particulate respirators or powered air purifying respirator (PAPR). Autopsy personnel who cannot wear a disposable particulate respirator because of facial hair or other fit limitations should wear a loose-fitting (e.g. helmeted or hooded) PAPR. Remove PPE before leaving the autopsy room and dispose in accordance with facility policies and procedures.

4. Management of Contacts and Chemoprophylaxis with Antivirals

For antiviral chemoprophylaxis of pandemic (H1N1) influenza virus infection, oseltamivir is recommended. The duration of antiviral chemoprophylaxis *post-exposure* is 10 days after the last known exposure to pandemic (H1N1) influenza.

Antiviral chemoprophylaxis with oseltamivir can be considered for health care personnel or public health workers who have had a recognized, unprotected close contact exposure to a person with pandemic (H1N1) influenza virus infection (confirmed, probable, or suspected) during that person's infectious period. The decision to initiate chemoprophylaxis should be taken by the treating clinician. Chemoprophylaxis generally is not recommended if more than 48 hours have elapsed since the last contact with an infectious person.

Patients given post-exposure chemoprophylaxis should be informed that the chemoprophylaxis lowers but does not eliminate the risk of influenza and that protection stops when the medication course is stopped. Patients receiving chemoprophylaxis should be encouraged to seek medical evaluation as soon as they develop a febrile respiratory illness that might indicate influenza.

Antiviral agents should not be used for post exposure chemoprophylaxis in healthy children or adults based on potential exposures in the community, school, camp or other settings.

Adult Dosage for Prophylaxis

Oseltamivir 75mg once daily for 10 days

Paediatric Dosage for Prophylaxis

To be given once daily for 10 days, based on child's weight:

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

5. Guidance for Laboratory Diagnosis for Confirmation of Cases

Facilities for testing for pandemic H1N1 influenza are only available at the Medical Research Institute (MRI). Since the resources for this activity is limited and MRI would only process a limited number of samples, strict criteria would apply on laboratory investigations.

- Samples should be collected **only from patients with severe symptoms who have been admitted. Samples from OPD patients MUST not be collected and they will NOT be processed by the MRI.**
- Appropriate laboratory specimens from these patients should be sent to Medical Research Institute (MRI) for laboratory diagnosis using the special request form developed by the MRI for this purpose.

(please refer guidelines and special request form for pandemic influenza on the Epidemiology Unit website <http://www.epid.gov.lk/pdf/Swine%20Flu/2009-06-22/MRI%20Guidelines%20for%20Sample%20Collection.pdf> and the general circular 01-19/2006 'Joint Circular on Guidelines on Collection and Transport of Specimens' dated 15/03/2006, available at <http://www.epid.gov.lk/Disease%20Situations.htm>)

- A detailed clinical history indicating the justification for the investigation should be included in the request. A special authorization from the head of the institution or an authorizing officer will be required by the MRI for all requests from private hospitals.
- MRI would be open to receive specimen for 24 hours. It would direct the test results within 24 hours to the respective hospital and to the Epidemiology Unit by telephone/fax.
- Patients presenting to the GPs who may require laboratory investigations should be directed to a government or private hospital where treatment facilities are available.
- For patients in the private sector who requires laboratory testing, initial screening through conventional PCR is strongly recommended (if facilities are available) before sending specimen to MRI for RT PCR.

Surveillance and Reporting

- ✓ All admitted cases should be notified using routine procedure to the relevant Medical Officer of Health by the treating clinicians
- ✓ These notifications would be handled as per routine procedure at the MOH office
- ✓ A weekly return on admitted patients should be completed by the Infection Control Nursing Officer (ICNO). This should include H1N1 patients admitted to the hospital from Saturday of the week to coming Friday. The return should be posted to the Epidemiology Unit by Saturday morning with a copy to the Regional Epidemiologist. The format for this is attached as Annex III.
- ✓ A Special Investigation Form should be completed for each admitted H1N1 patient by the ICNO and should be sent to the Epidemiology Unit. The format for this is attached as Annex IV.
- ✓ In the event of a death from H1N1 influenza, the treating clinicians/ICNO should inform the Epidemiology Unit and the Regional Epidemiologist (RE) promptly by telephone/fax/e mail. RE should inform the relevant MOH and they should handle the technical infection control matters pertaining to preparing the body and the funeral house personally.

Dr Ajith Mendis
Director General Health Services
Ministry of Health

Annex I

List of Hospitals selected as Sentinel Sites for Pandemic Influenza Preparedness

1. GH Ampara
2. GH Chilaw
3. GH Matara
4. GH Nuwara Eliya
5. GH Polonnaruwa
6. GH Vavunia
7. IDH
8. LRH
9. NHSL
10. NCTH
11. SJGH
12. TH Anuradhapura
13. TH Badulla
14. TH Batticaloa
15. TH Jaffna
16. TH Kalubowila
17. TH Karapitiya
18. TH Kurunegala
19. TH Peradeniya
20. TH Ratnapura

Annex II

Other Government Hospitals where Treatment Facilities are Available

1. AMH Kalmunai
2. BH Akkaraipattu
3. BH Kalmunai
4. BH Panadura
5. BH Wathupitiwala
6. GH Diyatalawa
7. GH Gampaha
8. GH Gampola
9. GH Hambantota
10. GH Kalutara
11. GH Mahiyangana
12. GH Matale
13. GH Moneragala
14. GH Nawalapitiya
15. SBMCH Peradeniya
16. TH Kandy



Epidemiology Unit

Ministry of Healthcare and Nutrition

231, De Saram Place, Colombo 10, Sri Lanka

Tele: (+94 11) 2695112, 4740490, 4740491, 4740492 2681548 Fax: (+94 11) 2696583 E-mail: chepid@sitnet.lk, epidunit@sitnet.lk Web: www.epid.gov.lk

Special Investigation Form on Pandemic H1N1 2009 Influenza

H1N1 ගෝලීය වසංගත ඉන්ෆ්ලුවන්සාව පිළිබඳ විශේෂ විමර්ශන පත්‍රිකාව

1. Name }
නම }

2. Age } □□ / □□
වයස } Y M

3. Sex } □ M / F
ස්ත්‍රී/පුරුෂ භාවය } ගැ/පී

4. Hospital }
රෝහල }

5. Ward } □□
වාට්ටුව }

6. BHT No }
ඇඳ ඉහපත් අංකය }

7. Occupation }
රැකියාව }

8. Date of onset of illness } □□/□□/□□
රෝගය පටන් ගත් දිනය } DD / MM / YY

9. Date of admission } □□/□□/□□
රෝහලට ඇතුළත් වූ දිනය } DD / MM / YY

10. Presenting complaints (please mark with a "✓")
රෝගියා පෙන්නුම් කරන රෝග ලක්ෂණ (කරුණාකර "✓" ලකුණ යොදන්න)

- | | | | |
|-----------------------------------|--------------------------|---|--------------------------|
| Fever / උණ | <input type="checkbox"/> | Difficulty in breathing / හුස්ම ගැනීමට අපහසුව | <input type="checkbox"/> |
| Muscle/body pains / ශරීරයේ වේදනාව | <input type="checkbox"/> | Cough / කැස්ස | <input type="checkbox"/> |
| Nausea/ ඔක්කාරය | <input type="checkbox"/> | Cold / සෙම්ප්‍රතිශ්‍යාව | <input type="checkbox"/> |
| Vomiting / වමනය | <input type="checkbox"/> | Sore throat / උගුරේ ආසාදන තත්වය | <input type="checkbox"/> |

11. Given Tamiflu ? } Yes / ඔව් No / නැත
රෝගියාට Tamiflu ලබා දුන්නේද ? }

12. If yes, when was it started ? } □□/□□/□□
එසේ දුන්නේ නම් එය මුලින් පටන් ගත් දිනය ? } DD / MM / YY

13. ICU care given ? } Yes / ඔව් No / නැත
දැඩි සත්කාර ඒකකයේ ප්‍රතිකාර සඳහා යොමු වූයේද ? }

14. RTPCR results (please mark with "✓") }
RTPCR පරීක්ෂණයේ ප්‍රතිඵලය තහවුරු වීද } Positive / තහවුරු විය
(කරුණාකර "✓" ලකුණ යොදන්න) } Negative / තහවුරු නොවීය

15. Presence of Risk Factors (please mark with "✓")
 අවදානම් තත්ව (කරුණාකර "✓" ලකුණ යොදන්න)

- Pregnancy / ගර්භනීභාවය
- Chronic Lung Disease / නිදන්ගත පනහළු රෝග
- Asthma / ඇදුම
- Diabetes / දියවැඩියාව
- Congestive Cardiac Failure / හෘද අකර්මන්‍යතාව
- Chronic Renal Disease / නිදන්ගත වකුගඩු රෝග
- Chronic Liver Disease / නිදන්ගත අක්මා රෝග
- Neurological Disease e.g. fits / ස්නායු ආබාධ උදා: වලිප්පුව
- HIV/AIDS / ඒඩ්ස්
- On long term immunosuppressives / ප්‍රතිශක්තිය අවම කරන ඖෂධ දිගු කලක් භාවිතය
- On long term aspirin / දිගු කාලයක් ඇස්ප්‍රින් භාවිතා කිරීම
- Other / වෙනත්

16. Outcome (please mark with "✓") } Recovered / සුවවූණා Died / මියගියා
 රෝගයේ ප්‍රතිඵලය (කරුණාකර "✓" ලකුණ යොදන්න)

17. If the patient has died please complete the following
 රෝගියා මියගොස් ඇත්නම් පහත විස්තර සම්පූර්ණ කරන්න

- (a) Date of death }
 මියගිය දිනය }
 - (b) Post Mortem done }
 මරණ පරීක්ෂණයක් සිදු කළේද }
 - (c) Cause of Death }
 මරණයට හේතුව }
 - (d) Major findings of the post mortem
 පශ්චාත් මරණ පරීක්ෂණයේ දී හඳුනා ගත් ප්‍රධාන කරුණු
- Lungs }
 පෙනහළු }
 - Heart }
 හදවත }
 - Liver }
 අක්මාව }
 - Kidney }
 වකුගඩු }
 - Brain }
 මොළය }
 - Other }
 වෙනත් }

This form should be completed for each suspected or confirmed H1N1 patient admitted to hospital for treatment and it should be completed by the infection control nursing officer.
 Once completed please send to the Epidemiology Unit.
 මෙම පත්‍රිකාව රෝහලට ඇතුළත් කර ප්‍රතිකාර කරනු ලබන සෑම රෝගියෙක් සඳහාම පිරවිය යුතු අතර එහි වගකීම ආසාදන පාලක හෙද නිලධාරීන් සතුයි. සම්පූර්ණ කළ විභාග වසංගත රෝග විද්‍යා අංශයට එවන්න.

