WEEKLY EPIDEMIOLOGICAL REPORT

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Ministry of Healthcare and Nutrition

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

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 diarrhoea 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 pneumoccocus* infections which may be severe, rapidly progressive, necrotizing, and in some instances, 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 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.

Further details on infection control and waste disposal are specified in Previous circulars 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.

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 (Part III)

In the Event of a Death from Influenza A/ H1N1

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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 equipment 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.

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

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 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 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.

Guidelines for Clinical Management and Laboratory Investigation of Patients with Pandemic Influenza A (H1N1) 2009, is available at the Epidemiology Unit website www.epid.gov.lk.

The editor wishes to thank Dr Wasu Jayasinghe at the Epidemiology Unit, Colombo for her contribution in preparing Pandemic Influenza A H1N1 guidelines.

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Table 1: Vaccine-preventable Diseases & AFP

24th - 30th October 2009 (44thWeek)

Disease	No. of Cases by Province									Number of cases during current week in 2009	Number of cases during same week in 2008	Total number of cases to date in 2009	Total number of cases to date in 2008	Difference between the number of cases to date in 2009 & 2008
	W	C	S	N	E	NW	NC	U	Sab					
Acute Flaccid Paralysis	01	01	00	00	00	01	01	00	00	04	03	61	86	-29.1%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	-
Measles	00	00	01	00	00	00	00	00	00	01	00	158	100	+58.0%
Tetanus	00	00	00	00	00	00	00	00	00	00	00	23	33	-30.3%
Whooping Cough	00	00	00	0	0	00	00	00	00	00	00	57	44	+29.5%
Tuberculosis	34	11	60	21	10	17	28	7	30	218	80	8760	7052	+24.2%

Table 2: Newly Introduced Notifiable Disease

24th - 30th October 2009 (44thWeek)

Disease	No. of Cases by Province									Number of cases during current week in 2009	Number of cases during same week in 2008	Total number of cases to date in 2009	Total number of cases to date in 2008	Difference between the number of cases to date in 2009 & 2008
	W	C	S	N	E	NW	NC	U	Sab					
Chickenpox	18	03	07	17	04	01	01	03	08	62	63	13713	4689	+192.4%
Meningitis	22 CB=13 KT=4 GM=5	05 KN=2 MT=1 NE=2	02 GL=1 MT=1	01 VU=1	02 TR=1 KM=1	11 KR=7 PU=4	02 PO=1 AP=1	00	05 RP=2 KG=3	50	20	1249	1141	09.4%
Mumps	02	02	01	00	03	02	00	02	01	13	36	1562	2535	-38.4%
Leishmaniasis	00	00	08 HB=2 MT=6	00	00	00	05 AP=5	00	00	13	Not available*	594	Not available*	-

Key to Table 1 & 2

Provinces: W: Western, C: Central, S: Southern, N: North, E: East, NC: North Central, NW: North Western, U: Uva, Sab: Sabaragamuwa.

DPDHS Divisions: CB: Colombo, GM: Gampaha, KL: Kalutara, KD: Kandy, ML: Matale, NE: Nuwara Eliya, GL: Galle, HB: Hambantota, MT: Matara, JF: Jaffna, KN: Killinochchi, MN: Mannar, VA: Vavuniya, MU: Mullaitivu, BT: Batticaloa, AM: Ampara, TR: Trincomalee, KM: Kalmunai, KR: Kurunegala, PU: Puttalam, AP: Anuradhapura, PO: Polonnaruwa, BD: Badulla, MO: Moneragala, RP: Ratnapura, KG: Kegalle.

Data Sources:

Weekly Return of Communicable Diseases: Diphtheria, Measles, Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps.

Special Surveillance: Acute Flaccid Paralysis.

Leishmaniasis is notifiable only after the General Circular No: 02/102/2008 issued on 23 September 2008.

Table 4: Surveillance of Communicable diseases among IDP's

24th - 30th October 2009 (44thWeek)

Area \ Disease	Dysentery	Enteric fever	Viral Hepatitis	Chicken Pox	Watery Diar-rhoea
Vavunia	4	5	0	0	-
Chendikulam	6	6	4	76	245
Total	**10**	**11**	**4**	**76**	**245**

Table 4: Selected notifiable diseases reported by Medical Officers of Health

24th - 30th October 2009 (44thWeek)

DPDHS Division	Dengue Fever / DHF*		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Returns Received Timely**
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	%
Colombo	80	3848	4	208	0	12	2	198	0	87	28	1001	1	6	3	131	0	4	**85**
Gampaha	41	3770	3	145	0	20	0	43	0	36	21	398	0	8	4	231	0	5	**53**
Kalutara	16	1417	5	324	0	13	5	55	0	44	15	455	0	1	0	81	0	2	**67**
Kandy	25	3770	9	266	0	7	2	29	0	58	8	196	1	156	5	127	0	0	**68**
Matale	35	1731	3	127	1	5	1	28	6	21	0	309	0	5	0	85	0	2	**83**
Nuwara Eliya	2	239	3	388	0	2	2	169	0	801	0	42	2	71	2	80	0	0	**100**
Galle	10	566	3	225	0	10	0	4	30	110	1	190	0	15	0	29	1	5	**89**
Hambantota	15	878	1	84	0	8	0	7	0	15	6	84	0	81	0	48	0	0	**82**
Matara	6	1099	2	255	1	7	0	6	0	20	4	191	2	136	2	62	0	1	**82**
Jaffna	0	29	1	119	0	3	2	243	0	30	0	0	0	125	0	176	0	3	**13**
Kilinochchi	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Mannar	0	5	3	99	0	1	7	114	15	19	0	0	0	0	1	67	0	0	**75**
Vavuniya	16	164	5	1633	0	25	5	678	0	2	1	7	0	5	0	3765	0	0	**75**
Mullaitivu	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	**0**
Batticaloa	4	557	8	273	0	12	0	16	2	56	0	9	0	5	2	22	0	5	**64**
Ampara	4	222	9	84	0	1	0	12	0	8	0	14	0	2	2	37	0	0	**100**
Trincomalee	1	328	7	151	0	4	0	13	0	3	1	18	0	19	3	54	0	1	**50**
Kurunegala	29	2687	5	230	0	12	3	78	0	15	6	127	0	77	2	154	0	4	**70**
Puttalam	11	598	3	149	0	7	0	70	7	11	2	90	0	31	0	44	0	1	**67**
Anuradhapura	1	527	0	118	0	6	0	7	0	40	0	83	0	29	0	184	0	4	**63**
Polonnaruwa	1	169	4	105	0	4	0	21	0	9	0	61	0	9	1	86	0	0	**86**
Badulla	4	314	11	334	0	5	1	49	0	32	0	89	3	128	4	306	0	1	**100**
Monaragala	1	156	6	142	0	2	0	23	1	21	0	15	0	62	2	90	1	2	**64**
Ratnapura	7	1978	13	480	0	20	2	52	2	40	4	300	0	36	4	198	1	2	**61**
Kegalle	33	3661	2	173	0	9	3	52	0	7	8	271	0	33	3	244	0	1	**82**
Kalmunai	1	218	0	105	0	1	0	14	0	4	0	7	0	3	0	21	0	0	**23**
SRI LANKA	**343**	**29031**	**110**	**6219**	**02**	**196**	**35**	**1982**	**63**	**1489**	**105**	**3957**	**09**	**1043**	**40**	**6322**	**03**	**43**	**69**

Source: Weekly Returns of Communicable Diseases WRCD).
*Dengue Fever / DHF refers to Dengue Fever / Dengue Haemorrhagic Fever.
**Timely refers to returns received on or before 30th October, 2009 Total number of reporting units =311. Number of reporting units data provided for the current week: 216
A = Cases reported during the current week. B = Cumulative cases for the year.

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Comments and contributions for publication in the WER Sri Lanka are welcome. However, the editor reserves the right to accept or reject items for publication. All correspondence should be mailed to The Editor, WER Sri Lanka, Epidemiological Unit, P.O. Box 1567, Colombo or sent by E-mail to chepid@sltnet.lk.

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