

# WEEKLY EPIDEMIOLOGICAL REPORT

# A publication of the Epidemiology Unit Ministry of Health

231, de Saram Place, Colombo 01000, Sri Lanka
Tele: + 94 11 2695112, Fax: +94 11 2696583, E mail: epidunit@sltnet.lk
Epidemiologist: +94 11 2681548, E mail: chepid@sltnet.lk
Web: http://www.epid.gov.lk

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## Middle East Respiratory Syndrome (Part II)

This is the second in a series of two article on Middle East Respiratory Syndrome (MERS).

#### **Laboratory Diagnosis**

Samples must be taken only from patients related to case definitions given previously. Lower respiratory tract (endotracheal aspirate or broncho–alveolar lavage) or upper respiratory tract (nasopharyngeal aspirate) specimens should be obtained for rRT-PCR testing from all severe cases and from milder cases when possible. Lower respiratory tract specimens should be the first priority for collection and multiple specimens should be collected from different sites and at different intervals to increase the likelihood of detecting MERS-CoV.

A serum sample should also be obtained for serological testing of an enzyme-linked immune-sorbent assay (ELISA) for screening followed by an indirect immunofluorescence test or micro-neutralization test for confirmation.

Postmortem specimens collected from lung by true cut needle biopsy (through intercostal space) just after death. Two autopsy samples should be sent in ice with the 1<sup>st</sup>sample in Viral Transport Media (VTM) and the 2<sup>nd</sup>sample in 70% alcohol.

All samples should be transported in VTM or ice (use an ice pack or vaccine container). Ice should have melted when reaching the laboratory. Make sure that samples are properly secured and leak proof. Sam-

ples can be handed over to Medical Research Institute (MRI) on a 24/7 basis.

A brief clinical history including date of onset, travel history (date returned to Sri Lanka) and personal details of the patient (i.e. name, age, sex, address and risk factors) should be included in the request form.

#### **Treatment**

There is no specific antiviral treatment recommended for MERS-CoV infection. Individuals with MERS should seek medical care to relieve symptoms.

#### Prevention

All health care workers should always apply standard precautions, droplet precautions and airborne precautions steadily with all patients regardless of their diagnosis at all times.

#### Standard precautions

Wash hands before and after attending to the patient and immediately after removal of PPE often with soap and water or an alcohol based hand sanitizer.

- Use PPE (gloves, long-sleeved gowns (clean/sterile as required for the procedure, eye protection and N95 or equivalent mask) during procedures with a risk for splashes onto the face and body.
- Cleaning and disinfection of the environment and equipment using disinfectants.

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Proper waste management.

### **Droplet Precautions**

In addition to standard precautions;

- Place patient in an isolated room or cohort with similar patients.
- Limit patient movement and ensure that patients wear face masks when outside their rooms.
- Use a face mask when within < 1 m of patient.

#### Airborne Precautions

Ensure usage of PPE by healthcare workers performing aerosol generating procedures (aspiration of respiratory tract, intubation, resuscitation, bronchoscopy, physiotherapy and autopsy) and adequately ventilated rooms when performing aerosol generating procedures

In addition to standard precautions, all individuals when in close contact (within 1 m) or upon entering the room/cubicle of patients with laboratory confirmed MERS-CoV infection should:

- Wear a face mask
- Wear eye protection (i.e. goggles or a face shield)
- Wear a clean, sterile/non sterile, long-sleeved gown and gloves
- Perform hand hygiene before and after contact with the patient and his/her surroundings and immediately after removal of PPE

For patients with laboratory confirmed MERS-CoV infection:

- Avoid movement and transport of patients out of the isolation room unless medically needed. If transport is required, use routes of transport that minimize exposures of staff, other patients and visitors.
- Clean and disinfect patient-contact surfaces (e.g. bed) with routine disinfectants.
- Ensure that healthcare workers who transport pa tients wear appropriate PPE and perform hand hygiene afterwards

#### **Precautionary measures**

WHO has not declared MERS as a Public Health Emergency of International Concern (PHEIC) and no travel bans were imposed on South Korea or the Middle Eastern countries.

So far, MERS has not been reported in Sri Lanka, but as

a precautionary measures the Ministry of Health has practiced several measures for early identification, thereby reducing spread of disease. A '24/7 health desk' manned by doctors and public health officers is available at the Bandaranaike International Airport (BIA) to screen all inbound passengers from South Korea and the Middle East. Leaflets with information on MERS are being distributed among all inbound and outbound passengers to and from those countries. Posters and placards are displayed at the BIA to alert passengers on the symptoms of the disease, stressing the importance of passengers presenting themselves at the quarantine desk. Airport ambulance will be on standby for emergency transfer of patients to the Infectious Disease Hospital (IDH) in Colombo. Passenger locater forms will also be distributed to all passengers on a flight with an infected passenger and Medical Officers of Health (MOH) of the areas where those passengers live will be monitored for two weeks for symptoms that may be indicative of the disease.

#### **Notification**

A laboratory confirmed case of MERS-CoV should be immediately notified to the Epidemiology Unit by relevant Medical Officer of Health (MOH)

All notified cases of suspected/confirmed MERS-CoV infection and their close contacts should be investigated by the MOH team (MOH and PHI). A risk assessment including any direct epidemiological link and a detailed travel history should be done for a MERS-CoV confirmed/suspected patient.

In the event of a MERS-CoV associated death, notify the Epidemiology unit immediately by telephone, fax or email and standard droplet and airborne precautions should be used where relevant when handling deceased individuals from MERS-CoV infection and when preparing bodies for autopsy or transfer to mortuary.

#### Sources

WHO guidelines for investigation of cases of human infection with Middle East Respiratory Syndrome Coronavirus (MERS-CoV) July 2013. Available at: <a href="http://www.who.int/csr/disease/coronavirus\_infections/MERS CoV investigation guideline Jul13.pdf">http://www.who.int/csr/disease/coronavirus\_infections/MERS CoV investigation guideline Jul13.pdf</a>.

World Health Organization (2015), Middle East Respiratory Syndrome Coronavirus (MERS-CoV) fact sheet. Available at <a href="http://www.who.int/mediacentre/factsheets/mers-cov/en/">http://www.who.int/mediacentre/factsheets/mers-cov/en/</a>

Compiled by Dr. K.C.Kalubowila of the Epidemiology Unit

Table 1: Selected notifiable diseases reported by Medical Officers of Health 27th - 03rd July 2015 (27th Week)

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WRCD	<b>*</b>	13	13	15	4	31	12	20	25	0	0	20	40	20	40	53	22	17	#	12	<b>5</b> 6	22	54	0	33	6	31	70
W	<u>*</u>	88	87	82	96	69	82	80	75	100	100	20	09	20	9	71	43	83	89	85	74	43	92	100	67	91	69	80
Leishmani- asis	В	0	2	0	6	11	0	2	175	59	0	0	0	က	4	0	7	П	29	7	163	54	9	18	4	0	0	582
Leish asis	∢	0	0	0	П	0	0	0	14	2	0	0	0	0	0	0	н	0	ø	0	က	0	0	П	0	0	0	30
Meningitis	Ф	22	14	32	∞	6	31	29	ø	14	6	0	0	7	М	15	72	m	21	70	20	16	21	11	30	32	8	418
Meni	∢	0	٣	0	0	0	н	0	0	0	н	0	0	0	0	0	0	0	0	П	0	0	0	0	0	П	0	7
Chickenpox	മ	278	129	169	141	13	82	163	9/	154	151	13	7	35	4	28	144	26	259	33	117	98	117	29	70	134	26	2594
Chick	∢	4	2	3	4	0	m	2	0	2	က	0	0	0	0	H	0	н	4	0	П	3	7	5	н	1	0	48
an es	В	3	0	2	0	0	0	0	0	0	2	н	0	2	0	T	0	н	4	0	1	0	7	П	0	0	0	20
Human Rabies	∢	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Viral Hepatitis	മ	23	89	19	66	22	41	9	25	17	6	0	0	1	ю	10	m	7	30	1	œ	4	116	43	138	61	1	922
Ť	⋖	1	1	0	Н	0	н	1	0	0	0	0	0	0	1	T	0	0	П	0	0	0	П	0	က	0	0	12
Typhus Fever	В	9	9	2	39	7	38	37	29	21	522	18	17	13	7	2	н	14	20	14	17	1	89	20	40	30	0	1019
Typhus	∢	0	0	0	н	0	0	0	П	11	6	0	П	1	0	0	0	0	0	0	0	0	2	0	0	0	0	16
Leptospirosi s	Ф	159	237	183	65	44	18	144	26	86	13	П	8	13	3	6	10	12	176	24	168	48	43	126	181	201	5	2045
Lept	∢	9	3	3	7	4	н	2	1	1	0	0	0	0	0	0	0	0	10	0	0	1	က	П	2	7	1	21
Food Poisoning	В	72	25	71	25	2	0	19	11	4	54	31	2	2	1	123	4	34	13	9	51	3	7	m	4	8	33	654
Pois	∢	1	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	6
Enteric Fever	Ф	53	22	56	19	7	13	2	9	4	145	6	2	51	9	16	11	17	m	4	2	7	9	13	31	49	1	521
ᇤᄣ	∢	3	1	0	0	0	н	0	1	0	П	Н	0	1	0	2	0	0	0	1	0	0	0	0	7	2	0	16
Encephalit is	Ф	2	4	4	9	0	m	2	0	2	8	0	П	9	2	9	н	0	2	4	П	3	4	က	9	œ	1	82
Ence	⋖	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	П	0	0	0	-
Dysentery	В	114	26	89	73	31	223	41	18	43	387	47	7	12	16	162	27	36	100	25	47	56	113	71	177	44	81	2045
Dys	⋖	2	0	П	2	0	က	0	П	1	23	н	0	0	1	9	0	2	2	2	н	0	2	н	2	2	2	99
Dengue Fever	Ф	4867	2275	808	716	326	100	430	167	236	1142	37	75	83	97	1242	34	475	823	479	272	129	371	125	581	343	416	16649
Dengu	⋖	85	59	10	<sub>∞</sub>	0	4	11	П	က	20	0	0	0	0	9	0	Ŋ	12	12	0	1	ю	m	6	14	4	240
RDHS Division		Colombo	Gampaha	Kalutara	Kandy	Matale	NuwaraEliya	Galle	Hambantota	Matara	Jaffna	Kilinochchi	Mannar	Vavuniya	Mullaitivu	Batticaloa	Ampara	Trincomalee	Kurunegala	Puttalam	Anuradhapura	Polonnaruwa	Badulla	Monaragala	Ratnapura	Kegalle	Kalmunei	SRILANKA

# Table 2: Vaccine-Preventable Diseases & AFP

27th - 03rd July 2015 (27th Week)

Disease			N	o. of Cas	es by P	rovince			Number of cases during current	Number of cases during same	Total number of cases to	Total num- ber of cases to	Difference between the number of cases to date in 2014& 2015		
	W	С	S	N	N E		NC	U	Sab	week in 2015	week in 2014	date in 2015			date in 2014
AFP*	00	00	00	00	01	00	00	00	00	01	03	39	48	-18.7%	
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0%	
Mumps	01	00	00	00	00	00	00	02	01	04	19	209	391	-46.5%	
Measles	14	04	06	01	03	00	00	09	03	40	36	1334	2045	-35.1%	
Rubella	00	00	00	00	00	00	00	00	00	00	00	06	13	-54.1%	
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	04	-100%	
Tetanus	00	00	00	00	00	00	00	00	00	00	00	10	08	+25%	
Neonatal Teta- nus	00	00	00	00	00	00	00	00	00	00	00	00	00	0%	
Japanese En- cephalitis	00	00	00	00	00	00	00	00	00	00	00	07	18	-61.1%	
Whooping Cough	00	00	00	00	00	00	00	00	00	00	00	44	27	+63.1%	
Tuberculosis	186	55	21	15	04	39	08	08	10	346	122	5057	5130	-1.4%	

#### 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.

RDHS 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, Neonatal Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps., Rubella, CRS,

Special Surveillance: AFP\* (Acute Flaccid Paralysis ), Japanese Encephalitis

CRS\*\* =Congenital Rubella Syndrome

AFP and all clinically confirmed Vaccine Preventable Diseases except Tuberculosis and Mumps should be investigated by the MOH

# **Dengue Prevention and Control Health Messages**

# Look for plants such as bamboo, bohemia, rampe and banana in your surroundings and maintain them

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