



WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit
Ministry of Health

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Middle East Respiratory Syndrome (Part I)

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

Introduction

Middle East respiratory syndrome (MERS) is a zoonotic disease, caused by a new strain of a corona virus (MERS-CoV). It is a single-stranded RNA belonging to genus beta corona virus which is different from Severe Acute Respiratory Syndrome (SARS) coronavirus and the common-cold coronavirus. It can cause diseases ranging from the common-cold to SARS.

MERS-CoV was first recognized in Saudi Arabia in September 2012. Since then, World Health Organization (WHO) has been notified 1,365 laboratory-confirmed cases of infection with MERS-CoV, including a minimum of 487 related deaths (36% of cases) worldwide. The virus appears to be circulating throughout the Arabian Peninsula, primarily in Saudi Arabia, where the majority of cases (>85%) have been reported since 2012. Most of these infections are believed to have been acquired in the Middle East and then exported outside the region. The ongoing outbreak in the Republic of Korea is the largest outbreak outside the Middle East. Twenty six countries have since reported cases of MERS.

Transmission

Animal to human transmission: Camels are considered to be a key reservoir host for MERS-CoV in transmission of animal to human, but the route of transmission is not completely understood.

Human to human transmission: The virus transmission occurs through close contact with an infected person (by caring for or living with the person or having direct contact with their respiratory secretions or body fluids).

Clinical manifestations

Incubation period usually ranges from 5 to 14 days. Symptoms range from asymptomatic or mild respiratory symptoms to severe acute respiratory disease and death. The main symptoms of MERS include high fever (over 38°C or 100.4°F), cough and shortness of breath. Sometimes it can present as gastrointestinal symptoms mainly as diarrhoea. Pneumonia is also a common presentation. Severe illness can cause respiratory failure that needs mechanical ventilation and support in an intensive care unit. The severity of the disease is high in elderly persons, immune-compromised patients and those who suffer from chronic diseases such as cancer, chronic lung disease and

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diabetes. Renal failure, disseminated intravascular coagulation and pericarditis have also been reported in patients with the disease.

Case definition

Confirmed case

A person with laboratory confirmation of MERS-CoV infection by detection of viral nucleic acid or serology irrespective of clinical signs and symptoms.

Probable case

Definition 1

A febrile acute respiratory illness with clinical, radiological or histo-pathological evidence of lung parenchymal disease (e.g. pneumonia or Acute Respiratory Distress Syndrome) and direct epidemiological link with a confirmed MERS-CoV case and testing for MERS-CoV is unavailable or negative on a single inadequate specimen or inconclusive.

Definition 2

A febrile acute respiratory illness with clinical, radiological, or histo-pathological evidence of lung parenchymal disease (e.g. pneumonia or acute Respiratory Distress Syndrome) and the person residing or travelled in the Middle East or in countries where MERS-CoV is known to be circulating in Arabian camels or where human infections have recently occurred and testing for MERS-CoV is inconclusive.

Definition 3

An acute febrile respiratory illness of any severity and direct epidemiological link with a confirmed MERS-CoV case and testing for MERS-CoV is inconclusive.

A direct epidemiological link with a confirmed MERS-CoV patient may include:

- Health care associated exposure, including provision of direct care for MERS-CoV patients, working with health care workers infected with MERS-CoV, visiting patients or staying in the same close environment of individuals infected with MERS-CoV.

- Working together in close proximity or sharing the same environment or living in the same household as individuals infected with MERS-CoV.
- Travelling together with individuals infected with MERS-CoV.
- The epidemiological link may have occurred within a 14-day period before or after the onset of illness in the case under consideration.

An inadequate specimen would include:

A nasopharyngeal swab without an accompanying lower respiratory specimen, a specimen that has had improper handling is judged to be of poor quality by the testing laboratory or was taken too late in the course of illness.

Inconclusive tests may include:

A positive screening test on a single reverse-transcriptase polymerase chain reaction (rRT-PCR) without further confirmation or evidence of sero-reactivity by a single convalescent serum sample ideally taken at least 14 days after exposure by a screening assay and a neutralization assay in the absence of molecular confirmation from respiratory specimens.

Sources

WHO guidelines for investigation of cases of human infection with Middle East Respiratory Syndrome Coronavirus (MERS-CoV) July 2013. Available at: http://www.who.int/csr/disease/coronavirus_infections/MERS_CoV_investigation_guideline_Jul13.pdf.

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

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

Table 1: Selected notifiable diseases reported by Medical Officers of Health 20th - 26th June 2015 (26th Week)

RDHS Division	Dengue Fever		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Chickenpox		Meningitis		Leishmaniasis		WRCD	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	T*	C**
Colombo	120	4763	7	112	0	5	1	50	1	71	4	150	0	6	0	21	0	3	8	273	0	22	0	0	75	25
Gampaha	30	2220	1	56	0	4	0	20	0	25	0	234	0	6	0	87	0	0	2	127	0	11	0	2	53	47
Kalutara	13	795	3	66	0	4	1	26	4	71	2	179	0	2	0	19	1	2	4	166	1	31	0	0	69	31
Kandy	12	704	0	68	0	6	0	17	0	25	0	59	0	38	2	98	0	0	4	137	0	8	0	8	61	39
Matale	3	322	0	31	0	0	0	7	0	5	0	38	0	7	0	22	0	0	0	13	0	8	0	9	31	69
NuwaraEliya	1	96	5	220	0	3	0	12	0	0	0	17	0	38	0	40	0	0	0	78	0	30	0	0	85	15
Galle	5	417	5	41	0	2	0	4	4	19	0	142	1	37	0	5	0	0	3	157	0	29	0	2	75	25
Hambantota	2	165	0	17	0	0	0	5	0	11	0	55	1	28	0	25	0	0	1	75	0	7	0	159	50	
Matara	2	233	1	42	0	5	0	4	0	44	1	97	0	20	0	17	0	0	5	147	1	14	5	57	88	12
Jaffna	14	1120	25	363	0	8	2	144	1	47	0	13	3	513	0	9	0	2	1	148	0	8	0	0	92	8
Kilinochchi	1	37	0	46	0	0	0	6	0	27	0	1	1	17	0	0	0	0	0	13	0	0	0	0	50	50
Mannar	0	75	0	7	0	1	0	5	0	2	0	8	0	16	0	0	0	0	0	7	0	0	0	0	80	20
Vavuniya	0	81	0	12	0	6	1	50	0	5	0	13	0	12	0	1	0	2	0	35	0	7	0	3	25	75
Mullaitivu	11	97	0	15	0	2	1	6	0	1	0	3	0	7	0	2	0	0	0	4	0	3	0	4	80	20
Batticaloa	2	1217	0	150	2	6	0	13	0	123	0	9	0	2	2	5	0	1	0	27	0	15	0	0	43	57
Ampara	1	34	0	25	0	1	0	1	0	4	0	10	0	1	1	3	0	0	5	144	0	5	0	1	71	29
Trincomalee	4	470	2	33	0	0	0	17	2	34	0	12	1	14	0	7	0	1	0	54	0	3	0	1	67	33
Kurunegala	13	809	4	95	0	2	0	3	0	13	3	166	1	20	1	29	0	4	6	255	0	21	2	59	89	11
Puttalam	0	461	0	23	0	4	0	3	0	6	0	24	0	13	0	1	0	0	1	33	1	17	0	2	46	54
Anuradhapura	2	271	0	46	0	1	0	2	0	50	0	168	0	17	0	8	0	1	0	115	0	18	5	159	58	42
Polonnaruwa	0	127	0	26	0	3	0	7	0	3	1	47	0	1	0	4	0	0	1	80	0	15	0	53	14	86
Badulla	6	364	5	105	0	4	0	5	0	7	0	38	0	64	7	113	0	2	1	114	1	51	0	6	71	29
Monaragala	6	120	4	70	0	2	0	13	0	3	1	125	0	50	3	43	0	1	2	54	1	11	1	17	91	9
Ratnapura	13	558	2	173	0	6	1	27	0	4	4	173	0	40	0	134	0	0	0	68	2	30	0	4	44	56
Kegalle	7	326	1	42	0	8	0	47	1	7	4	194	0	30	0	61	0	0	2	131	0	31	0	0	82	18
Kalmunei	5	411	3	77	0	1	0	1	0	33	1	4	0	0	1	1	0	0	8	76	1	8	0	0	69	31
SRI LANKA	273	16293	68	1961	2	84	7	495	13	640	21	1979	8	999	17	755	1	20	54	2531	8	403	13	546	66	34

Source: Weekly Returns of Communicable Diseases (WRCD).

*T=Timeliness refers to returns received on or before 26th June, 2015 Total number of reporting units 337 Number of reporting units data provided for the current week: 225 C**=Completeness

Table 2: Vaccine-Preventable Diseases & AFP

20th - 26th June 2015 (26th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2015	Number of cases during same week in 2014	Total number of cases to date in 2015	Total number of cases to date in 2014	Difference between the number of cases to date in 2014 & 2015
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	00	00	00	00	00	00	00	00	00	02	38	45	-15.5%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Mumps	00	01	00	01	00	00	01	00	01	04	09	203	368	-45.1%
Measles	22	00	06	00	02	01	01	02	07	41	37	1274	1985	-36.1%
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	09	08	+12.5%
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Japanese Encephalitis	00	00	00	00	00	00	00	00	00	00	00	07	18	-61.1%
Whooping Cough	00	01	01	00	01	00	00	00	00	03	00	44	26	+69.2%
Tuberculosis	62	69	25	08	14	11	09	02	36	236	168	4711	5008	-6.1%

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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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. Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication

ON STATE SERVICE

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