WEEKLY EPIDEMIOLOGICAL REPORT

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Ministry of Health, Nutrition & Indigenous Medicine

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Ebola– Old Disease in a New Context

Ebola Virus Disease (EVD) which was formerly known as Ebola Haemorrhagic fever is a fatal disease if left untreated.

Ebola outbreak– 2014

World experienced the largest Ebola outbreak in the history in 2014. It particularly affected West Africa, mainly Guinea, Sierra Leone and Liberia. However, several other countries like Nigeria, Senegal, Spain, United States, Mali, United Kingdom and Italy have also reported cases either imported or locally acquired.

As of April 13th 2016, a total of 28,652 cases were reported. They were either suspected, probable or confirmed cases. Out of them 11,325 died, accounting for a case fatality rate nearly 40%. Guinea, Sierra Leone and Liberia have reported 3814, 14124 and 10678 cases respectively. Zaire species of Ebola virus was responsible for the outbreak.

Origin of the outbreak

Retrospective studies and reviews have revealed an 18 month old boy in Meliondou, Guinea as the index case of this outbreak. He has suddenly developed an illness characterized by fever, passage of black stools and vomiting on 26th December 2013. He died two days after the onset of symptoms. Prior to the onset of the symptoms, the child was seen playing near a hallow tree which was heavily infested with bats.

Meliondou is a remote village in Guinea where most of its land is covered with vegetation. However it has rapidly being deforested in the recent past, destroying natural habitats of animals. This has brought potential infected animals into closer human contact.

From the index case, the illness has spread to immediate family, extended family, healers , visitors etc. As for the rapidity of the spread, four districts were affected in the week that followed. Liberia and Sierra Leone started to report imported cases from March 2014. In March 2014, the causavative organism was identified as the Zaire species of Ebola virus.

Factors which contributed to undetected spread

Since its discovery in 1976, there had been several small EVD outbreaks. These were mostly reported from equatorial African countries. These outbreaks were easily contained due to geographical limitations and health sector preparedness. Health care workers and authorities of these countries were familiar with the disease. They had well established health infrastructure including laboratory facilities for early diagnosis. Therefore, outbreaks were easily controlled in these countries.

However, for West African countries where curative sector has hardly come across cases, EVD was relatively new . Health sectors were not well prepared to combat an EVD outbreak mainly due to inability to come to an early diagnosis, lack of experience in treating the disease and weak infrastructure. Not only health infrastructure, but also other facilities like transport and

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communication were not well established as most of these affected West African countries have recently been settled down from civil wars. Therefore, the virus behaved more aggressively and differently in West Africa.

In previous outbreaks disease transmission was seen more in hospital settings than in communities. As such, containment of outbreaks was easier as it was more convenient and effective to apply infection control measures in hospital settings. However, in this outbreak more community spread was seen. In previous outbreaks mostly remote rural areas were affected whereas this time all the capital cities became epicenters. This facilitated rapid spread of the disease due to high population density.

In the affected West African countries, high population mobility is seen across borders. People go in search of food and work, crossing borders. This facilitated the spread of the disease across a larger geographical area.

In addition, numerous socio cultural and economical factors contributed to amplify the case numbers. In these countries it is a traditional custom to come near ancestors for burial. This created new transmission chains. Apart from that, the burial practices like sleeping next to the dead bodies, themselves led to more disease transmission. In fact, 60% of the cases in Guinea and 80% of the cases in Sierra Leone were due to this reason. On the other hand, compassionate care of the patients without applying proper infection control measures also increased spread.

In these countries, by default the health care work force is not sufficient to provide optimum care where there is only 1-2 health care personnel for 100 000 population. In addition, the outbreak itself affected a great number of health care workers. This further compromised the health care work force leading to adverse consequences.

Apart from that, a lot of community resistance was seen. The disease was unfamiliar to people, creating fear and misconceptions. As many patients died in hospitals, people perceived hospitals as places of more adverse outcomes. This led to dragging people away from hospitals. Due to associated stigma, a lot of people did not come out for treatment.

Ebola flare-ups

Even after the Ebola outbreak was declared to be over in December 2015, several cases were reported from the affected countries. According to the investigations, these cases were found to be parts of previous transmission chains and they were not due to new introduction of the virus from animals. Source of the flare-ups is most likely to be survivors. In 2014 outbreak, the survival rate was high even though the case fatality rate of the EVD is nearly 90%, . The virus can survive in selected body compartments of the survivors particularly seminal fluid for a prolonged time period. This leads to continuous disease transmission and flare- ups.

Reported flare-ups

- March 2015– 1 case in Liberia with 192 contacts, likely to be due to sexual transmission
- June 2015– 7 cases in Liberia with 126 contacts
- August 2015– 6 cases in Sierra Leone with 840 contacts, this is also likely to be due to sexual transmission.
- September 2015- 1 case in Sierra Leone with 780 contacts
- November 2015– 3 cases in Liberia with 165 contacts
- January 2016– 2 cases in Sierra Leone with more than 150 contacts
- March 2016– 13 cases in Guinea and Liberia with more than 1200 contacts. Sexual transmission was suspected.

Care for survivors

As the main source of flare-ups is survivors, clinical care for survivors is essential. Continuous follow up, counselling, provision of investigation facilities which include seminal fluid and vaginal fluid testing, ensuring proper hygiene are essential elements of this care.

Apart from the medical issues, socio– cultural issues like stigmatization, economic status, employment, shelter and food safety and social support also have to be addressed.

Sources

Center for Disease Control and Prevention official web site

One year into the Ebola epidemic: a deadly, tenacious and unforgiving virus available at *http://www.who.int/csr/disease/ebola/one-year-report/introduction/en/*

Clinical care for survivors of Ebola virus disease available at http://www.who.int/csr/resources/publications/ebola/guidance-survivors/en/

Compiled by Dr. S.A.I.K. Sudasinghe of the Epidemiology Unit

Table 1: Selected notifiable diseases reported by Medical Officers of Health 30th – 05th Aug 2016 (32nd Week)

RDHS Division	Dengue Fever		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Chickenpox		Meningitis		Leishmani-asis		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	398	11214	1	114	0	6	1	44	0	27	2	168	0	7	0	26	0	0	6	311	0	36	0	0	81	100
Gampaha	124	4071	2	85	1	10	1	19	0	18	5	196	0	11	0	25	0	0	5	242	0	30	1	5	47	87
Kalutara	83	2433	1	70	0	7	1	23	2	25	4	321	0	7	1	20	0	0	2	190	2	56	0	0	71	93
Kandy	146	2713	1	115	0	15	1	14	0	29	0	93	1	64	0	40	0	0	5	125	0	31	0	8	100	100
Matale	18	600	2	44	0	1	0	11	1	4	0	68	0	17	0	14	0	1	1	26	0	48	0	17	69	100
NuwaraEliya	18	299	1	67	0	1	1	41	0	15	2	38	3	56	0	28	0	0	2	92	1	31	0	0	92	100
Galle	24	1351	2	101	0	8	0	6	0	7	5	200	2	71	0	7	0	0	8	212	0	29	0	3	75	85
Hambantota	15	577	0	41	0	1	1	3	0	54	2	86	4	46	4	39	0	0	5	163	1	12	0	217	83	100
Matara	44	808	1	90	0	13	0	6	0	35	0	132	3	38	1	23	0	0	4	127	0	18	3	142	100	100
Jaffna	49	1581	5	172	0	3	2	63	5	51	0	10	4	568	0	8	0	0	1	127	1	38	0	1	92	92
Kilinochchi	2	61	0	31	0	0	2	34	0	5	0	12	1	24	0	0	0	0	0	10	0	10	0	0	100	100
Mannar	1	106	0	18	0	4	2	20	0	7	1	9	0	38	0	0	0	0	0	7	0	1	0	0	80	100
Vavuniya	2	187	0	10	0	3	4	71	0	30	0	12	0	9	0	6	0	0	0	23	0	8	0	6	75	100
Mullaitivu	5	142	0	23	0	2	0	17	3	39	0	23	0	5	0	1	0	0	0	15	0	6	0	4	80	80
Batticaloa	1	387	8	217	0	0	0	29	0	89	2	37	0	5	0	9	0	0	1	72	1	10	0	1	71	93
Ampara	1	177	1	34	0	1	0	0	0	20	0	24	0	0	0	7	0	0	1	104	0	3	0	5	14	71
Trincomalee	2	325	1	47	0	2	0	10	0	24	0	26	0	22	0	32	0	1	1	122	0	10	0	5	58	92
Kurunegala	70	1822	6	236	2	10	0	1	0	13	2	118	4	29	0	19	0	2	7	218	0	42	1	60	83	97
Puttalam	32	813	2	59	0	4	0	4	0	0	0	33	0	59	0	0	0	0	3	59	4	32	0	2	77	85
Anuradhapur	13	462	1	59	0	3	0	5	0	26	1	230	0	24	0	15	0	0	1	166	0	30	0	156	63	100
Polonnaruwa	12	336	2	25	0	3	1	10	0	12	0	81	0	1	0	2	0	0	4	82	0	14	5	93	71	86
Badulla	20	551	2	86	0	12	0	7	0	22	6	101	2	77	7	95	0	0	18	157	1	134	0	3	88	94
Monaragala	12	265	0	41	0	1	0	2	0	10	0	152	1	89	0	108	0	2	0	51	0	18	0	33	73	100
Ratnapura	42	2084	1	263	0	26	0	23	0	23	1	392	0	24	4	102	0	0	9	147	0	104	0	1	61	83
Kegalle	53	1016	2	64	1	18	2	25	0	47	6	143	0	23	1	18	0	0	4	219	1	36	0	1	82	100
Kalmune	2	392	1	60	0	3	0	5	0	43	0	13	0	0	0	3	0	4	0	58	0	18	0	0	62	92
SRILANKA	1189	34773	43	2172	4	157	19	493	11	675	39	2718	25	1314	18	647	0	10	88	3125	12	805	10	763	76	94

Source: Weekly Returns of Communicable Diseases (WRCD).

*T=Timeliness refers to returns received on or before 05th August, 2016 Total number of reporting units 339 Number of reporting units data provided for the current week: 323 C**-Completeness

A = Cases reported during the current week. B = Cumulative cases for the year.

Table 2: Vaccine-Preventable Diseases & AFP

30th – 05th Aug 2016 (32nd Week)

Disease	No. of Cases by Province									Number of cases during current week in 2016	Number of cases during same week in 2015	Total number of cases to date in 2016	Total number of cases to date in 2015	Difference between the number of cases to date in 2016 & 2015
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	02	01	01	00	00	00	00	00	00	04	00	46	45	+2.2%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Mumps	02	01	01	02	00	00	00	01	01	08	03	260	242	+7.4%
Measles	02	00	01	00	00	00	00	00	00	03	74	309	1764	-82.4%
Rubella	00	00	00	00	00	00	00	00	00	00	00	06	07	-14.2%
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Tetanus	00	00	00	00	00	00	00	00	00	00	00	07	12	-41.6%
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	12	07	-71.4%
Whooping Cough	00	00	00	00	00	00	00	00	01	01	01	40	57	-29.8%
Tuberculosis	51	28	17	10	25	34	21	04	09	199	153	5845	5714	+2.2%

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

Number of Malaria Cases Up to End of July 2016,

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All are Imported!!!

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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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