



WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit
Ministry of Health

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Vol. 39 No.28

07th – 13th July 2012

Diarrhoea Outbreak Report - Lindula

Introduction

District Medical Officer at District Hospital (DH) Lindula has noted that number of patients seeking medical care from DH Lindula for diarrhoea has increased since 1st of April 2012. Medical Officer of Health of the area was duly informed regarding this outbreak. Field investigations were started after the 17th of April.

Background

Two hundred and eighty three (283) cases of diarrhoea were reported from the Lindula-Kotagala MOH area during the month of April 2012. Number of diarrhoea patients reported during the month concerned exceeded the previous patterns observed. Therefore, the presence of an outbreak of diarrhoea was evident. (Refer table 1).

Methods

A case definition was established at the beginning of the outbreak investigation and it was decided to use

the frequency of 2 or more loose stools per day and vomiting with or without fever and abdominal pain as the case definition.

Details of inward diarrhoea patients treated at DH Lindula prior to 17th of April were collected from BHTs. Doctors working in the Out Patient Department (OPD) of DH Lindula and general practitioners practicing in Lindula and Kotagala MOH areas were informed regarding the prevailing situation at the beginning of the outbreak investigation and were asked to notify diarrhoea cases to the MOH office (The response to this request is evident by the sharp increase in the number of notifications received after 17th of April). Data was gathered from notification forms (H 544) also.

A standard format was used in the collection of data and 283 cases were investigated.

Water samples from community water supply schemes and stool samples were taken for laborato-

Table-1 Number of diarrhoea patients at DH Lindula during last 5 years.

Year	2008	2009	2010	2011	2012
Month					
January	9	14	6	8	10
February	19	18	15	5	21
March	32	28	46	26	56
April	34	27	41	67	283
May	22	14	34	50	
June	15	11	10	24	
July	7	11	9	6	
August	5	5	2	6	
September	4	8	7	8	
October	13	13	4	6	
November	25	12	7	9	
December	15	8	11	5	

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ry analysis and the analysis was carried out at the Medical Research Institute (MRI) Laboratory.

Results

Descriptive Epidemiology

Majority of the cases (57%) were reported between 17th and 22nd of April. This sharp increase is probably due to improved disease notification and increased awareness among public due to activities of the Public Health staff (Refer Figure 1)

Most of the patients (94%) were from adjoining Lindula, Thalawakele and Watagoda PHI areas (Refer Table-2).

Disease is nearly equally distributed among males (53%) and females. More than half of the patients (53.7%) were under 5 years of age. More than a third (35.34%) of the patients were below 2 years of age.

Laboratory Studies

Three (03) water samples were collected for analysis and all three of them were bacteriologically unsatisfactory as drinking water (presumptive coliform count was > 200/100ml). One had evidence of contamination by foecal bacteria (E. coli was detected in the water sample).

Nine (9) stool samples were analyzed and 7 (78%) of them were positive for Rota virus.

Discussion

Diarrhoeas are spread faeco-orally . As the distribution of the disease was far and wide, the possibility of food being the causative agent was unlikely. Therefore, it was hypothesized that water was the causative agent. It was noticed that most of the water supply schemes in the area have not maintained Public Health safety measures properly. Water from streams or springs is collected directly into tanks and are distributed to the consumers without proper chlorination. People were not using boiled-cooled water for drinking mainly due to lack of awareness and recourses (e.g. firewood). Therefore, disease control methods targeting provision of safe water for consumption were launched awaiting results.

Following activities were conducted to control the spread of the disease .

1. Conducting public awareness programmes through home visits and public address system emphasizing the importance of
 - Using boiled cooled water for drinking purposes
 - Following good personal hygiene practices
 - Seeking immediate medical care from qualified medical personnel.
2. Super chlorination of water supply schemes and training selected persons from each estate in the process of chlorination was done. Provision of chlorine powder was done to continue the chlorination process. Testing of water samples for residual chlorine was done to monitor the effectiveness of control activities.
3. Strengthening disease surveillance activities was carried out by increasing awareness among general practitioners, Estate Medical Assistants and hospital staff. Prompt Investigation of cases was also done.

Number of patients having diarrhoea came down with the control activities and incidence of diarrhoea was within the normal limit at the end of April 2012.

Recommendations

- Establishment of proper water supply schemes
- Motivation of people to use boiled-cooled water
- Motivation and provision of aid to build latrines

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Acknowledgements

I gratefully acknowledge the hard work of MOH Lindula and Kotagala, SPHID-Nuwaraeliya and PHII of the area.

Graph-1 Distribution by Time

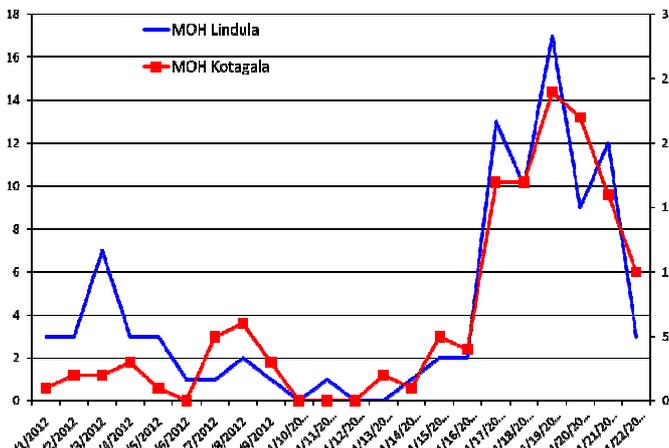


Table-2 Distribution By Area

MOH Area	PHI Area	No of Patients
Lindula	Agarapathana	10
	Dayagama	08
	Lindula	103
Kotagala	Thalawakele	91
	Watagoda	71
	Kotagala	-

Table 1: Vaccine-preventable Diseases & AFP

30th June-06th July 2012 (27thWeek)

Disease	No. of Cases by Province									Number of cases during current week in 2012	Number of cases during same week in 2011	Total number of cases to date in 2012	Total number of cases to date in 2011	Difference between the number of cases to date in 2012 & 2011
	W	C	S	N	E	NW	NC	U	Sab					
Acute Flaccid Paralysis	00	00	00	00	00	00	00	00	00	00	00	44	48	- 08.3 %
Diphtheria	00	00	00	00	00	00	00	00	00	-	-	-	-	-
Measles	00	00	00	00	00	00	00	00	00	00	00	23	78	- 70.5 %
Tetanus	00	00	00	00	00	00	00	00	00	00	00	05	12	- 58.3 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	03	34	23	+ 47.8 %
Tuberculosis	230	09	00	06	14	12	08	00	00	279	134	4632	4587	+ 0.98 %

Table 2: Newly Introduced Notifiable Disease

30th June-06th July 2012 (27thWeek)

Disease	No. of Cases by Province									Number of cases during current week in 2012	Number of cases during same week in 2011	Total number of cases to date in 2012	Total number of cases to date in 2011	Difference between the number of cases to date in 2012 & 2011
	W	C	S	N	E	NW	NC	U	Sab					
Chickenpox	00	00	00	00	00	00	01	00	00	01	36	2255	2542	- 11.3 %
Meningitis	01 GM=1	00	00	02 JF=02	00	00	00	00	00	03	11	295	475	- 37.9 %
Mumps	06	00	00	01	02	02	03	00	1	15	58	2216	1422	+ 55.8 %
Leishmaniasis	00	00	00	00	00	00	01 AP=1	00	00	01	14	323	382	- 15.4 %

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.
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.

Dengue Prevention and Control Health Messages

Check the roof gutters regularly for water collection where dengue mosquitoes could breed .

Table 4: Selected notifiable diseases reported by Medical Officers of Health
30th June-06th July 2012 (27thWeek)

DPDHS Division	Dengue Fever / DHF*		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Returns Received
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	%
Colombo	159	3590	0	51	0	5	0	89	0	25	0	67	0	2	0	29	0	2	23
Gampaha	28	2289	0	34	0	5	0	33	0	13	0	81	1	7	1	103	0	0	13
Kalutara	11	917	0	37	0	2	0	17	0	3	0	104	0	2	0	12	0	1	8
Kandy	0	750	0	40	0	1	0	11	0	12	0	28	0	65	0	16	0	0	0
Matale	1	194	0	39	0	4	0	7	0	4	1	21	0	2	0	10	0	0	8
Nuwara	0	125	0	64	0	1	0	17	0	1	0	14	0	32	0	9	0	1	0
Galle	7	462	0	36	0	3	0	6	0	10	0	59	0	21	0	1	0	0	5
Hambantota	0	216	0	18	0	1	0	2	0	10	0	28	0	22	0	5	0	0	0
Matara	0	580	0	30	0	4	0	9	0	16	0	64	0	36	0	48	0	0	0
Jaffna	0	202	0	85	0	6	2	179	0	27	0	2	0	236	0	4	0	0	17
Kilinochchi	0	20	0	6	0	1	0	18	0	39	0	4	0	26	0	4	0	1	0
Mannar	0	91	0	43	0	3	0	13	0	14	0	16	0	38	0	2	0	0	0
Vavuniya	0	31	0	9	0	19	0	6	8	13	0	15	0	0	0	1	0	0	25
Mullaitivu	0	8	0	9	0	1	0	4	0	1	0	2	0	5	0	0	0	0	0
Batticaloa	1	560	4	90	0	2	0	14	0	30	0	5	0	0	0	6	0	3	43
Ampara	0	58	0	44	0	0	0	3	0	6	0	17	0	0	0	2	0	0	0
Trincomalee	0	90	0	80	0	1	0	15	0	2	0	32	0	5	0	2	0	0	33
Kurunegala	35	848	2	73	0	6	0	55	0	24	2	90	0	18	0	60	0	2	42
Puttalam	0	356	0	23	0	4	0	5	0	1	0	20	0	9	0	1	0	0	0
Anuradhapu	1	178	1	32	0	2	2	6	0	3	1	53	0	18	0	38	0	1	26
Polonnaruw	2	112	1	26	0	0	0	1	0	1	1	25	0	2	1	29	0	1	43
Badulla	0	88	0	33	0	2	0	16	0	1	0	17	0	24	0	20	0	0	0
Monaragala	0	97	0	36	0	4	0	10	0	4	0	47	0	42	0	104	0	1	0
Ratnapura	38	972	0	95	0	23	0	30	0	5	1	131	0	19	0	50	0	1	17
Kegalle	13	1310	0	34	0	8	0	15	0	9	2	88	0	34	2	315	0	0	18
Kalmune	0	137	0	108	0	1	0	5	0	66	0	2	0	0	0	6	0	1	15
SRI LANKA	296	14281	08	1175	00	109	04	586	08	340	08	1032	01	665	04	877	00	15	14

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 06th July, 2012 Total number of reporting units 329. Number of reporting units data provided for the current week: 46

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

PRINTING OF THIS PUBLICATION IS FUNDED BY THE WORLD HEALTH ORGANIZATION (WHO).

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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