



# WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiological Unit,

Ministry of Healthcare & Nutrition

231, de Saram Place, Colombo 01000, Sri Lanka.

Tele: (+94-011) 2695112/681548/4740490/4740492, E-Mail: epidunit@slt.net.lk

Epidemiologist: (+94-011) 4740491, E-mail: chepid@slt.net.lk, Web: www.epid.gov.lk

Vol. 35 No. 17

19<sup>th</sup> - 25<sup>th</sup> April 2008

## Chikungunya outbreak – 2008

Since early January 2008 there have been several reports to the Epidemiology Unit, Ministry of Health Sri Lanka of an increase in viral fever cases in districts of Anuradhapura, Ratnapura, Kegalle and Kalutara from numerous sources. These sources included some General Practitioners, Regional Epidemiologists and Medical Officers of Health. This viral fever was characterized with high fever, severe joint and muscle pain and a maculopapular rash. Since these symptoms resembled those of Chikungunya fever which was reported in large numbers the previous year, arrangements were promptly made to send samples of blood from these suspected patients for virological studies on dengue and Chikungunya to the Medical Research Institute (MRI), Colombo. Initial samples were taken from Anuradhapura by a team from the MRI with Regional Epidemiologist which visited there to investigate a large number of military personnel who fell ill with this fever particularly in Janakapura and Sampathnuwara. Thereafter samples were sent in by the MOOH of the most affected areas in Ratnapura e.g. Kuruwita, Eheliyagoda Kiriella, Erathna, Godekawela and Kegalle district eg. Dehiowita, Warakapola, Dereni-yagala. Most of these samples tested positive for Chikungunya virus and this outbreak of viral fever was attributed to the virus.

**Surveillance of Cases :** The following case definition which had been developed for surveillance

of chikungunya cases last year was adopted for this outbreak as well.

**Suspected case:** A patient presenting with acute onset of fever usually with chills/rigors which lasts for 3 – 5 days with multiple joint pains/swelling of extremities that may continue for weeks to months.

**Probable case:** A suspected patient with above features with any one of the following:

- history of travel or resident in areas reporting outbreaks
- ability to exclude Malaria, Dengue and any other known cause for fever with joint pains

**Confirmed case:** Any patient with any one or more of following findings irrespective of the clinical presentation.

- virus isolation in cell culture or animal inoculations from acute phase sera
- Presence of viral RNA in acute phase sera
- Seroconversion to virus specific antibodies in samples collected at least 1 – 3 weeks apart
- Presence of virus specific IgM antibodies in single serum collected after 5 days of onset of illness

All provincial and district health authorities namely Provincial Directors of Health Services, Regional directors of Health Services and Regional Epidemiologists were promptly informed on the situation and guidelines were issued to initiate surveillance. A special investigation form which had been developed last year to collect

### Contents

### Page

1. Leading Article - Chikungunya outbreak - 2008	1
2. Surveillance of vaccine preventable diseases & AFP (12 <sup>th</sup> - 18 <sup>th</sup> April 2008)	3
3. Summary of newly introduced notifiable diseases (12 <sup>th</sup> - 18 <sup>th</sup> April 2008)	3
4. Laboratory surveillance of dengue fever (12 <sup>th</sup> - 18 <sup>th</sup> April 2008)	4
5. Summary of selected notifiable diseases reported (12 <sup>th</sup> - 18 <sup>th</sup> April 2008)	

Following are the number of cases which have been laboratory tested during the outbreak.

Month	District	MOH Area	Number of Samples				
			Collected	Positive for CK	Positive for Dengue	Positive for both Dengue & CK	Negative for both
January	Anuradhapura	Galnewa,	95	8	9	0	78
	Kandy	Galagedara, Hataraliyedda	8	2	0	0	4
February	Ratnapura	Kuruwita, Godakawela	82	54	4	2	18
March	Anuradhapura	Padaviya	25	8	5	2	10
April	Colombo	Hanwella	25	19	0	3	3
	Anuradhapura	Sampathnuwara, Padaviya, Anuradhapura, Janakapura	63	60	4	3	21
	Kegalle	Dehiowita, Warakapola	24	14	0	0	11
	Ratnapura	Kiriella, Kuruwita, Devipahala, Eheliyagoda Embilipitiya, Ayagama	135	99	2	0	39
		<b>Total</b>	457	264	43	10	184

information from suspected cases, was sent to all the sentinel sites (major hospitals) and relevant officials along with the fact sheet which also had been developed earlier.

Fever surveillance activities on Chikungunya were initiated in most hospitals in the affected areas by respective Regional Epidemiologists with due guidance from Regional Directors. Clinicians were encouraged to differentiate and confirm the suspected cases from Dengue which closely resembles Chikungunya clinically. Necessary arrangements were made to transport specimens for laboratory diagnosis wherever necessary. Hospitals were persuaded to notify the confirmed as well as suspected cases by completing the special investigation forms to the Epidemiology Unit. Assistance and cooperation of the Infection Control Nurses were obtained in the institutions to carry out this task.

During the month of April Ratnapura and Kegalle districts have reported six deaths which has some link to the ongoing fever outbreak. Epidemiology Unit has investigated all deaths in detail and found Clinical pictures of all six deaths were clearly suggestive of the presence of chronic underlying medical conditions other than fever directly responsible for the deaths.

#### Prevention and Control

As in the previous year, Medical Officers of Health were mobilized to initiate preventive measures against the spread of Chikungunya fever. This included health education campaigns for the public to highlight the mode of spread and possible preventive measures. Priority was given to organize parallel campaigns promptly to eliminate mosquito breeding sites especially in public places such as schools and working places. Information was given to electronic and print media as requested since the outbreak was limited to only a few districts this year.

**Affected Areas :** Most affected districts were Anuradhapura,

Ratnapura and Kegalle. Over 14000 suspected cases have been reported from Ratnapura district alone during the last week of April and first week of May out of which 50—60 % would have been chikungunya. The total number of cases are still being updated and a detailed epidemiological report would be prepared once the special surveillance forms are analyzed.

**Laboratory Diagnosis :** Blood samples from chikungunya patients from hospitals and mostly the field have been tested at the Medical Research Institute (MRI) and Molecular Medicine Unit of the Department of Microbiology at University of Kelaniya during the initial outbreak period. A total of 488 samples were tested at these laboratories and out of them 264 (57%) were positive for chikungunya.

**Conclusion :** According to the data received to date at the Epidemiology Unit the outbreak still appears to be limited to a few districts. Incidentally these districts were not largely affected during the previous outbreak and therefore it would be safe to conclude that this outbreak was limited to a mostly unimmunized population. Chikungunya fever outbreak is not directly associated with mortality but it is unable to exclude the possibility of precipitation of the underlying medical conditions. However surveillance in the hospitals and field in the affected areas is being continued with support from the regional health administrators. Initial data obtained through the Regional Epidemiologists to date may be overestimated since these surveillance activities were mainly based in the Out Patients' Departments on all fever cases. Therefore it includes large numbers who opted to seek hospital care for all viral fevers. However a clearer and a more accurate report would be available once the special surveillance forms are analyzed.

*This article was compiled by Dr Nihal Abeysinghe—Chief Epidemiologist.*

12<sup>th</sup> - 18<sup>th</sup> April 2008 (16<sup>th</sup> Week)

Table 1: Vaccine-preventable Diseases &amp; AFP

Disease	No. of Cases by Province									Number of cases during current week in 2008	Number of cases during same week in 2007	Total number of cases to date in 2008	Total number of cases to date in 2007	Difference between the number of cases to date between 2008 & 2007
	W	C	S	N	E	NW	NC	U	Sab					
Acute Flaccid Paralysis	00	00	02 GL=1 MT=1	01 JF=1	00	00	00	00	00	03	03	25	29	-13.8%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	00.0%
Measles	00	00	00	00	00	00	00	00	00	00	00	40	24	+59.3%
Tetanus	00	00	00	00	00	00	00	00	00	00	00	12	11	+9.0%
Whooping Cough	00	00	00	00	00	00	00	00	00	00	01	11	14	-21.4%
Tuberculosis	33	06	06	16	17	00	00	06	00	84	177	2763	3162	-12.6%

Table 2: Newly Introduced Notifiable Diseases

12<sup>th</sup> - 18<sup>th</sup> April 2008 (16<sup>th</sup> Week)

Disease	No. of Cases by Province									Number of cases during current week in 2008	Number of cases during same week in 2007	Total number of cases to date in 2008	Total number of cases to date in 2007	Difference between the number of cases to date between 2008 & 2007
	W	C	S	N	E	NW	NC	U	Sab					
Chicken-pox	05	03	13	00	02	07	03	05	14	52	77	1895	1119	+69.3%
Meningitis	02 KL=1 GM=1	00	01 HB=1	00	02 BT=2	04 KR=4	02 PO=2	02 BD=2	02 KG=2	15	00	541	49	+1004.1%
Mumps	04	04	03	00	01	02	06	00	04	30	46	763	380	+100.4%

Key to Table 1 &amp; 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.

Table 3: Laboratory Surveillance of Dengue Fever

12<sup>th</sup> - 18<sup>th</sup> April 2008 (16<sup>th</sup> Week)

Samples	Number tested		Number positive *		Serotypes									
					D <sub>1</sub>		D <sub>2</sub>		D <sub>3</sub>		D <sub>4</sub>		Negative	
	GT	AH	GT	AH	GT	AH	GT	AH	GT	AH	GT	AH	GT	AH
Number for current week	06	11	02	04	00	00	02	02	00	02	00	00	00	00
Total number to date in 2008	71	40	07	13	00	00	04	05	01	04	00	00	02	00

**Sources:** Genetech Molecular Diagnostics & School of Gene Technology, Colombo [GT] and Genetic Laboratory Asiri Surgical Hospital [AH]

\* Not all positives are subjected to serotyping.

NA= Not Available.

**Data Sources:**

**Weekly Return of Communicable Diseases:** Diphtheria, Measles, Tetanus, Whooping Cough, Human Rabies, Dengue Haemorrhagic Fever, Japanese Encephalitis, Chickenpox, Meningitis, Mumps.

**Special Surveillance:** Acute Flaccid Paralysis.

**National Control Program for Tuberculosis and Chest Diseases:** Tuberculosis.

**Table 4: Selected notifiable diseases reported by Medical Officers of Health**  
12<sup>th</sup> - 18<sup>th</sup> April 2008 (16<sup>th</sup> Week)

DPDHS Division	Dengue Fever / DHF*		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human-Rabies		Returns Receive %
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	
Colombo	26	592	04	55	00	05	00	46	00	57	07	146	00	01	02	50	00	01	77
Gampaha	17	385	01	54	00	05	01	23	01	66	10	120	00	03	02	47	00	01	79
Kalutara	03	187	04	119	00	06	00	35	00	16	04	133	00	02	00	16	00	00	92
Kandy	02	81	00	76	00	03	01	18	00	30	07	76	00	37	01	67	00	00	80
Matale	04	45	05	94	00	00	01	17	00	02	07	192	00	01	02	16	00	00	83
Nuwara Eliya	00	07	00	66	00	01	00	85	00	107	01	13	01	30	00	57	00	01	92
Galle	01	40	02	44	00	08	00	10	00	42	09	132	00	08	00	04	00	03	88
Hambantota	01	44	02	32	00	03	00	05	00	06	03	44	00	45	00	04	00	00	91
Matara	05	89	01	66	00	03	00	20	00	02	06	131	07	81	00	04	00	01	94
Jaffna	00	36	00	45	00	01	01	153	00	05	00	00	03	114	00	17	00	00	50
Kilinochchi	00	00	00	02	00	00	00	00	00	00	00	01	00	00	00	01	00	00	25
Mannar	01	22	00	07	00	06	04	90	00	00	00	00	00	00	01	11	00	00	25
Vavuniya	00	10	00	13	00	01	00	01	00	06	00	02	00	00	00	02	00	00	50
Mullaitivu	00	00	00	01	00	00	00	05	00	00	00	00	00	00	00	04	00	00	40
Batticaloa	02	66	00	24	00	02	00	08	00	17	00	01	00	01	02	58	00	04	82
Ampara	00	07	00	76	00	00	00	02	00	00	00	07	00	00	00	01	00	00	29
Trincomalee	00	145	01	31	00	00	00	06	00	03	00	07	00	10	00	08	00	00	60
Kurunegala	07	177	02	121	00	09	00	22	00	10	04	31	00	14	00	20	00	03	83
Puttalam	08	194	00	35	00	02	00	53	00	17	00	03	03	21	00	18	00	02	67
Anuradhapur	02	90	01	30	00	04	00	08	00	04	16	53	00	09	00	07	00	00	68
Polonnaruwa	03	33	02	38	00	01	00	16	00	05	02	23	00	00	02	15	00	00	100
Badulla	04	29	08	134	00	03	00	45	00	01	00	10	00	51	00	51	00	01	87
Monaragala	00	25	01	76	00	01	01	21	03	18	04	38	02	50	02	11	00	00	91
Ratnapura	01	102	02	85	00	18	00	36	00	42	01	66	00	63	02	34	00	00	75
Kegalle	12	125	02	165	00	15	01	20	00	00	12	63	00	31	05	214	00	00	100
Kalmunai	04	18	01	66	00	02	00	05	04	10	00	00	00	01	00	11	00	00	69
<b>SRI LANKA</b>	<b>103</b>	<b>2549</b>	<b>39</b>	<b>1555</b>	<b>00</b>	<b>99</b>	<b>10</b>	<b>750</b>	<b>08</b>	<b>466</b>	<b>93</b>	<b>1292</b>	<b>16</b>	<b>573</b>	<b>21</b>	<b>748</b>	<b>00</b>	<b>17</b>	<b>78</b>

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 26 April, 2008 Total number of reporting units =238. Number of reporting units data provided for the current week:

PRINTING OF THIS PUBLICATION IS FUNDED BY THE UNITED NATIONS CHILDREN'S FUND (UNICEF).

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.

### ON STATE SERVICE

**Dr. M. R. N. ABEYSINGHE**  
 EPIDEMIOLOGIST  
 EPIDEMIOLOGICAL UNIT  
 231, DE SARAM PLACE  
 COLOMBO 10