



WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit
Ministry of Health, Nutrition & Indigenous Medicine

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Dengue Epidemic 2017: Evidence and Lessons Learnt — Part 4

This article, discussed here as the fourth of 5 parts, further summarizes the activities carried out during the Dengue outbreak in 2017.

(Continued from Previous WER).....

- More beds were made available to major hospitals by converting smaller satellite hospitals as temporary dengue care centers by upgrading necessary facilities with additional trained staff, laboratory and ambulance services. In Colombo, suburban smaller hospitals like DH Thalangama, DH Piliyandala, and DH Wethara were turned into satellite hospitals and auxiliary units to NIID and CSH Kalubowila. Similar actions were taken to support DGH Negombo and DGH Matara as well.
- Improvement of dengue care facilities as High Dependency Units in existing medical and paediatric wards already being carried out was intensified especially in the outbreak areas.
- Lack of adequate and trained human resources was a major obstacle in providing round-the-clock clinical care in most of the hospitals, especially those other than major hospitals. It was decided to mobilize additional medical officers from the post-interns and those temporarily attached to much-needed stations on a priority basis. Nursing officers in their final year at training schools were also mobilized to strengthen patient monitoring and to assist in various routine ward work.
- A circular was issued to all major hospitals to establish an emergency medical team with trained specialists and medical officers along with paramedical staff, ready to be deployed at short notice to smaller hospitals in outbreak areas within their localities rather than expecting relief from the central level.
- Instituting a national level OPD triaging system to streamline hospital admissions to curb unnecessary “panic” admissions was a major breakthrough during the peak of the outbreak. The OPD Triage consisted of having separate sections in the OPD to cater for fever patients with early and individual attention given to them. Special OPD laboratories were set up to enable a rapid reporting of urgent FBC tests, which was then referred to a medical officer for necessary attention, all within a very short time duration. Depending on the urgency of each individual patient’s condition and reports, admission to the hospital or preferable ambulatory care at home was decided by the on-duty medical officer. A standardized Ambulatory Care Management Protocol for DF patients was developed with the advice of dengue clinical experts and was made available in all 3 languages. Sri Lanka Medical Association (SLMA) played a leading role in disseminating this concept throughout the country, through their routine information circulation and official website. This concept was well capitalized at the National

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Hospital in Colombo and other major hospitals to curtail the “panic” admissions during the outbreak and to relieve the congestions at OPD.

- An important aspect of outbreak management was disease surveillance, enabling valid and prompt patient information being shared among the necessary parties. The on-line dengue surveillance system (DenSys) was very useful for obtaining real-time information. Measures were taken to enhance the DenSys capabilities at various hospitals and some institutions were added into the system as a priority like BH Kinniya and BH Mulleriyawa. All base hospitals in Hambantota district was DenSys enabled during the outbreak and also temporary facilities were given to DH Piliyandala, DH Wethara, and DH Thalagama.
- Strengthening of existing electronic disease surveillance activities was also envisioned. A project was initiated to employ GIS mapping technology to dengue surveillance by incorporating the activities carried out by the field staff. This was initiated, in early 2017, as a pilot project in 3 selected high-risk areas in the Western Province; Maharagama, Rathmalana and Panadura MOH areas. An alternative method of fever surveillance was also planned out with the Education Ministry, where a mobile application will be developed to record and report school absenteeism due to any fever and this information analyzed as a proxy indicator for identifying potential clusters of a fever outbreak.
- Monitoring of midnight dengue patient counts in all major hospitals was done through the Disaster Management Unit of the Ministry of Health, providing dynamic daily caseload information, in addition to existing disease surveillance modality.
- Additional equipment was provided for facilitating optimum clinical care in hospitals throughout the outbreak period, by the National Dengue Control Unit. A total of 94 Mobile US scanners, 300 Multi-para monitors, 605 Infusion pumps, 150 Adjustable beds, 100 Haematocrit machines and over 500 Blood pressure apparatus was distributed during the year to further strengthen clinical care of Dengue patients.
- Laboratory services are very crucial for the provision of optimal care in dengue management. Therefore, improving the efficiency of hospital and OPD laboratory services was of very high concern. Providing additional equipment and reagents, increasing manpower and enabling night lab facilities to minimize any reporting delay were among the many measures taken in various hospitals.
- Basic investigations which had to be repeated frequently

were made available at low cost or outsourced as a free service (during the peak of the outbreak) through a request made to the private sector by the Hon. Minister of Health. Routine full blood reports (FBC) and even the Dengue Rapid Diagnostic Test (NS1) was made more affordable to the community during the height of the outbreak.

- In early July, a team of international experts in dengue was specially flown in from Thailand with the assistance of WHO as an initiative to evaluate the local outbreak and mitigation activities. This was followed up by another local experts committee appointed by the Hon. Minister of Health to look into enhancements to the national dengue control program.
- Training and updating on clinical management issues were carried out by the Epidemiology Unit in all parts of the country, especially in the dry zone areas like Anuradhapura, Hambantota, Vavuniya, Moneragala, Kinniya, Batticaloa, Kurunegala, Dambulla, Jaffna, Puttalam, Kalmunai, and Kanthale. General Practitioners in various parts of the western province and nursing staff from many hospitals were also trained in special sessions conducted by the Epidemiology Unit.
- Institutional and national level death reviews were also conducted by the Epidemiology Unit to improve the quality of care and to identify and rectify clinical pitfalls.

Mosquito Control Activities

These were carried out in most parts of the country as a major part of the outbreak mitigation process.

- Premise inspection and source-reduction programmes were carried out extensively in selected high-risk areas. Inspection of households and communicating messages and awareness building was continuously carried out. Seventeen special 2-3 day campaigns were coordinated and carried out by the National Dengue Control Unit with Police and Tri-Forces participation and other stakeholders. This was in addition to the bi-annual National Mosquito Control Weeks conducted in April and September. These periodic house-to-house (premise) inspections were done covering over 3,000,000 premises throughout the island with the support of tri-forces and police. Special inspections of major schools, public institutions, and large construction sites were also carried out in selected high-risk areas routinely.

(to be continued...)

Compiled by Dr. M. B. Azhar Ghouse

Table 1: Selected notifiable diseases reported by Medical Officers of Health 27th - 02nd Feb 2018 (05th 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	196	1355	2	5	0	1	1	7	1	2	4	21	0	1	1	1	0	0	28	75	0	6	0	1	56	95
Gampaha	105	816	0	6	0	1	5	0	5	3	16	1	1	0	2	0	0	6	75	1	2	0	0	75	100	
Kalutara	103	534	1	8	1	2	0	0	3	11	4	31	0	0	1	1	0	0	11	55	2	13	0	0	59	100
Kandy	82	563	1	6	0	1	0	0	0	0	7	2	11	0	1	0	0	5	26	0	2	0	2	61	100	
Matale	24	163	0	1	1	1	0	0	3	4	0	1	0	1	0	0	0	0	4	0	2	3	5	68	100	
NuwaraEliya	4	27	0	2	0	0	2	0	2	0	2	0	10	1	2	0	0	3	31	0	2	0	0	18	100	
Galle	8	84	0	3	0	0	0	0	0	1	1	22	0	3	0	0	0	2	6	0	0	0	1	39	41	
Hambantota	24	150	0	1	0	0	0	0	0	0	7	1	8	0	0	0	0	10	31	0	1	3	87	68	100	
Mataru	29	165	0	3	0	0	1	0	12	2	21	1	2	0	0	0	0	14	37	0	0	7	37	55	100	
Jaffna	102	739	0	15	0	0	2	9	0	6	0	2	10	108	0	0	0	2	29	2	5	0	0	36	93	
Kilinochchi	2	40	0	5	0	0	2	7	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	30	100	
Mannar	2	14	2	8	0	0	0	1	0	0	0	1	0	0	0	0	0	1	9	0	1	0	0	28	100	
Vavuniya	15	86	0	0	0	0	5	0	5	2	8	0	4	0	0	0	1	1	4	0	1	0	0	65	100	
Mullaitivu	2	12	0	0	0	0	1	1	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	50	56
Batticaloa	132	730	3	23	0	1	0	0	1	2	6	1	1	1	0	1	0	0	2	6	0	4	0	0	60	100
Ampara	4	28	0	4	0	0	0	0	0	0	11	0	0	0	1	3	0	4	17	0	0	0	0	49	100	
Trincomalee	24	117	2	9	0	0	1	0	0	0	7	2	7	0	0	0	0	1	27	0	0	0	1	36	96	
Kurunegala	83	588	2	15	0	2	0	2	0	1	1	20	0	3	0	1	0	5	46	3	12	7	21	68	100	
Puttalam	84	621	0	4	1	2	0	0	0	1	0	6	0	2	0	0	0	1	11	4	7	0	0	66	100	
Anuradhapura	34	141	4	11	0	0	1	0	0	6	27	0	6	0	0	0	0	4	29	1	1	2	19	41	100	
Polonnaruwa	5	50	0	2	0	1	0	0	6	2	29	0	0	0	1	0	0	9	21	0	2	1	22	66	100	
Badulla	15	91	3	18	0	0	1	3	0	1	3	19	3	8	0	2	0	13	37	3	11	0	1	49	100	
Monaragala	32	217	3	19	1	2	0	1	0	2	6	62	3	13	1	2	0	8	21	1	2	2	6	51	100	
Ratnapura	42	220	2	25	1	8	0	4	0	1	5	37	0	3	0	1	0	6	29	0	15	2	59	39	100	
Kegalle	29	217	2	6	0	2	0	0	0	15	3	16	4	9	0	4	0	2	27	0	2	0	0	73	100	
Kalmune	80	653	0	3	0	0	0	0	0	3	0	1	0	0	0	1	0	2	16	0	1	0	0	45	100	
SRILANKA	1262	8421	27	202	5	24	8	50	8	79	44	382	28	204	5	24	0	2	140	670	17	92	27	262	54	95

Source: Weekly Returns of Communicable Diseases (WRCD). *T=Timeliness refers to returns received on or before 02nd February, 2018. Total number of reporting units 349. Number of reporting units data provided for the current week: 328. C**=Completeness. A = Cases reported during the current week. B = Cumulative cases for the year.

Table 2: Vaccine-Preventable Diseases & AFP

27th – 02nd Feb 2018 (05th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2018	Number of cases during same week in 2017	Total number of cases to date in 2018	Total number of cases to date in 2017	Difference between the number of cases to date in 2018 & 2017
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	00	00	00	00	00	00	00	00	00	01	04	07	- 42.8 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	02	00	00	01	00	02	00	01	00	06	04	19	28	- 32.1%
Measles	00	00	00	00	00	00	01	00	00	01	02	11	34	-67.6%
Rubella	00	00	00	00	00	00	00	00	00	00	00	02	00	0 %
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	01	04	01	300 %
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	01	00	01	00	07	04	75 %
Whooping Cough	00	01	00	00	00	00	00	00	00	01	00	06	01	500 %
Tuberculosis	53	03	08	12	05	11	05	06	15	118	156	749	809	- 7.4%

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
NA = Not Available

Dengue Prevention and Control Health Messages

Look for plants such as bamboo, bohemia, rampe and banana in your surroundings and maintain them free of water collection.

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