WEEKLY EPIDEMIOLOGICAL REPORT

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

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WEER SRI LANKA 2017

Flashback 2016 (Part II)

This is the second in the series of two articles on the activities carried out by the Epidemiology Unit during the preceding year.

Dengue

Dengue has become a major public health concern in recent years. The highest ever cases for a year was reported in 2016 (55,102) but the case fatality was at a low level of 0.16% in 2016.

Surveillance plays a very important part in the control of communicable diseases and in 2016 several steps were taken to strengthen Dengue surveillance activities. Hospital level surveillance was further improved with the addition of 25 more sentinel sites to the online system, increasing the total to 75 spanning the whole country. Hospital surveillance teams (ICNOs) were continuously trained on recent advancements. The field component of the current real-time web based DenSys surveillance system was introduced initially in selected MOH areas in the Western province as a pilot project. In this component, PHII will add the field investigations and preventive actions taken along with area the GPS location using a tablet computer (TAB device).

Further, improving the clinical management of dengue haemorrhagic fever (DHF) has been the strength in keeping a lower fatality despite the high case load. Many training and capacity building programmes were held for clinicians and clinical staff in high risk areas such as Colombo, Kandy, Jaffna, Puttalam, Ratnapura, Hambantota, Mannar, Gampaha, Kalutara, Kalmunai districts etc.. In view of this, hospital infrastructure facilities were also improved with the collaboration of National Dengue Control Unit (NDCU) to establish High Dependency Units (HDU) at several base hospitals, by distributing HDU equipment including multiport monitors, micro-haematocrit machines, portable ultrasound scanners and adjustable beds.

With the collaboration of Medical Research Institute (MRI), blood samples from sentinel sites were tested for virological diagnosis and identification of circulating dengue serotypes. There was a change in virus to DENV2 serotype in 2016.

Until an effective dengue vaccine or a specific drug is available, prevention of dengue infection will depend on strengthening of the integrated vector management. Machinery for chemical and thermal fogging including vehicle mounted models and mist blowers were distributed along with continuous supply of chemicals through NDCU for this purpose. A practical guideline for standardization of *Aedes* vector surveillance and control was introduced this year with the collaboration of NDCU.

Dengue control demands a multi-pronged response that involves different stakeholders from various ministries other than the health sector. A series of source reduction campaigns and 2 national dengue control weeks were organized in 2016 where more than 2.2 million premises were inspected and necessary actions taken to mitigate impending outbreaks.

School based dengue inspection cards were introduced to induce school children as change agents for behaviour modification. About one million cards were distributed among school children in grades 4 to 9 and were expected to inspect their home environment and record it while eliminating those places with the support of parents. A competition to select the best schools on practicing control of dengue was held and district level winners were awarded and highly commended.

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National, Provincial and District Level Reviews were conducted to evaluate the dengue situation covering all the high risk areas including the Western province, Batticaloa, Jaffna and Kandy districts. The activities of this joint reviews included performance inspection of all MOH and field level activities conducted for the prevention and control of dengue. All dengue deaths which occurred in 2016 were reviewed at the national level with the participation of relevant clinical specialists in technical sessions chaired by the Director General of Health Services.

A collaborative phase III clinical study on dengue vaccine was established in hospitals in Colombo and Gampaha.

Public awareness was continuously enhanced throughout the year with broadcasting and telecasting advertisements through electronic and feature articles, leaflets and advertisements in the print and electronic media.

Chronic Kidney Disease

The burden of Chronic Kidney Disease (CKD) and Chronic Kidney Disease of Unknown aetiology (CKDu) is on the rise in the country and the Epidemiology Unit is entrusted with the responsibility of carrying out the surveillance system on CKD/ CKDu. The number of sentinel sites were expanded from 35 to 50 hospitals during 2016 and necessary infrastructure development and staff training have been done in the newly established sentinel sites. The "National Renal Registry", a web based real time patient registration system, has expanded since its inception and during the year 2016, around 5500 new CKD patients have been registered in the system. Screening guidelines developed in 2015 for CKD in Sri Lanka were revised during 2016 with the consensus of the technical experts and health staff were trained according to the new guidelines. Further, the water quality assessment laboratory in Anuradhapura was upgraded with new chemical analyzers which can detect heavy metals in water. This lab will be fully functional in 2017 and this will be of great benefit to the residents in the Anuradhapura district.

Leptospirosis

Leptospirosis continues to be a disease of public health importance in Sri Lanka with approximately 3000 – 5000 suspected cases reported each year and a Case Fatality of 1-2% in the recent past. Due to its diverse clinical manifestations and complications, diagnosis and treatment could be challenging. Having identified these challenges, the Epidemiology Unit with the collaboration of the Ceylon College of Physicians, Sri Lanka College of Paediatricians, College of Anesthesiologists of Sri Lanka, Sri Lanka College of Pulmonologists and Sri Lanka Medical Association has developed National Guidelines on Management of Leptospirosis in 2016. This will guide the clinicians to manage Leptospirosis patients in the future.

Influenza

Influenza is a disease with significant disease burden in the country with a pandemic potential. The Epidemiology Unit will be taking necessary measures to introduce the seasonal influenza vaccine to the high risk identified groups in 2017 as the initial step. No severe outbreaks of influenza were reported during the year 2016 in Sri Lanka, and only 13 deaths were reported which was fairly a low number compared to the last year (75 deaths in 2015). Special emphasis was given to further strengthen influenza surveillance activities during the last year (reviews, supervisory visits etc.). The physical and human resource facilities were strengthened in the regional laboratory Teaching Hospital Kandy and they will accept respiratory samples from 2017.

Enteric Fever

Due to the timely preventive measures initiated by relevant authorities, the cases of Enteric Fever have been coming down over the years. During 2016 there was a 23% reduction of the cases compared to 2015 (total 529 cases in 2016 compared to 684 cases in 2015). In order to further reduce the numbers it is important that in-depth analysis is done in each reported case so that necessary specific preventive strategies could be formulated. Thus a special surveillance form for Enteric Fever was introduced towards the end of 2016 and the Public Health Inspector is expected to investigate and complete the special investigation form as early as possible from the beginning of 2017.

Research activities

High coverage, high quality and low cost are characteristics of an optimal immunization programme in a country. Though Sri Lanka has achieved great heights in the coverage and the quality the evidence related to the cost of the national immunization programme is scarce. Information regarding the national immunization programme is of utmost importance to justify that immunization is a cost effective intervention and moreover, this information could be used for future cost predictions and policy planning. Identifying this need, the Epidemiology unit has carried out a study to estimate the cost of the National Immunization Programme in the country. The study was conducted in 6 districts namely; Gampaha, Batticaloa, Monaragala, Kegalle, Matara and Jaffna. Results have indicated that the national level mean cost per Fully Immunized Child (FIC) at 5 years of age was Rs.5093 (3932-5865) and the mean cost per FIC at 12 years of age was Rs.5333 (4066-6111). Of the total programme cost, it was estimated that 90.2% was for recurrent expenditure while 9.8% for capital expenditure. Further, it was interesting to note that the proportion of the National Immunization Programme cost borne by the Central Government was 30% while 70% of the cost was borne by the Provincial Governments.

Compiled by

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Table 1: Selected notifiable diseases reported by Medical Officers of Health 31st – 06th Jan 2017 (01st 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	342	342	6	6	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0	1	1	0	0	**44**	**88**
Gampaha	84	84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**13**	**67**
Kalutara	38	38	0	0	0	0	0	0	0	0	4	4	1	1	0	0	0	0	2	2	1	1	0	0	**50**	**86**
Kandy	43	43	0	0	0	0	0	0	0	0	4	4	5	5	0	0	0	0	7	7	0	0	0	0	**78**	**96**
Matale	19	19	2	2	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	3	3	0	0	**77**	**100**
NuwaraEliya	11	11	3	3	0	0	1	1	0	0	1	1	2	2	0	0	0	0	7	7	0	0	0	0	**62**	**85**
Galle	111	111	0	0	0	0	0	0	0	0	2	2	1	1	0	0	0	0	2	2	0	0	0	0	**45**	**65**
Hambantota	18	18	3	3	0	0	1	1	0	0	1	1	0	0	0	0	0	0	1	1	0	0	3	3	**67**	**92**
Matara	69	69	2	2	0	0	0	0	2	2	3	3	2	2	1	1	0	0	5	5	0	0	0	0	**100**	**100**
Jaffna	126	126	9	9	0	0	0	0	1	1	3	3	32	32	1	1	0	0	2	2	1	1	0	0	**83**	**92**
Kilinochchi	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**50**	**75**
Mannar	29	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**60**	**80**
Vavuniya	27	27	2	2	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	**100**	**100**
Mullaitivu	5	5	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	**60**	**60**
Batticaloa	25	25	4	4	0	0	0	0	0	0	5	5	0	0	0	0	0	0	2	2	0	0	0	0	**79**	**93**
Ampara	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**14**	**71**
Trincomalee	33	33	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	2	2	0	0	0	0	**67**	**83**
Kurunegala	90	90	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	6	6	4	4	**79**	**97**
Puttalam	10	10	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**23**	**86**
Anuradhapura	15	15	0	0	0	0	0	0	0	0	2	2	3	3	0	0	0	0	1	1	0	0	2	2	**37**	**74**
Polonnaruwa	6	6	1	1	0	0	0	0	0	0	2	2	1	1	0	0	0	0	1	1	0	0	0	0	**43**	**100**
Badulla	58	58	5	5	0	0	0	0	0	0	1	1	0	0	0	0	0	0	10	10	7	7	1	1	**82**	**94**
Monaragala	15	15	1	1	0	0	0	0	0	0	2	2	2	2	1	1	0	0	2	2	1	1	1	1	**64**	**91**
Ratnapura	57	57	2	2	0	0	0	0	0	0	7	7	0	0	2	2	0	0	0	0	4	4	0	0	**61**	**83**
Kegalle	41	41	2	2	0	0	0	0	0	0	0	0	1	1	0	0	0	0	3	3	3	3	0	0	**64**	**91**
Kalmune	37	37	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**54**	**77**
SRILANKA	**1311**	**1311**	**48**	**48**	**0**	**0**	**04**	**04**	**03**	**03**	**42**	**42**	**51**	**51**	**6**	**6**	**0**	**0**	**55**	**55**	**28**	**28**	**11**	**11**	**61**	**86**

Source: Weekly Returns of Communicable Diseases (WRCD).

•**T=**Timeliness refers to returns received on or before 06th January , 2017 Total number of reporting units 337 Number of reporting units data provided for the current week: 298 **C****-Completeness

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

Table 2: Vaccine-Preventable Diseases & AFP

31st – 06th Jan 2017 (01st Week)

Disease	No. of Cases by Province									Number of cases during current week in 2017	Number of cases during same week in 2016	Total number of cases to date in 2017	Total number of cases to date in 2016	Difference between the number of cases to date in 2017 & 2016
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	01	00	00	00	00	00	00	00	00	01	00	01	00	0%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Mumps	00	03	01	00	00	02	00	01	00	07	04	07	04	+75%
Measles	01	00	00	00	01	00	01	02	00	05	09	05	09	-44.4%
Rubella	00	00	00	00	00	00	00	00	00	00	00	00	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	00	00	00	0%
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	04	04	00	04	00	0%
Whooping Cough	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Tuberculosis	102	08	13	11	07	19	01	04	21	186	130	186	130	+43.0%

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 December 2016,

41

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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