



WEEKLY EPIDEMIOLOGICAL REPORT

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

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Flashback 2017 (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 2017.

Leptospirosis

Annually around 3000 leptospirosis cases are reported in Sri Lanka and the case fatality rate is around 1-2% in the recent past.

Due to the wide variety of clinical manifestations and complications of the disease, in 2016 a National guideline on leptospirosis management was developed mainly focusing on patient management in different settings and patients with different complications. It was developed by the Epidemiology unit in collaboration with multiple stakeholders such as Ceylon College of Physicians, Sri Lanka College of Paediatricians, College of Anaesthesiologists and intensivists of Sri Lanka, Sri Lanka College of Pulmonologists and Sri Lanka Medical Association.

Mass media campaigns for prevention and control of Leptospirosis were conducted to coincide with the "Maha" paddy cultivation season. Intersectoral coordination meetings were conducted at MOH level to plan and implement leptospirosis control activities and chemoprophylaxis distributed in high risk MOH areas.

Food and Water borne disease surveillance

Enteric fever, Viral Hepatitis and Dysentery can be considered as main diseases under the surveillance of food and water borne disease surveillance, carried out by the Epidemiology Unit. With the public health intervention and the socio-economic development in Sri Lanka, most of the food and water borne diseases are gradually reducing to a minimum state.

In 2017 Sri Lanka experienced a massive food poisoning outbreak in a food Dhansal at Waankamam Area, in MOH Irakkamam in Kalmunai RDHS division. Around 2500 people had consumed from the Dhansal and 1067 patients were admitted to hospitals, 3 died. Timely intervention done by the district health authorities and the Epidemiology unit led to successful control of the

outbreak. *Staphylococcus aureus*, *Salmonella* and *Clostridium perfringens* were isolated from the samples.

Dengue Fever/ Dengue Haemorrhagic Fever

Dengue is the most important epidemic prone public health concern in Sri Lanka. In 2017 there were approximately 185,000 dengue cases reported from all over the Island with about 40% of cases being reported from the Western Province. There was an outbreak with the south-western monsoonal rains in the mid-year period and due to the severe drought experienced in many dry-zone areas in the country mainly due to indoor water storage containers. It is notable that among the dengue fatalities reported during the whole year, 67% were females while 11.6% of the total was less than 15 years of age.

Epidemiology Unit took several measures to strengthen and control DF/DHF outbreak situation in the country with enhanced surveillance and case management. Improved real-time disease surveillance was done with the aim of carrying out prompt preventive actions at field level in all parts of the island. Many hospitals affected by the outbreak were newly enrolled to the on-line notification system in Trincomalee and Hambantota districts. To increase bed strengths in affected areas, facilitation of dedicated new hospital units for Specialized Dengue Care was carried out as well as establishment of satellite hospitals and setting up of temporary wards as auxiliary units. Imparting updated knowledge and skills for the clinicians and paramedical staff was carried out intensely in most areas of the country. Manpower shortage at many hospitals was settled as an urgent necessity and trained emergency teams were formed at major hospitals for rapid deployment to assist in local outbreak areas. Additional equipment like mobile USS, multi monitors, Infusion pumps, adjustable beds, blood pressure apparatus etc. were provided to many hospitals for ensuring optimum clinical monitoring and patient care. Overcrowding in hospitals and OPD facilities was another obstacle in providing quality care. Instituting an OPD triaging

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system for streamlining hospital admissions along with standardizing an ambulatory care management system of DF patients was a major turning point in this regard. Laboratory services were improved by providing additional equipment and reagents, increasing the manpower and enabling night lab facilities to minimize reporting delays. Arrangements were made to have basic investigations done at low cost during the peak of the outbreak. Eminent international dengue experts were flown in with WHO assistance during the peak of the outbreak to evaluate the local situation. Institutional and national level death reviews were conducted to improve quality of care.

Ensuring inter-sectoral collaboration was very important and it was spearheaded at national level through the Presidential Task Force (PTF) with HE The President Sirisena himself presiding at the Colombo and Gampaha district meetings. This was further strengthened with regular fortnightly/monthly meetings of the PTF chaired by President's Secretary and monthly District level coordination meetings. Implementation of multi-sectoral Mitigation Action Plan for all public-sector organizations was a major achievement.

Community empowerment and heightened communication with a major publicity drive was carried out through all types of media to strengthen the source reduction campaigns. Regular media updates were issued to strengthen community awareness, feedback and cooperation as well as regular cleaning campaigns in schools and public places to minimize mosquito breeding sites. Stringent inspections and litigations at construction sites were also conducted to prevent mosquito breeding in them. National reviews, provincial level and district level reviews were held in high-risk areas which included performance evaluation of preventive action.

Chronic Kidney Disease

The burden of Chronic Kidney Disease (CKD) and CKD of unknown aetiology (CKDu) is one of the major health problem in Sri Lanka. National Renal Registry is the online real time national CKD patients' database implemented by the Epidemiology unit, currently feeding data from 58 sentinel hospitals. 7,226 patients have been registered in the renal registry by these sentinel hospitals during 2017.

The Epidemiology unit was able to further improve the renal registry in 2017, by integrating National Renal Field Registry and link patients' hospital and field follow-up, enabling PHII to update the community level patients' details including follow-up of patients, trace the defaulters and refer them back for treatments as well as to remove the dead patients from the registry. With these modifications, the Epidemiology Unit has trained all relevant hospital and field level staff including medical officers, nurses, MOHH and PHII.

Influenza

Influenza, a viral respiratory disease, can cause high morbidity and mortality in humans. Influenza Like Illness (ILI) in 19 hospitals and Severe Acute Respiratory tract Infections (SARI) surveillance in four major hospitals is carried out as a sentinel surveillance to identify disease trends in relation to time, place and person. The on-line data management system, "FluSys", smoothly functioned throughout the year.

In 2017 influenza surveillance system was further strengthened through training of staff at sentinel hospitals, maintaining adequate supplies of reagents for RTPCR at the MRI/ National Influenza Centre and visits to the sentinel hospitals by the Epidemiology Unit staff. The National Technical Committee Meeting on Avian Influenza chaired by the Director General of Health Services was held every month of the year in order to gain further cooperation from

all key stake holders.

The country experienced a massive outbreak during the early part of 2017 from February to May. The outbreak subsided from June and remained at low prevalence during the latter part of the year till November. The public awareness done by the Epidemiology Unit through mass media and distribution of IEC materials in all public institutions including schools cause to reduce the magnitude and the duration of the outbreak. Further, Epidemiology Unit regulated the issuance of anti-viral drugs (Oseltamivir) as well as personal protective equipment (N- 95 masks) and distributed them according to the requirement without any shortage.

Detailed investigation of influenza related deaths was initiated in 2017. Accordingly, the Influenza Death Registry is maintained at the Epidemiology Unit. During the year of 2017, 89 influenza related deaths were reported through the death surveillance system.

The Epidemiology Unit is in the process of revising the National Influenza Pandemic Preparedness Plan keeping in line with the WHO guidelines (2013) on pandemic influenza preparedness.

Research activities

Conducting research is another important responsibility of the Epidemiology Unit. In 2017 the Epidemiology Unit conducted a boosting trial of polio mucosal immunity among OPV primed children comparing the development of mucosal immunity by fractional dose IPV to full dose IPV. This will be a globally important study in IPV scarcity and this will guide to respond for Vaccine Derived Polio Virus (VDPV) or wild polio virus outbreak situation.

In addition, a cross-sectional survey to estimate the burden and to understand the aetiology of Chronic Kidney Disease of unknown aetiology (CKDu) was carried out by the Epid Unit during the year 2017. This is the first study to utilize the agreed upon operational case definitions of CKDu since its publication in 2016. The study followed the internationally accepted DEGREE protocol with a total sample of 5000 individuals in the Anuradhapura district. All the lab tests were carried out traceable to the IDMS standards with bi-banking of the samples for future use. Study reported a "suspected CKDu" prevalence of 10.7% (Male - 17.5%, Females - 7.6). Epid Unit is in the process of commencing a long-term follow-up study based on the current study findings.

A study to assess the immunization coverage, proportion of age appropriate immunization and some aspects of immunization service provision in Puttalam district was carried out by the Epidemiology unit in 2017.

Apart from that the consultant epidemiologists attached to the Epidemiology Unit supervised many postgraduate researches which will be helpful on decision making in improvement of the health system in Sri Lanka.

Compiled by

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Table 1: Selected notifiable diseases reported by Medical Officers of Health 30th - 05th Jan 2018(1st 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	260	260	1	1	0	0	1	1	1	1	4	4	4	0	0	0	0	0	0	5	5	1	1	1	1	50	95
Gampaha	208	208	2	2	0	0	0	0	2	2	4	4	4	0	0	1	1	0	0	6	6	0	0	0	0	80	100
Kalutara	124	124	2	2	0	0	0	0	0	0	10	10	0	0	0	0	0	0	0	6	6	1	1	0	0	60	100
Kandy	157	157	1	1	0	0	0	0	0	0	3	3	2	2	2	0	0	0	0	4	4	0	0	1	1	57	100
Matale	32	32	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	62	100
NuwaraEliya	6	6	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	0	0	3	3	0	0	0	0	15	100
Galle	18	18	0	0	0	0	0	0	0	0	12	12	1	1	0	0	0	0	1	1	0	0	0	0	0	31	65
Hambantota	31	31	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	4	4	0	0	15	15	50	100
Matara	17	17	2	2	0	0	0	0	0	0	6	6	0	0	0	0	0	0	0	3	3	0	0	11	11	59	100
Jaffna	230	230	2	2	0	0	5	5	0	0	0	0	28	28	0	0	0	0	0	3	3	0	0	0	0	14	93
Klinochchi	11	11	2	2	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	100
Mannar	3	3	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	40	100
Vavuniya	26	26	0	0	0	0	2	2	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	50	100
Mullaitivu	6	6	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	80	100
Batticaloa	168	168	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	64	100
Ampara	0	0	1	1	0	0	0	0	0	0	3	3	3	0	0	0	0	0	1	1	1	1	0	0	0	43	100
Trincomalee	34	34	3	3	0	0	1	1	0	0	1	1	1	1	0	0	0	0	3	3	0	0	0	0	0	27	100
Kurunegala	138	138	4	4	0	0	0	0	0	0	6	6	6	0	0	0	0	0	7	7	1	1	3	3	75	100	
Puttalam	149	149	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	1	1	0	0	0	69	100
Anuradhapura	32	32	2	2	0	0	0	0	0	0	5	5	5	0	0	0	0	0	2	2	2	2	0	0	1	47	95
Polonnaruwa	12	12	0	0	0	0	0	0	0	0	9	9	9	0	0	1	1	0	2	2	2	2	2	2	2	86	100
Badulla	24	24	4	4	0	0	1	1	0	0	6	6	6	1	1	0	0	0	7	7	3	3	0	0	0	50	100
Monaragala	53	53	3	3	0	0	1	1	0	0	16	16	16	1	1	0	0	0	7	7	0	0	0	0	0	36	100
Ratnapura	50	50	9	9	0	0	0	0	0	0	7	7	7	0	0	0	0	1	4	4	3	3	12	12	56	100	
Kegalle	51	51	3	3	0	0	0	0	0	0	4	4	4	0	0	2	2	0	4	4	4	0	0	0	0	82	100
Kalmune	173	173	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	0	3	3	3	1	1	0	0	38	100
SRILANKA	2013	2013	51	51	0	0	14	14	4	4	98	98	98	36	36	4	4	1	84	84	13	13	47	47	54	97	

Source: Weekly Returns of Communicable Diseases (WRCD).
 *T=Timeliness refers to returns received on or before 05th January, 2018 Total number of reporting units 349 Number of reporting units data provided for the current week: 339 C**-Completeness
 A = Cases reported during the current week. B = Cumulative cases for the year.

Table 2: Vaccine-Preventable Diseases & AFP

30th – 05th Jan 2018(1st 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	01	00	00	00	01	00	00	00	01	01	01	01	0 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	01	00	00	00	00	02	00	00	00	03	07	03	07	-57.1%
Measles	00	00	00	00	00	00	00	00	00	00	05	00	05	-100 %
Rubella	02	00	00	00	00	00	00	00	00	02	00	02	00	100 %
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Tetanus	01	00	00	00	00	00	00	00	00	01	00	01	00	- 45.4%
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	04	00	04	- 100 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Tuberculosis											186		186	

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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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@slt.net.lk. **Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

ON STATE SERVICE

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