WEEKLY EPIDEMIOLOGICAL REPORT

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

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WER SRI LANKA 2019

Vol. 46 No. 01 **29th – 04th January 2019**

Flashback 2018 (Part I)

This is the first of two articles on the activities carried out by the Epidemiology unit during the preceding year. 2018 was a successful and eventful year for the Epidemiology unit.

Disease surveillance

Disease surveillance is the backbone of the country's communicable disease control programme and the Epidemiology unit carries out this task successfully for decades with utmost dedication. Timely collection of relevant data, analyzing, interpretation and dissemination of the disease-related information to the relevant stakeholders are the key to the success of the programme.

e-Surveillance is the web-based weekly updating disease surveillance system, which was started in 2015. It was implemented to minimize the errors encountered in the paper-based system and now it has become the main source of data in the disease surveillance programme. Currently, all 353 Medical Officers of Health (MOH) divisions are sending data through the e-Surveillance with near 100% completeness and 90% timeliness.

National Immunization Programme

National Immunization Programme (NIP) is one of the major responsibilities upon the Epidemiology unit. Currently, NIP protects the nation from 12 dreadful communicable diseases and 2 non-communicable diseases.

HPV vaccination: post introduction Evaluation

Introduction of HPV vaccine was done in the last quarter of 2017. Post Introduction Evaluation (PIE) is recommended by WHO for countries to conduct after a new vaccine introduction within 6 months to 1 year time period. Considering this recommendation, PIE after HPV vaccination was conducted in September 2018.

The PIE intended to identify and rectify any programmatic and logistical gaps to address in smooth implementation. At the same time, the country also intended to document the findings and lessons learnt in order to use in future new vaccine introductions. The PIE was conducted in randomly selected 11 districts aiming to evaluate the overall progress of the introduction of HPV vaccine in the national immunization programme to identify problem areas needing correction within the immunization programme either pre-existing or resulting from the introduction of a new vaccine and to provide valuable lessons for future new vaccine introductions.

The evaluation method was focused on a range of programmatic aspects such as pre-introduction planning, vaccine stock management, vaccine cold chain maintenance, implementation process of the vaccine, monitoring of vaccine wastage, logistics of administering

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In each district 2 MOH areas were evaluated including school HPV vaccination sessions, interviewing students and parents. The vaccine storing cold rooms at district level were evaluated for district-level stock management and vaccine storage. Immunization programme technical experts and independent evaluators were included in the team.

Cold chain maintenance was satisfactory at all levels with minimum vaccine wastage. Vaccination coverage for 2017 Grade 6 girl cohort was identified as 90% and the follow-up 2nd dose to date of the review was 58%. The same for 2018 Grade 6 girl cohort to the date of the review was 88% for the 1st dose and 21% for the 2nd dose. The evaluators have noted that the final dose for both age cohorts was due in MOH schedules and be further continued during the rest of the year and the following year and the 2nd dose coverage would be achieved. However, data transferring system identified requirement of improvement as the web-based immunization system identified the real-time data and separate birth cohort data identification and a separate each dose identification has some limitations to be improved.

Polio sero survey

National Immunization Schedule replaced one intramuscular dose of inactivated polio virus vaccine (IPV) with two doses of intradermal fractional IPV (fIPV) in July 2016, in response to the global scarcity of IPV with a view to continuation of IPV.

Gradual withdrawal of OPV, in the process of polio eradication and the polio endgame strategic plan, one intramuscular dose of IPV was introduced in 2015 with planned "Polio Switch" in April 2016 to change over trivalent OPV (containing polio virus 1,2,3) to bivalent OPV (containing polio virus 1,3).

A survey of seroprevalence of anti-polio antibodies in children who had received two fIPV doses was compared with those who received one full IPV dose with the aim of identifying adequate population protection level for polio virus type 2.

Children born between March and December 2016 were randomly selected from three districts (Colombo, Badulla, and Anuradhapura) for the study. Sera were collected and tested for the presence of neutralizing antibodies to poliovirus types 1, 2, and 3 by sending samples to Global Polio Laboratory at CDC, Atlanta.

Seroprevalence of anti-polio antibodies was 100% in all districts for polio virus type 1 (PV1) and PV3; it ranged between 90-93% for PV2 in children who had received one full IPV dose and between 78-100% in those receiving two fIPV doses (p=0.217). Median reciprocal titers of anti-PV2 antibodies were similar in those who had received full IPV vs fIPV (1:64 vs 1:45 respectively; p=0.110).

The seroprevalence of anti-PV2 antibodies did not decrease after the introduction of fIPV. In fact, this study demonstrated that Sri Lanka is maintaining adequate immunity to polio virus type 2 even though changing over to fractional dose IPV schedule. Sri Lanka is the first country changed over to 2 intradermal fractional dose IPV schedule national wide and this is the first global evidence available at community level research study in assessing population-level immunity to polio virus type 2 after 2-fractional doses of IPV.

Measles, Rubella and Congenital Rubella Syndrome (CRS) Elimination programme.

Sri Lanka is experiencing a Measles outbreak from 2013 to 2016 period with gradually reducing the intensity and the outbreak was successfully waned out in 2016.

On par with the Regional Measles, Rubella / CRS elimination strategic plans, Sri Lanka has set the goal for the elimination of Measles, Rubella and CRS by 2020. To achieve this target Measles, Rubella CRS elimination guidelines were updated by introducing more sensitive surveillance case definition of "fever and maculopapular rash" with essential early laboratory investigations for suspected Measles/Rubella and CRS cases

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to be continued…

Table 1: Selected notifiable diseases reported by Medical Officers of Health 22nd – 28th Dec 2018 (52nd Week)

RDHS Division	Dengue Fever		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Chickenpox		Meningitis		Leishmania-sis		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	320	10258	1	102	0	9	1	48	0	43	2	241	1	16	0	11	0	1	6	722	1	69	0	5	**61**	**100**
Gampaha	151	5857	1	78	1	13	2	26	2	181	4	233	0	11	0	15	1	1	13	749	1	52	0	68	**63**	**100**
Kalutara	102	3155	4	98	0	5	1	19	1	65	20	712	0	7	0	17	0	0	11	732	0	107	0	9	**55**	**100**
Kandy	54	3832	0	119	0	7	0	6	2	32	6	124	0	110	0	24	0	1	4	334	0	43	1	41	**59**	**100**
Matale	7	906	0	24	0	1	0	8	1	43	3	119	1	6	0	10	0	0	0	61	0	17	16	211	**59**	**100**
NuwaraEliya	2	207	2	63	0	5	0	15	0	159	2	54	2	149	1	29	0	0	0	208	1	52	0	0	**24**	**100**
Galle	17	977	2	66	0	14	0	6	0	25	8	436	1	67	0	4	0	1	5	378	2	62	0	5	**32**	**100**
Hambantota	19	972	2	32	0	4	0	3	0	8	6	93	6	100	0	3	0	1	3	287	3	18	3	749	**71**	**100**
Matara	35	1148	0	42	1	8	0	9	0	23	1	292	1	68	1	27	0	0	9	308	1	16	8	508	**56**	**100**
Jaffna	236	4058	3	221	0	6	1	56	0	224	3	22	22	415	0	1	0	2	2	279	0	13	0	3	**37**	**93**
Kilinochchi	13	342	0	41	0	1	0	21	0	6	5	13	2	19	0	0	0	1	0	33	0	4	0	9	**51**	**100**
Mannar	4	224	0	26	1	1	0	3	0	2	0	1	1	13	0	1	0	0	0	28	0	4	0	4	**36**	**100**
Vavuniya	11	603	0	20	2	6	0	54	0	16	0	52	1	8	0	0	0	1	3	55	0	10	0	13	**54**	**100**
Mullaitivu	1	115	0	9	0	0	0	12	0	26	2	14	0	8	0	0	0	1	0	12	0	2	0	2	**26**	**98**
Batticaloa	47	4843	9	233	0	5	0	11	1	37	2	63	0	3	0	7	0	3	6	198	0	21	0	0	**63**	**100**
Ampara	0	249	2	87	0	6	0	3	0	11	1	71	0	0	0	7	0	1	2	294	2	36	0	3	**62**	**100**
Trincomalee	26	1149	0	41	0	2	0	10	0	15	0	64	0	23	0	4	0	0	0	201	0	10	0	20	**31**	**98**
Kurunegala	45	2464	0	149	0	20	2	19	1	14	11	373	1	33	1	26	0	2	10	615	0	89	22	533	**60**	**100**
Puttalam	27	2010	1	95	0	8	0	7	0	10	0	59	0	12	0	3	0	0	0	151	0	89	0	6	**62**	**100**
Anuradhapura	18	884	0	93	1	9	0	10	4	49	4	251	1	24	0	24	0	2	13	435	1	55	6	515	**44**	**95**
Polonnaruwa	8	325	2	51	0	5	0	0	0	20	13	192	0	1	0	4	0	1	9	331	0	24	9	263	**56**	**88**
Badulla	22	613	1	147	1	11	0	14	1	19	4	189	2	98	0	69	0	0	15	511	7	156	0	12	**48**	**99**
Monaragala	8	854	1	89	0	2	0	1	0	4	15	422	3	146	0	51	0	0	0	190	5	191	0	51	**66**	**100**
Ratnapura	25	2245	3	208	0	43	0	30	1	6	21	776	0	29	1	31	0	2	1	321	4	142	0	223	**46**	**100**
Kegalle	32	1534	0	64	0	13	0	11	0	97	2	368	0	79	0	19	0	0	9	443	2	51	0	17	**63**	**100**
Kalmune	22	1766	1	70	0	4	0	4	0	35	0	15	0	1	0	1	0	0	3	219	0	19	0	1	**50**	**100**
SRILANKA	**1252**	**51590**	**35**	**2268**	**7**	**208**	**7**	**406**	**14**	**1170**	**13**	**5249**	**45**	**1446**	**4**	**388**	**1**	**21**	**124**	**8095**	**30**	**1352**	**65**	**3271**	**53**	**99**

Source: Weekly Returns of Communicable Diseases (WRCD).

*T=Timeliness refers to returns received on or before 28th December , 2018 Total number of reporting units 353 Number of reporting units data provided for the current week: 344 **C****-Completeness

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

Table 2: Vaccine-Preventable Diseases & AFP

22nd – 28th Dec 2018 (52nd 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	01	00	00	00	01	NA	70	67	4.4%
Diphtheria	00	00	00	00	00	00	00	00	00	00	NA	00	00	0%
Mumps	00	00	00	00	01	00	00	03	00	04	NA	364	302	20.5%
Measles	01	00	00	00	00	00	00	00	00	01	NA	129	201	-35.8%
Rubella	00	00	00	00	00	00	00	00	00	00	NA	08	10	- 20 %
CRS**	00	00	00	00	00	00	00	00	00	00	NA	00	01	- 100%
Tetanus	00	00	00	00	00	00	00	00	00	00	NA	20	16	25 %
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	NA	00	00	0%
Japanese Encephalitis	00	00	00	00	00	00	00	00	00	00	NA	15	22	- 31.8 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	NA	54	24	125 %
Tuberculosis	91	35	19	00	14	12	00	02	13	186	NA	8876	8267	7.2 %

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.

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

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