WEEKLY EPIDEMIOLOGICAL REPORT

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

231, de Saram Place, Colombo 01000, Sri Lanka
Tele: + 94 11 2695112, Fax: +94 11 2696583, E mail: epidunit@sltnet.lk
Epidemiologist: +94 11 2681548, E mail: chepid@sltnet.lk
Web: http://www.epid.gov.lk

WER SRI LANKA 2019

Vol. 46 No. 41 05th– 11th October 2019

World Polio Day: 24th October Part I

Achieving and sustaining polio free status: High coverage in routine polio vaccination prevents polio in paralysing children……..!

Background

Sri Lanka has achieved and sustained poliomyelitis free status after the last case in 1993. The success of achievements are with commitments and accountability of the Polio Eradication Programme in the country, and integrated with health services at each level of health. This is the contribution of all the government health staff working for the programme, private health sector institutions, leadership of the Ministry of Health and positive political willpower.

But, most importantly the acceptance of vaccination and trust built up towards the programme has led to make this success and requires to be maintained in view of heading for Global Polio Eradication. In this process, the commitment and the hard work of field level public health staff headed by the Medical Officer of Health (MOH) has showed the immense contribution for its success.

Some countries are experiencing low immunization coverage which leads to continued circulation of the wild polio virus transmission (WPV 1) in endemic countries (Afghanistan and Pakistan) and evolving problem of Vaccine Derived Polio Virus (VDPV) for all 3 polio virus types of 1,2 and 3 in several countries.

The removal of vaccine component of poliovirus type 2 has been done in 2016 April as a global synchronized process of “Polio Switch” and expected to provide polio type 2 immunity through IPV vaccination introduced in 2015. This is expected to protect children from possible emergence of VDPV type 2 after withdrawal of Poliovirus type 2 component from the Oral Polio Vaccine (OPV). This global decision has been made with the last case of wild poliovirus type 2 in 1999 and with the declaration of its eradication. The last wild poliovirus 3 case has been detected in 2012 but not yet declared as eradicated. All global wild poliovirus cases experiencing from endemic countries at the moment are poliovirus type 1 cases.

In response to global scarcity of IPV stocks and preventing population level immunity gaps for poliovirus type 2, Sri Lanka decided to continue IPV vaccination by shifting

Contents Page

over to dose sparing IPV schedule of fractional dose Inactivated Polio Vaccine (IPV). This includes 0.1ml to be given intradermal as 2 doses for developing adequate immunity, instead of a single full dose IPV which is 0.5 ml intramuscularly. The current polio vaccination schedule includes bivalent OPV (protection for poliovirus type 1 and 3) given to children including 5 doses at 2, 4,6,18 and 60 months of age and fractional dose IPV given concomitantly at 2 and 4 months.

What is poliomyelitis and exclusion procedure?

Poliomyelitis is a paralytic illness caused by a faeco-orally transmitted virus. Polioviruses are members of enterovirus subgroup, staying and multiplying in the gastro-intestinal tract and stable in acidic environment. There are 3 polio serotypes and do not develop heterogeneic or cross protective immunity by infecting with one serotype to the other serotype. The polio virus destroys outside the body in exposing to heat, chlorine, formaldehyde or exposing to sunlight especially to ultra-violet rays.

Once poliovirus enters through the oral route, it multiplies in pharynx and gastrointestinal tract and viruses will pass through in faeces. In lower hygienic and sanitation situations it can easily transmit to another person, undergoing the same multiplication procedure. After about 200 persons get infected, at least 1 person will get paralysis appearing as acute flaccid paralysis (AFP). In fact, one polio case in a country or a region, means a widespread poliovirus circulation. At the stage of lowering of a polio caseload or when polio incidence is reducing, countries change the case definition to more sensitive or a broader case definition of “Acute Flaccid Paralysis”. This concept of sensitive surveillance is considered not to miss out any possible poliomyelitis case. It will obviously identify a wider variety of other differential diagnosis in a country as with polio case incidence is reducing. But, it is very important to identify all possible polio cases and confirm them as other differential diagnoses and exclude poliomyelitis.

In excluding poliomyelitis with other differential diagnoses, it is very important to investigate them for polioviruses, excreted in faeces. After getting infected, poliovirus excretion in faeces may be intermitted and maximum excretion will remain for initial 14 days. The timely collected stool samples (within 14 days of the onset of paralysis) tested at an accredited proficiency laboratory for polio will confidently exclude polio cases. Because of the nature of intermitted shedding of the viruses, 2 stool samples are collected from the patient at 24 hours apart for possible maximum isolation. Timely collected stool samples are to be dispatched to the accredited Polio Regional Reference Laboratory at the Medical Research Institute, Colombo for exclusion of all AFP cases. Reverse cold chain needs to be maintained in sending samples (in a cold box with ice packs) to ensure polioviruses are not exposed to heat and get destroyed.

The polioviruses, if evade from the intestinal mucosal immunity and multiplies, it enters into the circulatory system and can infect the nervous system. It specially affects the central nervous system in replicating in motor neurons at the anterior horn cells, destroying motor functions. It also can infect brain stem cells. This results in typical appearance of acute flaccid paralysis and also cranial nerve falsies commonly the facial nerve palsy.

Majority of the susceptible are below 5 years, even though adults also can get affected. However, considering the possibility of case appearance and not to miss out cases AFP surveillance is carried out below 15 years of age. The incubation period may vary from 1- 3 weeks or little longer. Those who get infected, while the majority remains asymptomatic, paralytic cases may be spinal involvement, bulbar involvement with cranial nerve paralysis or can present as a combination of spino-bulbar involvement. Complete recovery is unlikely. Death, long term paralysis with major morbidity or with some residual paralysis with varying degree of morbidity can occur in affected children.

Compiled By:

Dr Deepa Gamage
Consultant Epidemiologist
MBBS, MSc, MD (Community Medicine)
National focal point for Polio Eradication Programme.

to be continued ..

Table 1: Selected notifiable diseases reported by Medical Officers of Health 28th – 04th Oct 2019 (40th 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	647	11272	3	49	0	10	1	20	1	59	11	178	1	9	0	8	0	0	5	369	0	41	0	4	**48**	**100**
Gampaha	351	9050	4	37	0	8	0	3	0	25	1	81	0	3	0	7	0	2	2	350	0	21	1	146	**51**	**96**
Kalutara	178	5322	0	65	0	6	0	18	1	60	10	476	1	7	0	4	0	1	13	563	2	96	0	3	**63**	**100**
Kandy	331	3832	5	93	1	11	1	4	0	28	4	73	0	82	0	5	1	3	8	230	2	59	0	41	**63**	**100**
Matale	21	491	1	25	0	3	0	1	0	6	0	42	0	6	0	7	0	2	2	79	0	5	13	206	**58**	**100**
NuwaraEliya	13	212	1	94	0	2	0	9	0	5	2	45	6	73	0	9	0	0	2	115	3	41	0	0	**26**	**100**
Galle	105	5099	1	40	0	7	0	3	0	5	20	365	1	44	0	42	0	0	6	367	2	43	0	4	**61**	**99**
Hambantota	55	1422	2	26	0	3	0	1	1	8	3	110	3	107	0	4	0	1	5	257	3	36	9	649	**71**	**100**
Matara	116	2779	5	26	0	4	1	3	0	18	25	348	2	38	0	16	0	1	5	259	0	16	10	469	**59**	**100**
Jaffna	77	2396	19	248	0	13	0	24	3	100	0	30	1	280	0	4	0	0	5	263	0	20	0	0	**21**	**93**
Kilinochchi	8	142	3	24	0	1	0	11	0	0	0	19	0	25	0	1	0	0	0	7	0	7	0	14	**51**	**100**
Mannar	0	79	0	3	1	2	0	9	0	1	0	1	0	8	0	0	0	0	0	0	1	3	0	1	**54**	**100**
Vavuniya	7	251	1	23	0	11	1	28	0	13	0	54	0	5	0	0	0	0	4	81	1	11	0	3	**58**	**100**
Mullaitivu	1	123	0	11	0	0	0	13	0	3	0	22	0	8	0	0	0	0	0	14	0	7	0	4	**29**	**96**
Batticaloa	24	1177	13	157	0	2	0	13	2	42	0	43	0	1	0	0	0	1	5	227	0	26	0	0	**50**	**100**
Ampara	7	217	2	73	0	2	0	0	1	17	1	39	0	2	0	11	0	0	17	270	0	13	0	4	**58**	**100**
Trincomalee	15	997	2	26	0	0	0	0	0	57	1	18	0	18	0	5	0	1	5	217	0	9	0	5	**32**	**100**
Kurunegala	103	1704	3	65	0	17	0	6	0	30	3	140	0	22	1	22	0	3	6	510	2	90	20	662	**60**	**100**
Puttalam	69	853	2	26	0	3	0	1	2	19	0	32	2	15	1	3	0	0	3	124	1	43	0	9	**62**	**99**
Anuradhapura	13	546	1	43	0	10	0	5	1	13	4	108	0	33	0	22	0	2	1	429	1	84	16	465	**42**	**99**
Polonnaruwa	13	306	1	27	0	3	0	1	0	3	0	63	0	4	0	16	0	2	3	278	1	20	10	249	**61**	**99**
Badulla	40	817	2	77	1	7	1	10	0	83	5	181	5	116	0	15	0	0	10	289	0	159	0	14	**63**	**100**
Monaragala	0	333	0	36	0	4	0	0	0	79	0	189	0	82	0	41	0	0	0	212	0	112	0	22	**60**	**78**
Ratnapura	77	2577	3	88	0	30	0	10	0	14	24	794	0	37	0	29	0	4	8	337	3	143	4	140	**47**	**100**
Kegalle	99	1621	0	36	0	18	0	2	0	28	4	183	0	55	0	91	0	0	12	411	0	46	3	49	**67**	**100**
Kalmune	8	622	3	85	0	1	0	1	1	62	0	29	0	3	0	4	0	0	4	203	0	20	0	0	**63**	**99**
SRILANKA	**2378**	**54240**	**77**	**1503**	**3**	**178**	**5**	**196**	**13**	**778**	**11**	**3663**	**22**	**1083**	**2**	**366**	**1**	**23**	**131**	**6461**	**22**	**1171**	**86**	**3163**	**54**	**98**

Source: Weekly Returns of Communicable Diseases (WRCD).

*T=Timeliness refers to returns received on or before 04 th October , 2019 Total number of reporting units 353 Number of reporting units data provided for the current week: 324 **C****-Completeness

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

Table 2: Vaccine-Preventable Diseases & AFP

28th – 04th Oct 2019 (40th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2019	Number of cases during same week in 2018	Total number of cases to date in 2019	Total number of cases to date in 2018	Difference between the number of cases to date in 2019 & 2018
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	00	00	00	00	00	00	00	00	00	01	62	48	29.1 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	00	00	00	00	00	02	00	00	00	02	07	263	272	- 3 .3 %
Measles	01	02	00	00	00	00	00	00	00	03	02	250	100	150 %
Rubella	00	00	00	00	00	00	00	00	00	00	00	00	04	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	17	17	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	00	00	00	09	25	- 64 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	01	36	41	- 12.1 %
Tuberculosis	56	17	03	03	15	05	27	02	00	128	158	6517	6591	- 1.1 %

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**

ON STATE SERVICE

Dr. SUDATH SAMARAWEERA
CHIEF EPIDEMIOLOGIST
EPIDEMIOLOGY UNIT
231, DE SARAM PLACE
COLOMBO 10