WEEKLY EPIDEMIOLOGICAL REPORT

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Global Polio Eradication Initiative (*Part 2*)

Adequate resources needed to eradicate polio

Partners in the Global Polio Eradication Initiative are examining every possible option to seek fresh funding while managing existing cash flow to limit any threat to the immunization plan. The risk of not stopping polio in endemic countries was made clear when a large type-1 outbreak originally from India spread to Tajikistan early in 2010 where, to date, it has paralysed 239 children. Tajikistan had been polio -free since 1997. This highlights the urgency of capitalizing on recent gains made in the polio-endemic countries.

Sri Lanka Situation

Since 1993 Sri Lanka has not reported any poliomyelitis cases up to date. Sri Lanka has the threat of importation of wild polio virus because her neighbouring countries still harboring them. Therefore, stringent surveillance activities need to be carried out to remain in polio free status. This is more important currently with the resettlement process in the northern and eastern part of the country after the civil war.

Medical Officer of Health has an important role to play in this regards. Following account is to refresh the memories on action that need to be carried out in the field to sustain the polio free status.

Action taken by the Medical Officer of Health Investigation

On receipt of notification of an Acute Flaccid Paralysis (AFP) case from any institution, Epidemiological Unit, Regional Epidemiologist (RE) and are MOH should record the case in the AFP register MOH should investigate personally within 72 hours of notification. Following investigation; investigation form number 2 (yellow) EPID/37/2/R2004 in duplicate and one should be returned to the Epidemiology Unit with a copy to the Regional Epidemiologist early and the duplicate should be retained and filed at the MOH office.

The activities that should carry out in the field are listed below.

Visit the community where the case is resident.

- Meet the key people and health workers in the area. Inform the parents of the case and the community that the case is an AFP, which may be due to many causes one of which being poliomyelitis. Explain the importance of investigating such cases to specially eliminate poliomyelitis as the cause.
- Meet the parents of the case and inquire whether the patient has had contact with another AFP/ polio patient within 60 days of onset of paralysis or whether he/she has traveled out of the area within 28 days before the onset of paralysis. Inform the relevant MOH/MOOH of the areas to which the patient had traveled for further investigation. Also inquire whether the patient or near relatives had traveled out of the country within 28 days before the onset of paralysis.
- Inquire from the parents about the polio immunization history of the patient including any extra doses received.
- Inquire from the parents whether anyone in the house including the patient, had received OPV during the 28 days before onset of paralysis. Enter any positive findings under immunization history.
- Inquire whether there are any other children in the family or in the vicinity with paralysis of recent onset.
- Make house-to-house visits in the immediate neighbourhood of the patient to detect any other cases.
- Request parents of at least 3 - 5 immediate contacts to make available samples of stools for collection the following day. Immediate contacts are siblings, playmates and classmates of the patient. The parents should be informed of the method of proper collection of the stools samples.
- If samples of stools have not been collected the following day, they should be collected as early as possible.

Parents should be instructed to collect the stools in a clean container (a clean, dry, wide mouthed bottle with a lid). The container should be free of soap or detergent. The quantity of the sample should be 8 to 10 grams or the size of two thumbnails or two tamarind seeds. The container should be tightly closed to prevent leaking and drying of the stools sample and kept in a cool place away from sunlight till it is collected by a Public health Inspector (PHI) or Public

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health Midwife (PHM). Action should be taken by the PHI/PHM to help the parents to obtain suitable containers where necessary. The special stool collection bottle provided by the Epidemiological Unit could be used if available.

Collection and dispatch of samples of stools from suspected case and contacts

Two samples of stools collected 24 – 48h apart from the suspected case is needed while one sample each from 3 to 5 immediate contacts should be collected. Collection and dispatch of stool samples of suspected case will be done by the hospital staff. The samples of stools obtained from the contacts in the field should be collected by the field health staff and transported to the MRI as early as possible preferably within 72 hours of collection. The containers with samples should be packed in ice. The quantity of ice should be such that at least some pieces of ice are present on arrival at the MRI. If there is a delay in transporting, the samples should be kept in a refrigerator (at 0 to 8 degrees Centigrade) till ready for transport. If a "reverse cold chain box" is available it should be used to transport the samples. The samples should be sent by the fastest and most reliable mode of transport. A special messenger should transport the samples. The samples should be sent with a request for polio virology. If possible the MRI should be informed of the expected date and time of the arrival of the samples.

The following information should be given in the request letter accompanying the samples of stools:

- Name of the AFP case
- Epid No of the AFP case if available
- Name, age and sex of the contact.
- Date of receipt of the last dose of OPV by the contact
- Date of collection of the sample.
- Date of dispatch of the sample.
- Medical Officer of Health (MOH) area.
- Date of investigation by MOH

Limited outbreak response immunization by MOH

Only a limited outbreak response immunization needs to be carried out now. The MOH team should conduct this on the day following the investigation of the AFP case. Only one dose of OPV should be given. This dose is an extra dose and should be given irrespective of the immunization status of the recipient. Even if the child had received the scheduled immunizations, this extra dose should be given. The scheduled routine OPV doses should be given on the due dates. This extra dose of OPV should be administered on a house-to-house basis for children living within a two-kilometer radius of the AFP case and under the age of the AFP case. The number of children should be limited to about 250. Contacts from whom samples of stools have to be taken should be immunized after collecting the samples, to avoid contamination of the stools with vaccine virus making it more difficult to determine the cause of paralysis.

Follow up of AFP cases

It is important to follow up the case to assist a diagnosis to be made. This is especially important in cases where poliovirus has not been isolated from stools of the patient, where the samples on arrival at the MRI has not been of "good condition" or when the stools have not been collected from the patient for virus isolation. If a case of AFP has residual paralysis, is dead or is lost for follow up or when poliovirus has not been isolated from an inadequate diagnostic sample of stools or a sample of stool has not been collected it is difficult to rule out poliomyelitis as the cause of paralysis. Such cases are reviewed by the Polio Expert Committee. This committee consists of a Neurologist, a Neuro-physician, a Paediatrician, and an Epidemiologist. If the case is not diagnosed as poliomyelitis it is discarded and an alternate diagnosis given.

Studies conducted in seven Latin American countries from 1989 to 1991 have shown that 60% of Guillain Barre Syndrome (GBS) cases have residual paralysis 60 days after onset and 15% of GBS cases have residual paralysis 180 days after onset and 10% of GBS cases have residual paralysis one year after onset.

Follow up at 60 days after onset of paralysis

If the patient has been discharged from the hospital, an Assistant Epidemiologist from the Epidemiological Unit or the relevant Regional Epidemiologist (RE), will personally do the follow up examination of the patient, 60 days after onset of paralysis and will complete form EPID/37/3/R2004 (green). This form will then be returned to the Epidemiologist.

Follow up at 90 days after onset of paralysis

If residual paralysis was present at the first examination at 60 days after onset of paralysis, and poliomyelitis could not be ruled out, the patient should be re-examined 90 days after onset of paralysis and another form (green) EPID/37/3/R2004 should be completed and returned to the Epidemiologist. The same process should be adhered to as for the first examination.

Follow up at 180 days after onset of paralysis

The patient should be followed up at 180 days after onset of paralysis, if residual paralysis was present at 90 days after onset, and poliomyelitis could not be ruled out, by the second examination. The same procedure as for the previous examination should be adhered to, and the appropriate form made available to the Epidemiologist.

National plan of action to respond to an outbreak of poliomyelitis

An increasing number of countries like Sri Lanka appear to have terminated transmission of wild poliovirus, yet they remain at risk for re-introduction of indigenous transmission. AFP surveillance, even when ideal, detects only a small proportion of poliovirus infections. It is critical to rapidly detect and respond to suspected polio cases to minimize the spread of the virus. A National Plan of Action has been developed to respond in the event of importation of wild poliovirus or circulating vaccine derived poliovirus (cVDPV). For this purpose a suspected polio outbreak needing rapid investigation is defined as,

> A cluster of polio compatible cases (two or more compatible cases as classified by an Expert Group) with onset in the same or adjacent districts within a two month period
> *or*
> A cluster of AFP cases (multiple AFP cases without final classification, but which are clinically strongly suggestive of polio), with onset in the same or adjacent districts within a two-month period.
>
> Within 48 hours of detection of a suspected polio outbreak, a full clinical, epidemiological, and virological investigation should be initiated; with a detailed review of surveillance quality in the area. Based on the investigation, a decision should be made on the need for, and scope of, an immunization response. Any suspected polio outbreak should be notified to WHO within 48 hours. Within one month, a suspected polio outbreak (including a cluster of AFP cases) should be confirmed as due to wild poliovirus or discarded. In polio free areas, any confirmed polio outbreak should have had an extensive 'mop-up' operation initiated within two months of onset of the index case. Exhaustive documentation of the interruption of transmission should be completed within six months of onset of the index case.

Source:

WHO and Eradication of Poliomyelitis and Comprehensive guide to medical officers

Continued with no : 45

Table 1: Vaccine-preventable Diseases & AFP

05th – 12th November 2010(45th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2010	Number of cases during same week in 2009	Total number of cases to date in 2010	Total number of cases to date in 2009	Difference between the number of cases to date in 2010 & 2009
	W	C	S	N	E	NW	NC	U	Sab					
Acute Flaccid Paralysis	00	01	00	00	00	00	00	01	00	02	04	74	61	+ 21.3 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	-
Measles	00	00	00	00	00	00	00	00	01	01	03	87	163	- 46.6 %
Tetanus	00	00	00	00	00	00	00	00	00	00	02	21	26	- 19.2 %
Whooping Cough	00	01	00	00	00	00	00	00	00	01	01	30	58	- 48.3 %
Tuberculosis	50	90	02	00	26	14	08	02	23	215	252	8877	9012	- 1.5 %

Table 2: Newly Introduced Notifiable Disease

05th – 12th November 2010(45th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2010	Number of cases during same week in 2009	Total number of cases to date in 2010	Total number of cases to date in 2009	Difference between the number of cases to date in 2010 & 2009
	W	C	S	N	E	NW	NC	U	Sab					
Chickenpox	08	07	05	00	05	01	06	01	10	43	73	3009	13796	- 78.2 %
Meningitis	03 CB=1 KL=2	00	02 GL=2	00	00	04 KR=3 PU=1	02 AP=2	00	02 KG=2	13	75	1415	1351	+ 4.7 %
Mumps	04	03	03	01	01	01	01	02	07	23	17	1057	1562	- 32.3 %
Leishmaniasis	00	01 NE=1	03 HB=1 MT=2	00	00	01 KR=1	02 AP=2	00	00	07	16	355	611	- 41.9 %

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.

DPDHS 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, Whooping Cough, Chickenpox, Meningitis, Mumps.

Special Surveillance: Acute Flaccid Paralysis.

Leishmaniasis is notifiable only after the General Circular No: 02/102/2008 issued on 23 September 2008.

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

Table 4: Selected notifiable diseases reported by Medical Officers of Health

05th – 12th November 2010(45th Week)

DPDHS Division	Dengue Fever / DHF*		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Returns received timely
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	%
Colombo	26	5740	1	292	1	16	7	177	4	48	11	538	0	8	3	65	0	1	**85**
Gampaha	13	3822	1	166	1	27	2	58	0	21	10	502	0	15	3	111	0	5	**60**
Kalutara	3	1778	1	238	0	14	1	37	0	76	13	380	1	5	0	41	0	3	**75**
Kandy	4	1616	5	319	0	6	1	31	0	16	15	144	1	132	5	141	0	1	**74**
Matale	7	600	3	295	0	8	0	36	0	80	5	101	0	7	0	53	0	1	**92**
Nuwara	0	218	3	334	0	1	4	114	5	89	4	33	5	65	1	51	0	0	**85**
Galle	6	1104	3	245	0	8	1	13	0	59	4	148	4	23	1	19	0	5	**95**
Hambantot	0	793	1	83	0	7	0	4	0	14	1	90	0	90	0	19	0	0	**82**
Matara	3	597	0	165	0	8	1	13	0	53	8	350	1	129	0	19	0	0	**82**
Jaffna	23	2853	5	281	0	7	20	552	1	9	0	1	4	129	3	72	0	2	**83**
Kilinochc	2	45	2	16	0	0	0	10	0	1	0	3	0	0	0	1	0	1	**75**
Mannar	1	553	0	48	0	2	0	45	0	10	0	0	0	1	0	17	0	0	**17**
0Vavuniya	1	574	3	55	0	3	0	44	0	13	0	2	0	1	0	13	0	2	**100**
Mullaitivu	0	19	0	8	0	0	0	3	0	0	0	0	0	0	0	1	0	0	**33**
Batticaloa	3	1211	9	189	0	4	0	35	0	38	0	13	0	4	2	7	0	3	**86**
Ampara	0	156	5	115	0	1	1	9	0	65	0	30	0	1	0	14	0	0	**57**
Trincomale	1	956	0	154	0	14	0	7	0	11	0	32	1	20	0	15	0	1	**91**
Kurunegala	6	1386	9	309	0	20	0	46	4	31	6	334	1	56	1	121	0	4	**67**
Puttalam	1	986	8	173	0	7	1	52	0	125	0	74	0	2	0	22	0	1	**44**
Anuradhap	2	1048	7	122	0	11	1	16	0	46	1	90	0	26	2	52	0	4	**63**
Polonnaru	1	392	2	107	0	2	0	7	0	10	4	66	0	2	0	46	0	0	**86**
Badulla	3	1281	2	204	0	1	2	87	2	29	4	86	0	114	1	107	0	0	**73**
Monaragala	12	1028	0	177	0	1	0	43	0	7	1	34	1	87	2	92	0	3	**82**
Ratnapura	3	2731	1	464	0	5	1	21	0	26	2	388	0	60	1	100	0	3	**39**
Kegalle	3	881	5	151	0	17	3	73	0	27	15	338	1	30	1	125	0	0	**64**
Kalmunai	6	525	11	298	0	3	1	12	0	9	0	3	0	0	0	12	0	1	**54**
SRI LANKA	**130**	**32893**	**88**	**5008**	**2**	**19**	**47**	**1545**	**16**	**913**	**104**	**3780**	**20**	**1007**	**26**	**1336**	**0**	**41**	**72**

Source: Weekly Returns of Communicable Diseases WRCD).
*Dengue Fever / DHF refers to Dengue Fever / Dengue Haemorrhagic Fever.
**Timely refers to returns received on or before 12th November, 2010 Total number of reporting units =320. Number of reporting units data provided for the current week: 232
A = Cases reported during the current week. B = Cumulative cases for the year.

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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.

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