WEEKLY EPIDEMIOLOGICAL REPORT

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Guidelines on Immunization against tetanus

(A) Introduction

Tetanus is a fatal infectious disease caused by toxigenic strains of Clostredium tetani. Tetanus and neo- natal tetanus is still a major public health problem in a considerable number of developing countries. However, both tetanus and neo- natal tetanus have reached elimination levels in Sri Lanka as a result of the successful immunization programme.

Protection against tetanus could be achieved either through active immunization (by giving tetanus toxoid containing vaccine) or by passive immunization (by giving tetanus specific immunoglobulin). Neonatal tetanus is prevented by immunizing the pregnant mothers with tetanus toxoid vaccine.

Tetanus vaccines are based on tetanus toxoid which is a chemically inactivated tetanus toxin which could induce production of antibodies against tetanus toxin. Tetanus toxoid is available as mono valent tetanus toxoid (TT), combined with diphtheria, pertussis, hepatitis B and Hib vaccines (pentavalent vaccine), combined with diphtheria and pertussis vaccines (DPT), combined with diphtheria (DT) or as low dose diphtheria Toxoid (aTd).

The goal of Tetanus immunization in the EPI programme is to eliminate tetanus and neonatal tetanus from Sri Lanka. With the emergence of new knowledge on immunological response of patients after receiving tetanus toxoid, the following recommendations have been made regarding immunization with tetanus containing vaccines.

(B) Recommended schedule (pre exposure vaccination)

Immunization from infancy up to adolescence

Dose	Age (on completion of)	Type of vaccine	Minimum duration to be kept between different doses of tetanus containing vaccine when tetanus toxoid containing vaccines have not been received according to the scheduled age
1st	2 months	DPT or pentavalent	6-8 weeks between 1st and the 2nd dose 2nd and the 3rd dose
2nd	4 months		
3rd	6 months		
4th	18 months	DPT	12 months between 3rd and 4th doses
5th	5 years	DT	3 years between 4th and 5th doses
6th	12 years (in grade 7, in school medical inspection)	aTd	years between 5th and 6th doses

2) Immunization during pregnancy

The number of doses required and timing of boosters during pregnancy will depend on the past immunization history of the pregnant mother with tetanus containing vaccines.

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Pregnant mothers who have not received tetanus containing vaccine according to the EPI schedule during infancy and childhood should be immunized according to the following schedule.

1st dose	=	During 1st pregnancy after 12 weeks of gestation
2nd dose	=	During 1st pregnancy (6-8 weeks after the first dose, two weeks before the delivery)
3rd dose	=	During 2nd pregnancy
4th dose	=	During 3rd pregnancy
5th dose	=	During 4th pregnancy
Not indicated		Pregnant mothers who have received 5 doses of tetanus toxoid during previous pregnancies do not

Immunization of pregnant mothers who have documented evidence of receipt of six doses of tetanus containing vaccines as per the national EPI schedule (3 doses of DPT/ penta in infancy + DPT at 18 months + DT at 5 years + aTd at 12 years)

One booster dose (TT)	=	If the gap between the 6th dose of tetanus containing vaccine or any subsequent tetanus containing vaccine and the current pregnancy is more than 10 years
Not indicated	=	If the gap between the 6th dose of tetanus containing vaccine and the current pregnancy is less than 10 years If the gap between the subsequent tetanus containing vaccine dose after the 6th dose and the current pregnancy is less than 10 years

© Post exposure vaccination

Decision on post exposure vaccination should be taken after considering the nature of the lesion and the previous history of the immunization with tetanus containing vaccine.

Immunization of persons who have been immunized with tetanus containing vaccine during infancy and childhood

If a person has documented evidence of receipt of six doses of tetanus containing vaccine (with 4 doses of DPT/ penta, DT, aTd) he/she does not need to be immunized with tetanus toxoid up to 10 years after the 6th dose of tetanus containing vaccine. If a patient presents 10 years after the 6th dose of tetanus containing vaccine a booster dose should be given. If a patient presents with a severely contaminated wound but less than 10 years from the 6th dose of tetanus containing vaccine a booster dose of tetanus toxoid can be given with the discretion at the treating physician.

Immunization of persons who have not been immunized with tetanus containing vaccine according to the EPI schedule

Any person who has not been immunized with tetanus containing vaccine during infancy and adolescence according to the national EPI schedule, he / she should be given a dose of tetanus toxoid (1st dose) if there is a risk of developing tetanus. Second dose of tetanus toxoid should be given 4 weeks after the 1st dose and the third dose should be given 6 months after the second dose. A booster dose (4th) of tetanus could be given after 5 years. Fifth dose given 10 years after the 4th dose will produce a long lasting, probably a life long immunity.

(D) Development of immunity after immunization with tetanus containing vaccines

If there is documentary evidence to show that any infant, child or an adult have been immunized as per EPI schedule, it is not necessary to immunize them in between the routine doses again whenever they present with trauma as they are protected against tetanus infection in between the doses.

(E) Storing and administering tetanus containing vaccines

Tetanus containing vaccines should be stored and transported between + 2C and+8 C and should not be exposed to freezing as freezing can reduce the potency of these vaccines. Opened tetanus containing vaccines should be stored between + 2C and+8 C and could be reused in subsequent immunization sessions within 4 weeks of opening of the vaccine vials. Tetanus containing vaccines should be given intra muscularly.

Table 1: Vaccine-preventable Diseases & AFP

13th – 19th February - 2010(07th 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 20010 & 2009
	W	C	S	N	E	NW	NC	U	Sab					
Acute Flaccid Paralysis	02	01	03	00	00	00	00	00	01	07	00	16	08	+100%
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	00	21	15	+ 40.0 %
Tetanus	00	00	00	00	00	00	00	00	00	00	01	04	05	- 20.0 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	01	03	12	- 75.0 %
Tuberculosis	25	14	41	16	11	12	00	13	09	141	177	1331	1148	+ 16.0 %

Table 2: Newly Introduced Notifiable Disease

13th – 19th February - 2010(07th 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	17	05	13	06	01	05	15	06	08	76	161	496	1081	- 54.1 %
Meningitis	03 KT=1 CB=1 GM=1	00	02 GL=1 MT=1	00	00	07 KR=5 PU=2	01 AP=1	00	07 KG=2 RP=5	20	17	268	142	+ 88.7 %
Mumps	01	03	05	01	01	01	02	00	04	18	34	120	265	- 54.7 %
Leishmaniasis	00	00	02 MT=2	00	00	00	06 AP=6	00	00	08	14	54	50	+ 08.0 %

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.

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.

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

13th – 19th February - 2010(07th Week)

DPDHS Division	Dengue Fever / DHF*		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Returns Received
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	%
Colombo	136	954	2	23	1	3	1	12	0	5	16	61	0	2	2	12	0	1	**85**
Gampaha	86	1004	1	6	1	6	0	5	1	1	17	56	0	0	1	17	0	1	**67**
Kalutara	22	207	4	30	0	3	0	4	0	6	1	28	0	0	1	7	0	0	**92**
Kandy	32	319	0	57	0	0	0	2	0	1	0	9	1	27	2	15	0	2	**87**
Matale	28	202	102	128	0	0	0	6	33	36	3	20	0	0	2	10	0	0	**83**
Nuwara	4	38	1	13	0	0	2	22	0	0	0	4	1	15	4	10	0	0	**100**
Galle	19	94	1	28	01	1	0	0	0	4	0	2	0	1	2	4	0	1	**95**
Hambant	40	138	0	7	0	2	1	1	0	0	3	17	1	28	1	2	0	0	**100**
Matara	15	71	1	19	0	1	0	1	0	34	7	23	3	41	0	5	0	0	**94**
Jaffna	83	1557	1	28	0	1	18	166	0	4	0	0	8	73	1	11	0	0	**67**
Kili-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Mannar	5	42	2	11	0	0	1	17	0	0	0	0	0	0	1	8	0	0	**60**
Vavuniya	22	414	0	10	0	1	3	19	0	0	0	0	0	0	1	4	0	0	**75**
Mullaitivu	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Batticaloa	57	488	3	18	1	1	0	5	0	9	0	1	0	1	0	0	0	0	**92**
Ampara	0	20	2	17	0	0	0	2	2	6	0	12	0	0	0	5	0	0	**71**
Trincomal	12	430	7	38	0	2	0	2	0	1	0	6	0	4	0	5	1	1	**60**
Kurunega	15	291	3	48	0	3	1	7	0	0	15	68	1	12	3	15	0	0	**80**
Puttalam	23	360	0	17	0	2	0	21	0	0	1	7	0	0	0	0	0	0	**89**
Anuradha	35	482	0	14	0	0	0	2	0	0	2	7	3	9	0	10	0	3	**68**
Polonnar	11	62	3	16	1	1	0	0	1	2	1	23	0	0	2	13	0	0	**100**
Badulla	13	125	7	36	0	0	5	19	0	6	2	14	2	12	1	12	0	0	**87**
Monaraga	9	73	3	43	0	0	0	14	0	1	1	10	1	9	0	1	0	0	**73**
Ratnapur	32	177	6	51	0	3	0	4	0	8	9	51	0	19	2	29	0	3	**67**
Kegalle	33	176	0	11	0	4	0	12	0	2	4	34	1	4	3	22	0	0	**100**
Kalmunai	38	277	4	29	0	0	1	3	0	0	0	0	0	0	0	5	0	0	**77**
SRI LANKA	**770**	**8001**	**153**	**698**	**05**	**34**	**33**	**346**	**37**	**126**	**82**	**453**	**22**	**257**	**29**	**222**	**01**	**10**	**80**

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 19th February, 2010 Total number of reporting units =311. Number of reporting units data provided for the current week: 255
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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