WEEKLY EPIDEMIOLOGICAL REPORT

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Update on Hepatitis B and C

Hepatitis B and C infections are extensively spread in the world and responsible for 887,000 and 400,000 deaths respectively per year. Hepatitis B is prevalent in sub-Saharan Africa and East Asia whereas Hepatitis C is commonly seen in Eastern Europe, Asia, sub-Saharan Africa and North Africa.

Sri Lanka has a very low prevalence of Hepatitis B. Padmasiri et al., (1995) reported Hepatitis B surface antigen prevalence of 2.5% (95% CI 2-3%) among the general population who were residents in the Gampaha district by a community-based survey. In the year 2002, Premarathna et al., reported the Hepatitis B prevalence in Colombo district as 0.46% (0.14 – 0.77%). Niriella et al. carried out a study among high-risk group (prison inmates) in 2015 and reported screening positive rate of Hepatitis B as 0.25%. Though these figures are not directly comparable due to the differences in the methods used to assess the prevalence, low prevalence can be observed. Hence Sri Lanka falls into the low endemicity category for Hepatitis B according to the WHO categorization. (>8% high, 2-8% moderate, <2% low endemicity) Small number of injectable drug addicts in the country, excellent injection safety practices including usage of disposable IV infusion sets and syringes in hospitals and vaccination clinics, thorough screening of blood and blood products at blood banks and very high (>99%) coverage of Hepatitis B vaccination in the country could be considered as the main contributors for this low prevalence.

Conversely, the prevalence of Hepatitis C in Sri Lanka is more than the prevalence of Hepatitis B. Premarathna et al., (2002) reported it as 5.49% (95% C.I. 4.42%-6.55%) in Colombo district. In the year 2011, Senevirathne et al. studied 4980 blood donors and found that 53 of them were positive for Hepatitis C antibodies. When definitive tests were performed using Reverse Transcription-PCR, only 8 were confirmed to have the disease and suggested frequent false-positive results or viral clearance. Niriella et al. (2015) reported a 6.9% of screening positive rate among prison inmates who are generally considered as high risk due to their intravenous drug use and high-risk sexual behaviours. Further, he reported the RNA positive rate of 0.5% in the same group.

Though these numbers are not directly comparable due to their differences in the protocols of assessment and study populations, Hepatitis C needs more attention.
National Blood Transfusion services, Na-

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tional STD / AIDS control programme, National Thalassaemia Centre and Epidemiology Unit are the main sources/institutions of Hepatitis B and C data in Sri Lanka.

Hepatitis B is mainly spread through percutaneous or mucosal exposure to blood or body fluids of an infected individual to a healthy person. This could occur through unprotected sexual contact with a person who carries the disease, during childbirth, transfusion of the unscreened blood and blood products, unsafe injection practices and injectable drug users who share needles.
At birth or during the first year of life carries the highest risk of contracting Hepatitis B. Vast majority (90%) of those who acquired the disease from their mother ended up in the chronic stage. The risk of getting into the chronic stage becomes less with the advancement of the age. It remains at 30-50% in the age range of 1-5 years and in adults, it is approximately 6-10%. In addition, 15-25% of the people who are having the chronic Hepatitis B infection in them, run into the chronic liver disease, cirrhosis, liver failure or liver cancer. Therefore protecting newborns from the Hepatitis B infection in the first year is of utmost importance.

Though Hepatitis C also follows the same methods of transmission, mostly it spreads from the health care settings with poor hygienic and infection control practices. This is especially seen in low and middle-income countries with poor and unsafe injection policies and practices.

Injectable drug users are at significantly higher risk of getting Hepatitis C and seen mostly in developed countries. They contract the disease soon after starting the practice and risk of transmission rises with the duration of the practice, the frequency of injection and sharing of needles. Conversely, Hepatitis C spreads to a lesser degree through sexual contacts or from mother to child.
Vaccination is the mainstay of prevention from Hepatitis B infection. Three doses of vaccine during the first year of life which is incorporated into the routine vaccination programme is the strategy adopted by many countries. Additionally, some countries offer the birth dose of the vaccine where the possibility of mother to child transmission is high. It is found that 85% of the mother to child transmission can be averted by this method. There is no vaccine available for Hepatitis C. Genetic diversity of the virus and lack of immune markers make it difficult to develop Hepatitis C vaccine.

Though the current treatment options for Hepatitis B is effective, it is not possible to cure the disease and needs lifelong treatments. Conversely, long-term treatment with oral anti-viral drugs can cure the chronic Hepatitis C condition. Most of the Hepatitis C drugs have an excellent safety profile and usual duration of the regimen is 2-3 months. Literature suggests that all course mortality reduction by 74% and liver cancer reduction by 85% and liver failure reduction by 93% can be expected following a Hepatitis C treatment regimen.

Surveillance is the backbone of prevention and control of Hepatitis B and C and it is of utmost importance to report all suspected cases to the routine notification system by all health care practitioners despite low prevalence.

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Editor

Table 1: Selected notifiable diseases reported by Medical Officers of Health 28th– 03rd November 2017 (44thWeek)

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	253	31794	1	55	0	3	0	28	1	36	3	133	0	3	0	14	0	0	3	325	0	27	0	1	**21**	**84**
Gampaha	250	29600	4	36	0	14	2	19	1	10	7	76	1	13	1	15	0	1	42	293	0	28	1	4	**7**	**94**
Kalutara	94	9981	0	53	0	4	1	19	0	53	12	333	0	7	1	19	0	1	5	476	1	141	0	1	**1**	**96**
Kandy	183	12750	1	66	0	5	0	7	0	16	1	47	2	122	0	13	0	2	7	232	1	37	0	13	**15**	**100**
Matale	59	2801	1	22	0	4	0	1	0	10	1	31	0	2	1	11	0	1	2	48	0	58	1	7	**12**	**100**
NuwaraEliya	3	834	1	28	0	9	1	34	0	53	0	50	0	175	1	21	0	0	6	288	1	41	0	0	**61**	**100**
Galle	57	5675	0	46	0	13	0	19	0	16	10	375	3	68	0	5	0	1	1	348	1	64	0	1	**18**	**99**
Hambantota	43	3196	0	22	0	7	0	7	1	26	4	53	2	66	0	9	0	1	3	181	0	19	16	352	**11**	**100**
Matara	42	6010	2	39	0	8	0	4	0	14	12	208	0	24	1	12	0	1	1	215	0	13	3	150	**11**	**100**
Jaffna	128	4782	15	375	0	21	2	39	0	57	0	29	18	453	0	3	0	0	1	186	1	35	0	0	**43**	**87**
Kilinochchi	1	459	0	30	0	1	0	11	0	1	0	4	0	15	0	2	0	0	0	3	0	11	0	3	**24**	**100**
Mannar	2	515	0	10	0	0	0	2	0	1	1	3	1	4	0	0	0	0	0	14	0	0	0	0	**15**	**100**
Vavuniya	23	858	1	23	0	0	2	74	0	7	0	27	0	11	0	7	0	0	0	36	0	4	0	9	**13**	**100**
Mullaitivu	0	330	0	15	0	4	0	5	0	5	0	21	0	4	0	1	0	1	0	17	0	5	0	2	**9**	**100**
Batticaloa	31	4810	12	153	0	9	0	15	0	37	0	23	0	1	0	6	0	1	0	163	1	31	0	1	**23**	**100**
Ampara	11	852	2	43	1	3	1	2	0	3	0	18	1	2	0	4	0	0	12	190	2	45	0	5	**31**	**100**
Trincomalee	11	4794	1	40	0	2	1	14	0	21	0	26	1	14	0	18	0	0	3	148	0	23	0	11	**19**	**100**
Kurunegala	177	10137	2	85	0	10	1	4	0	55	5	74	0	27	0	19	0	4	9	456	1	70	3	141	**11**	**100**
Puttalam	193	5862	4	54	0	2	0	2	0	9	1	27	0	11	0	1	0	0	2	147	1	45	0	3	**12**	**100**
Anuradhapur	27	2598	1	41	0	4	1	2	0	16	2	68	0	19	2	16	0	2	3	349	1	71	3	236	**7**	**95**
Polonnaruwa	11	1283	0	21	0	6	0	9	0	8	0	42	0	7	0	8	0	0	2	211	0	21	7	130	**4**	**100**
Badulla	32	3422	7	110	0	9	0	10	0	5	3	128	3	113	0	55	0	1	3	348	3	211	0	13	**7**	**100**
Monaragala	90	2709	6	74	0	3	0	1	1	10	6	126	2	123	1	20	0	1	0	95	0	67	1	25	**30**	**100**
Ratnapura	51	10786	8	154	2	82	0	13	1	9	11	545	1	31	1	74	0	0	4	265	4	144	0	22	**11**	**100**
Kegalle	56	9095	0	34	1	13	0	6	2	35	11	118	1	75	1	14	0	0	4	295	0	66	0	10	**11**	**100**
Kalmune	35	2402	1	97	0	7	0	4	1	286	0	10	0	0	0	3	0	0	0	137	5	36	0	0	**14**	**100**
SRILANKA	**1863**	**168335**	**70**	**1726**	**4**	**243**	**12**	**351**	**8**	**799**	**90**	**2595**	**36**	**1390**	**1**	**370**	**0**	**18**	**113**	**5466**	**23**	**1313**	**35**	**1140**	**16**	**97**

Source: esurveillance.epid.gov.lk

*T=Timeliness refers to returns received on or before 03rdNovember , 2017 Total number of reporting units 344 Number of reporting units data provided for the current week: 339 C**-Completeness

Table 2: Vaccine-Preventable Diseases & AFP

28th– 03rd November 2017 (44thWeek)

Disease	No. of Cases by Province									Number of cases during current week in 2017	Number of cases during same week in 2016	Total number of cases to date in 2017	Total number of cases to date in 2016	Difference between the number of cases to date in 2017 & 2016
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	00	00	00	00	00	00	00	00	00	01	61	59	3.3%
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Mumps	00	00	00	01	00	00	01	00	01	03	04	266	338	- 21.3%
Measles	00	00	00	00	00	00	00	00	00	00	05	180	351	- 48.7%
Rubella	00	00	00	00	00	00	00	00	00	00	00	10	09	- 11.1%
CRS**	00	00	00	00	00	00	00	00	00	00	00	01	00	0%
Tetanus	00	00	00	00	00	00	00	00	00	00	01	16	09	77.7%
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0%
Japanese Encephalitis	01	00	00	00	00	00	00	00	00	01	01	22	17	29.4%
Whooping Cough	00	00	00	00	00	00	00	00	00	00	01	19	61	- 68.8%
Tuberculosis	34	13	23	01	07	24	11	05	17	135	146	7191	7855	- 8.4%

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

Dengue Prevention and Control Health Messages

Look for plants such as bamboo, bohemia, rampe and banana in your surroundings and maintain them

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