



# WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit  
Ministry of Health

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## HIV/AIDS and Its Challenges (Part II)

This is the last in a series of two articles on HIV/AIDS and Its Challenges .

### The link between STIs and HIV infection

Apart from being serious diseases in their own, STIs increase the risk of both transmitting and acquiring HIV infection.

- **Increased susceptibility** - STIs increase the susceptibility to HIV infection by two mechanisms. Genital ulcers (e.g., syphilis, herpes or chancroid) result in breaks in the genital tract lining or skin. These breaks create a portal of entry for HIV. Additionally, inflammation resulting from genital ulcers or non-ulcerative STDs (e.g., chlamydia, gonorrhea, and trichomoniasis) increase the concentration of cells in genital secretions that can serve as targets for HIV (e.g. CD4+ cells).
- **Increased infectiousness** - STIs also appear to increase the risk of an HIV-infected person transmitting the virus to his or her sex partners. Studies have shown that HIV-infected individuals who are also infected with other STIs are particularly likely to shed HIV in their genital secretions. For example, men who are infected with both gonorrhea and HIV are more than twice as likely to have HIV in their genital secretions than are those who are infected only with HIV. Studies have found that the concentration of HIV in semen is as much as 10 times higher in men who are infected with both gonorrhea and HIV than in men infected only with HIV. The higher the concentration of HIV in semen or genital fluids, the more likely it is that HIV will be transmitted to a sex partner.

### Challenges on HIV and its treatment

There are several major challenges Sri Lanka has to face today.

- The possibility of increasing number of new cases

- presence of a significant number of key populations such as men having sex with men (MSM), injecting drug users, female sex workers practising unsafe sex which could fuel the epidemic ,
- Challenges in providing ART such as ART coverage, changing ART regimens and treatment criteria
- ART associated other issues (cost, availability of options, toxicities and their management, metabolic syndrome, Anti retroviral resistance- ARV etc)
- New range of challenges due to HIV and ageing

There are four countries in South East Asia which records an increase in identification of new cases among adults between 15-49 years old between 2001 and 2011. Sri Lanka is one of these which shows an increasing trend. The number of identified HIV cases per quarter during the last three years shows a clear increase. There were 146 new HIV positive cases reported to the Epidemiology Unit by the end of 2011, 186 cases in 2012 and 196 cases in 2013.

### Evolution of treatment options and criteria

Sri Lanka is one of first countries that adopted 2010 WHO guidelines. The main changes were to start ART at a CD4 count of 350 instead of 200 and to provide ART for high risk groups and sero discordant couples. In addition, continuation of ART for all mothers in whom ART was started for prevention of mother to child transmission is practised in Sri Lanka.

In the guidelines issued by WHO in 2013, the CD4 count cut off for the initiation ART has been increased to 500. Sri Lanka has still not taken this cut off as the eligibility criteria to start ART. The problems faced with the new guidelines are new budgets for ART, adherence issues with the start of ART in asymptomatic patients, starting

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ART in high risk groups especially in drug users and MSM, and more long term side effects due to ART.

As the life expectancy increases, the age related complications also will be more. It is more challenging to manage an ageing HIV positive population. Risk of co-morbidities increase with age. Even though these problems may not be directly related to HIV, the long term drug related complications have to be dealt with care. More resources are needed to handle this situation.

Other issues which arise when caring for an elderly population are development of frailty ( muscle weakness, weight loss, fatigue and low levels of physical activity.), Insulin resistance, diabetes mellitus, cardiovascular disease, chronic kidney disease, bone disease, cognitive impairment and dementia, HIV-related and unrelated malignancies, drug interactions due to other medications and liver dysfunction such as chronic ALT (alanine transaminase) elevation, steatosis, steato-hepatitis, increased drug related toxicity and hepatocellular carcinoma. More severe liver disease in ageing patients with hepatitis B and C viruses (HBV and HCV) with 4 – fold increase in morbidity and mortality due to liver disease among older patients is also a challenge.

#### Changing patterns of morbidity and mortality among people with HIV

Causes of death in participants in the Swiss HIV cohort study in 3 different time periods, and in the Swiss population in 2007 shows that the pattern of death among HIV positives have changed from the early years dramatically. Between 1984 and 1995, the majority of deaths were AIDS related but in 2007, the AIDS related deaths were at a very minimum level. The AIDS related and non-AIDS related malignancies and deaths due to cardiovascular disease have contributed mostly to the deaths among positive people.

#### Major Co-morbidities associated with HIV infection and treatment (ART)

- Cardiovascular disease (CVD) with 75% increase in risk of acute myocardial infarction
- Reduced bone mineral density with increased prevalence (63%) among HIV infected patients.
- Neuro-cognitive dysfunction prevalent among (50%) HIV infected patients.
- Renal dysfunction with 30% of HIV infected patients having renal functional abnormalities.
- Increased risk of non-AIDS defining cancers. e.g. anal, vaginal, liver, lung, melanoma, leukemia, colorectal and renal malignancies

Facilities to screen and treat these co-morbidities are necessary. A multi-disciplinary approach is needed when caring for HIV positives.

#### Other Current Challenges for Sri Lanka

- **Osteoporosis in HIV positive patients who are on ART**

Osteoporosis and fractures are common in HIV positive patients and this problem will increase with age. Risk factors include chronic infection which are HIV related, ART (tenofovir, certain PIs) and behavioural factors such as smoking and alco-

hol. Dual energy x-ray absorptiometry should be considered in all HIV positive postmenopausal women and in men aged over 50 yrs for screening of osteoporosis.

- **Provision of Sexual and Reproductive care for HIV positive patients**

One of the key challenges is providing sexual and reproductive care to those infected. Some of the important linkages between sexual and reproductive health and HIV/AIDS care are, learning the HIV status, promotion of safe sex, optimizing connection between HIV/AIDS and STI services and integrating HIV/AIDS with maternal and infant health. A significant proportion of women with HIV are sexually active (70-80%) and contraceptive advice is essential. Counselling on contraception and fertility and providing them with fertility options is a big challenge.

- **ART Failure and Drug Resistance**

ART failure and drug resistance is another issue. The experience in Sri Lanka is different when compared to the developed world. There are 387 HIV positive patients on ART in Sri Lanka. Out of them, 232 are on first line regimen, 131 on substituted therapy and 24 have been switched to the 2nd line regimens. The reasons for switching regimens are evidence of immunological, virological or clinical failures and side effects of the drugs.

With the advancement of newer antivirals, side effects, drug interactions, resistance development is very much less when compared to the previous regimens. The combined pill containing tenofovir, emtricitabine and efavirenz gives remarkable clinical improvement. The fact that the patient has to take only one pill per day has improved the adherence dramatically.

- **Management of Opportunistic infections**

Managing opportunistic infections is a bigger challenge as the diagnostic facilities are very minimum and costly. The most common opportunistic infections found in the Sri Lanka are oesophageal candidiasis, tuberculosis, *Pneumocystis jirovecii* pneumonia and cryptococcal meningitis. The facilities for diagnosing opportunistic infections are not at an optimal level in Sri Lanka.

#### Sources

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- CDC Fact Sheet on The Role of STD Detection and Treatment in HIV Prevention available from <http://www.cdc.gov/std/hiv/STDFact-STD-HIV.htm>
- STI case definitions for surveillance in Sri Lanka available from [http://www.aidscontrol.gov.lk/web/images/web\\_uploads/Guidelines\\_Reports\\_Publications/Surveillance%20case%20definitions.pdf](http://www.aidscontrol.gov.lk/web/images/web_uploads/Guidelines_Reports_Publications/Surveillance%20case%20definitions.pdf)

Compiled by Dr. H. A. Shanika Rasanjalee of the Epidemiology Unit

Table 1: Selected notifiable diseases reported by Medical Officers of Health 19th - 25th April 2014 (17th 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	159	2906	0	46	0	8	5	34	0	149	0	36	0	0	0	13	0	0	8	184	1	20	0	3	44	56
Gampaha	29	1237	0	56	0	5	0	17	0	10	0	75	0	5	1	36	0	4	8	157	2	23	0	2	47	53
Kalutara	47	653	5	61	0	3	1	17	2	44	1	106	0	0	0	6	0	0	8	113	0	27	0	0	77	23
Kandy	17	216	2	37	0	1	0	5	0	2	1	14	2	26	4	48	0	0	0	88	0	11	0	1	87	13
Matale	4	99	0	21	0	1	0	11	0	1	1	16	0	2	2	66	0	0	0	22	0	5	1	11	77	23
Nuwaraeliya	5	56	14	88	0	1	0	9	0	65	1	2	1	26	2	15	0	0	1	41	0	8	0	0	92	8
Galle	8	265	0	32	0	5	0	1	0	12	2	74	1	29	0	0	0	0	14	196	0	20	0	3	65	35
Hambantota	2	109	0	13	0	3	0	8	0	6	1	41	0	39	0	6	0	0	1	65	0	18	12	107	50	50
Matara	4	105	1	23	0	2	0	20	1	6	0	24	0	21	0	16	0	0	2	89	0	19	6	30	100	0
Jaffna	15	354	15	168	0	3	6	110	0	31	1	6	5	238	0	7	0	0	4	56	0	13	0	0	92	8
Kilinochchi	0	20	0	48	0	1	0	9	0	0	0	0	0	11	0	0	0	0	0	2	0	3	0	4	0	100
Mannar	0	4	0	12	0	8	0	19	0	0	0	4	0	20	0	1	0	0	0	6	0	2	0	1	40	60
Vavuniya	0	23	0	14	0	0	0	4	0	3	0	6	0	3	0	0	0	0	0	4	0	3	0	0	0	100
Mullaitivu	0	42	0	16	0	0	0	6	0	8	0	6	0	5	0	0	0	0	0	4	0	3	0	4	0	100
Batticaloa	24	341	2	95	0	2	0	17	0	11	1	7	0	1	0	5	0	0	6	21	0	4	0	0	79	21
Ampara	6	55	0	21	0	0	0	0	0	8	0	8	0	8	0	2	0	1	1	39	0	2	0	6	71	29
Trincomalee	26	275	0	13	0	1	0	1	3	3	1	8	0	10	0	0	0	0	1	36	0	1	0	0	100	0
Kurunegala	7	399	3	37	2	13	0	8	1	9	5	42	0	31	0	11	0	0	10	195	0	29	5	58	78	22
Puttalam	10	204	2	18	0	0	3	10	0	9	0	45	0	18	0	2	0	1	4	49	0	2	0	3	92	8
Anuradhapura	8	163	1	43	0	2	0	0	0	9	0	47	0	23	1	3	0	0	0	91	0	21	1	116	26	74
Polonnaruwa	0	90	0	12	0	1	0	1	0	0	0	9	0	0	0	1	0	0	0	29	0	2	0	23	0	100
Badulla	2	144	2	39	0	4	0	4	0	3	1	23	4	31	0	14	0	0	1	26	3	27	0	0	71	29
Monaragala	1	76	0	23	0	2	0	2	0	28	4	45	4	52	2	59	0	1	2	38	1	9	0	8	82	18
Ratnapura	12	231	7	76	0	13	1	9	0	7	6	102	1	45	3	135	0	0	2	80	1	12	0	9	56	44
Kegalle	24	249	2	47	0	5	2	15	1	6	3	56	1	28	3	27	0	0	9	114	3	21	0	1	82	18
Kalmune	0	42	2	41	0	1	1	4	0	11	0	1	0	0	0	0	0	0	0	59	0	2	0	0	23	77
<b>SRILANKA</b>	<b>410</b>	<b>8358</b>	<b>58</b>	<b>1100</b>	<b>2</b>	<b>85</b>	<b>19</b>	<b>341</b>	<b>8</b>	<b>441</b>	<b>29</b>	<b>803</b>	<b>19</b>	<b>672</b>	<b>18</b>	<b>473</b>	<b>0</b>	<b>7</b>	<b>82</b>	<b>1804</b>	<b>11</b>	<b>307</b>	<b>25</b>	<b>390</b>	<b>66</b>	<b>34</b>

Source: Weekly Returns of Communicable Diseases (WRCD).

\*T=Timeliness refers to returns received on or before 25th April 2014. Total number of reporting units 337. Number of reporting units data provided for the current week: 224. C\*\*=Completeness

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

**Table 2: Vaccine-Preventable Diseases & AFP**

19<sup>th</sup> – 25<sup>th</sup> April 2014 (17<sup>th</sup> Week)

Disease	No. of Cases by Province									Number of cases during current week in 2014	Number of cases during same week in 2013	Total number of cases to date in 2014	Total number of cases to date in 2013	Difference between the number of cases to date in 2013 & 2014
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	02	00	00	00	00	01	00	00	00	03	00	29	21	+38.1%
Diphtheria	00	00	00	00	00	00	00	00	00	00	-	00	-	%
Mumps	01	01	01	00	02	02	00	03	03	10	24	252	235	+7.2%
Measles	27	02	18	01	02	25	00	03	03	77	21	1527	235	+549.8%
Rubella	00	00	00	00	00	00	00	00	00	00	-	08	-	%
CRS**	00	00	00	00	00	00	00	00	00	00	-	03	-	%
Tetanus	00	00	00	00	01	00	00	00	00	01	00	07	07	0%
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	-	00	-	%
Japanese Encephalitis	00	00	00	00	00	00	00	00	00	00	-	17	-	%
Whooping Cough	00	00	00	01	00	00	00	01	00	02	01	21	27	-22.2%
Tuberculosis	81	28	02	03	07	04	07	10	28	170	195	3322	2734	+21.5%

**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

AFP and all clinically confirmed Vaccine Preventable Diseases except Tuberculosis and Mumps should be investigated by the MOH

**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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**ON STATE SERVICE**

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