

Report of HIV sentinel survey - 2000

HIV sentinel surveys are cross-sectional studies of HIV prevalence rates carried out at regular intervals among selected groups in the population known as "sentinel groups" at selected sites. Its main objective is to monitor trends of HIV infection over time, by population group and by site. The National STD/AIDS Control Programme (NSACP) of Sri Lanka has been conducting this surveillance activity since 1993 on an annual basis according to the guidelines given by World Health Organization (WHO).

Duration and Sentinel sites: In the year 2000 the survey was conducted for a period of six months from 1st of April to 30th September in the following seven sentinel sites.

1. Colombo
2. Kandy
3. Galle (Included samples from Matara)
4. Rathnapura (Included samples from Kegalle)
5. Kurunegala (Included samples from Chilaw)
6. Anuradhapura (Included samples from Polonnaruwa)
7. Badulla

Sentinel groups: Only three sentinel population groups were included in this year's survey. Blood donors were excluded as a sentinel group, as data related to blood donors are available to NSACP due to mandatory testing for HIV. Following three groups were included in the survey.

1. STD clinic attendees (STD)
2. Female sex workers (FSW)
3. Patients with tuberculosis (TB)

Method of testing: HIV testing was done on unlinked anonymous basis to minimise biases that can arise in selecting the sample.

Sample size: WHO recommends a minimum sample size of 250 for high risk groups and 400 for low risk groups. Following minimum sample sizes were decided in advance but sample collection continued till the end of survey period (i.e. 30th of September 2000).

	Colombo	Kandy	Galle	Rathnapura	Kurunegala	A'pura	Badulla
1. FSW	400 +	250 +	250 +	250 +	250 +	250 +	250 +
2. STD	500 +	250 +	250 +	250 +	250 +	250 +	250 +
3. TB	250 +	250 +	250 +	250 +	250 +	250 +	250 +

Laboratory testing strategy: HIV testing of blood samples was done as follows. Serum was first tested with ELISA or Particle Agglutination Assay. Any serum found to be positive on the first assay was re-tested with the ELISA, Particle Agglutination Assay and Rapid Sample Assay. Samples that were non-reactive on the first assay were considered HIV antibody negative. Confirmatory testing with Western Blot was not done as stated in the WHO protocol.

Training and supervision: This survey was carried out at seven sites in different provinces. Hence it was important to ensure uniformity at all sites. To train staff in all sites, one day workshop was held prior to the survey. The protocol prepared for the survey in year 2000 was discussed in detail in this workshop.

Supervisory visits were made to all sentinel sites by a team of officers from the Central STD clinic while the survey was in progress. The supervisory team comprised of senior medical personnel and a senior laboratory technician. A standard checklist was completed during each visit. Enrolment of TB patients was not found to be satisfactory in Rathnapura and Kurunegala. Supervisory officers had discussions with relevant officers regarding this.

Results

A total of 6887 blood samples were tested. Of these six samples were found to be HIV positive. All these samples belonged to male STD clinic attendees in three sites i.e. Colombo, Kandy and Rathnapura.

Table 1 shows the summary of HIV cases detected in the survey.

Table 1: Summary of HIV positive cases found in the sentinel survey-2000

Case no.	Sentinel site	Sentinel group	Age (years)	Sex
1	Colombo	STD	28	Male
2	Colombo	STD	26	Male
3	Kandy	STD	53	Male
4	Kandy	STD	42	Male
5	Rathnapura	STD	41	Male
6	Rathnapura	STD	41	Male

Except for one case in Kandy all other positive samples were in the 15-49 year age group.

Table 2 : HIV test results by sentinel sites and sentinel groups

Sentinel sites	Sentinel groups					
	STD		FSW		TB	
	No. tested	No. positive	No. tested	No. positive	No. tested	No. positive
Colombo	1448	2 (0.1%)	286	0	223	0
Kandy	749	2 (0.3%)	70	0	269	0
Galle	595	0	279	0	174	0
Rathnapura	375	2 (0.5%)	241	0	94	0
Kurunegala	668	0	75	0	75	0
Anuradhapura	349	0	259	0	165	0
Badulla	276	0	106	0	111	0

Table 2 indicates the number of HIV tests carried out and number of positives by sentinel sites and sentinel groups. All sites were able to enrol more than the minimum required sample size for STD clinic attendees. Colombo, Kandy and Rathnapura had two HIV positive samples in each site giving HIV prevalence rates of 0.1% , 0.3% and 0.5% respectively for STD clinic attendees.

Kandy, Kurunegala and Badulla had enrolled less than 50% of the required minimum sample size for female sex workers (FSW). There were no positive samples among FSW.

Enrolment of TB patients was satisfactory only in Kandy and Colombo. Rathnapura and Kurunegala had enrolled less than 100 TB patients. All TB cases were negative for HIV antibodies.

Table 3: STD clinic attendees by age groups and sentinel sites

Sentinel site	Age groups (years)						Total	
	0-14		15-49		50+		No.	%
	No.	%	No.	%	No.	%		
Colombo	15	1.0	1338	92.4	95	6.6	1448	100.0
Kandy	8	1.1	697	93.1	44	5.9	749	100.0
Galle	21	3.5	550	92.4	24	4.0	595	100.0
Rathnapura	6	1.6	341	90.9	28	7.5	375	100.0
Kurunegala	16	2.4	593	88.8	59	8.8	668	100.0
Anuradhapura	3	.9	342	98.0	4	1.1	349	100.0
Badulla	9	3.3	251	90.9	16	5.8	276	100.0

Table 3 indicates STD clinic attendees by age and sentinel site. Over 90% of STD patients were between 15-49 year age group except those in Kurunegala. In Kurunegala 9% of the sample was over 50 years of age.

Table 4: STD clinic attendees by age groups and sex

Sex	Age groups (years)						Total	
	0-14		15-49		50+		No.	%
	No.	%	No.	%	No.	%		
Male	32	41.0	2601	63.3	183	67.8	2816	63.1
Female	46	59.0	1511	36.7	87	32.2	1644	36.9
Total	78	100.0	4112	100.0	270	100.0	4460	100.0

Table 4 shows STD clinic attendees by age and sex. Majority (63%) of STD clinic attendees was males. Proportion of males were more in 15-49 and over 50 year age groups whereas the proportion of females in 0-14 year age group was more than males.

Table 5 : Female sex workers by age groups and sentinel sites

Sentinel site	Age groups (years)						Total	
	0-14		15-49		50+		No.	%
	No.	%	No.	%	No.	%		
Colombo			284	99.3	2	.7	286	100.0
Kandy			68	97.1	2	2.9	70	100.0
Galle	2	.7	276	98.9	1	.4	279	100.0
Rathnapura	2	.8	234	97.1	5	2.1	241	100.0
Kurunegala			74	98.7	1	1.3	75	100.0
Anuradhapura			258	99.6	1	.4	259	100.0
Badulla			102	96.2	4	3.8	106	100.0

Table 5 presents female sex workers (FSW) enrolled in the survey by age group and sentinel sites. Over 96% of FSW in all sentinel sites were in 15-49 year age group.

Table 6 : TB patients by age groups and sentinel sites

Sentinel site	Age groups (years)						Total	
	0-14		15-49		50+		No.	%
	No.	%	No.	%	No.	%		
Colombo			143	64.1	80	35.9	223	100.0
Kandy	3	1.1	169	62.8	97	36.1	269	100.0
Galle	1	.6	101	58.0	72	41.4	174	100.0
Rathnapura	1	1.1	63	67.0	30	31.9	94	100.0
Kurunegala			52	69.3	23	30.7	75	100.0
Anuradhapura	2	1.2	102	61.8	61	37.0	165	100.0
Badulla	7	6.3	76	68.5	28	25.2	111	100.0

Table 6 shows TB patients included in the survey by age groups and sentinel sites. Compared to STD and FSW categories, a higher proportion of TB patients were found in over 50 year age group (25%-41%).

Table 7 : TB patients by age groups and sex

Sex	Age groups (years)						Total	
	0-14		15-49		50+		No.	%
	No.	%	No.	%	No.	%		
Male	8	57.1	454	64.3	305	78.0	767	69.0
Female	6	42.9	252	35.7	86	22.0	344	31.0
Total	14	100.0	706	100.0	391	100.0	1111	100.0

Table 7 indicates TB patients by age groups and sex. The proportions of male patients were higher than that of females in all three age groups. Male to female ratio of the overall sample was 2.2:1.

Comments

In the sentinel survey of year 2000, six male STD clinic attendees in three sentinel sites were found to be positive for HIV antibodies. This is the highest number of positive cases detected in any of the sentinel surveys carried out since 1993. However, whether this is a true increase in the trend of HIV prevalence or a random variation has to be judged in future, once results of next few surveys are available.

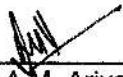
In this year's survey, a total of 1296 female sex workers were tested for HIV. This includes almost all FSW who attended the STD clinics during the survey period of six months. Surprisingly, all these samples tested negative for HIV.

TB patients were included in the survey as there is a well-established association between TB and HIV infections. Although, majority (64%) of TB patients was in 15-49 year age group, none of the samples were positive for HIV.

Currently Sri Lanka is classified as a low prevalence country for HIV. Findings of this survey are compatible with this classification. While HIV sero-surveys would be continued annually at the present sites an attempt would be made to establish new sites in the Northern and Eastern provinces. In addition Behavioural Surveillance Surveys would be started from 2001.

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