

REPORT ON HIV SENTINEL SURVEILLANCE - 1997

HIV surveillance can be defined as the collection of epidemiological information regarding the distribution and spread of HIV infection to be relevant to the planning and implementation of HIV/AIDS prevention activities. Sentinel surveillance is the recommended methodology by WHO to monitor trends of HIV infection rates in various population groups in selected sites.

The National STD/AIDS Control Programme of the Ministry of Health and Indigenous Medicine has been conducting HIV sentinel surveillance annually since 1993.

In 1997, this survey was conducted in 7 sentinel sites, Colombo, Galle, Kandy, Ratnapura, Kurunegala, Anuradhapura and Badulla.

Duration

Sentinel surveillance was carried out from 1st July to 31st December 1997.

Testing Methodology

Unlinked anonymous testing is recommended for HIV sentinel surveillance as it will minimise biases and ethical implications that can affect the survey. This methodology was used in all sentinel groups except in blood donors in whom HIV testing was mandatory. In unlinked anonymous testing, a part of the blood sample originally collected for VDRL test/ESR were used for HIV testing after removing all identifying labels so that HIV result could not be linked to any particular individual.

HIV Testing Strategy.

In Sri Lanka HIV prevalence continues to be much less than 10% in all sentinel groups. Therefore following testing strategy was used.

Serum was first tested with one ELISA or Particle Agglutination Assay. Any serum found to be positive on the first assay was re-tested with the ELISA, Particle Agglutination and rapid Sample Assay. Any serum found to be positive on the second assay was also confirmed with the Western Blot test. Serum that was non-reactive on the first assay was considered HIV antibody negative.

Sentinel Sites

Colombo	-	Western Province
Kandy	-	Central Province
Galle	-	Southern Province
Ratnapura	-	Sabaragamuwa Province
Kurunegala	-	North Western Province
Anuradhapura	-	North Central Province
Badulla	-	Uva Province

These sites were selected as they were accessible, had a functioning STD clinic with staff willing to participate in the survey and were expected to have sufficient numbers study subjects.

Ratnapura included blood samples collected from Kegalle, Anuradhapura included samples from Polonnaruwa and Kurunegala included samples from Chilaw.

Sentinel Population groups

The following population groups were screened in each sentinel site.

1. Female sex workers
2. STD Clinic attenders
3. Patients newly diagnosed with tuberculosis
4. Blood donors

Female sex workers and STD clinic attenders represent population groups with high risk behaviours while blood donors could be considered as groups representing low risk behaviours. Tuberculosis patients have been selected as the prevalence of HIV among tuberculosis patients is increasing in many South East Asian countries.

Monitoring Visits

Kandy, Galle, Ratnapura, Kurunegala, Anuradhapura and Badulla sentinel sites were visited by teams of medical officers from the Central STD clinic Colombo during the data collection for HIV sentinel survey. These visiting teams had discussions with the PDHS/RDHS, MO/Chest clinic, MO/Blood Bank, MO/STD Clinic and other relevant staff involved in the survey.

Results of the HIV sentinel Surveillance 1997

A total of 6836 blood samples were tested for the HIV sentinel surveillance 1997. This number was 2921 samples less than the total number tested in 1996, as antenatal mothers were not included in 1997 survey.

Of the total number tested, **only one sample was found to be positive for HIV**. This blood sample came from a 38 year old female STD clinic attendee from Colombo. The **period prevalence rate** for Colombo STD clinic attenders in 1997 was thus 0.25% (Table 1)

Table 1

HIV Sentinel sites & populations according to the number examined & number positive.

HIV Sentinel Survey 1997.

	FSW	STD clinic attenders	TB patients	Blood Donors	Total
COLOMBO					
Number examined.	110/200	400/400	100/100	600/600	1210/1300
Number positive.	0	1	0	0	1
KANDY					
Number examined.	82/100	200/200	100/100	600/600	982/1000
Number positive.	0	0	0	0	0
GALLE					
Number examined.	100/100	200/200	100/100	600/600	1000/1000
Number positive.	0	0	0	0	0
RATHNAPURA					
Number examined.	47/100	185/200	100/100	600/600	932/1000
Number positive.	0	0	0	0	0
KURUNAGALA					
Number examined.	69/100	100/100	61/100	600/600	830/900
Number positive.	0	0	0	0	0
ANURADHAPURA					
Number examined.	100/100	100/100	100/100	600/600	900/900
Number positive.	0	0	0	0	0
BADULLA					
Number examined.	43/100	62/100	67/100	600/600	772/900
Number positive.	0	0	0	0	0

Under number examined, Numerator = Number of specimens tested
Denominator = Required number

Shaded areas - Required number not tested.

1. STD Clinic attenders

All sentinel sites except Ratnapura and Badulla completed required number of STD clinic attenders. Ratnapura was able to enrol 185 (15 less than required number) but Badulla enrolled only 62 STD clinic attenders for the whole 6 month period.

2. Female Sex Workers

Only Galle and Anuradhapura were able to recruit required the sample size for Female sex workers. Colombo had screened only 110 out of the 200 required sample size. Badulla and Ratnapura were able to recruit less than 50% of the stipulated sample size of 100.

3. Patients newly diagnosed with Tuberculosis

Kurunegala and Badulla had screened only 61 and 67 patients respectively. All other sites were able to get the required number of TB patients.

4. Blood donors

All donors were voluntary and HIV testing was mandatory. Therefore no additional testing was done for the survey. All sites had enrolled the required sample size.

Age and Sex distribution

(a) STD clinic attenders

Eighty two to 98% of all STD clinic attenders were in 15-45 age group. In Kandy, all STD clinic attenders were males while in other sites male to female ratio varied between 1:1 and 3:1. (Table 2)

Table 2

**Percentage Age distribution of STD clinic attenders
in different sentinel sites.**

<i>Sentinel site</i>	<i>Age groups</i>			<i>Total</i>
	<i><15 years</i>	<i>15-45 years</i>	<i>> 45 years</i>	
<i>Colombo</i>	2	90	8	100
<i>Kandy</i>	1	91	8	100
<i>Galle</i>	7.5	81.5	11	100
<i>Rathanapura</i>	0	91.9	8.1	100
<i>Kurunagala</i>	0	98	2	100
<i>Anuradhapura</i>	0	98	2	100
<i>Badulla</i>	4.8	92	3.2	100

(b) Female Sex workers

Ninety three to 100% of all female sex workers were in the age groups of 15-45. Kandy, Galle, Kurunegala and Ratnapura had included 2.1% to 4% female sex workers who were below 15 yr. while Kandy, Galle and Anuradhapura had screened 3% to 4% female sex workers above 45 years. (Table 3)

Table 3

**Percentage Age distribution of Female sex workers
in different sentinel sites.**

Sentinel site	Age groups			Total
	<15 years	15-45 years	> 45 years	
Colombo	0	100	0	100
Kandy	3.7	92.6	3.7	100
Galle	4	93	3	100
Rathanapura	2.1	97.9	0	100
Kurunagala	2.9	97.1	0	100
Anuradhapura	0	96	4	100
Badulla	0	100	0	100

(c) Patients newly diagnosed with Tuberculosis

Seventy six to 49% of patients were in 15-45 age group and 19.4% to 48% were above 45 years. Only less than 4.5% were below 15 years. Majority of TB patients was males. In Kurunegala, all TB patients screened were males. (Table 4)

Table 4

**Percentage Age distribution of TB patients
in different sentinel sites.**

Sentinel site	Age groups			Total
	<15 years	15-45 years	> 45 years	
Colombo	1	54	45	100
Kandy	0	59	41	100
Galle	3	49	48	100
Rathanapura	1	66.3	32.7	100
Kurunagala	0	62.3	37.7	100
Anuradhapura	0	56	44	100
Badulla	4.5	76.1	19.4	100

*Kandy 3.7%
Galle 4%
Ratnapura 2.1%
Kurunegala 2.9%
Anuradhapura 4%
Badulla 0%*

(d) Blood donors

Ninety seven to 99.8% of all blood donors were in 15-45 age group. In Colombo and Kurunegala all blood donors were males. In all other sites more than 98% of all blood donors were males. (Table 5)

Table 5

**Percentage Age distribution of Blood donors
in different sentinel sites.**

<i>Sentinel site</i>	<i>Age groups</i>			<i>Total</i>
	<i><15 years</i>	<i>15-45 years</i>	<i>> 45 years</i>	
<i>Colombo</i>	0	97	3	100
<i>Kandy</i>	0	99.2	0.8	100
<i>Galle</i>	0	97.2	2.8	100
<i>Rathanapura</i>	0	98.1	1.9	100
<i>Kurunagala</i>	0	98.1	1.9	100
<i>Anuradhapura</i>	0	98.5	1.5	100
<i>Badulla</i>	0	100	0	100

Comments

There was one HIV antibody positive sample in 1997 survey. This blood sample had come from a 38 year old female STD clinic attendee in Colombo. In Colombo, all newly registered patients at STD clinic were classified as STD clinic attenders for the survey. But it should be noted that a proportion of female STD clinic attenders were female sex workers.

Enrolment of required number of female sex workers was completed only in Galle and Anuradhapura. Badulla and Ratnapura were not able to recruit even 50% of the required sample size. Female sex workers form a vital high-risk group for HIV transmission. Therefore, it should be stressed that special efforts have to be taken to complete required sample sizes for this category.

Enrolment of STD clinic attenders was completed in most of the sites except in Badulla and Ratnapura. Screening of patients newly diagnosed with Tuberculosis was also completed in all sites except Badulla and Kurunegala.

Badulla sentinel site, like in the previous year, could not complete required sample sizes for all categories except for blood donors in whom HIV testing was

mandatory. Therefore, feasibility of maintaining Badulla as a sentinel site has to be reconsidered, as ability to enrol required sample size is a vital requirement for a sentinel site.

All sentinel sites except Kurunegala and Kandy had sent a report on **problems and constraints**. This is an improvement compared to previous year. The main constraints pointed out by Colombo were non-availability of a vehicle for field visits and lack of staff willing to do field visits during non-working hours. Loss of contacts with brothel owners due to retirement of senior PHIs was also had affected the enrolment of female sex workers in Colombo. Rathnapura also had the problem of transport for field visits. Heavy rain with floods and an epidemic of cholera also had adversely affected the survey in Rathnapura. Kandy, Kurunagala and Badulla had not mentioned any particular reason for their failure to enrol required sample size.

In summary, results of 1997 HIV sentinel survey are compatible with a low prevalence of HIV infection. Except one 38 year old female STD clinic attender in Colombo, all other samples were found to be Negative for HIV Antibodies. However, sample sizes were too small to comment on a definite prevalence rate with a certain degree of confidence limits. Therefore, in future it is advisable to get a bigger sample size even though the number of sentinel sites may have to be limited.

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23 March 1998

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