

REPORT ON HIV SENTINEL SURVEILLANCE - 1995

Sentinel surveillance is the method of choice for obtaining data on HIV infection rates in various population groups and is used thereafter for monitoring trends.

From a programmatic view point, it was considered better to carry out surveillance in more sites and repeat them once a year instead of sampling fewer sites every six months.

Duration

In 1995, HIV surveillance was carried out from 1st July to 31st December (6 months). The duration of the surveillance was extended to 6 months because in 1994, three of the six sentinel sites were unable to enroll the required sample sizes during the 3 month survey period. This was also noted in the 1993 survey.

Testing Methodology

Active Surveillance using unlinked anonymous testing procedure was used in all sentinel groups except in blood donors where testing for HIV was mandatory. Unlinked anonymous testing was used to minimize participation bias. In this type of testing, a part of the blood sample originally collected for other purposes was used for HIV testing after removing all personal identifiers (eg. name, patient number) so that HIV test results could not be linked with the individual.

Testing Strategy

Following the WHO recommendations, testing strategy depended on the expected HIV seroprevalence in that population group.

As HIV sero prevalence was considered to be < 10% in all population groups, the serum was first tested with one ELISA/particle agglutination assay with higher sensitivity. Any serum found reactive on the first assay was retested with ELISA, particle agglutination and rapid simple assay. Any serum found positive on the 2nd 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 & Matara	-	Southern Province
Ratnapura & Kegalle	-	Sabaragamuwa Province
Anuradhapura & Polonnaruwa	-	North Central Province
Kurunegala & Chilaw	-	North Western Province

These sites were selected as they were accessible, convenient, expected to have sufficient numbers of patients and had staff willing to participate in the survey.

Ratnapura included samples from Kegalle, Anuradhapura included samples from Polonnaruwa (as in 1994) and Kurunegala included samples from Chilaw.

Sentinel Population groups

The following population groups were surveyed in each sentinel site.

Female sex workers	-	representing high risk
Male STD Clinic attenders	-	behaviour
Patients diagnosed with tuberculosis	-	representing medium risk
Blood donors and antenatal clinic attendees	-	representing low risk

Monitoring Visits

Each of the 5 sentinel sites outside Colombo was visited once during the survey by a team of medical officers from the Central STD Clinic in Colombo. The team included the Director or a Consultant Venereologist or the most senior medical officer and a junior medical officer. The teams had discussions relating to the implementation of surveillance with the PDHS/RDHS, MO/STD, MO/Chest Clinic, MO/Blood Bank, PHI of the STD Clinic and other relevant personnel. Any difficulties/problems encountered were discussed in detail and solutions suggested. Each team submitted a report on the visits to the D/STD AIDS on their return.

RESULTS

Results of the 1995 sentinel surveillance are given in Table 1. A total of 10,132 samples were screened for HIV antibody during the survey.

Female Sex Workers

In 1995, as in the previous years, Kandy and Galle were unable to screen the required number of female sex workers, whereas Kurunegala together with Chilaw had screened 87% more than the required sample size. The only HIV positive among female sex workers was detected from Chilaw, giving a seropositivity rate of 0.5%.

For Colombo, all sex workers were covered by visiting brothels, massage parlours, and hotels where an size all primary sex workers
Male STD Clinic Attenders *attending the STD clinics as well as those from the field were covered.*

Galle, Anuradhapura & Kurunegala had screened far in excess of the required number in this category. One male STD clinic attender from Chilaw was found to be HIV antibody positive giving a seropositivity rate of 0.4%. Only newly registered male STD clinic attenders were screened.

Patients diagnosed with Tuberculosis

In 1995, all sentinel sites except Colombo were unable to screen the required sample size of TB patients. There were no HIV antibody positives detected among this sentinel population group. Only newly diagnosed patients with tuberculosis were included in the survey. HIV surveillance in patients attending TB clinics does not give pure trend data per se. However, it does give important information on HIV related disease morbidity.

ANC Attendees

Unlike in 1994, all sentinel sites were requested to screen ANC attendees. Six hundred new pregnant women registered consecutively from 01.07.95 were screened from each sentinel site and there were no seropositives detected. *Over 50% of pregnant women screened were first time*

Blood Donors

All sentinel sites screened 600 blood donors each and there were no HIV positives detected in this group. All were voluntary donors.

Age Distribution

Eighty three to 98% of all female sex workers surveyed were in the 15-45 year age group (Table 2). The HIV positive female sex worker was 36 years old.

Table 2 - Percentage age distribution of female sex workers

	< 15 yrs %	15-45 yrs %	> 45 yrs %
Colombo	0	98.5	1.5
Kandy	2.5	97.5	0
Galle	0	83.4	16.6
Ratnapura	1.0	97.0	2.0
Anuradhapura	1.0	98.0	1.0
Kurunegala	7.0	92.5	0.5

Eighty nine to 94% of male STD clinic attenders surveyed were in the 15-45 year age group (Table 3) and the HIV positive detected in this group from Chilaw was 37 years old.

Table 3 - Percentage age distribution of male STD clinic attenders

	< 15 yrs %	15-45 yrs %	> 45 yrs %
Colombo	0.25	90.5	9.25
Kandy	1.0	93.0	6.0
Galle	1.0	89.0	10.0
Ratnapura	0	89.5	10.5
Anuradhapura	1.0	90.3	8.7
Kurunegala	0	94.2	4.8
		95.2	

Only 44 to 63% of patients diagnosed with tuberculosis were in the 15-45 year age group. In Anuradhapura particularly, 54% of such patients were over the age of 44 years (Table 4).

Table 4 - Percentage age distribution of TB patients

	< 15 yrs %	15-45 yrs %	> 45 yrs %
Colombo	0.5	61.5	38.0
Kandy	0	62.0	38.0
Galle	0	52.3	47.7
Ratnapura	0	63.2	36.8
Anuradhapura	1.0	44.7	54.3
Kurunegala	0	48.2	51.8

Ninety six percent or more of blood donors surveyed at all sites except Kurunegala were 15-45 yrs old. Age distribution data of blood donors from Kurunegala were not made available (Table 5), to the Co-ordinator.

Table 5 - Percentage age distribution of blood donors

	< 15 yrs %	15-45 yrs %	> 45 yrs %
Colombo	0	96.0	4.0
Kandy	0	97.0	3.0
Galle	0	96.0	4.0
Ratnapura	0	97.5	2.5
Anuradhapura	0	98.0	2.0
Kurunegala	Not available		

Over 99.5% of all antenatal clinic attendees surveyed were in the 15-45 year age group (Table 6)

Table 6 - Percentage age distribution of ANC attendees

	< 15 yrs %	15-45 yrs %	> 45 yrs %
Colombo	0	99.8	0.2
Kandy	0	100.0	0
Galle	0	100.0	0
Ratnapura	0.3	99.7	0
Anuradhapura	0	99.8	0.2
Kurunegala	0	100.0	0

Comments

Certain sentinel sites have not followed the protocol in recruiting the required sample size. Kurunegala in particular had screened more than twice the required sample size for male STD clinic attenders. Amongst this group there was one HIV antibody positive. Even with female sex workers, 87 more than the required sample had been screened and one was found to be HIV antibody positive.

It is not possible to comment on trends in HIV infection among male STD clinic attenders or female sex workers as there were no positives identified in the 1994 survey. In the 1993 survey, a female sex worker from Colombo was found to be seropositive for HIV.

Both HIV positives detected in this year's survey were from Chilaw in the North Western Province. Chilaw was included in the survey for the first time in 1995. In the light of the positives detected it may be more appropriate to include Chilaw as a separate sentinel site in future. However, this would depend on the ability to enroll the total required sample sizes of all sentinel populations.

All sentinel sites other than Colombo were not successful in enrolling the required sample size for patients with tuberculosis. Galle was unable to recruit

even 50% of the required sample. This has been a feature in the previous sentinel surveys too. Since only newly diagnosed patients with tuberculosis ~~are~~ *could be enrolled* screened for HIV, this was most probably the reason for the inability to enroll the required sample size outside Colombo.

Only 44-63% of patients with tuberculosis were 15-45 years old. In Anuradhapura and Kurunegala more than half the number screened were 45 years or older. If an attempt is made to recruit only those in the 15-45 year age group, it may not be possible to screen even 50% of the required sample size from most sentinel sites during the 6 month survey period. This raises the question of the feasibility of continuing with patients with tuberculosis as a sentinel population group. *However, tuberculosis is one of the most common opportunistic infections anyway. Hence unaffected with HIV.*
(if not the commonest)

The blood samples from Kurunegala (including Chilaw) and Ratnapura (including Kegalle) were tested in the Central laboratory of the STD/AIDS Control Programme as was the practice in 1994. However, this year too there were instances where the Public Health Inspector who was assigned to sentinel surveillance found it difficult to decipher the information written on the test tubes. This was most disheartening as at both sentinel surveillance workshops conducted in 1994 and 1995, the staff in all sentinel sites were trained to mark legibly the site, month and year, age and sex on one label and the patient number on the 2nd label. Properly labelled vacutainer tubes were demonstrated to all staff and it appears that the MO/STDs in these sentinel sites have not supervised the labelling of the tubes.

Colombo, Kandy and Galle used the ELISA method for screening, while only Anuradhapura used the particle agglutination method. There are no facilities to carry out ELISA at Anuradhapura. The advantages in the ELISA method are, cost per test is less costly, than the particle agglutination method and the test is able to detect both HIV 1 and HIV 2 antibodies whereas the particle agglutination method available detects only HIV 1 antibodies. ^{mu} However, pooling of sera cannot be done with ELISA as neat serum has to be used for the test.

This report was delayed as sentinel sites other than Colombo delayed sending the results to the Co-ordinator and even up to the time of writing, Kurunegala has failed to send the age and sex data of blood donors screened at that site.

Dr. I. Abeyewickreme
Co-ordinator,
STD/HIV/AIDS Surveillance, STD Care & Research
STD/AIDS CONTROL PROGRAMME
COLOMBO.

10.06.1996

CC: 1. DDG (PHS)
2. Director, Respiratory Diseases Control Programme
3. Director, NBTS
4. W.R.
5. Co-ordinator - WHO, AIDS Project Office
6. MOO/STDs) Kandy, Galle, Matara,
7. MOO/Chest Clinics) Ratnapura, Kegalle,
8. MOO/Blood Banks) Kurunegala, Chilaw, A'pura,
& Polonnaruwa