



Sexually Transmitted Infections in Arunachal Pradesh

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KEYWORDS

STIs, risky behaviours, National AIDS Control Organisation (NACO), HIV/AIDS, youth.

ABSTRACT

In the epidemic era of HIV/AIDS, sexually transmitted infections (STIs) are one the most common identifiable health challenges globally. The paper attempts to take account of and understand the incidence of sexually transmitted infections (and HIV/AIDS) in Arunachal Pradesh, the largest state in North East, India. The study reveals high STI cases in the state; and the districts recorded the high cases of STIs includes West Kameng (781 cases), East Siang (7113) and Changlang (642 cases) in 2012-13 and Papum Pare (683 cases) and West Kameng (593 cases) in 2013-14. All this reflects the deficit of knowledge for protecting and preventing oneself from these preventable STI cases. The study underscores the importance of promoting knowledge and awareness of STIs and particularly of HIV/AIDS amongst the youth of the state.

Introduction

In the epidemic era of HIV/AIDS, which creating havoc throughout the world, sexually transmitted infections (STIs) are also the most common identifiable health problems in many countries. STIs spread from one person to another through sexual contact. The majority of STIs worldwide are caused by the infections such as: syphilis, gonorrhoea, Chlamydia, trichomoniasis, genital herpes, hepatitis B virus (HBV), and human papillomavirus (HPV). STIs constitute one of the major public health issues, and continue to present major health, social and economic challenges in the developing countries like India, leading to considerable morbidity, mortality, stigma, major cause of infertility and foetal wastage (Thapar, *et al.*, 2018).

The annual incidence of STIs in India is estimated to be five percent, or 40 million new infections every year (Ravi and Nair, 2011). The Family Health Survey-3 estimates that 11.1 percent of women were reported to have STIs in India. The prevalence varies across the states ranging from two percent in Goa to 25 percent women in Assam (NFHS-3, 2009). According to BBC Report (2007), Andhra Pradesh, Tamil Nadu and Karnataka in the south, Uttar Pradesh and Bihar in the north, Maharashtra in the west and Manipur and Nagaland in the Northeast were considered high HIV prevalence states in India (BBC, 2007).

However, the tragedy of the health and economic burden of STIs is that they are preventable and often treatable, frequently with simple, inexpensive interventions. The precautionary and protective

Please cite this article as: Tailyang S., H. Vokendro, Sexually Transmitted Infections in Arunachal Pradesh. *Antrocom J. of Anthropology* 17-2 (2021) pp. 351-362.

measures are not adequately adopted by the people mainly due to the lack of education and awareness level, and also due to casual approach towards sexual behaviours on account of the prevailing socio-psychological and cultural values and norms of the society (Sirah, 2018). For certain other section of the population, the stigma and taboo associated with the disease/infection curtail one to access regular counselling and clinical services.

The historical peculiarity and geographical isolation, and delayed development initiative may be taken as the main reason behind very late and low level of education development, health awareness and consciousness among the people of Arunachal Pradesh. Arunachal Pradesh has long international borders with Bhutan in the west (160 km), Tibet (China) in the north and northeast (1080 km), and Myanmar in the east (440 km). The largest state of the eight states of North East India, Arunachal Pradesh shares borders with the states of Nagaland and Assam in the south-east and south respectively.

The high HIV concentrated states of Manipur and Nagaland are closed to and sharing border with Arunachal Pradesh. Again, the north eastern states bordering the heroin producing Golden Triangle of Laos, Myanmar and Thailand, there are high prevalence of intravenous drug users in the region, which are considered to be the main driving force of HIV/AIDS epidemic. In the light of the given vulnerability status of the state, the paper attempts to access and understand the incidence and prevalence of sexually transmitted infections including HIV/AIDS in Arunachal Pradesh.

Methods

The periodic review of Arunachal Pradesh State AIDS Control Society (APSACS), Naharlagun the “CMIS Bulletin” is the main data source for the study. The online data of the National AIDS Control Organisation (NACO) are also served as the significant data source apart from the other secondary sources. The relevant data pertaining to sexually transmitted infections from the designated STI Clinic in the District Hospital from each district headquarter and HIV and syphilis test and positive detection cases reported from Integrated Counselling and Testing Centre (ICTC) located in various health set up of Arunachal Pradesh for the period of two financial years (i.e. April 2012 to March 2013 and April 2013 to March 2014) have been taken into account to make comparative analysis.

The online data of the National AIDS Control Organisation (NACO) are reviewed and take into account in the study to understand HIV/AIDS estimation, detection trend and prevalence, and death of HIV/AIDS in North-eastern states of India.

The prior written permission was sought from the Project Director, APSACS, Naharlagun for accessing and making use of data pertaining to STIs, HIV and syphilis test and positive detection cases in the study.

Findings and Results

The total STI diagnosed were 4924 cases in financial year 2012-13 in Arunachal Pradesh, out of which vaginal/cervical discharge were 1740 (35%), other STIs 931 (19%) and asymptomatic treatment 656 (13%). STI cases decreased to 4094 in 2013-14, in which vaginal/cervical discharge constituted of 1399 (34%), other STIs 829 (20%), lower abdominal pain 434 (11%) and urethral discharge 432 (11%).

Out of the total STI cases diagnosed, West Kameng district has highest number of 781 STI cases in

2012-13, out of which 731 cases (94%) were of vaginal/cervical discharge. The cases decreased to 593 during 2013-14, out of which 547 cases (92%) were of vaginal/cervical discharge. East Siang district has 713 STI cases in 2012-13, out of which 218 were vaginal/cervical discharge, 142 urethral discharge and 208 other STIs. STI diagnosed cases decreased to 527 in 2013-14, out of which 143 were vaginal/cervical discharge, 136 urethral discharge and 124 other STIs. In Changlang district STI diagnosed cases in 2012-13 were 642, out of which 579 cases were of asymptomatic treatment. The cases decreased to 335 in 2013-14, out of which 202 were asymptomatic treatment and 43 lower abdominal pain. However, Papum Pare district has witnessed dramatic increasing in STI diagnosed cases from 290 in 2012-13 to 683 in 2013-14. In 2012-13, 159 (55%) were genital warts and 44 (15%) were vaginal/cervical discharge, whereas in 2013-14, 193 (28%) were of other STIs, 156 (23%) genital warts and 106 (16%) vaginal/cervical discharge in Papum Pare district (Table 1 and 2).

In 2012-13, the total HIV test conducted of general client were 19885 and total HIV positive detected was 19, out of which 13 HIV positive was detected from Papum Pare district. Again, the total HIV tested to Ante-Natal Care (ANC) client was 9795, from where 3 HIV positive cases detected. Whereas, the general client undergone HIV test during 2013-14 was 18910, from where 10 HIV positive was detected. The ANC client undergone HIV test was 9450 in 2013-14, out of which 1 HIV positive was detected (Table 3 and 4).

The total syphilis tested by general client during 2012-13 were 6229, out of which 444 (7.13%) reactive cases reported. The district which have highest number of syphilis reactive was East Kameng (72), followed by West Siang (69), Changlang (64) and Lower Subansiri (63). Among ANC client the total syphilis tested was 6088, from where 198 (3.25%) reactive cases detected. On the other hand, the general client who have undergone syphilis tests were 3883 in 2013-14, out of which 163 (4.2%) reactive cases detected. 7167 ANC clients have tested for syphilis and out of which 258 (3.6%) syphilis reactive cases were detected in 2013-14 (Table 3 and 4).

In Table 5, it shows 354 HIV positive case detected in Arunachal Pradesh as of March 2018, out of which, Papum Pare district has top the list with 216 HIV positive case, it was followed by Lohit (43 case) and East Siang (23). Again, 229 were male and 124 female among the HIV positive people and in regard to age distribution of HIV positive people, 197 cases in age group of 20-29 years, 105 in age group of 30-44 years and 36 in age less than 20 years (from Table 6).

In Table 7, the estimated summary of HIV/AIDS epidemic 2015 by NACO projected HIV positive cases to be 560 by 2011 and 606 HIV positive cases by 2015 in Arunachal Pradesh. Again, it estimated high HIV positive cases in states of Assam (12,090), Nagaland (11,050) and Manipur (24,457).

Discussion

The findings of the study revealed that there are high STI prevalence in Arunachal Pradesh and shows how the state is vulnerable to HIV/AIDS epidemic. There are reportedly some decline in STI diagnosed cases, but by no means satisfactory, from the period of 2012-13 to 2013-14 in the state as whole from 4924 STIs cases to 4094 cases respectively and in the districts of West Kameng from 781 STI cases to 593 cases, East Siang from 713 to 527 and Changlang from 642 to 335 during the period respectively. However, Papum Pare district has recorded dramatic increase in STI cases during the period, which increased from 290 STIs cases in 2012-13 to 683 cases in 2013-14.

The high STIs prevalence of various categories reflects the unsafe sexual behaviour patterns among certain section of the people of the state. Such a high cases of STI prevalence may be taken as just the tip of an iceberg as it reflects only clinically recorded cases from the designated STI clinic located in the district headquarter of each district of Arunachal Pradesh. Amongst the various categories of STIs, vaginal/cervical discharge occupies the highest prevalence cases of 1740 (35%) in 2012-13 and 1399 (34%) in 2013-14 in the state, out of which, the districts West Kameng and Lower Subansiri have the highest cases of vaginal/cervical discharge of 731 (42%) cases and 221 (13%) cases in 2012-13 and 547 (39%) cases and 204 (15%) cases in 2013-14 respectively.

The category of other STI cases also recorded high prevalence, which is 931 (19%) cases in 2012-13 and 829 (20%) in 2013-14, out of which, the high prevalence recorded from the districts East Siang (208 cases) and Lower Dibang Valley (187 cases) in 2012-13 and from West Siang (196 cases) and Papum Pare (193 cases).

The high prevalence of lower abdominal pain recorded to 538 (11%) in 2012-13 and 434 (11%) in 2013-14. The districts that recorded the high cases of lower abdominal pain are West Siang (77 cases) and Tawang (71 cases) in 2012-13 and West Siang (67 cases) and Papum Pare (65 cases) in 2013-14.

The high syphilis reactive cases detected among the general clients and more so of ANC clients in Arunachal Pradesh may be taken as a serious alarm. The slight decline in syphilis reactive detection from 444 (7.13%) in 2012-13 to 163 (4.2%) is not proved to be adequate as there are increasing detection of syphilis reactive cases among the ANC clients from 198 (3.25%) in 2012-13 to 258 (3.6%) in 2013-14. The high cases of syphilis reactive detection among ANC patients reflect the penetration of infection into the general population from the high risk population.

The study findings agree with the observation of Sirah (2018) that there were cases of early initiation of sexual intercourse, multiple partnerships, pre-marital and extra-marital affairs, and low condom use even with non-regular partners. On account of such behaviours, perhaps, there were high STI cases among the youth of Arunachal Pradesh (Sirah, 2018).

The high STI prevalence, indicator for unsafe sexual behaviours, facilitates and leads to an ever increasing trend of HIV/AIDS positive detection cases in Arunachal Pradesh. As pointed out by Sirah (2018), a first case detected in 1998, which has increased and shot up to 269 cases in 2015 and 354 in March 2018, in which 229 (65%) were male and 124 (35%) female (Sirah, 2018). 61% (216) of HIV positive cases are from the Papum Pare district, followed by Lohit and undivided East Siang districts of 12% (43) and 6% (23) respectively.

The facts remain that the estimated population with HIV/AIDS to be much higher than one actually detected in the state so far. As per estimate, Arunachal Pradesh has 560 HIV/AIDS positive cases by 2011 and 606 cases by 2015, which implies that the larger section of population with HIV/AIDS remained untraceable and may be infecting others in large scale without having knowledge of infection status through their risky behaviours.

Sirah (2019) observed very low level of knowledge and awareness on HIV/AIDS and STIs and condom usage and pointed out a doubtful approach towards sexual behaviours among the senior students of Itanagar (Sirah, 2019). Thus, the unsafe sexual behaviours and practices and its consequent high STI

cases diagnosed are the outcome of the lack of knowledge and awareness on preventive modes and on various categories of STIs including HIV/AIDS. Again, Sirah (2018) also pointed out that the factors such as religion, educational level and parental occupation have influenced the sexual behaviours of the youth. The tolerance and permissiveness of the prevailing social norms and value system on any risky sexual behaviours in Arunachal Pradesh maybe relooked into (Sirah, 2018).

Conclusion and Recommendations

The study pointed out the significant fact on detail of STI prevalence status and comparison of STI prevalence in different districts of the state in two different financial years. It reveals high STI cases in the state; and the districts recorded high STI cases includes West Kameng, East Siang, Papum Pare and Changlang. Amongst the most common STI categories, vaginal/cervical discharge is on the top, followed by other STI category and lower abdominal pain. High detection of syphilis reactive cases from ANC client come as a great alarm indicating the penetration of infection into the general population from the high risk population. There are increasing trend of HIV positive detection cases in the state, but by no means it enable to trace and detect estimated people with HIV/AIDS. This implies larger section of HIV/AIDS positive people roaming around without knowing their infected status and hence transmitting to others in large scale through their risky behaviour pattern.

The findings of the study underscores the importance of sex education and awareness programmes to prevent the youths from STIs (including HIV/AIDS), sexual and reproductive health problems and unwanted pregnancy. The study may be indicative for the systematically designing and implementing intensive sexual risk reduction programmes for the youth at various appropriate settings.

Moreover, it is strongly suggestive to undertake the research effort to understand whether the prevailing socio-psychological and cultural values and norms of the society facilitate or contribute toward the higher incidence of STI cases in Arunachal Pradesh. Again, it would be pertinent to point out the necessity of carrying out the research activities to assess and understand knowledge, attitude and practices pertaining to STIs (including HIV/AIDS) of young people of the state. The findings of which would be great helpful, apart from the academic utility, to the policy makers and implementing agencies to initiate required effort to address the gap in knowledge about STI, HIV/AIDS, safer sexual behaviours and reproductive and sexual health.

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Tables

Table 1: STI Prevalence during Financial Year 2012-13
Source: APSACS CMIS Bulletin 2012-13

Name of District	Syndromic Diagnosis of STI at designated STI Clinic at each District											
	Vaginal/ Cervical Discharge	Genital Ulcer - Non - Herpetic	Genital Ulcer - Herpetic	Lower Abdominal Pain	Urethral Discharge	Ano- Rectal Discharge	Inguinal Bubo	Painful Scrotal Swelling	Genital Warts	Other STIs	Asymptomatic STI Treatment	Total STI Cases
Anjaw	105	0	0	58	4	0	0	15	0	24	0	206
Changlang	1	0	0	1	0	0	0	0	0	61	579	642
Dibang Valley	18	0	6	18	16	0	0	0	4	22	0	84
East Kameng	63	0	0	30	33	16	0	0	0	0	0	142
East Siang	218	37	3	62	142	18	0	2	11	208	12	713
Kurung Kume	6	0	0	20	0	0	0	0	0	0	1	27
Lohit	67	5	4	28	4	0	3	0	3	50	0	164
Lower Dibang Valley	24	0	35	69	0	0	1	5	0	187	0	321
Lower Subansiri	221	0	0	66	64	87	0	8	0	100	0	546
Papum Pare	44	3	10	8	29	0	1	0	159	23	13	290
Tawang	68	0	0	71	34	11	0	14	0	20	23	241
Tirap	12	2	0	18	15	10	16	13	9	46	6	147
Upper Siang	4	0	0	3	0	0	2	0	0	0	0	9
Upper Subansiri	20	0	0	9	14	0	0	0	4	6	1	54
West Kameng	731	7	0	0	30	8	0	5	0	0	0	781
West Siang	138	29	14	77	49	2	5	3	35	184	21	557
Total	1740	83	72	538	434	152	28	65	225	931	656	4924

Table 2: STI Prevalence during Financial Year 2013-14
 Source: APSACS CMIS Bulletin 2013-14

Name of District	Syndromic Diagnosis of STI at designated STI Clinic at each District											Total STI Cases
	Vaginal/ Cervical Discharge	Genital Ulcer - Non Herpetic	Genital Ulcer - Herpetic	Lower Abdominal Pain	Urethral Discharge	Ano- Rectal Discharge	Inguinal Bubo	Painful Scrotal Swelling	Genital Warts	Other STIs	Asymptomatic STI Treatment	
Anjaw	61	0	4	24	18	0	6	7	0	3	0	123
Changlang	38	0	10	43	0	0	0	0	0	42	202	335
Dibang Valley	5	0	0	1	11	7	0	0	0	23	2	49
East Kameng	34	0	0	9	11	7	0	0	0	0	4	65
East Siang	143	7	0	58	136	18	1	2	14	124	24	527
Kurung Kume	14	0	0	31	0	0	0	0	0	12	5	62
Lohit	8	4	0	5	1	0	0	1	1	25	0	45
Lower Dibang Valley	25	0	0	45	0	0	2	6	1	89	0	168
Lower Subansiri	204	0	10	15	50	128	0	0	10	89	31	537
Papum Pare	106	6	18	65	83	0	0	26	156	193	30	683
Tawang	26	0	0	20	11	0	0	5	0	0	21	83
Tirap	15	9	0	8	16	14	6	3	3	27	23	124
Upper Siang	32	0	0	17	0	0	0	0	8	0	0	57
Upper Subansiri	36	0	0	20	25	3	0	0	7	1	1	93
West Kameng	547	22	0	6	12	0	0	1	0	5	0	593
West Siang	105	43	20	67	58	0	9	3	36	196	13	550
Total	1399	91	62	434	432	177	24	54	236	829	356	4094

Table 3: HIV and Syphilis Test and Positive Cases Identified During Financial Year 2012-13
 Source: APSACS CMIS Bulletin 2012-13

Name of District	HIV Test and Positive Cases			Syphilis Test and Reactive Cases					
	HIV Tested General Client	Sero Positive Detected of General Client	HIV Tested ANC Client	Sero Positive Detected of ANC Client	Syphilis Tested General Client	Syphilis Reactive for General Client	Syphilis Tested ANC Client	Syphilis Reactive for ANC Client	Syphilis Reactive % for ANC Client
Anjaw	-	-	-	-	65	0	30	0	0
Changlang	3020	0	1161	0	688	64	199	8	4.02
Dibang Valley	30	0	43	0	86	1	40	1	2.5
East Kameng	576	0	141	0	624	72	137	15	10.95
East Siang	2286	1	950	0	709	42	817	92	11.26
Kurung Kume	270	0	89	0	319	27	69	2	2.9
Namsai	546	1	297	0	-	-	-	-	-
Lohit	1050	2	904	1	163	8	663	0	0
Lower Dibang Valley	460	1	434	0	321	0	582	0	0
Lower Subansiri	990	0	95	0	554	63	132	18	13.64
Papum Pare	5121	13	3195	2	582	33	1657	8	0.48
Tawang	146	0	443	0	215	9	359	3	0.84
Tirap	923	0	348	0	363	12	208	4	1.92
Upper Siang	347	0	136	0	31	9	31	9	29.03
Upper Subansiri	385	0	290	0	50	3	125	2	1.6
West Kameng	506	0	860	0	867	32	340	14	4.12
West Siang	1505	1	409	0	592	69	699	22	3.15
Mobile ICTC Van	1724	0	-	-	-	-	-	-	-
Total	19885	19	9795	3	6229	444	6088	198	3.25

Table 4: HIV and Syphilis Test and Positive Cases Identified During Financial Year 2013-14

Source: APSACS CMIS Bulletin 2013-14

Name of District	HIV Test and Positive Cases				Syphilis Test and Reactive Cases					
	HIV Tested General Client	Sero Positive Detected of General Client	HIV Tested ANC Client	Sero Positive Detected of ANC Client	Syphilis Tested General Client	Syphilis Reactive for General Client	Syphilis Reactive % for General Client	Syphilis Tested ANC Client	Syphilis Reactive for ANC Client	Syphilis Reactive % for ANC Client
Anjaw	-	-	-	-	37	0	0	10	0	0
Changlang	1600	0	729	0	125	1	0.8	192	1	0.52
Dibang Valley	33	0	88	0	57	4	7.02	71	3	4.23
East Kameng	564	0	212	0	509	38	7.47	135	17	12.59
East Siang	1764	1	814	0	399	24	6.02	662	11	1.66
Kurung Kume	118	0	63	0	162	5	3.09	57	0	0
Namsai	635	1	340	0	-	-	-	-	-	-
Lohit	474	3	420	0	45	1	2.22	57	0	0
Lower Dibang Valley	204	0	491	0	86	0	0	614	0	0
Lower Subansiri	905	0	153	0	392	33	8.42	99	15	15.15
Papum Pare	5868	4	2985	1	1184	33	2.79	3163	143	4.52
Tawang	128	0	382	0	83	8	9.64	213	10	4.69
Tirap	881	0	428	0	284	3	1.06	306	5	1.63
Upper Siang	279	0	55	0	150	6	4	223	7	3.14
Upper Subansiri	829	0	469	0	19	1	5.26	241	2	0.83
West Kameng	1817	0	740	0	295	1	0.34	281	0	0
West Siang	1129	1	1081	0	56	5	8.93	843	44	5.22
Mobile ICTC Van	1682	0	-	-	-	-	-	-	-	-
Total	18910	10	9450	1	3883	163	4.2	7167	258	3.6

Table 5: District Wise HIV Positive Detection in Arunachal Pradesh (March 2018)

Source: SIMS, 2018, APSACS, Naharlagun, Arunachal Pradesh

District Wise Distribution of HIV Sero-Positive (2018)		
Sl.No.	District	Total HIV Positive
1	Tawang	2
2	West Kameng	9
3	East Kameng	5
4	Papum Pare	216
5	Lower Subansiri	7
6	Kurung Kumey	0
7	Upper Subansiri	0
8	West Siang	14
9	East Siang	23
10	Upper Siang	2
11	Dibang Valley	1
12	Lower Dibang Valley	3
13	Lohit	43
14	Namsai	9
14	Anjaw	0
15	Changlang	18
16	Tirap	2
	Total	354

Table 6: Age and Sex Distribution of HIV Positive Cases in Arunachal Pradesh (March 2018)

Source: SIMS, 2018, APSACS, Naharlagun, Arunachal Pradesh

Age and Sex Distribution of HIV Positive Cases (2018)				
Age Distribution	Sex Distribution			Total
	Male	Female	TS/TG	
< 20	24	12	0	36
20 – 29	112	84	1	197
30 – 44	81	24	0	105
45 and Above	10	2	0	12
Not Specified	2	2	0	4
Total	229	124	1	354

Table 7: *Estimated Summary of HIV/AIDS Epidemic in North East India*Source: *India HIV Estimates, 2015 Technician Report by NACO*

States	HIV Prevalence (Adult) (%)			Number of People Living with HIV/AIDS			Number of Annual New HIV Infection			Number of Annual AIDS-Related Deaths		
	2007	2011	2015	2007	2011	2015	2007	2011	2015	2007	2011	2015
Arunachal Pradesh	0.06	0.07	0.07	419	560	606	57	44	42	13	24	32
Assam	0.04	0.05	0.06	6,211	9,188	12,090	817	919	928	199	198	229
Meghalaya	0.06	0.06	0.06	874	1,030	1,122	79	66	45	46	31	14
Manipur	1.94	1.55	1.15	30,399	28,252	24,457	1,242	638	429	1,470	1,461	1,146
Mizoram	0.8	0.79	0.8	4,725	5,259	5,762	339	298	230	258	167	79
Nagaland	0.98	0.87	0.78	12,005	11,228	11,050	850	536	513	724	470	287
Sikkim	0.1	0.15	0.23	340	580	939	53	85	134	14	16	27
Tripura	0.15	0.21	0.31	3,069	4,821	7,238	438	670	929	148	202	266