IOSR Journal of Nursing and Health Science (IOSR-JNHS)
e-ISSN: 2320–1959.p- ISSN: 2320–1940 Volume 3, Issue 4 Ver. II (Jul-Aug. 2014), PP 28-32
www.iosrjournals.org

Exploring High Vulnerability for Sexually Transmitted Infections in Arunachal Pradesh, India

Dr. Pranab Ranjan Nath[1], Arpana Barman[2]
[1](*Catholic Bishops' Conference of India – Coalition for AIDS Related Diseases)*
[2](*Regional Resource Centre for NE States, India)*

Abstract: *The South and South-East Asia region has very high prevalence of STI. In India, Arunachal Pradesh, the only state bordering China, Bhutan and Myanmar has recorded national highest in Syphillis amongst ANC attendees in HIV Sentinel Surveillance of 2010-11. An effort is made through informal conversational method and by analyzing available public data to explore the factors behind high prevalence of STIs in this geographically and culturally diverse state towards designing appropriate control measures. Interaction with service providers and local people revealed various vulnerability factors for increased prevalence of STIs in the state. Sensitive international borders of 13 districts and construction of hydro-electric power projects mobilize huge number of uniformed personnel and migrant workers into the state. STI prevalence and contributing factors in the districts are described under three categories on the basis of controlled, increasing and alarming increase. Prevailing myths, cultural and behavioral factors among the indigenous people contribute to risky sexual practices and increased STIs. Preventive measures should be made available for general population considering the specific local issues related to risky sexual practices. Interventions need to be customized for every client. Motivation of the service providers is essential to ensure good compliance.*

Keywords: *Opium, Polygynae, syndromic, migrant, counseling.*

I. Introduction

Arunachal Pradesh is the eastern most state of India, sharing strategically sensitive borders with China, Bhutan and Myanmar. 13 out of 16 districts are sharing one or two international borders. Additionally the state, being located at the foothills of the Himalayan range, is home to numerous scenic and picturesque tourist spots. Because of both these reasons, this state experiences high influx of defence personnel as well as tourists round the year. Complementary to this, the indigenous geo-demographic peculiarities such as major bulk of population being composed of total 20 major tribes and a number of sub tribes [1], generalized poverty and backwardness, scarce health facilities, difficult geographic terrain, illiteracy and a low level of awareness about Sexually Transmitted Infections (STI) and HIV, and the lack of healthy recreational facilities and certain attributable social customs have rendered this state a sheet of high prevalence in terms of various infectious diseases. Nyishi, one of the major native tribes of this state, practices polygynae (having more than one wife) as approved by their custom [2].

The second highest prevalence and incidence rate of STI in the world is found in South and South-East Asia. This is due to the considerable size of the at-risk populations of young people in these countries. Another factor lies in the fact that the recent opening of several international borders to free trade has facilitated increase in prostitution and STI, which were once believed to have been controlled [3]. Arunachal Pradesh, being the only state sharing a border with China Bhutan and Myanmar, has recorded the highest incidence and prevalence of Sexually Transmitted Infections amongst all the 8 North Eastern states of India [4]. This state recorded national highest in syphilis screening amongst ANC attendees [5].

One major indicator of STI prevalence in a community is the positivity rate of Syphilis screening tests called Venereal Disease Research Laboratory (VDRL) and Rapid Plasma Reagin (RPR) test. The epidemiology of STIs depends upon several complex yet distinct as well as interrelated factors that can be classified as behavioral, socio-demographic, economic, geographical and ethnic factors. A comprehensive knowledge of these various epidemiological factors is essential to design effective preventive and control strategies to curb these infections. Efforts are being made by many governmental and non-governmental organizations to identify the patterns of development of STIs in the community, which would help policy-makers to design appropriate control measures [6].

10 out of 16 districts of Arunachal Pradesh share inter-state borders with Assam and which serve as the only linkage route of the state with the mainland of India. Only viable transit mode is road transport. This circumstance leads to the emergence of another virtually high risk group that transmits STIs – the roadside hotel/restaurant workers. In a survey undertaken among this group along a highway in Assam, over one-third had sexual contact with multiple partners or Commercial Sex Workers (CSWs) and 2% were engaged in homosexual activity. A majority of them were illiterate, 30% were alcoholics and smokers, and 3% were

addicted to cannabis [7]. Genital Ulcer Disease was present in 25.7% of the workers, 11.8% had gonorrhoea while 5.1% were VDRL reactive. In Manipur, in 2000, the prevalence of HIV among intravenous drug abusers was 80% and vaginal discharge was strongly associated with HIV positivity [8]. A study of sexual behaviour among drug abusers in Delhi showed a higher number of sex partners, higher rate of anal intercourse (25.7%) and an increased frequency of visits to CSWs leading to a significantly higher prevalence of STIs [9].

The average positivity in the state used to be as high as 10% during 2009-10 against the national average 2.6% in that period. Although there has been a gradual decline since then and improvement in terms of programmatic performance is evident from scaled up testing and screening of Syphilis leading to gradually increased detection and exploration of the high Syphilis Positivity during 2009 -10. Then came a later stage of controlled positivity with improved service delivery in 2010-11 and 2011-12, though the current situation with RPR positivity is still in the alarming zone. There are four districts which are individually showing 10% to 12% RPR positivity currently owing to some peculiar factors [4]. As shared, syphilis reactivity is also showing an increasing trend from Blood Bank data available in 6 six districts. Blood donors may also acquire and transmit syphilis [10].

Objective:

- To highlight the current scenario of STI prevalence in the state.
- To highlight the contributing factors for high incidence and prevalence of the infection.

II. Methodology

Under the National AIDS Control Programme of India, common and major Sexually Transmitted Infections are depicted as a set of 10 categories of syndromes rather than referring to their etiological origin. This is done so, under the Syndromic Case Management protocol [11]. Therefore, the term STI in this analysis refers to the syndromic facts and figures only for all means and purposes of interpretation. Qualitative analysis is done for this study using available public data and informal conversational interview method. 12 out of 16 districts are taken for study. 4 districts (Kurung Kumey, Upper Siang, Anjaw and Lower Dibang Valley) are excluded due to unavailability of conclusive data. Interviews were conducted with program officers of Arunachal Pradesh State AIDS Control Society and STI Clinic at District Civil Hospitals. To identify the vulnerability factors similar interviews were conducted with STI service providers of Targeted Intervention (TI) projects and with general population at district headquarters of 12 districts, on random basis. Interviews are analysed and inferences drawn in relation with shared vulnerability factors. Inferences of interviews, statistics of DLHS-3 and available literature review is analysed to derive some conclusion and the way forward for focussed program implementation.

III. Analysis And Discussion

More than 60% of DSRC attendees are reported to be symptomatic in Arunachal Pradesh. [12] High RPR positivity is observed in Arunachal Pradesh and increasing numbers of Migrant clients are being treated for STI over the years. Another major indication is that female cases are comparatively very high amongst the general clients attending Designated STI/RTI Clinics (DSRCs). Increase in Non Herpetic Genital Ulcers coincides with high level of RPR positivity which is indicative of Syphilis infection [13]. Steady increase of Urethral Discharge (UD) and Ano-Rectal Discharge (ARD) point towards unprotected anal sex practice. From subsequent discussion, it can be assumed that male Migrants are patronizing this practice. Increasing number of female attendees reporting ARD at DSRCs is significant. ARD in female are reported from 2 districts only: Lower Subansiri and Tirap. In Lohit district, female ARD cases are reported from female Migrants.

Pertinent and complimentary to this fact would be the information obtained from interviews with general population: many people follow a myth that "anal sex with female carries less chance of infection as all the disease causing factors (infections) are confined to the vaginal tract only". Therefore many conscious male partners prefer anal sex when protective measures (condom) are not available.

Table 1: Status of RTI/STI among women of 15-49 yrs (DLHS-3)

Sl. No.	District	Who heard about RTI/STI (%)	Who reported any abnormal vaginal discharge (%)	Who have any other symptoms of RTI/STI (%)	Who sought treatment for any RTI/STI (%)
1	Tawang	27.3	14.9	18.2	32.9
2	West Kameng	28.6	7.8	10.8	30.3
3	East Kameng	2.8	8.3	18.2	25.9
4	Papumpare	37.5	9.5	16.7	56.5
5	Lower Subansiri	6.3	0.7	7.7	17.1
6	Upper Subansiri	15.7	2.0	10.6	31.8
7	West Siang	17.6	2.5	6.5	35.5
8	East Siang	31.3	8.2	24.9	44.2

9	Dibang Valley	37.8	3.2	4.0	71.4
10	Lohit	2.7	1.2	3.0	6.1
11	Changlang	16.4	3.0	4.6	23.6
12	Tirap	11.1	0.6	5.4	47.8

Above table shows that, the knowledge of RTI/STI among women is between 2.7% - 37.8% in 12 districts of study.

Population based classification of districts:

Districts in Arunachal can be divided into three categories in terms of population size (Census 2011)

- **5** districts come under the most populous group with population between 1,00,000 to 2,00,000 (Tirap, West Siang, Lohit, Changlang and Papumpare).
- **8** districts form a group where population ranges from 50,000 to less than 1,00,000 (Tawang, Lower Dibang Valley, East Kameng, Lower Subansiri, Upper Subansiri, West Kameng, Kurung Kumey and East Siang).
- **3** districts are in the least populated group with population ranging from 8,000 to 35,000 (Dibang Valley, Anjaw and Upper Siang).

STI Prevalence & Contributing Vulnerabilities:

A. Districts showing control in STI prevalence: Six districts, namely East Kameng, Lohit, Lower Subansiri, Tawang, Upper Subansiri and West Kameng are showing gradual improvement in terms of STI prevalence and control. STIs like UD, ARD as well as RPR positivity are being reported in high numbers in almost all the districts. High numbers of ARD reported amongst female attendees of DSRC and high number of UD amongst male DSRCs in Lower Subansiri, indicates presence of unprotected Anal sex practice amongst the general population.

Lohit is the Category A district of Arunachal Pradesh [14]. Large numbers of male migrants reported of having of UD and ARD (also female migrants) in this district that needs to be considered in the light of the following observations.

- Tezu, the district headquarter of Lohit, is a business centre. This town also is a transit point for both tourists and defence personnel on their way to Walong, a garrison town in the neighbouring district of Anjaw, bordering China.
- Alcoholism is common across all levels of population and it is rampant. Use of a certain local form of opium is also common which is cultivated by many households in rural areas.

5 out of the 6 districts in this section are sharing international borders namely – East Kameng (China), Tawang (Bhutan and China), West Kameng (Bhutan), Upper Subansiri (China) and Lohit (China). NEEPCO hydro power project in West Kameng and Lower Subansiri Hydroelectric Power Project (LSHEP) in Lower Subansiri are big budget power projects which involves migrant population from various social background.
100 out of 185 female cases seeking STI care in DSRC within first two quarters of 2013-14, belong to the age group of 25-44 years. As per literature, due to polygynae practice, the number of widows and widowers is high around the age group of 40.

B. Districts showing increasing STI prevalence: Five districts, namely Papumpare, Tirap, East Siang, Changlang and Dibang valley are showing increasing trend in terms of STI prevalence indicating insufficient control measures. High figures of Urethral Discharge, Ano-Rectal Discharge, Genital Warts and RPR positives, chiefly reported from DSRCs and Migrant TIs of Papumpare raises serious concern. Overall RPR positivity shooting up to 6% in the current year from 2.7% in the previous year. HIV detection also coincides with RPR positivity.

In Tirap Non Herpetic Genital Ulcer, Urethral Discharge and Ano-Rectal Discharge are increasing amongst the general population. Female cases reporting Ano-Rectal Discharge at DSRC are consistently increasing. RPR positivity has decreased from 3.1% to 1.3% in the current year. In East Siang, focus is again on Urethral Discharge and Ano-rectal Discharge increasing in male DSRC attendees and more conspicuously amongst the male Migrant group. RPR positivity is also high although it has come down to 5.5% in the current year from 6.1% of previous year. Genital Ulcer (NH), Urethral Discharge and Scrotal Swelling are alarmingly increasing in Migrants & Truckers group of Changlang district.

Papumpare being most populated of all the districts having two twin capital towns Itanagar and Naharlagun, experiences maximum influx of people. This district is inhabited majorly by Nyishi tribe that invariably practices polygynae. Tirap is a place of busy defence activities as militant groups are active in the region and the general lifestyle of the place is greatly influenced by this factor. High rate of inter-state transit

flux of businessmen, defence personnel and others. District Tirap shares a state border with Nagaland and Assam, an international border with Myanmar and a district border with Changlang.

Huge construction works are going on for Lower Siang Hydroelectric Project which is located in both East and West Siang districts. Pasighat, the district headquarter, is a centre of business activities. Changlang is the second most populous district, it shares a long international border with Myanmar on one side and state border with Assam. It has become one of the major districts in the area owing to the presence of crude oil, coal and mineral resources other than tourism and hydro power. A transit route and activity hub for insurgent groups. Business activities are centred on mineral resources. Life in general is impacted by frequent insurgent and defence activities. The population consists of a huge chunk of non-tribal migrants.

Tirap, least populated of all districts with merely a total population of only 9000, service provision is challenging owing to difficult geography. Clinic utilization is very low but reporting of UD and ARD accompanied by 6% RPR positivity is peculiar again.

C. Districts showing Alarming increase of STI prevalence: West Siang is the only district showing alarmingly increasing trend in almost all the STIs indicating insufficient control measures. Current RPR positivity is 10% and all the infections increasing in number, the situation is really alarming. This district shares international border with Tibet and state border with Assam. Home to several hydro electric projects.

Migrant data is conspicuously alarming in terms of GU – NH, UD, Scrotal Swelling and RPR positivity in the current year.

IV. Inferences

i. Sensitive borders (both international and inter-state) have caused almost all the major places to be concentrated with uniformed personals round the year.

ii. Several places in Papumpare, Lohit, Changlang, East and West Siang are majorly populated by people coming from outside for short term or long term stay in relation to business, tourism and working in upcoming industrial projects.

iii. As observed in Tezu, casual entertainment combined with rampant alcoholism is one of the major background facilitator for unprotected sexual activities. This is basically patronized by the two above mentioned classes. Local youth are seen to be very easily carried away by lure of items of physical and material comfort such as electronic gadgets, clothing as well as even offers of drink and food as there is very less employment or earning opportunities otherwise. A superficial wave of westernization facilitating liberal acts of addiction and sexual activities amongst the young generation is easily observable.

iv. Use of a certain local form of opium is also common which is cultivated by many households in rural areas. The drug most often associated with STIs is local opium. Ethnographic research suggests that addiction to drug forces young women to sell sex directly for money to buy local drug. Also, sex workers, under the influence of the drug, may be less careful when indulging in sexual practices or choosing partners. Epidemiological data indicate that 'local drug for sex' exchange differs from other types of prostitution because a high proportion of the adolescent population are drug abusers and often indulge in unprotected sex. [15]

v. Many tribes follow multiple sex partner relationships in varying degrees and in various forms of adopted relationships as a custom. Polygynae (having multiple wives) is considered to be a status symbol in many communities. This leads to the circumstance that the number of widows is high – because when one husband dies, several women become widows at a time. This is related to the observation cited above (Lower Subansiri district) that number of women aged between 25 -44 years seeking STI care in DSRC is the highest of all age groups.

vi. Poverty and under-development in terms of communication, electrification, transport and availability or access to mass-media leaves sexual act combined with alcoholism as the only medium of recreation and entertainment in most of the places in the state.

vii. The incidence of STI has been more or less controlled within the core HRGs through improved functioning of TIs and that the same is growing within the general population and migrants. [16]

V. Conclusion

This is apparent that as the incidence of STI has been more or less controlled within the core HRGs, the general population and migrant workers now become the focus of all control measures. This implies two things;

- Counseling, partner management and condom promotion at the DSRCs needs to be improved to achieve the purpose of providing adequate preventive care. The efficacy of curative services provided at these DSRCs needs improvement.
- Migrants have been major promoters of casual sex amongst the easy-going local people. Many women, who are not regular commercial sex workers, have been allured or driven into casual sex trade by these migrants / defence personnel present in most of the districts throughout the year. Anal sex with both male and female is not a very uncommon practice.

Rather than having a standard framework of preventive modalities and program operation set in mind, program managers as well as service providers need to be aware of and sensitive to the locality specific indigenous issues and factors. Preventive interventions and counseling, rather than being followed stereotypically, need to be customized for each and every client.

There should be a corporate model management approach to enhance motivation of the service providers in order to ensure good compliance to the above need. It is essential that good rapport is built up by the service provider with all the clients. Counseling should contain personalized motivational contents. Only dedicated service providers will be able to enhance the level of adherence to instructions by the clients which are to be administered to them by Counseling as well as rapport building.

Additionally, people are found within the general population who practice anal sex. Prevention tools should be available at all service delivery sites for this kind of risky sexual behaviour.

Acknowledgement

Would like to acknowledge the contribution of the respondents from Arunachal Pradesh.

References

[1]. Environmental Impact Assessment-Socio Cultural and Economic Profile, Centre for Interdisciplinary Studies of Mountain and Hill Environment, Delhi University; 12-27.
[2]. Von Fürer-Haimendorf, Christoph. Tribes of India: The Struggle for Survival. Berkeley: University of California Press, c 1982 1982. http://ark.cdlib.org/ark:/13030/ft8r29p2r8/ Chapter 11 ch 306 Nishi Tribe.
[3]. Cohen MS, Henderson GE, Aiello P et al. Successful eradication of sexually transmitted diseases in the People's Republic of China: implications for the 21st century. J Infect Dis 1996; 174 (Suppl II):S223–9
[4]. Annual Report Sexually Transmitted Infections, Department of AIDS Control, 2010-11; 26-29.
[5]. HIV Sentinel Surveillance, 2010-11, Department of AIDS Control.
[6]. Sharma VK, Khandpur S. Changing patterns of sexually transmitted infections in India, The Nat Med J of India; 2004; 17,6; 31-319.
[7]. Biswas D, Hazarika NC, Hazarika D, Mahanta J. Prevalence of communicable diseases among restaurant workers along a highway in Assam, India. Southeast Asian J Trop Med Public Health 1999;30:539–41
[8]. Agarwal AK, Singh GB, Khundom KC, Singh ND, Singh T, Jana S. The prevalence of HIV in female sex workers in Manipur, India. J Commun Dis 1999; 31:23–8.)
[9]. Sharma AK, Aggarwal OP, Dubey KK. Sexual behaviour of drug-users: Is It different? Prev Med 2002;34:512–15.
[10]. Nanu A, Sharma SP, Chatterjee K, Jyoti P. Markers for transfusion-transmissible infections in north Indian voluntary and replacement blood donors: Prevalence and trends 1989–1996. Vox Sang 1997;73:70–5.
[11]. Operational Guideline for Sexually Transmitted Infections, Department of AIDS Control.
[12]. Analysis of STI/RTI Programme Performance, 2009-10 & 2010-11, Department of AIDS Control, 37.
[13]. TI Program Performance Analysis, 2010-11, Department of AIDS Control.
[14]. Annual Report, 2011-12, Department of AIDS Control.
[15]. Bourgois P, Dunlap E. Exorcising sex-for-crack: An ethnographic perspective from Harlem. In: Ratner M (ed). Crack pipe as pimp: An ethnographic investigation of the sex-for-crack exchange. New York, NY:Lexington; 1993:97–132.
[16]. Bill & Melinda Gates Foundation Support to the National AIDS Control Organization – North East Regional Office under National AIDS Control Programme – Phase III, Report by Emmanuel Hospital Association (EHA), 2014; 34-63.