

SOCIO-DEMOGRAPHIC PROFILE OF ATTENDEES OF AN INTEGRATED COUNSELLING & TESTING CENTRE: A CROSS SECTIONAL STUDY AT A TERTIARY CARE HOSPITAL OF BIHARRout A. J¹, Dubey M², Ram R³, Biswas N⁴, Chakraborty M⁵, Saha J. B⁶**HOW TO CITE THIS ARTICLE:**

Rout A. J, Dubey M, Ram R, Biswas N, Chakraborty M, Saha J. B. "Socio-Demographic Profile of Attendees of an Integrated Counselling & Testing Centre: A Cross Sectional Study at a Tertiary Care Hospital of Bihar". Journal of Evolution of Medical and Dental Sciences 2015; Vol. 4, Issue 19, March 05; Page: 3238-3246, DOI: 10.14260/jemds/2015/469

ABSTRACT: INTRODUCTION: Pandemic AIDS is one of the leading causes of global morbidity and mortality. Awareness generation and lifestyle modification are the main preventive and control measures for HIV/AIDS. So, socio-demographic profile and pattern of risk behaviour of population must be understood, for implementing Targeted Intervention towards high risk groups & bridge populations. **OBJECTIVES:** To explore various socio-demographic profile of clients attending ICTC; to determine source of referral of clients & to identify risk behaviour pattern of the attendees. **MATERIALS & METHODS:** Institution based descriptive cross sectional study from February 2014-April 2014. Data collected according to Helsinki Declaration of 1975; revised in 2000 and analyzed using SPSS Version 20.0. Results were expressed in simple proportions. **RESULTS:** out of 1567 attendees, 1019 (65.03%) were males and 548 (34.97%) were females with 9.31% total seropositivity. 2.62% of clients attended ICTC on their own will. Those who either did not responded or risk unknown to them, showed 16.44% seropositivity. **CONCLUSION:** In absence of prophylactic & curative treatment, more & more community based epidemiological studies should be conducted, for Behavioural Change Communication (BCC) in respect to socio-demographic strata and to interrupt & control transmission of the deadly disease.

KEYWORDS: Acquired Immunodeficiency Syndrome, Human immunodeficiency virus, ICTC, Migrant.

INTRODUCTION: Modern pandemic, Acquired Immunodeficiency Syndrome (AIDS), one of the most important public health problems of the late twentieth and early twenty-first centuries, affecting both industrialized & developing countries,^[1] is now one of the leading causes of global morbidity and mortality.^[2] WHO, UNAIDS & UNICEF have jointly estimated that in 2013 there were 31.8 million adults, 16 million Women & 3.2 million children (<15yrs) living with Human Immunodeficiency Virus (HIV); people newly affected with HIV were 2.1 Million with 1.5 million AIDS death.^[3] The third largest country with people living with HIV/AIDS (PLHIVs), India, as per 2011 estimates, had 2.09 million PLHIVs of whom 39% were females and 7% were children with an adult prevalence of 0.27%.^[4] Bihar, one of the north eastern states of India, has more than 1 lakh PLHIVs.^[5] Seropositive general clients (April-December 2012) were 3.76% of counselled & tested for HIV. Regarding PPTCT (Prevention of Parent to Child Transmission of HIV/AIDS) services, Seropositive Pregnant women were 261 (0.16% of tested).^[4]

The ancestor VCTCs (Voluntary Counselling and Testing Centres) and facilities providing PPTCT services are now remodelled as a hub & renamed as "Integrated Counselling and Testing Centres" or ICTCs^[6] under National AIDS Control Programme (NACP)-III along with HIV-TB collaborative activities.^[4] ICTC is an important part of most comprehensive HIV prevention strategies

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rendering services to all clients under one roof, either with individuals own freewill or as advised by a health services provider.

ICTC is a cost effective intervention in preventing transmission of HIV/AIDS and data generated in ICTC provides an important clue to understand the epidemiology, in respect of socio-demographic profile and risk behaviour of population.

The town, where our study ICTC was located, has borders of West Bengal, Bangladesh & Nepal in close proximity. It is well connected with rest of India with rail & National Highway, with lots of dhabas in and around the town for resting of truck drivers & helpers. Cherry on the cake- a red light area is only 10 minutes away from the town. With these scenarios, the town plays an important role in trade, influx of outsiders & high population movement. As the study centre was in a tertiary care hospital of this town, catering large number of patients, so, the information gathered from the attendees of this centre may throw light on the epidemiology of HIV transmission in this area.

Hence the study was conducted with the objectives of:

1. To explore various socio-demographic profile of all clients attending ICTC.
2. To determine source of referral of clients.
3. To identify risk behaviour pattern of the attendees.

MATERIALS & METHODS: This institution based descriptive cross sectional study was undertaken in a tertiary care hospital of Bihar, from February 2014-April 2014, after obtaining clearance from Institutional Ethics committee. Complete enumeration of attendees i.e. 1642 (Sixteen hundred forty two), who visited ICTC for HIV testing, during the specified study period, was done. Consent was obtained after explaining the purpose of this study; data was collected on pre-designed, pre-tested proforma by face to face interview. After pre-test counselling blood samples were collected by technician and HIV positive status was confirmed after 3 specified tests. All data were cross-checked and validated with Patient Information Details (PID) register and other relevant registers. Incomplete & incorrect information were found for 75 (Seventy five) attendees & hence rejected. Data were analyzed using the Statistical Package for Social Sciences (SPSS) Version 20.0 and were expressed in simple proportions. Chi-square tests were performed at 5% level of significance. Strict anonymity of the clients was maintained.

RESULTS: Out of 1567 attendees, 1019 (65.03%) was male and rest 548 (34.97%) was female. Highest seropositivity (45.24%) was observed in the age group of 20-29 years followed by 30.95% in 30-39 years age group (Table 1). Seropositivity found high among Muslims (52.38%) as compared to 40.48% & 7.14% in Hindus & Christian respectively {Table 2a)}. Caste wise observation in respect of seropositivity, was high among general caste (59.52%) as compared to 19.05% in scheduled caste. However other castes showed much lesser percentage {Table 2b)}. Seropositivity in married & unmarried people was 54.76% & 30.95% respectively while 7.14% & 4.76% were found in separated & divorcee group respectively {Table 2c)}. Illiterate group showed a higher seropositivity 40.48% as compared to 30.95% in primary level education. The positivity decreases with increase in literacy level {Table 2d)}. Unskilled workers showed 33.33% seropositivity {Table 2e)} while 85.71% positivity in non-migrant people were found {Table 2f)}. People staying alone & staying in hostel or mess showed 11.90% & 33.33% of positives respectively {Table 2g)}.

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Highest referral of clients (32.55%) were from various departments of the hospital with highest seropositivity (28.57%) while 4.76% of clients were found to attended ICTC on their own will (Table 3).

Risk behaviour wise, males exposed to CSW (commercial sex worker) and females acted or acting as CSW showed 34.29% & 42.86% positivity respectively (Table 4).

DISCUSSION: The study was conducted with 1567 attendees of which 1019 (65.03%) was male and rest 548 (34.97%) was female while National average showed 38.40% of female attendees.⁽⁷⁾ This difference in attendance suggests some barriers such as stigma and discrimination, which prevent access of females to avail health services. Vyas Nitya et al showed that fewer females were availing the medical facilities than males.⁽⁸⁾ Overall seropositivity of 2.68% against total tested was lower than the studies of Gupta M. (9.60%) in Karnataka,⁽⁹⁾ Joardar GK et al in Darjeeling⁽¹⁰⁾ (17.06%) and Quazi SZ et al in Wardha (12.50%).⁽¹¹⁾ Lower seropositivity in the present study could be due to difference in health seeking behaviour of community. We found majority of attendees i.e. 39.89% belonged to the age group 20-29 years while Darjeeling study⁽¹⁰⁾ showed 44.77% attendees were in the mentioned age group. However Chennaveerappa PK et al found maximum i.e. 29.86% belonged to age group 35-49 years.⁽¹²⁾

Most of the attendees were from general caste (75.23%) while Gwalior study showed that most were from scheduled caste (47.95%).⁷ Location of the ICTC, ease of accessibility of service, may be the reason for such finding. 54.29% positivity in married male nearly corresponds with the Darjeeling study (51.32%)⁽¹⁰⁾ whereas finding of 57.14% of positive married females is much less than 88.23% finding of Darjeeling, but is in closer proximity with Maharashtra study (60.30%).⁽¹³⁾ More seropositivity among married people may be due to spousal spread of previously harboured infection. Highest seropositivity (40.48%) were found in illiterate group while G. K. Joardar et al found that 33.33% (highest) seropositives were illiterate.⁽¹⁰⁾

This may be due to lack of knowledge, awareness & lowered social value, resulting in indulgence with multiple sex partner & promiscuity. Occupation wise, maximum seropositivity was found in unskilled worker (33.33%) while 4.76% seropositivity in driver. G. K. Joardar et al found 24.73% seropositivity in unskilled worker and 10.75% in driver.⁽¹⁰⁾ Seropositivity of 28.57% migrant females which was higher than migrant male (11.43%), may be due to presence of a red light area nearby. Seropositivity among females either staying with family (57.14%) or in hostel/mess/paying guest/other places (42.86%) were much higher than males staying either with family (54.29%) or in hostel/mess/paying guest/other places (31.43%). Overall positivity was more in people staying with family (54.76%). Indulgence with multiple sex partner or CSW, spread of infection to spouse may be the possible reasons of such finding.

Referral of 32.55% of subjects was from different departments of this hospital followed by 17.74% from maternity homes. Seropositivity among referred from RNTCP was found to be 23.81%. Only 4.76% of study subjects came to ICTC on their own. Sharma et al in their study in Ahmedabad had found 19.40% clients walked in directly.⁽¹⁴⁾ Lack of awareness, fear of shame & stigma may be putting hindrance against self-initiation of attendees.

Seropositivity among males exposed to CSW was found to be 34.29% followed by 14.29% among having multiple sex partners. Positivity among CSW was found to be 42.86%. About half of the attendees (51.30%) did not disclose or unaware of any risk factor with 30.95% seropositivity among this group. Non-disclosure may be due to fear of shame & stigma. 9.52% seropositivity was found in

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patients who were addicted while in a study at Calcutta National Medical College 3.3% seropositivity was found among injectable drug users.⁽¹⁵⁾

CONCLUSION: ICTCs are often the first interface of citizens with the entire range of preventive, care and treatment services provided under umbrella of NACP. Increased awareness and adaptation of safe behavioural practices are known solutions to prevent HIV/AIDS. From the present study it can be said that planning and designing of IEC activities should be targeted based on socio-demographic profile and risk behaviour pattern of population of a particular area.

RECOMMENDATIONS: HIV/AIDS spreads mainly due to human risk behaviour and ignorance. More of this type studies should be taken up to understand the role and complex relationship of various behavioural, social and demographic factors, responsible for transmission of HIV/AIDS. Measures to increase female attendance in the health care centres should be carried out. To increase overall attendance at ICTC, IEC activities should be planned & executed effectively. By Priority Targeted approach we can sensitize at risk people against HIV/AIDS thus interrupting and controlling the spread of the disease.

LIMITATIONS OF THE STUDY: Data regarding socio-economic status, residential status, posttest counselling, and condom use were not taken which could have highlighted on newer dimension of the study. Being a hospital based study, the results obtained were influenced by catchment area of hospital setting, care seeking behaviour of population and its external validity is decreased. So results cannot be applied to whole population. Community based studies to be done to avoid this.

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REFERENCES:

1. Park K. Park's Text Book of Preventive and Social Medicine; Epidemiology of communicable diseases, AIDS, M/s Banarasidas Bhanot, Jabalpur (India), 2013; 22nd Edition: 316.
2. Alan E., Peter D., James W., Robert S. The Epidemiology and Prevention of HIV Infection and AIDS. In: Wallace/Maxcy-Rosenau-Last Public Health & Preventive Medicine. 15th edition. New York: McGraw-Hill; p.189, 2008.
3. Global summary of the AIDS epidemic 2013. Available from: http://www.who.int/hiv/data/epi_core_dec2014.png [Last accessed on 2014 February 8].
4. Govt. of India. Ministry of Health & Family Welfare. Dept. of AIDS Control. National AIDS Control Organization. Annual Report 2012-13. Available from: http://www.naco.gov.in/upload/Publication/Annual%20Report/Annual%20report%202012-13_English.pdf [Last accessed on 2014 February 8].
5. Govt. of India. Ministry of Health & Family Welfare. Dept. of AIDS Control. National AIDS Control Organization. Annual Report 2011-12. Available from: http://www.naco.gov.in/upload/Publication/Annual%20Report/Annual%20report%202011-12_English.pdf [Last accessed on 2014 February 8].
6. J. Kishore, National Health Programs of India, NACP, 11th Edition, 2014, 309.
7. Mishra S, Mishra A. Socio-Demographic Profile of an Integrated Counselling and Testing Centre Attendees: A Cross Sectional Study at a Tertiary Care Hospital in Gwalior, India. Natl J Community Med 2013; 4(3): 493-497.

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8. Vyas N, Hooja S, Sinha P, Mathur A, Singhal A, Vyas L. Prevalence of HIV/AIDS and prediction of future trends in north-west region of India: A six-year ICTC-based study. *Indian J Community Med* 2009; 34: 212-7. Quazi SZ, Nimbarte Sanjay, Selokar Deepak, Gaidhane Abhay, Mudey Abhay, Wagh Vasant. Profile of Clients Attending an Integrated Counselling and Testing Centre at a Private Rural Tertiary Care Hospital in India. *Australasian Medical J* 2010; 3, 6: 349-52.
9. Gupta M. Profile of clients tested HIV positive in a voluntary counselling and testing centre of a district hospital, Udupi. *Indian J of Community Med* 2009; 34, 3: 223-26.
10. Joardar GK, Sarkar A, Chatterjee C, Bhattacharya RN, Banerjee P. Profile of attendees in the voluntary counselling and testing centre of North Bengal Medical College in Darjeeling district of West Bengal. *IJCM*, 31(4): 241, 2006.
11. Quazi SZ, Nimbarte Sanjay, Selokar Deepak, Gaidhane Abhay, Mudey Abhay, Wagh Vasant. Profile of Clients Attending an Integrated Counselling and Testing Centre at a Private Rural Tertiary Care Hospital in India. *Australasian Medical J* 2010; 3, 6: 349-52.
12. Chennaveerappa PK, Halesha BR, Vittal BG, Jayashree N. A Study on the Socio demographic Profile of the Attendees at the Integrated Counselling and Testing Centre of a Medical College in South India. *Journal of Clinical and Diagnostic Research*. 2011 June, Vol-5(3): 430-433.
13. Langare SD, Rajderkar SS, Naik JD, Prabhu PM. Profile of clients attending an Integrated Counselling and Testing Centre of Tertiary Care Hospital at Sangli District of Maharashtra. *International Journal of Recent Trends in Science and Technology* 2011; 1(3): 124-26.
14. Sharma R. Profile of attendee for voluntary counselling and testing in the ICTC at Kesar SAL Medical College, Ahmedabad. *Indian J Sex Transm Dis* 2009; 30: 31-6.
15. Ghosh S, Mukherjee S, Samanta A. Profile of HIV seropositive patients attending Integrated Counselling & Testing Centre (ICTC): an experience from a medical college in West Bengal, India. *Global Journal of Medicine and Public Health* 2013; 2, 5: 1-8.

SEX AGE GROUP	Male Attendees		Female Attendees		Total tested	Total positive	Chi square	p value
	Tested	Positive	Tested	Positive				
<10	19	0 (0.00)	7	0 (0.00)	26	0 (0.00)	59.0616	p<0.001
10-19	47	2 (5.71)	19	0 (0.00)	66	2 (4.76)		
20-29	388	16 (45.71)	237	3 (42.86)	168	19 (45.24)		
30-39	281	11 (31.43)	199	2 (28.57)	480	13 (30.95)		
40-49	117	3 (8.57)	51	1 (14.29)	625	4 (9.52)		
50 & above	167	3 (8.57)	35	1 (14.29)	202	4 (9.52)		
Total	1019	35 (100)	548	7 (100)	1567	42 (100)		

Table 1: Distribution of the study population according to age & sex

Figures in parentheses indicate percentage. Chi square test was applied to total no. of positives & negatives. p value <0.001 is highly significant.

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Socio demographic profiles	Male Attendees		Female Attendees		Total		Chi square	p value
	Tested (n=1019)	Positive (n=35)	Tested (n=548)	Positive (n=7)	Tested (n=1567)	Positive (n=42)		
a) RELIGION								
Hindu	616	14 (40.00)	307	3 (42.86)	923	17 (40.48)	9.4064	p <0.05
Muslim	297	19 (54.29)	186	3 (42.86)	483	22 (52.38)		
Christian	106	2 (5.71)	55	1 (14.29)	161	3 (7.14)		
b) CASTE								
General	781	21 (60.00)	398	4 (57.14)	1179	25 (59.52)	46.7585	p <0.001
SC	87	7 (20.00)	46	1 (14.29)	133	8 (19.05)		
ST	6	2 (5.71)	7	2 (28.57)	13	4 (9.52)		
OBC	145	5 (14.29)	97	0 (0.00)	242	5 (11.90)		
c) MARITAL STATUS								
Unmarried	228	11 (31.43)	189	2 (28.57)	417	13 (30.95)	43.6247	p <0.001
Married	766	19 (54.29)	349	4 (57.14)	1115	23 (54.76)		
Widow/(er)	9	1 (2.86)	7	0 (0.00)	16	1 (2.38)		
Separated	9	2 (5.71)	3	1 (14.29)	12	3 (7.14)		
Divorcee	7	2 (5.71)	0	0 (0.00)	7	2 (4.76)		
d) EDUCATION								
Preschool children	7	0 (0.00)	9	0 (0.00)	16	0 (0.00)	14.0586	p <0.05
Illiterate	212	14 (40.00)	105	3 (42.86)	317	17 (40.48)		
Primary	314	11 (31.43)	156	2 (28.57)	470	13 (30.95)		
Middle school	287	6 (17.14)	134	1 (14.29)	421	7 (16.67)		
High school	93	2 (5.71)	87	1 (14.29)	180	3 (7.14)		
Higher secondary	57	0 (0.00)	33	0 (0.00)	90	0 (0.00)		
Graduate & post graduate	49	2 (5.71)	24	0 (0.00)	73	2 (4.76)		

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e) OCCUPATION								
Unskilled Worker	342	11 (31.43)	98	3 (42.86)	440	14 (33.33)	15.8087	p < 0.05
Skilled Worker	217	7 (20.00)	55	0 (0.00)	272	7 (16.67)		
Business	65	1 (2.86)	0	0 (0.00)	65	1 (2.38)		
Service	59	1 (2.86)	17	0 (0.00)	76	1 (2.38)		
Agricultural Works	271	9 (25.71)	72	3 (42.86)	343	12 (28.57)		
Driving*	16	2 (5.71)	0	0 (0.00)	16	2 (4.76)		
Home maker	0	0 (0.00)	279	1 (14.29)	279	1 (2.38)		
Others†	49	4 (11.43)	27	0 (0.00)	76	4 (9.52)		
f) MIGRATORY STATUS								
Migrant	39	4 (11.43)	31	2 (28.57)	70	6 (14.29)	9.7490	p < 0.05
Non migrant	980	31 (88.57)	517	5 (71.43)	1497	36 (85.71)		
g) LIVING STATUS								
Alone	64	5 (14.29)	13	0 (0.00)	77	5 (11.90)	46.2040	p < 0.001
In hostel/mess/ paying guest/other places‡	76	11 (31.43)	45	3 (42.86)	121	14 (33.33)		
With family	879	19 (54.29)	490	4 (57.14)	1369	23 (54.76)		

Table 2: Distribution of study population according to socio-demographic profile

Figures in parentheses indicate percentage. Chi square test was applied to total no. of positives & negatives. p value <0.05 is significant; <0.001 is highly significant.

(*Though driving is a skilled work, in relevance to present study, separate occupation subgroup was formed with it. †Students, Unemployed. ‡Brothel).

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Source of Referral	Male Attendees		Female Attendees		Total		Chi square	p value
	Tested (n=1019)	Positive (n=35)	Tested (n=548)	Positive (n=7)	Tested (n=1567)	Positive (n=42)		
Non-Governmental organisation	58	4 (11.43)	23	0 (0.00)	81	4 (9.52)	21.4814	p < 0.05
Obstetrics and gynaecology/Maternity homes	0	0 (0.00)	278	1 (14.29)	278	1 (2.38)		
Revised national tuberculosis control programme	209	8 (22.86)	40	2 (28.57)	249	10 (23.81)		
Blood bank	16	0 (0.00)	2	0 (0.00)	18	0 (0.00)		
Departments of medical college	387	11 (31.43)	123	1 (14.29)	510	12 (28.57)		
Antiretroviral therapy centres	78	2 (5.71)	17	0 (0.00)	95	2 (4.76)		
Sexually transmitted infectious clinics	178	6 (17.14)	51	2 (28.57)	229	8 (19.05)		
Community Care Centres and Drop in centres	11	2 (5.71)	0	0 (0.00)	11	2 (4.76)		
Private health facilities	47	1 (2.86)	8	0 (0.00)	55	1 (2.38)		
Client initiated	35	1 (2.86)	6	1 (14.29)	41	2 (4.76)		

Table 3: Distribution of study population according to source of referral

Figures in parentheses indicate percentage. Chi square test was applied to total no. of positives & negatives. p value <0.05 is significant.

Sk Behaviour	Male Attendees		Female Attendees		Total		Chi square	p value
	Tested (n=1019)	Positive (n=35)	Tested (n=548)	Positive (n=7)	Tested (n=1567)	Positive (n=42)		
Exposed to CSW§	228	12 (34.29)	0	0 (0.00)	228	12 (28.57)	25.8910	p<0.001
Acted or acting as CSW	0	0 (0.00)	67	3 (42.86)	67	3 (7.14)		
Multiple sex partner	176	5 (14.29)	19	1 (14.29)	195	6 (14.29)		
Addictions	48	4 (11.43)	5	0 (0.00)	53	4 (9.52)		
Parents HIV positive	13	0 (0.00)	9	0 (0.00)	22	0 (0.00)		
Spouse HIV positive	29	2 (5.71)	36	1 (14.29)	65	3 (7.14)		

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Received blood transfusion	67	0 (0.00)	61	0 (0.00)	128	0 (0.00)		
Homosexual	5	1 (2.86)	0	0 (0.00)	5	1 (2.38)		
No response/risk unknown	453	11 (31.43)	351	2 (28.57)	804	13 (30.95)		

Table 4: Distribution of study population according to route of spread of infection/ RISK BEHAVIOUR

Figures in parentheses indicate percentage. Chi square test was applied to total no. of positives & negatives. p value <0.001 is highly significant.

(§ Commercial Sex Worker. ¶Alcoholism, Substance use, Injectable drug use).

AUTHORS:

1. Rout A. J.
2. Dubey M.
3. Ram R.
4. Biswas N.
5. Chakraborty M.
6. Saha J. B.

PARTICULARS OF CONTRIBUTORS:

1. 2nd Year Post Graduate Trainee, Department of Community Medicine, Mata Gujri Memorial Medical College, Kishanganj, Bihar.
2. 2nd year Post Graduate Trainee, Department of Community Medicine, Mata Gujri Memorial Medical College, Kishanganj, Bihar.
3. Professor & HOD, Department of Community Medicine, Mata Gujri Memorial Medical College, Kishanganj, Bihar.

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4. RMO CUM Clinical Tutor, Department of Gynaecology & Obstetrics, North Bengal Medical College & Hospital, Darjeeling.
5. Professor, Department of Community Medicine, Mata Gujri Memorial Medical College, Kishanganj, Bihar.
6. Professor, Department of Community Medicine, Mata Gujri Memorial Medical College, Kishanganj, Bihar.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Arup Jyoti Rout,
G-3, Medical Officers' Quarters,
North Bengal Medical College &
Hospital Campus,
P. O. Sushrutanagar City,
Siliguri, District, Darjeeling-734012.
E-mail: dr.arupjyoti81@rediffmail.com

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