

5A Tobacco Cessation Strategy and Physician's Practice in Odisha, India: A Cross-sectional Study

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ABSTRACT

Background: Physicians constitute a considerable professional influential group; they may be most suited for tobacco use prevention and smoking cessation intervention among the growing tobacco using population.

Methods: We assessed tobacco cessation knowledge and practice done by 91 physicians in two blocks of Khurda district by using modified version of survey instrument developed by Francisco G. Soto Mas. Statistical Package for Social Sciences (SPSS) 16 statistical software was used for the analysis.

Results: The response rate was 75.83%, of which 77 (84.6%) were male. Study participants were in the age group 36-45 years. Nearly 13.2% of the respondents were active tobacco user. In tobacco-related practices, around 58 (62%) of participant physicians ask patients about tobacco use status always-frequently. More than (67) 70% of participant physicians advise their patients to quit tobacco but only 10-20% of study physicians assist them in referring to cessation programs. Seventy one (78%) of physicians felt providing counseling to patients using tobacco as their responsibility.

Conclusions: The results indicate that physicians participating in this study do not meet the level of intervention recommended by National Tobacco Control Program.

Keywords: Odisha, primary care, physician counseling, tobacco cessation

INTRODUCTION

Tobacco smoking is one of the preventable factors for chronic diseases and mortality. World Bank predicts that 450 million tobacco deaths will occur over the next 50 years unless dramatic changes occur in current pattern of tobacco use.^[1] Globally, 12% of all deaths among adults aged 30 years and over were attributed to tobacco.^[2] In 2004, about 5 million adults aged 30 years and over died from direct tobacco use (smoking and smokeless) around the globe, that is one death approximately every 6 seconds.^[2] Even though tobacco use possesses huge threat to public health still the prevalence is increasing in India

and other developing countries. Particularly in India, the prevalence of tobacco use is quite high comparable to other countries in all form of its consumption. India is the second largest producer and the third largest consumer of tobacco in the world and is home to nearly 275 million tobacco users.^[3] The latest National Family Health Survey (NFHS-3 of 2005-2006) indicates that currently 57% men and 10.8% women in India use some form of tobacco.^[4] Global adult tobacco survey revealed that 34.6% of adult populations in India are using any form of tobacco, which is more among male (47.9%) compared to female (20.3%).^[5] In India, the proportion of all deaths that can be attributed to tobacco use is expected to increase from 1.4% in 1990 to 13.3% in 2020^[6] of which smoking alone will cause about 930,000 adult deaths by 2010.^[4] Currently, nearly 13% of all death India is tobacco related.^[6] An estimate shows that, the economic loss due to tobacco related disease surpluses the revenue collected through tax from tobacco product in year 2002-03 was about 308.3 billion rupees.^[6] Odisha, an eastern state of India, is dominated with communicable diseases and inching towards having the burden of non-communicable diseases. The current prevalence of use of any sort of tobacco in the state among individuals with age 15years or more is 30.1% with predominance of smokeless tobacco (>30.1%) over smoking (10.1-20.1%)^[5] is going to create a huge burden, undoubtedly.

Global Adult Tobacco Survey (GATS) 2009-10 reports, 46.6% smokers and 45.2% smokeless tobacco user had either thought or planned to quit the tobacco,^[5] where health professionals can play great role in enhancing the quitting habits. Many studies have proved that healthcare providers are influential enough to encourage people for achieving better quit rate of tobacco.^[7-9] Physicians are well-regarded and respected in the community; their advice will motivate the patient to quit tobacco. Among different strategy in practice, World Health Organization's 5A aims at different stages of tobacco quit and prepare an individual for it. An experimental study done in primary healthcare settings showed that simple advice increased abstinence process by 30% compared to no advice on tobacco cessation.^[10] A small intervention by physicians can built confidence and motivation among individuals to quit the habit. It is found that, 46.3% smokers, and 26.7% smokeless tobacco users

are being advised by their physicians to quit tobacco.^[5] Counseling practice by physicians will definitely help for reduction in the rate of tobacco use, which is being neglected in developing countries.^[11] There are few studies available on practice and counseling of tobacco cessation by physicians in developing countries. Keeping this in view, present study was aimed at to assess the tobacco intervention practices and training needs of physicians in Khurdha District of Odisha.

METHODS

This cross-sectional study was conducted to explore tobacco cessation counseling practices of physicians of Khurda district, Odisha from April 1, 2011 to June 30, 2011. Quantitative data probing the perspectives and attitudes regarding tobacco issues and patient education were collected from randomly selected sample of physicians. A modified version of the survey instrument developed by Francisco G. Soto Mas^[12] was used to elicit information on tobacco-related practices of the study participants.

Selection of the respondents

The study was carried out in 14 health facilities selected randomly from 30 public and private facilities present in two blocks of Khurda district. Due to time and logistic constraint, only two blocks were selected for the study purpose. One tertiary care hospital i.e., Capital hospital Bhubaneswar, one District Headquarter hospital i.e., Khurda DHH, one Community health center i.e. Balipatna CHC, three new Primary health centers under Balipatna CHC, five Government urban dispensaries in Bhubaneswar, and three private hospitals of Bhubaneswar were included in the study.

All physicians working in selected health facilities formed sampling unit, among those who were interested and able to give time were included in the study as practicing doctors are unlikely to give time for personal interviews due to their busy schedules. Total 91 physicians agreed to participate in the study consisted of 72 working in government and 19 working in private.

Study tool

A pre-designed validated semi structured questionnaire was used to collect the data which is a modified version of the survey instrument

developed by Francisco G. Soto Mas^[12] for assessing tobacco-related practices among healthcare providers. Face-to-face interview of the respondents was carried out by the researcher and the questionnaire was filled by using 4-point or 5-point Likert scale for exploring knowledge attitude and practice.

Questionnaire

Part A

Demographic information such as: Gender, age, and place of birth, mother tongue, and educational level, language used for communication by the population as well physician. Items related to professional practice: Specialty and years, location and setting of professional practice including location of private practice, if any.

Part B

Respondents' habit of tobacco use in any (Smoking and/or smokeless) form and their attitude towards quitting were assessed.

Part C

Ten items assessed tobacco-related intervention practices for all patients as well as for smoking patients. These included whether the physician asked if the patient wanted to quit smoking, advised to quit, offered assistance to quit, asked to set a quit date, arranged follow-up, discussed about Nicotine replacement therapy and other cessation treatments, asked about exposure to passive smoking and behavior change techniques and programs. Respondents were asked to estimate the frequency of patients with whom they perform each of the activities in a typical hospital visit.

Part D

Three items assessed self-efficacy. These included respondents' confidence in being able to: (a) Get tobacco using patients to quit their habit, (b) Reduce the number of daily tobacco use by patients, and (c) Reduce patient exposure to secondhand smoke.

Part E

Questions being asked to assess the attitudes/responsibility were (a) How do they perceive their responsibility for providing counseling to smoking patients, (b) How do they perceive patients' expectations about physician counseling, and (c) Whether they perceive their intervention as being successful in increasing quitting rates.

Part F

Knowledge and skills were assessed through questions related to familiarity with and use of the most popular smoking cessation theories and

protocols. These include: Tobacco Dependence Treatment Guidelines of National Tobacco Control program,^[13] World Health Organization framework convention on tobacco control (WHO FCTC) 5A's and 5R's, and Tobacco free initiatives.^[14]

Part G

Respondents were asked to indicate the factors (barriers) which personally prevent them from intervening with patients who use tobacco and the community resources availability and accessibility for practicing the cessation program with their view on improving the skills for cessation activities.

Likert scoring

A 4-point Likert-type scale was used for assessing self-efficacy. The score for self-efficacy was computed as the sum of the three items. Physicians were asked to indicate whether they were very confident = 4, confident = 3, not very confident = 2, or not confident at all = 1 with each one of the three statements. Possible scores for self-efficacy ranged from a low of 3 to a high of 12.

The score for attitudes/responsibility was computed as the sum of the three items. Physicians were asked to indicate whether they strongly agreed = 4, agreed = 3, disagreed = 2, or strongly disagreed = 1 with each one of the three statements indicated above. Possible scores for knowledge ranged from low of 3 to a high of 12. The score for knowledge/skills was computed as the sum of five items. Physician were asked to rate their familiarity with each of four smoking cessation protocols, as well as the stages of change theory: Very familiar and know how to apply it = 3, familiar but does not know how to apply it = 2, and not familiar at all = 1. Possible scores for knowledge ranged from a low of 5 to a high of 15.^[12]

Ethical permission was obtained from Institutional Review Board (IRB) of Indian Institute of Public Health, Bhubaneswar. The respondents were explained about the purpose of the study prior to administering the survey. The voluntary nature of participation, anonymity and confidentiality nature of the questionnaire were strongly emphasized. Written informed consent was obtained from all the respondents.

Statistical analysis

Descriptive analysis was done by using statistical packages for social science (SPSS) 16. The result was described in frequency and proportion.

RESULTS

In total, 91 physicians participated in the study of which 77 (84.6%) were male and 14 (15.4%) were female. General practitioners constituted nearly 57% of study participants. In the study population, most of the physicians, 37 (40.7%) were from age group of 36-45 years, only 25 (27.5%) of the physicians were from above 50 age group [Table 1].

In this study, 86.8% of the physicians were either non user [71, 78.0%] or ex-user [8, 8.8%] of any form of tobacco compared to 13.2% who were into active abuse of the substance. Only 2 out of 91 had undergone some systemic training to handle addiction related issues are psychiatrists by profession. However, this was encouraging to find that more than 80% of subjects expressed willingness to go for training to get hands on experience in this field [Table 1].

Practice of components of 5A (Ask, Assess, Advice, Assess willingness, Assist, Arrange and prescription of nicotine replacement therapy (NRT) varies in great nature. Percentage of physician who always-frequently asks and assess regarding the tobacco-related habit and health consequences was 62% and 47.3%, however, when it comes to arranging as well as prescribing NRT significant declination was observed. Nearly 45.1% of the physicians always advice their client to quit the use of tobacco, but only 8.2% physicians used the behavioral techniques, 10.2% used educational aids and 13.2 % prescribed NRT [Table 2].

Barriers to smoking cessation intervention play major role in practice. Language and 'Own habit of tobacco' were discovered to be leading barriers, however nearly 64% physicians do not consider this as their responsibility [Table 3].

Nearly 71 (78%) respondents were not at all familiar in WHO 5A's and 5R's and 80 (87.9%) were not familiar with WHO tobacco free initiatives or Stages of change theory [Table 4].

The physicians opined that they would use the resources like Cessation program 61 (67.0%), cessation support group, education materials, and quitting self help guide if available to them. To improve the current tobacco-related practices and intervention skill the preferred mode of training by the study population were CME, workshop, and small group training [Table 5].

Table 1: Background characteristics of study participants

	Number	Percentage
Mean age		
Age year wise		
20-35	14	15.4
36-45	37	40.7
46-50	15	16.5
>50	25	27.5
Gender		
Male	77	84.6
Female	14	15.4
Qualification		
MBBS	52	57.1
PG	39	42.9
Private practice		
Yes	47	51.6
No	44	48.4
Location		
Tertiary center	44	48.3
CHC	6	6.6
DHH	12	13.2
Private center	19	20.9
Urban dispensary	10	11
Smoking status		
Current user	12	13.2
Ex user	8	8.8
Non user	71	78
Whether undergone any training		
Yes	2	2.2
No	89	97.8
Whether want to go for training		
Yes	73	80.2
No	18	19.8

DISCUSSION

In the present study, response rate was 75.83% and the reasons for which the physicians who could not participate in the study were non availability, lack of interest, time constraints, and inability of the investigator to contact them.

In a similar study, Francisco G. Soto Mas showed a lower response rate of 58%. A recent review of surveys assessing smoking cessation practices during the past fifteen years found that 70-98% of physicians routinely "ask" patients about smoking status, 51-90% "advise" smokers to quit, 25-68% "assist" smoking patients by providing materials or talking for a few minutes, 5-11% arrange "follow-up" visits, and 15-25% refer smokers to cessation programs or clinics.^[12]

Table 2: Tobacco related practices and attitude of the physicians

Practices (5A's) among participants	Frequency	Percentage
ASK		
Always	19	20.9
Frequently	39	42.9
Occasionally	30	33
Rarely	3	3.3
Assess		
Always	11	12.1
Frequently	32	35.2
Occasionally	37	40.7
Rarely	9	9.9
Never	2	2.2
Advice		
Always	41	45.1
Frequently	26	28.6
Occasionally	22	24.2
Rarely	2	2.2
Assess patient's willingness		
Always	11	12.1
Frequently	23	25.3
Occasionally	26	28.6
Rarely	21	23.1
Never	10	11
Assist in referring or educating		
Always	15	16.5
Frequently	31	34.1
Occasionally	25	27.5
Rarely	16	17.6
Never	4	4.4
Arrange follow up		
Always	8	8.8
Occasionally	5	5.5
Rarely	36	39.6
Never	42	46.2
Prescribe NRT		
Always	8	8.8
Frequently	4	4.4
Occasionally	15	16.5
Rarely	29	31.9
Never	35	38.5

NRT=Nicotine replacement therapy

Thus, the tobacco-related practices among western physicians is better as compared to our findings in coastal district of Odisha. This could be the result of more active policy level intervention in western countries. Unfortunately, many doctors fail to utilize the opportunity of illness for intervention.

Table 3: Barrier to cessation intervention and perception towards it

Variables	Frequency	Percentage
Lack of the training		
No	24	26.4
Yes	67	73.6
I am not the right person to address the problem		
No	64	70.3
Yes	27	29.7
Own habits of tobacco use interferes		
No	87	95.6
Yes	4	4.4
Too much time taking		
No	46	50.5
Yes	45	49.5
Patients are not receptive		
No	67	73.6
Yes	24	26.4
Quitting should be patients own choice		
No	41	45.1
Yes	50	54.9
Language barrier		
No	87	95.6
Yes	4	4.4
Confident in making patients to quit tobacco		
Very confident	0	0
Confident	28	30.8
Not very confident	63	69.2
Not confident at all	0	0
Confident in making reduction in no. of tobacco use		
Very confident	0	0
Confident	40	44
Not very confident	51	56
Not confident at all	0	0
Whether physician feels the responsibility to provide counselling		
Very confident	27	29.7
Confident	51	56
Not very confident	11	12.1
Not confident at all	02	2.2

In some developed countries a mere inquiry about the smoking status of patients by doctors itself increases quit rates and encourages those who have not thought about quitting to consider doing so.^[15-17] Lack of training, time factor, and

Table 4: Physicians knowledge familiarity with cessation counseling

	Frequency	Percentage
Familiarity with tobacco dependence treatment guidelines (NTCP)		
Very familiar and know how to apply it	11	12.11
Familiar but does not know how to apply it	41	45.1
Not Familiar at all	39	42.9
WHO's 5A		
Very familiar and know how to apply it	4	4.4
Familiar but does not know how to apply it	16	17.6
Not Familiar at all	71	78.1
WHO tobacco free initiative		
Very familiar and know how to apply it	4	4.4
Familiar but does not know how to apply it	7	7.7
Not Familiar at all	80	87.9
Stages of change theory		
Very familiar and know how to apply it	4	4.4
Familiar but does not know how to apply it	7	7.7
Not Familiar at all	80	87.9

WHO=World Health Organization,
NTCP=National Tobacco Control Program

responsibility of the patient is considered as barrier by many physicians in the study which is quite similar to the finding of other studies done in Kerala,^[18] a southern state of India and other part of world.^[19]

Familiarity with cessation practice is very low among the physicians in our study, similar to a study done in southern Orissa in 2001.^[20] Large numbers of the physicians are not familiar with 5A's or 5R's guideline of tobacco cessation, whereas nearly half of the physicians do not know how to apply even though they have the knowledge. All but two study participants said no to availability of resources like cessation programs, technical support staff or materials like brochures, booklets etc., in their respective centers. In a western study, almost half of the participants were not sure about community resources for smoking cessation, one-fourth felt they did not have access to programs and support,

Table 5: Resources likely to use if available to the physicians and preferred mode of training

	Frequency	Percentage
Resources likely to use if available to physicians		
Cessation program		
No	30	33
Yes	61	67
Cessation support group		
No	23	25.3
Yes	68	74.7
Quitting self help guides		
No	44	48.4
Yes	47	52.6
Audio-visual materials		
No	63	69.2
Yes	28	30.8
Education materials		
No	43	47.3
Yes	48	52.7
Preferred mode of training		
Internet based multimedia/Online		
No	66	72.5
Yes	25	27.5
CD ROMs or computer materials		
No	63	69.2
Yes	28	30.8
Workshop, small group training		
No	30	33
Yes	61	67
CME		
No	25	27.5
Yes	66	72.5
Tobacco related scientific journal		
No	68	74.7
Yes	23	25.3
Written materials (Brochures, manuals)		
No	44	48.4
Yes	47	51.6

CD ROM=Compact disk-Read only memory

and 75% were simply not sure or did not have all of the materials available in the hospital that they needed for educating smokers. Majority of the respondents in our study showed interested to go for training of any kind if provided, which is contrast to the result of Kerala study. This might be due to more primary care physicians were involved in our study than in Kerala study (More specialists).

CONCLUSIONS

This study reports that in Khurda district, Odisha participant physicians are concerned about tobacco use and willing to undergo training for improving their knowledge and skills in tobacco cessation counseling, they do not meet the level of intervention required by healthcare agencies. In general, the results of this investigation are consistent with other studies exploring physicians' tobacco education and control practices.

Limitations

The study was conducted in only two blocks of the district due to constraint of time and logistics. The response was dependent on physician's self-reporting, which might contain exaggerated communication.

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REFERENCES

- Jha P, Chaloupka FJ. Health Consequences of Smoking- Chapter-1, Curbing the Epidemic: Governments and the Economics of Tobacco Control. Washington: The World Bank; 1999. p. 21-8.
- World Health Organisation (WHO) Global Report. Mortality Attributable to Tobacco, 2012. Available from: http://whqlibdoc.who.int/publications/2012/9789241564434_eng.pdf. [Last accessed on 2013 Feb 25].
- Reddy KS, Gupta PC. Ministry of Health and Family Welfare, New Delhi, India. Report on Tobacco Control in India, 2004. Available from: [mohfw.nic.in/tobacco%20control%20in%20india_\(10%20dec%2004\).pdf](http://mohfw.nic.in/tobacco%20control%20in%20india_(10%20dec%2004).pdf). [Last accessed on 2012 May 11].
- Jha P, Jacob B, Gajalakshmi V, Gupta PC, Dhingra N, Kumar R, *et al.* A nationally representative case-control study of smoking and death in India. *N Engl J Med* 2008;358:1137-47.
- Global adult tobacco survey fact sheet: 2009-2010, released by Ministry of Health and Family Welfare Government of India; p no. 2. Available from: http://www.who.int/tobacco/surveillance/en_tfi_india_gats_fact_sheet.pdf. [Last accessed on 2012 May 21].
- Resource for Tobacco Free India, An Initiative of Voluntary Health Association of India. Available at webpage: http://rctfi.org/goi_initiatives.htm, [Last accessed on 2012 Jun 05].
- West R, McNeill A, Raw M. Smoking cessation guidelines for health professionals: An update. *Health Education Authority. Thorax* 2000;55:987-99.
- Lancaster T, Stead L, Silagy C, Sowden A. Effectiveness of interventions to help people stop smoking: Findings from the cochrane library. *BMJ* 2000;321:355-8.
- Gorin SS, Heck JE. Meta-analysis of the efficacy of tobacco counseling by health care providers. *Cancer Epidemiol Biomarkers Prev* 2004;13:2012-22.
- Fiore MC, Baily WC, Cohen SJ. Treating tobacco use and dependence, clinical practice guideline. US Department of Health and Human Services. Rockville: Public Health Service, 2000. Available from: <http://www.surgeongeneral.gov/tobacco/tobagrg/htm>. [Last accessed on 2012 May 10].
- Nichter M, Padmawati S, Danardono M, Ng N, Prabandari Y, Nichter M. Reading culture from tobacco advertisements in Indonesia. *Tob Control* 2009;18:98-107.
- Soto Mas FG, Papenfuss RL, Jacobson HE, Hsu CE, Urrutia-Rojas X, Kane WM. Hispanic physicians' tobacco intervention practices: A cross-sectional survey study. *BMC Public Health* 2005;5:120.
- National Tobacco Control Program; Ministry of Health and Family Welfare, Government of India. Available from: <http://www.pbhealth.gov.in/pdf/tobaccoo.pdf>. [Last accessed on 2012 Jun 20].
- World Health Organisation (WHO) Framework Convention on Tobacco Control. Available from: <http://whqlibdoc.who.int/publications/2003/9241591013.pdf>. [Last accessed on 2012 Jun 21].
- Gould KA, Eickhoff-Shemek JM, Stacy RD, Mecklenburg RE. The impact of national cancer institute training on clinical tobacco use cessation services by oral Health Teams. *J Am Dent Assoc* 1998;129:1442-9.
- Milch CE, Edmunson JM, Beshansky JR, Griffith JL, Selker HP. Smoking cessation in primary care: A clinical effectiveness trial of two simple interventions. *Prev Med* 2004;38:284-94.
- Kreuter MW, Chedda SG, Bull FC. How does physician advice influence patient behavior? Evidence for a priming effect. *Arch Fam Med* 2000;9:426-33.
- Thankappan KR, Pradeepkumar AS, Nitcher M. Doctor's behavior and skills for cessation of tobacco in Kerala. *Indian J Med Res* 2009;129:249-55.
- Spangler JG, George G, Foley KL, Crandall SJ. Tobacco intervention training: Current efforts and gaps in US medical schools. *JAMA* 2002;288:1102-9.

20. Pati S. A study on tobacco cessation practice among general practitioners in Orissa (India) Lung Cancer 2005;49:S195.

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