ORIGINAL ARTICLE

Evaluation of Tobacco Cessation Centres under National Tobacco Control Programme in Uttarakhand: A Cross-Sectional Study

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ABSTRACT

Introduction: In India 28.6% adults use tobacco while in Uttarakhand its prevalence is 26.5%. The guidelines instruct District Tobacco Control Cell to set up and run Tobacco Cessation Centres and provide cessation services. **Materials and Methods**: The present study was conducted in all the 13 districts of Uttarakhand. The study participants were the counsellors at the Tobacco Cessation Centre (TCC). All the TCCs were visited physically and then evaluated on the basis of questionnaire and checklist. **Results**: 11 TCCs were having TCC in District Hospital of which majority were staffed as per guidelines. 11 TCCs had dedicated room in OPD for cessation services while 3 hospitals had location and directions to TCC marked in hospital. CO monitor were present in working condition only at 1 TCC though it was available in 11 TCCs. Similar findings were found for Spirometer. NRT and IEC material are provided in all 13 centres. During last 1 year, 24660 tobacco users were given counselling services, out of which 2417 (10%) were given both counselling and NRT and out of them, 1266 (5% of total counselled) were under regular follow up. Total 241 tobacco users had quit tobacco during last 1 year. **Conclusion**: There is availability of TCCs under NTCP in every district of Uttarakhand but there is need for up scalation of services regarding equipment's and loss to follow up of beneficiaries.

KEYWORDS

Tobacco Cessation Centres, Tobacco users

INTRODUCTION

The global tobacco crisis stands as a colossal menace to public health, unparalleled in magnitude. Annually, it claims the lives of over 8 million individuals across the globe.(1) Exclusively in the WHO South-East Asian Region (SEAR), tobacco has a significant impact, resulting in 1.6 million deaths attributed to its usage.(2) India holds the position of being the second largest contributor to both tobacco production and consumption worldwide. Consequently, tobacco products are easily accessible in our country at significantly low prices. As a result, there is a widespread prevalence of tobacco usage, leading to various consequences. According to the "World Health Organization" (WHO), tobacco use is a major cause of disease and mortality in India, accounting for over 1.35 million fatalities each year.(3) Approximately 26.7 crore adults aged 15 years and above, which accounts for 28.6% of the population, use tobacco in various forms in India.(4) In Uttarakhand, approximately 26.5% of adults in the state use tobacco in either smoked or smokeless form. Among all adults, currently, 12.4% of people use smokeless tobacco, compared to 18.1% who smoke.(5) Considering significant occurrence of tobacco use along with the

negative effects on health and the economy, the Indian government is committed to addressing tobacco control issues and has implemented various measures to achieve this goal. India was among the early adopters to endorse "World Health Organization - Framework Convention on Tobacco Control" (FCTC).(6)

Given the widespread usage and advantages of quitting smoking, it appeared crucial to establish tobacco cessation clinics in various healthcare environments and educate healthcare professionals in cessation techniques. The World Health Organization launched the Tobacco Cessation Clinics project in developing nations, including India. On World No Tobacco Day, May 31, 2002, these clinics began operating in 13 locations throughout India(7) which increased to 429 working under the "National Tobacco Control Programme" in 2018.(8)

The National Tobacco Control Programme (NTCP) was established in 2007–08 with the intention of addressing the health problems and deaths linked to tobacco use. Its objectives include educating people about the negative effects of tobacco use and helping them stop. The National Tobacco Control Cell (NTCC) released Operational Guidelines, which served as a reference for the state and district administrations in the implementation of NTCP at the state level through 'State Tobacco Control Cell' and district level through 'District Tobacco Control Cell'. (9)
One of the activity under District Tobacco control Cell is setting up of Tobacco Cessation Centres (TCCs), at the district level where people from the community can directly access tobacco cessation services. At these centres, people are encouraged to quit tobacco and personal counselling services for tobacco cessation are provided to all.

"In the context of NTCP tobacco cessation services, **quitting** is generally defined as self-reported complete abstinence from all forms of tobacco for a specified period (often at least the previous 30 days) at the time of assessment or follow-up, consistent with national and international cessation guidelines that treat "quit" status as sustained abstinence rather than a temporary reduction or brief period of non-use."

"Under the National Tobacco Control Programme and the Tobacco Dependence Treatment Guidelines, **regular follow up** refers to planned, scheduled contacts (in-person or telephonic) with tobacco users after the initial counselling or quit attempt, typically at multiple time points in the weeks and months following the quit date, to reinforce motivation, monitor treatment adherence (behavioural and pharmacological), managing withdrawal and side effects, and preventing relapse." (Government of India, Ministry of Health & Family Welfare. Tobacco Dependence Treatment Guidelines, NTCP" and "Government of India, Ministry of Health & Family Welfare. Operational Guidelines for Establishing Tobacco Cessation Centres under NTCP)

Also, Nicotine Replacement Therapy (NRT) is provided to people free of charge to need it to quit tobacco. Against this background, the present study is designed for the Evaluation of Tobacco Cessation Centres in Uttarakhand as per the 'National Guidelines for Tobacco Cessation' and 'Operational Guidelines for National Tobacco Control Programme' by Ministry of Health and Family Welfare, Govt. of India.

Material & Methods

The present study is a cross sectional study which was conducted in all the 13 districts of Uttarakhand. Firstly, a comprehensive list of all Tobacco Cessation Centres working under the National Tobacco Control Programme (NTCP) in Uttarakhand was made and all of them were contacted. Universal Sampling was the sampling technique used and the sample size came to be 13 as there was one TCC working under the NTCP in each district. The study was carried out for a period of six months from December 2022 to May 2023 using a semi-structured questionnaire which was developed based on the defined objective and it was developed based on the Operational Guidelines for National Tobacco Control Programme (NTCP) and the National Guidelines for tobacco cessation. The Tobacco Cessation Centres were visited physically and observations were made. Face to face questions were asked to the counsellors present at the centre.

Prior Institutional permission was obtained from Institutional Ethics Committee, AIIMS Rishikesh vide letter no.- AIIMS/IEC/22/449.

Results

Out of the 13 Tobacco Cessation Centres under the National Tobacco Control Programme in Uttarakhand, 11 are located in District Hospitals while 1 each are located in Sub-district hospital (Haridwar) and Community health centre (Rudraprayag) as shown in Table 1.

Table 1: Districts and health facilities visited

Variables		Count (n=13)	%
Districts visited		13	100 %
Location of TCC	DH	11	84.6 %
	SDH	01	7.7 %
	CHC	01	7.7 %

The input indicators of both mandatory and optional service types are shown in Table 2. Out of the 13 centres, counsellors were present in 12 (92.3%) while social worker were presented in 11 (84.6%) while all the centres had trained manpower. Dedicated room for providing cessation services was present in 11 (84.6%) districts while signages to the TCC were marked in only 3 (23.1%) hospitals.

Breath Carbon Monoxide (CO) monitor was present in 11 (84.6%) centres out of which it was being used in only 1 (9.1%) centre. Spirometer was present in 10 (76.9%) centres out of which it was in use in 2 (20%) centres. The main reasons for the Breath carbon monoxide monitor and spirometer being not in use at majority of the centres is lack of training to the personnels to use the equipment and faulty equipment at some centres. All the centres were providing nicotine replacement therapy (NRT) and IEC material for health promotion and education of the beneficiaries.

2 (15.4%) centres were having local telephonic quitline services and the same was observed for the contact with a nearby alcohol de-addiction centre. Co-ordination through referral from Dental department was present in all centres while from TB clinic and Psychiatry or mental health was present in 10 (77%) centres.

Table 2: Input indicators of both mandatory and optional service types

S. No.	Variables			N = 13	%	Service Type
1	Manpower	Counsellor Present		12	92.3	Mandatory
		Social Worker present		11	84.6	
		Training of manpower		13	100	
2	Room	Presence of dedicated room		11	84.6	Mandatory
		Location and directions to TCC marked in hospital		03	23.1	
3	Equipment	Breath CO monitor	Present	11	84.6	Mandatory
			In Use	01	9.1	
		Spirometer	Present	10	76.9	
			In Use	02	20	
4	Medication	NRT provided		13	100	Mandatory
5	IEC material provided for health promotion and education			13	100	Mandatory
6	Presence of telephonic quitline			02	15.4	Optional
7	Blood urea & cotinine kits			00	0.0	Optional
8	Contact with nearby alcohol deaddiction centre			02	15.4	Optional
9	Co-ordination with other departments	Dental		13	100	Optional
		TB Clinic		10	77	
		Psychiatry (Mental Health)		10	77	

The process and output indicator represent data from April 2022 to March 2023 cumulatively in all the 13 districts of Uttarakhand.

The total number of people given tobacco cessation services in the previous one year in all the thirteen TCCs was 24660 out of which 2417 were given both counselling and nicotine replacement therapy and the rest were given only counselling. Out of the total beneficiaries, 1266 were under regular follow up which constitutes about 5% of the total. The number of beneficiaries who had quit tobacco use during the past one year was 241 which is a mere 1% of the total number of beneficiaries given tobacco cessation services.

DISCUSSION

Tobacco use poses a great threat and is among the greatest public health threats in present times. The management of tobacco dependence includes various approaches such as behavioural interventions that can be as brief as simple

guidance or as comprehensive as intensive counselling, nicotine replacement therapy in form of gums, lozenges, patches and pharmacotherapy.(10) Therefore, there lies a need and opportunity to provide cessation services to tobacco users.

The findings of our study highlight that there is a Tobacco Cessation Centre present in every district of Uttarakhand which is functioning under the National Tobacco Control Programme (NTCP). This is finding is in compliance to the Operational Guidelines for NTCP (9) which advocates presence of TCC in every district. While the Operational Guidelines for NTCP advocate setting up of TCC in the District Hospital,(9) our study finds that in Uttarakhand, 84.6% (n=11) of the district hospitals have presence of TCC. The presence of a TCC in the hospital gives an opportunity to the doctor as well as the tobacco user to motivate for cessation of the habit. Taking comprehensive medical history for a tobacco user seeking treatment at a hospital can result in the provision of cessation services to support their efforts to quit smoking. Similarly, a study conducted by Robert West et al(11) suggests that providing brief interventions from healthcare workers given opportunistically to smokers is found to be effective in smoking cessation.

There is provision of equipment like Breath CO Monitor and Spirometer to be provided in all TCCs for giving effective cessation facilities for which a one-time, non-recurring grant is also provided under the TCC budget for TCCs functioning under NTCP.(9) Our study finds that Breath CO Monitor is present in 84.6% (n=11) TCCs and is in use in only 9.1% (n=1) of them, whereas Spirometer is present in 76.9% (n=10) of the TCCs and is in use in 20% (n=2) of them. The interaction with the counsellors revealed that a major reason for the breath CO monitors and spirometers being not in use at majority of the centres is lack of training of the personnel in operating the equipment. Other reasons include outdated equipment and equipment malfunctions. The manpower present in all the 13 districts (100%) have had their training for tobacco cessation activities. Providing training to the counsellors and enabling them to engage in tobacco cessation services contributes to the development of available resources and addresses the tobacco cessation training gap.(12)

A review done by Robert West et al(11) provides evidence that when combined with certain behavioural assistance, nicotine replacement therapy and medications like bupropion, nortriptyline, varenicline, and cytisine have the potential to assist individuals in their efforts to quit smoking. The present study finds that nicotine replacement therapy is available and is provided to patients in all the 13 (100%) TCCs. In contrast to this finding, a study done by Smitha Sarma et al(13) in Kerala, India reported that medications for tobacco cessation were neither present in public hospitals (0%, n=58), nor in public specialty centres (0%, n=10) which included facilities that are designated to provide cessation services. The present study also found that IEC material for health promotion and education in form of pamphlets and handouts is provided in all the 13 (100%) TCCs. This is in compliance with the National Guidelines for Tobacco Cessation which states that providing handouts or education materials is a mandatory service for starting tobacco cessation services.(14)

The present study also finds that 15.4% (n=2) TCCs have availability of telephonic quitline services. The presence of telephones in tobacco cessation centres is an optional service but if present it is beneficial in contacting the subjects who are not coming regularly for follow up.(14) A review done by Robert West et al(11) also suggests that services such as proactive telephonic support and automated text messaging programmes can provide assistance to smokers seeking help for quitting. Also, in another study conducted by Raj Kumar et al regarding cost effectiveness of telephonic quitline services, it was found that Tobacco Quitline Service is an effective measure of tobacco control in India in terms of accessibility, number of quitters and ideal utilization if funds.(15)It has also been observed that the TCC should have contact with nearby alcohol de-addiction centre so that people who may need these services can be referred to the appropriate centres.(14) The present study finds that 15.4% (n=2) of the tobacco cessation centres are in contact with nearby de-addiction centres.

The present study also highlights that majority of the TCCs (77%, n=10), are in co-ordination with the TB clinic of the district hospital and there is referral of tobacco user tuberculosis patients to the tobacco cessation centre. The study also highlights that majority of the TCCs (77%, n=10) are in co-ordination with the Department of Psychiatry or the mental health clinic of the hospital and there is intra-institutional referral of patients to the TCC. It is evident from a study done by Tara Singh Bam that individuals who quit smoking decrease the risk of being infected by tuberculosis and also lowers the risk of mortality associated with the disease. Hence, timely detection of smoking habits and the active pursuit of quitting smoking are vital in enhancing tuberculosis (TB) treatment and minimizing TB transmission within the community.(16) H A Gupte et al also found in their study that it is feasible to

integrate tobacco cessation into regular tuberculosis treatment.(17)

The present study finds that a total 24660 tobacco users were given cessation services during the last one year out of which 241 had quit tobacco use, which constitute about 1 % of the beneficiaries. This finding is in contrast to a similar study conducted by Cherian Varghese et al where they found that 14% (n=3255) of the beneficiaries had quit tobacco at a six week follow up.(18)

Discussing about the way forward, it is recognized that consuming tobacco is a major risk factor for non-communicable diseases (NCDs) which is preventable and the high prevalence of tobacco use presents an obstacle to the ongoing plans and efforts aimed at preventing NCDs.(19) In their study, Bhatt and Goel have also highlighted that efficiently providing patient-focused, condition-targeted, culturally sensitive tobacco cessation services at a non-communicable disease (NCD) clinic could effectively decrease NCD-related complications in tobacco-using patients. Moreover, this approach has the potential to significantly reduce illness and death caused by NCDs in India.(20)

Conclusion

This study highlights that tobacco cessation centres have been established in every district of Uttarakhand, under the National Tobacco Control Programme. The majority of these TCCs are located in district hospitals, and they are staffed and supplied in compliance with operating and cessation criteria, which include providing IEC materials, nicotine replacement medication, and trained people on a universal basis.

Recommendation

To improve cessation centers outcomes, implementation must be strengthened, resources must be better utilized, and follow-up and support systems must be improved.

Limitation of the Study

- It is impossible to determine a causal relationship between service inputs and cessation outcomes, as the study design was cross-sectional
- The evaluation was limited to TCCs operating under the NTCP in Uttarakhand, which may limit its application to other states or to cessation programs offered through other platforms, including as private facilities or NCD clinics.
- Because process and output measures were assessed over the course of a single year, longer-term quit results or temporal variations in treatment intake may have been overlooked.

Authors Contribution

All authors have contributed equally.

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Nil

Conflict of Interest

There is no conflict of interest.

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Declaration of Generative AI and AI Assisted Technologies in the Writing Process

The authors haven't used any generative AI/AI assisted technologies in the writing process.

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