



TOBACCO CESSATION COUNSELING BY DENTAL PERSONNEL

¹*Dr Venkatesh Kulkarni and ²Dr Praveena Kulkarni

¹Professor, ²Assistant Professor,
Department of Oral Pathology & Microbiology, Bharati Vidyapeeth Deemed to be University Dental College & Hospital, Pune.

***Corresponding Author: Dr. Venkatesh Kulkarni**

Professor, Department of Oral Pathology & Microbiology, Bharati Vidyapeeth Deemed to be University Dental College & Hospital, Pune.

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ABSTRACT

Tobacco causes a wide range of conditions affecting all the body organs. It is also identified as major risk factors for many oral disorders comprising from simple staining of teeth to deadly oral cancer. The dental practice is a potential location for partaking in tobacco cessation measures accessing to large population. The advice delivered through dental practice is as effective as support provided by other primary care professionals. The dentist and dental practices have a critical role to play in encouraging and supporting tobacco cessation. This article aimed to review the literature on history, types, and impact of tobacco use, probable role of dental surgeon in tobacco habit cession.

KEYWORDS: Counseling, Dental personnel, Smoking, Strategies, Tobacco.

INTRODUCTION

Tobacco is the major cause of oral and other type of carcinoma; such carcinoma may lead to death in productive age of individual. Majority of deaths happen as a result of an addiction developed in youth. The overall untimely deaths produced by tobacco during the last century has been projected about 100 million.^[1] Globally, tobacco as a risk factor causes 4.1% of the total burden of disability. Tobacco use is a disease of addiction and a behavior choice, its control is both a public health concern and an issue of international law.^[2]

India's tobacco issue is difficult with significant affliction of tobacco-associated disease and death. Problem of tobacco-related disease and death is extensive in India. India is second largest producer and consumer of tobacco. These make a greater necessity to study the tobacco control program.^[1]

The World Oral Health Report 2003 points out that All health providers must be involved (in treatment of tobacco dependence), including oral health professionals.^[3] Oral health professionals in many countries, reach a large proportion of the healthy population. Such oral health professionals can help to prevent tobacco addiction. Various healths professional like the medical, oral health professional and auxiliaries can also be involve in cessation counseling. As no single profession can access all tobacco users.^[1,4] It is therefore very important that members of the dental team to

become involved in tobacco cessation activities within their practices.

This literature review focuses on chemical nature of tobacco, types and impact of tobacco use, strategies for Tobacco Cessation Counseling (TCC) at dental office and community level by dental personnel.

Brief about the nature of Tobacco

Tobacco was originally raised in Virginia. The modern commercial varieties of tobacco have descended directly from *Nicotiana tabacum*.^[1] Both the smokeless and the smoked form of tobacco consist close to 4000 odd chemical constituents and many of them have a carcinogenic potential.^[5,6] Nicotine is one among these, with cotinine and nicotine-N oxide as its chief metabolites. Nicotine that absorb through the oral mucosa and skin enters the bloodstream and reaches the brain and acts through specialized cell receptors located in the brain and other organs producing wide range of physiological effects.^[7]

Various forms of tobacco

Basically tobacco is used in the smoke and smokeless (chewing) forms. Tobacco is used in various ways smoked form as cigarettes, bidis, cigars, pipes, water pipes (hookahs), chillum, and hookli. Reverse smoking is a type of smoking keeping the glowing end of the tobacco product inside the mouth. Reverse smoking causes palatal patches which have been reported to show

a malignant change and associated with cancer of the base of the tongue.^[1,8]

Oral preparations/non combusted “oral” or “smokeless” tobacco products for chewing and holding in the mouth or placing in the nose. Major forms of smokeless tobacco are chewing tobacco, snuff, Swedish snus and gutkha, khaini, mainpuri tobacco, mawa, mishri/masheri, paan , zarda , pan masala etc.^[1,9]

EFFECTS OF TOBACCO

The health-related effects of smoking tobacco (cigarettes and bidis), smokeless forms of tobacco, and other forms of tobacco ranges from general ill health conditions such as tuberculosis, cardiovascular diseases, peripheral vascular disease, respiratory diseases, cancers, and diabetes.

The effects of tobacco in causing various diseased are noticed. Diseases of the oral cavity caused by tobacco habits include leukoplakia, oral submucous fibrosis, preleukoplakia, leukoedema, smoker’s palate, palatal erythema, central papillary atrophy of the tongue, erythroplakia, oral lichen planus, periodontal diseases, tooth loss and loss of jaw bone.^[7]

PASSIVE SMOKING (SECOND AND THIRD HAND SMOKING)

Indirect forms of exposure to tobacco smoke are variously referred to as passive smoking, involuntary smoking, tobacco smoke pollution. Second-hand tobacco smoke is the combination of smoke emitted from the burning end of a cigarette or other tobacco products and the passive inhalation of tobacco smoke when another person is smoking. Second-hand smoke has 4000 different chemicals, at least 250 are known to be harmful and 50 of which are known to cause cancer. It has 2 times nicotine and tar and 5 times the carbon monoxide than the smoke that smokers inhale. Various effects produced to its exposure are in infants, sudden death; in pregnant women, low birth weight infants and in adults, serious cardiovascular and respiratory diseases.^[10]

THIRD HAND SMOKE

Third-hand smoke applies to the tobacco smoke by products that stick to the smoker’s hair and clothing or to household fabrics even after the second-hand smoke has cleared. The residue also cleaves to walls and ceilings and is absorbed in vehicle interiors, and other items. This invisible toxic brew consists of gases and particulate matter, including carcinogens and heavy metals such as arsenic, lead, and cyanide. Young children are particularly susceptible as they breathe near, crawl on, play on, touch, and lick contaminated surfaces.^[7,11]

DIAGNOSIS OF TOBACCO HABIT AND ADDICTION LEVEL

Evidence of tobacco use in an individual could be established by general and clinical oral examination followed by assessing the tobacco addiction level with

the help of Fagerstrom Test for Nicotine Dependence (FTND). The FTND, past efforts to quit and patient choices are the important factors to consider while providing interventions.^[7,12]

GENERAL PHYSICAL EXAMINATION

The odor of tobacco on the individual, the nicotine staining of fingers/nails and facial hair, and the cigarette/bidi burn marks on the clothes may provide evidence of the tobacco use. The clubbing of the fingers may also provide early evidence of a complication like a bronchial carcinoma, and cyanosis may indicate associated respiratory failure. Peripheral edema and a raised jugular venous pulse/pressure may indicate congestive cardiac failure. The extremities, including the peripheral pulses, must be examined for evidence of any peripheral vascular disease.^[7]

ORAL EXAMINATION

The routine examination of the oral cavity provides an opportunity for the dental personnel to observe various local effect of smoking and chewing tobacco. The changes include discolored teeth, gingival recession, dental erosion, periodontitis, delayed wound healing, smoker’s palate, and white or red or speckled lesions.^[13]

FTND(Fagerstrom Test for Nicotine Dependence)^[12]

- For smoked tobacco user (6-item questionnaire), a score of 6 or greater (maximum score of 10) indicates a high level of nicotine dependence.
- For smokeless tobacco user (9-item questionnaire), a score of 9 or greater are interpreted as indicating a high degree of dependence, with greater difficulty in quitting, and possibly the need for higher doses of medication.

INVESTIGATION

A simple and an inexpensive instrument such as breath CO monitor that can measure carbon monoxide in the exhaled air, high levels of carbon monoxide (above 7 ppm), can be used to indicate a recent heavy smoking.^[7]

LUNG FUNCTION TEST

The spirometry helps to evaluate age-appropriate lung function, provide an opinion to the patient about his/her current status and also helps to monitor improvement in their lung function after tobacco cessation.^[7]

COTININE TEST

A cotinine test can be used as an index for ETS exposure/passive smoking and as a marker for active smoking. The estimated half-life of cotinine in plasma is about 15-20 h while, the half-life of nicotine is only 0.5-3 h.^[8,14]

COUNSELING

The approach in helping patients quit tobacco and guiding them toward habit cessation by any health professional is termed as counseling. The tobacco user’s self-image and socialization behavior should be assessed based on the stages of behavioral changes theory to

accommodate the new self-awareness of a smoke-free person rather than expecting an immediate, radical change in that individual. The clinician must also address the patient's fear about the withdrawal symptoms.^[15]

The three components of effective counseling and behavioral therapies are^[16]

- i. Practical counseling includes identification of events, internal states, or activities that increase the risk of smoking or relapse, and practice coping of problem solving skills.
- ii. Intra-treatment social support by encouraging the patient in the quit attempt, communicating the patient with care and concern, and encourage the patient to talk about quitting process.
- iii. Extra-treatment social support by training patient in support solicitation from family, friends, and coworkers; prompting support seeking and clinician arranging outside support.

RATIONALE FOR TOBACCO CESSATION COUNSELING (TCC) BY DENTAL PERSONNEL

The commitment of the dental team (includes dentists, dental hygienists, and practice assistants) plays a major role in the primary or the secondary prevention of tobacco addiction, and is important to achieve success in helping patient quit tobacco.^[17] Approximately, 63,000-190,000 smokers would stop smoking in a year if all dentists routinely offered smoking cessation advice as mentioned by Daly *et al.*^[18]

Evidence show that dental practice has been identified as a potential location for smoking cessation activities. Dentists and their team members have access to a large proportion of the smoking population^[19] and have many opportunities to reduce the prevalence of tobacco use.^[20]

Dental treatment often necessitates multiple visits, providing a mechanism for initiation, reinforcement, and support of tobacco cessation activities^[21] by the same individual.^[23] The very early effects of tobacco use manifested in the mouth can be used as a tool to educate the patient without any other aid.^[19] Dental patients are particularly receptive, teachable moment,^[22] to health messages at periodic check-ups, and oral effects of tobacco use provide visible evidence and a strong motivation for tobacco users to quit.^[13,23]

Involving dental personnel takes holistic approach in number of ways: As role models by not smoking; in primary care prevention and cancer detection in their practices; in counseling patients not to smoke; in referring patients to smoking cessation services; in speaking out publicly; and lobbying for comprehensive public policies to control tobacco use. Thus, the involvements of oral health professionals in tobacco use cessation help contribute to wider tobacco control strategies.^[24]

STRATEGIES FOR TCC AT INDIVIDUAL LEVEL IN DENTAL OFFICE

In providing tobacco cessation in dental office, routine screening for tobacco use followed by identification itself increases the rates of dental personnel intervention.⁸ Dentist who recognizes a patient as a tobacco user has a duty to inform the patient of the options available to them.^[13] Effective identification of tobacco use status not only opened the door for successful interventions, but it guided dental personnel to identify appropriate interventions based on patient's tobacco use status and willingness to quit.

Patients, who have not used tobacco in any form, should be complimented and encouraged never to begin. As for tobacco users, a quick assessment should be made of each patients' current habit and aspire them to quit tobacco use. Patients who use tobacco should be advised of the effects of tobacco on general health and on oral health and educate them regarding the oral health that has improved following tobacco cessation explicitly with pictures.^[15] Simple, tailored questioning, advice, and follow-up support are all required to help patients successfully stop tobacco.^[25]

Treatments involving person-to-person contact (via individual, group, or proactive telephone counseling) are consistently effective, and also the effectiveness increases with treatment intensity.^[8] Strong dose-response relationship is also seen between the intensity of tobacco dependence counseling and its effectiveness.^[16] Different levels of addiction are treated differently.

CONCLUSION

Tobacco is a major and foremost cause of preventable death in the world. It is important that all health providers including dental personnel must involve in combating today's tobacco war as no single health care professional can access all tobacco users. Dental team can play a vital role in various forms, at the dental office and at the community level, in decreasing the burdens inflicted by tobacco consumption.

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