

REVIEW ARTICLE



Role of dental professionals in tobacco control

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Abstract

Tobacco use is the leading preventable cause of death in the world. Dentists have a professional responsibility in helping patients quit tobacco and to promote tobacco prevention and control strategies, as a routine component of dental practice. Dental professionals have a key role to play as a member of an interdisciplinary health professional team, where each member delivers a consistent tobacco use cessation message. It is imperative that tobacco use cessation services are an integral part of oral health services. Activities such as educating the public on the health hazards of environmental tobacco smoke and encouraging policies and programs that support prevention and cessation of tobacco use should be encouraged.

Introduction

Tobacco use is considered one of the greatest risk factors for mortality, being the single most preventable cause of death in the world today.^[1] India is the second largest country in the world in population, and India's share of the global burden of tobacco-induced disease and death is substantial. Tobacco use is responsible for worldwide deaths of one in 10 adults. A tobacco user dies from a tobacco-related disease somewhere in the world every 6.5 s. 47.5% of men and 10.3% of women over 15 years of age smoke which gives a total global prevalence in smoking as 29%.^[2] If the present smoking patterns exist, approximately 500 million people alive today will be killed by the tobacco usage habit. By the year 2030, tobacco will be responsible for being the single largest cause of death worldwide, predicting about 10 million deaths a year.^[3]

In the world, India is the second largest consumer of tobacco. The overall prevalence of different types of tobacco use among men has been estimated to be high in most regions of the country (almost exceeding 50%).^[4] Of the 1.3 billion smokers currently, above 900 million live in developing countries and in that 120 million are there from India. Further, a survey done in national level on tobacco usage in India has reported that 16.2% are current tobacco smokers and 20.5% are tobacco chewers. This survey also revealed the fact that beedi is the most popular

form of tobacco smoking, followed by a cigarette. Similarly, in the nonsmoking form, pan with tobacco is the major chewing form of tobacco.^[5]

Oral Health Risks

The detrimental effects of tobacco on oral health are well documented; some of these involve a high degree of risk. Studies have shown that India has the highest prevalence of oral cancer in the world and because of that India is known as the capital of oral cancer. Yearly, 7% of all cancer mortality in males and 4% in females are due to tobacco-associated oral cancers.^[6-8] Moreover, it is calculated that 56,000 new cases of tobacco-associated oral cancers occur yearly, which would estimate to more than 100,000 people suffering from oral cancer-related diseases in the population in any given year. If the disease is detected soon, the survival rate in 5 years comes to around 85%. Nearly, all tobacco users develop periodontal diseases which have a diminishing effect on health and quality of life. When variables such as oral hygiene, age, gender, systemic diseases, medication, and frequency of oral health visits are controlled, cigarette smoking is the most significant risk factor for periodontal disease.^[9]

Maternal tobacco use during the pregnancy also has a negative impact on the fetus oral health. It is associated with intrauterine growth retardation that is harmful to the fetus and child's oral

and dental development. Oral developmental anomalies include cleft palate, dental asymmetry, and morphologic variants such as reduced tooth crown size.^[10] There is also some indication of an interaction between tobacco use and systemic disease, which creates further negative impact on oral health. For example, persons with diabetes are twice as likely to have periodontal attachment loss compared with nondiabetics. However, diabetics who smoke are 30 times more likely to have periodontal attachment loss than persons without these risk factors.^[9] The biological mechanism whereby smoking impacts on periodontal disease requires further study and clarification. There is, however, some indication that it may include changes in the vasculature, the immune and inflammatory systems, tissue oxygenation, and the healing process.^[11]

Role of a Dental Professional

Dental professionals do play an integral part in preventing and curbing tobacco use by identifying the people who use tobacco regularly, documenting their usage history and offering brief advice and written materials, as a part of their routine clinical practice. They can also change their clinical practice patterns so that every patient who uses tobacco could be identified and offered at least a session of brief counseling. They should take time to obtain increased knowledge about tobacco cessation by interacting with their colleagues, reading articles, or participating in continuing tobacco control education opportunities. Displaying self-help cessation materials related to tobacco control and provide additional resources for patients will be helpful. They are authorized to establish tobacco intervention initiative centers or cessation clinics; act as agents for change by advocating policy changes and community-based programs that would help to reduce tobacco use such as enacting smoke-free policies, supporting health promotion campaigns related to cessation, increasing tobacco taxation, and restrictions in tobacco advertising.

The role of the dentist has been highlighted at an individual level and community level.^[6,12] The individual level is at chair side in clinic, where the dentists see the ill effects of tobacco usage. Dentists spend more time with their patients than physicians, and so they should use this time for patient counseling by giving them good support and also to promote their lifestyles encouraging them to be healthier. This can be done by spending few minutes of focused talk during the oral examination, and thus, counseling the patient to make them aware and conscious about harmful effects of the habit of tobacco. Thereby, every interaction of dental practitioners with their patients in each visit can lead to a significant change in their behavior and attitude toward tobacco cessation. In a community level, local dental societies and dentists can become involved in local tobacco control coalitions, which function to mobilize and empower the community to make the changes that support nonuse of tobacco.^[13] Community-based programs should include activities such as educating the public on the health hazards of environmental tobacco smoke, and

encouraging policies and programs that support prevention and cessation of tobacco use.

Counseling Guide for Tobacco Cessation

Dentists have important skills in health promotion, disease prevention, health education, and behavioral motivation that would allow them to provide the effective tobacco use cessation services. Brief clinical interventions are 3 min interventions, incorporating the "Five A's" (described below) for those who are willing to quit. This intervention has five major steps: Ask, advice, assess, assist, and arrange. The dental clinical setting may be well suited to the brief intervention rather than more intensive counseling since tobacco counseling sessions are only one of the numbers of other oral health services delivered by a dentist in a limited amount of time.

The Five A's: ^[14,15]

1. **Ask:** Determine tobacco use status and flag the chart of those who are actively using tobacco, to prompt future discussions. Mention the observations to the patient to help him or her face facts. Systematic identification and tracking of tobacco using clients are an essential first step
2. **Advice:** Advice should be clear, strong, and personalized so that it prompts the tobacco users to quit the habit and non-users to never use tobacco at all. Advise the patients of their current oral condition, which may be related to tobacco, use and teach them how to detect possible future signs or symptoms that they should be looking for. Furthermore, educate the patient regarding the health benefits of tobacco use cessation
3. **Assess:** Ask if the patient is interested in quitting. Assess the smoking history and patterns. If the patient is only thinking of quitting but not willing to quit now, provide a "tailored message" to increase motivation. Furthermore, assess the risk of relapse
4. **Assist:** Help the patient to stop the habit by providing self-help materials and counseling. Provide a patient-centered counseling which offers support and recommends first or second-line pharmacotherapies, especially for depressed patients and those who have tried to quit several times and failed
5. **Arrange:** To prevent relapse, arrange for a follow-up visit or contact by phone, or provide a referral to a tobacco use cessation program/counselor/phone line.

Two other integral aspects of the "Five A" approach include determining the patient's level of dependence and willingness to quit. The level of dependence can be assessed using a simple or more complex method. A simple method may include a tally of their tobacco usage: Low level of dependence: Individuals those who neither use tobacco before 30 min of waking up nor use it more than 25 times a day. Moderate: Who use tobacco more than 30 min after waking up or <25 times/day. High: Individuals who use tobacco within 30 min of waking up or who use it 25 or more times/day. This may not be as accurate as a more complex

method, such as the Fagerstrom test, consists of questions about the timing of the first tobacco usage of the day, previous history of withdrawal, and ability to resist the urge when tobacco is not used.^[16]

A willingness to quit can be assessed with a variety of techniques. Prochaska's transtheoretical model of change is a comprehensive method for assessing willingness to quit. It includes the following concept of stages of "change readiness" or willingness to quit.^[17] Precontemplation: Patients who are not ready to quit in the next 6 months. Remind the client that services are available when they are ready to use them. Contemplation: Patients who are ready to stop in the next 6 months, who have not attempted to stop in the last year. Offer them self-help material and provide an opportunity to discuss plans to quit, assistance planning or setting a quit date. Preparation: Patients who are ready to quit in the next month, who have made an attempt in the last year. Offer them self-help material, refer them to other health professionals and an opportunity to discuss plans to quit, assistance planning or setting a quit date. Action: Patients who are making a quit attempt. They can be provided with encouragement and information about relapse. Maintenance: Patients who are maintaining their quit attempts. They can be provided with encouragement and information about relapse. Individual's cycle through these stages and a relapse may be followed by beginning again at the precontemplation stage. The cycle through the stages above may be repeated at least 2-3 times.

For those people who are not willing to quit the habit, use the five "R" methods. Ask the patient and/or advise the patient about (1) relevance of quitting: Enlighten the patient on what he/she does not know, (2) risks of continuing tobacco use: All the acute and long-term health risks and environmental risks should be explained to them, (3) Rewards of quitting: Apart from a longer and healthier life, they should also be conveyed about the money saved or the importance of setting a good example to their children, (4) Roadblocks to quitting: Their fear of withdrawal symptoms or failure should be dealt seriously and should help them to overcome that, and (5) Repeat these at every visit: Tobacco users who have failed to quit previously need to hear that most people make repeated attempts before they are successful.^[15]

Evidence suggests that even a brief advice leads to a drastic increase in the tobacco cessation rate of about 2.5% and 70% of the needed population who are tobacco users, see a clinician or a dentist at least once a year. So given the high prevalence of patients who are tobacco users, these interventions can have an enormous impact.^[18] As a dental practitioner, one has the unique opportunity to link the tobacco user patient's presenting illness to his/her habit, and then prescribe therapy of tobacco cessation.

The timing of advice is very important. If patient visits with an acute illness (e.g., pain in tooth) then that should be addressed first, and advice should be given at 1st and all subsequent visits. Repetition of advice in each patient visit and documentation of tobacco cessation advice on the prescription pad/discharge slip is also required. Customize the ill effects of tobacco as per tobacco user profile. There is a need to emphasize the ill effects

of tobacco usage that would be most relevant to each particular tobacco user. The patient's current illness needs to be linked to tobacco use. Clarify, that the presenting illness will not resolve unless tobacco usage is discontinued. Communicate to the tobacco user that there is help available if the tobacco user is interested. On the basis of patient co-morbidities, age and motivation quotient, dental practitioners should decide and advice on an interventional approach or a preventive approach for tobacco users.

It is well-known that tobacco quitting is not an event but a process which not only requires personal efforts but also requires good coordination from all the sectors to achieve greater success rates. The intervention which aimed at tailoring messages to the individual's stage of change can help the existing user move forward on the road to permanent abstinence.^[19] Thus, adopting such tailored messages into the field of dentistry can be one of the most effective therapies for behavioral intervention.

Conclusion

Tobacco usage will soon emerge as the single most known cause of mortality and morbidity in the world, therefore, it is imperative that various health agencies and professionals must work together to help their patients and public quit this habit at the earliest. Dentists play a tremendous role in making people aware of the ill effects of tobacco. Dental schools need to incorporate into their curricula not just didactic instruction on the oral health impact of tobacco use, but practical training in clinical intervention (for example, role-playing discussions between dentists and patients). The next generation of dentists should graduate with competency in assessing and treating tobacco use.

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