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ADOHTA Position Paper – Tobacco and Oral Health

Oral Health risks associated with smoking

Tobacco smoking remains the single most preventable cause of illness and death in Australia. Tobacco smoking is associated with many different types of serious illness, such as cardiopulmonary diseases, cancer, and low birth weight as well as many problems of health. Tobacco smoking is also linked to a harmful impact on oral health. Tobacco is consumed through mouth in a variety of ways. Mostly as smoked but many different populations use smokeless tobacco Smokeless tobacco and betel nut chewing produce similar risks of cancer development as tobacco smoking.

Smoking causes bad breath, stained teeth, reduced taste and changes to the gums. Quitting smoking reduces the risk of oral cancer and gum disease. Cessation of tobacco use positively effect and has many benefits of improving oral health.

The following are conditions and risks of smoking on oral health identified by the EU Working Group on Tobacco and Oral Health:

Aesthetics

Smoking causes discolouration of teeth, dental restorations and dentures. The discolouration effect of smoking is more severe than that of the consumption of coffee and tea.

Smell and taste

Many studies have shown that taste and smell acuity are affected by smoking. Smoking is a common cause of halitosis and smokers have an increased risk of calculus (tartar) build up which can make bad breath worse. Constant use of mints to freshen breath may lead to tooth decay; sugar free mints are recommended.

Wound healing

Evidence indicates that tobacco influences wound healing in the mouth, e.g. after periodontal scaling and curettage, periodontal surgery or tooth extraction. However, the amount smoked (ed 1 or 20 cigarettes a day) doesn't directly correlate to the effect on wound healing. The mechanism of impaired healing is likely associated with increased plasma levels of adrenaline and noradrenaline after smoking, leading to peripheral vasoconstriction. Several studies also show impaired PMN (Polymorphonuclear neutrophil) function in smokers compared with non-smokers.

Periodontal diseases

The association between tobacco smoking and periodontitis has been studied during the past 20 years in well controlled studies on large groups of populations. The results from these studies suggest smokers to have an increased prevalence and severity of periodontitis, as reported by greater marginal bone loss, deeper periodontal pockets, more severe attachment loss and more teeth with furcation involvements.

In many of the studies multivariate analyses suggested smoking as an independent risk factor for periodontal disease; after oral hygiene, plaque, calculus, and socio-economic factors were controlled for. Risk assessments suggest the smoking-attributable relative risk for a smoker to be 2.5 to 6.0 the risk of a non-smoker.

There is increasing evidence that tobacco is detrimental to both the initial and long-term success of dental implants, and that smoking cessation can be beneficial in improving implant success rates.

Acute necrotizing ulcerative gingivitis (ANUG)

Many studies have reported smokers to have a higher prevalence of ANUG than non-smokers. Recently, a similar relationship has been reported between smoking and ANUG-like lesions in HIV infected individuals. The results from these studies show a clear association between smoking and ANUG.

Oral Cancer

Smoking is a major cause of oral cancers. The risk of oral cancer increases with the number of cigarettes smoked, the length of time people have smoked and if they are heavy drinkers.

Signs and symptoms of oral cancer vary. They may be white or red patches in the mouth that don't go away, sores that don't heal, changes in the way teeth fit together or lumps and swellings. Diagnosed in the early stages, oral cancers may often be successfully treated. Oral cancers can be detected during dental check-ups.

Smoking cessation

A number of studies undertaken in a variety of populations have found that the risk of oral cancer is substantially higher in smokers than in non-smokers and that smoking cessation reduces this gap. The EU working group found that within 5-10 years the increased risk of oral cancer for smokers is decreased.

Studies have found that a 3 minute conversation with a smoker by a health professional could assist 2% of the smoking population to successfully stop. The addition of Nicotine Replacement Therapy (NRT) and a 10 minute conversation will aid another 6% to quit.

Evidence-based advice given in a primary dental setting would have a substantial impact on patient smoking cessation. Studies have shown that interventions in a dental setting are as effective as any other healthcare setting.

Dental and Oral Health Therapists have access to smokers in the healthcare system, and a direct professional awareness of the harmful impact of smoking on the oral cavity.

Current facts on tobacco and oral health, and smoking cessation, should be a fundamental part of the curricula of oral health programs and continuing professional development courses.

How can oral health practitioners help patients to QUIT smoking?

The entire dental team should be aware of the impact of smoking on oral health, and should be encouraged to actively participate in tobacco intervention routines. Dental and Oral Health Therapists' already have an essential role in oral health promotion, and this role is extended to educating patients on the harmful effects of tobacco. Tobacco cessation assistance can be integrated into a practice's hygiene procedures.

The pathological effects of smoking on oral tissues are well recognised. The most significant effects of smoking on the mouth are oral cancers, poor wound healing and more severe and widespread periodontal diseases.

Smoking remains the highest contributing factor to oral cancer at between 75-90%, and the risk to heavy smokers is estimated to be around seven times the risk to non-smokers. Over a ten year period of non-smoking, however, it is estimated that a once-heavy smoker's increased level of risk will fall to around that of a non-smoker. This statistic can be a useful motivator.

Dental and Oral health Therapists' have a high level of access to school-aged, low to middle-income or pregnant patients, groups the World Health Organisation (WHO) has highlighted in its tobacco prevention strategies. Oral health practitioners are in a position of substantial influence in this instance, and have the direct opportunity to encourage smoking cessation among these high-risk groups.

The early effects of smoking are often clearly visible, even to patients, on facial and oral tissues, and are reversible upon cessation. Halitosis and tooth staining are also significantly lower in non-smokers and may be strong motivators to quit, particularly among young people. Patients will respond to different advice and have different reasons for quitting, therefore guidance should be strong, personalised and concise.

The Australian Government's Department of Health has outlined the following guidelines which may assist health professionals in encouraging patients to quit[1]:

> ***Ask*** *- Identify and document tobacco use status for every patient at every visit.*
>
> ***Advise*** *- In a clear, strong, and personalised manner, urge every tobacco user to quit.*
>
> ***Assess*** *- Is the tobacco user willing to make a quit attempt at this time?*
>
> ***Assist*** *- For the patient willing to make a quit attempt, use counseling and pharmacotherapy to help him or her quit.*
>
> ***Arrange*** *- Schedule follow-up contact, in person or by telephone, preferably within the first week after the quit date.*

When a patient has identified that they want to quit smoking, the appropriate level of support should be offered to them. This can include:

• Advising them to commit to a definite quit date

[1] http://www.health.gov.au/internet/main/publishing.nsf/Content/lifescripts-gen-methsmo

• Reviewing their past attempts at quitting — determine what happened, identify what helped and hindered progress

• Identify future problems and devise ways of dealing with these

• Enlist the support of the patient's family and friends — a critical element for success

• Encourage the use of NRT

• Make them aware of the free support and advice available from Quitline (13 78 48)

Assisting patients to stop using tobacco may be the single most important service oral health practitioners can provide for their patients' overall general health.