Impact of Tobacco Use

Systemic Health Impact of Tobacco Use

- 90% of lung cancer cases
- Strong risk factor other cancers
- 80% and 90% of COPD deaths
- High blood pressure, stroke and heart attack
- Linked to Alzheimer’s disease
- Use during pregnancy endangers mother and fetus

Oral Health Impact of Tobacco Use

- Oral cancer and mucosal lesions
- Periodontal disease, impaired healing
- Caries
- Xerostomia
- Halitosis and staining
- Factor in Early Childhood Caries

Health Changes Following Tobacco Cessation

Year 1

- Cardiovascular improvements
- Social and sensory improvements
- Rapid improvement in periodontal status
- Regression of oral mucosal lesions
- Reduced caries risk

Year 10

- Cardiovascular improvements
- Reduced risk of cancers
- Reduced incidence of leukoplakia
- Reduced risk of tooth loss
- Reduced caries risk

The Dental Office and Tobacco Cessation

Patient Perspectives on Smoking Cessation

- Dental students should advise
- Majority believe dental offices should offer programs
- Patients interested in quitting are more comfortable getting advice

Dental Professional Perspectives on Barriers

- Lack of time/education/knowledge/renumeration
- Perception that patients are resistant/not interested/would leave the practice

Source: Surveys in US, Canada, UK, Australia, Europe

Tobacco Cessation Programs

Clinical practice guidelines recommend that all health care providers include tobacco cessation counseling in routine practice – US Public Health Service

- Patient must be motivated
- Tobacco is addictive - Physiological (all types) and Psychological (smoking)
Dental Office Effectiveness

“Strong supporting evidence for the incorporation of smoking cessation services into dental patient care” – Brothwell et al

Tobacco Cessation Methods

- Referral, counseling, quitlines, stand-alone
- Pharmacotherapeutic intervention
- Self-help materials
- School-based
- Use of the ‘5As’
  (Ask, Advise, Assess, Assist, Arrange follow-up)

‘Assisting’ Cessation Methods

- Pharmacological intervention
- Individual counseling
- Pamphlets
- Support groups
- Internet support programs

Nicotine Replacement Therapy (NRT)

- Provides controlled doses of nicotine
- Relieves withdrawal symptoms
- Increase cessation rates 150% to 200%
- Available in many forms to increase
  patient acceptance

FDA 2009: Required Boxed Warning on prescribing information for varenicline and bupropion.
“Highlight the risk of serious mental health events including changes in behavior, depressed mood, hostility, and suicidal thoughts. Weigh risks versus benefits”

Considerations for Individualizing Programs

- Clinician and patient preferences
- Previous attempts
- Potential side effects
- Contraindications
- Gain-framed messaging more effective

Medications

- Nicotine Gum
- Nicotine Inhaler (Rx)
- Nicotine Lozenges
- Nicotine Nasal Spray (Rx)
- Nicotine Patch
- Bupropion SR (Zyban)
- Varenicline (Chantix)

Comparative Effectiveness

- Varenicline and bupropion superior to NRT (gum or patch) at 3 months and 1 year
- Varenicline superior to bupropion

Wu et al.

General Considerations

- Must address all dosage, side effects and contraindications
- Full medical history, how to effectively and safely administer the program
- If preferred, individual patients can be referred to physician or a specialist
**Dental Office Effectiveness of Cessation Programs**

- Outcomes analysis: 10 – 15% quit rate
- Gordon et al.: 2177 tobacco users, 68 dental offices
- Advice to quit vs. 5 As
- Both have a higher quit rate than ‘usual care’
- 5As resulted in the greatest quit rate

**Effectiveness of RDH program**

- 116 patients (59 test and 57 control)
- Intervention using the 5As plus NRT
- 1-year quit rate ~x2 vs. no intervention

(Binnie et al.)

**Professional and Home-Based Oral Care**

**Considerations**

- Motivational factors
- Special care of smoker / recent smoker
- Routine care for all
- Oral cancer screening
- Periodontal care
- Preventive care

**Motivational and Preventive Treatment**

- Remove calculus and stain
- Reduce halitosis
- Provide patients with a new toothbrush
- Oral hygiene recommendations
- Toothwhitening

**Palliative Care: Aphthous Ulcers**

- 2% lidocaine or 20% benzocaine gels/pastes
- Rincinol or Gelclair rinse – widespread lesions
- 5% amlexanox paste
- Triamcinalone acetonide (corticosteroid paste)

- Fluocinonide paste
- Hydrocortisone hemisuccinate
- Tetracycline/minocycline rinses
- L-lysine
- Zinc lozenges

**Conclusions**

- Quitting reverses increased risk of diseases
- All health care professionals should be involved in tobacco cessation
- Program must consider individual patient, risks and benefits of options available
- Assistance and support are essential
- Program can be tailored to patient and office
- Professional oral care needs of smoker and recent smoker must be addressed
- Helping patients feel motivated is important
- Tobacco cessation through the dental office can be effective
Selected References


Collins FM. The Impact of Tobacco on Oral Health and Tobacco Cessation.


