

## A SELECTION OF TEN CURRENT READINGS ON TOPICS RELATED TO ORAL HEALTH IN PRIMARY CARE AVAILABLE AS FREE FULL-TEXT OR PAYMENT REQUIRED

Selection of readings made by A/Prof Goh Lee Gan

---

### READING 1 – Common acute conditions of the oral cavity

**Edwards PC, Kanjirath P. Recognition and management of common acute conditions of the oral cavity resulting from tooth decay, periodontal disease, and trauma: an update for the family physician. J Am Board Fam Med. 2010 May-Jun;23(3):285-94.**

URL: <http://www.jabfm.org/cgi/reprint/23/3/285> (free full text)

Department of Periodontics and Oral Medicine, Faculty of Dentistry, University of Michigan, Ann Arbor, MI 48109-1078, USA. paulce@umich.edu

#### SUMMARY

This article presents an overview of common and/or significant diseases of the oral cavity that the family physician is likely to encounter, with an emphasis on pathogenesis, recognition, complications, and management. Topics reviewed include the sequelae of dental caries, periodontal disease, and trauma. Prevention and early intervention strategies are emphasized. Recent updates and practical issues for the family physician are highlighted. PMID: 20453174 [PubMed - indexed for MEDLINE]

---

### READING 2 – Common tongue conditions in primary care

**Reamy BV, Derby R, Bunt CW. Common tongue conditions in primary care. Am Fam Physician. 2010; Mar 1;81(5):627-34.**

URL: <http://www.aafp.org/afp/2010/0301/p627.html> (free full text)

Uniformed Services University of the Health Sciences, 4301 Jones Bridge Rd., Bethesda, MD 20814, USA. breamy@usuhs.mil

#### SUMMARY

Although easily examined, abnormalities of the tongue can present a diagnostic and therapeutic dilemma for physicians. Recognition and diagnosis require a thorough history, including onset and duration, antecedent symptoms, and tobacco and alcohol use. Examination of tongue morphology and a careful assessment for lymphadenopathy are also important. Geographic tongue, fissured tongue, and hairy tongue are the most common tongue problems and do not require treatment. Median rhomboid glossitis is usually associated with a candidal infection and responds to topical antifungals. Atrophic glossitis is often linked to an underlying nutritional deficiency of iron, folic acid, vitamin B12, riboflavin, or niacin and resolves with correction of the underlying condition. Oral hairy leukoplakia, which can be a marker for underlying immunodeficiency, is caused by the Epstein-Barr virus and is treated with oral antivirals. Tongue growths usually require biopsy to differentiate benign lesions (e.g., granular cell tumors, fibromas, lymphoepithelial cysts) from premalignant leukoplakia or squamous cell carcinoma. Burning mouth syndrome often involves the tongue and has responded to treatment with alpha-lipoic acid, clonazepam, and cognitive behavior therapy in controlled trials. Several trials have also confirmed the effectiveness of surgical division of tongue-tie (ankyloglossia), in the context of optimizing the success of breastfeeding compared with education alone. Tongue lesions of unclear etiology may require biopsy or referral to an oral and maxillofacial surgeon, head and neck surgeon, or a dentist experienced in oral pathology. PMID: 20187599 [PubMed - indexed for MEDLINE]

---

**READING 3 – Oral health manifestations of systemic disease**

**Chi AC, Neville BW, Krayner JW, Gonsalves WC. Oral manifestations of systemic disease. Am Fam Physician. 2010 Dec 1;82(11):1381-8. Review. PubMed PMID: 21121523.**

URL: <http://www.aafp.org/afp/2010/1201/p1381.html> (payment is required)

Medical University of South Carolina, Charleston, 29425, USA. [chi@musc.edu](mailto:chi@musc.edu)

SUMMARY

Careful examination of the oral cavity may reveal findings indicative of an underlying systemic condition, and allow for early diagnosis and treatment. Examination should include evaluation for mucosal changes, periodontal inflammation and bleeding, and general condition of the teeth. Oral findings of anemia may include mucosal pallor, atrophic glossitis, and candidiasis. Oral ulceration may be found in patients with lupus erythematosus, pemphigus vulgaris, or Crohn disease. Additional oral manifestations of lupus erythematosus may include honeycomb plaques (silvery white, scarred plaques); raised keratotic plaques (verrucous lupus erythematosus); and nonspecific erythema, purpura, petechiae, and cheilitis. Additional oral findings in patients with Crohn disease may include diffuse mucosal swelling, cobblestone mucosa, and localized mucogingivitis. Diffuse melanin pigmentation may be an early manifestation of Addison disease. Severe periodontal inflammation or bleeding should prompt investigation of conditions such as diabetes mellitus, human immunodeficiency virus infection, thrombocytopenia, and leukemia. In patients with gastroesophageal reflux disease, bulimia, or anorexia, exposure of tooth enamel to acidic gastric contents may cause irreversible dental erosion. Severe erosion may require dental restorative treatment. In patients with pemphigus vulgaris, thrombocytopenia, or Crohn disease, oral changes may be the first sign of disease. PMID: 21121523 [PubMed - indexed for MEDLINE]

**READING 4 – Oral health manifestations of systemic disease**

**Dounis G, Ditmyer MM, McClain MA, Cappelli DP, Mobley CC. Preparing the dental workforce for oral disease prevention in an aging population. J Dent Educ. 2010 Oct;74(10):1086-94. PubMed PMID: 20930239.**

URL: <http://www.jdentaled/cgi/reprint/74/10/1086> (Free full text)

Department of Clinical Sciences, School of Dental Medicine, University of Nevada, Las Vegas, 1000 Shadow Lane, Las Vegas, NV 89106, USA. [georgia.dounis@unlv.edu](mailto:georgia.dounis@unlv.edu)

SUMMARY

The growing proportion of older adults in the U.S. population, as well as escalating dental expenditures, is leading to major changes in the demands on oral health care delivery. Researchers over the years have clearly demonstrated the shortcomings of traditional restorative treatment and the cycle of repeat interventional care. Oral health care professionals are constantly seeking advances in technology, protocols, methodologies, and materials to meet the needs of the growing, diverse older population. Early stages of oral diseases such as caries and periodontal disease are vigorous, preventable, and reversible. Assessment of social, systemic, and oral risk factors that emphasize patient counseling to facilitate risk reduction, along with individualized evidence-based disease prevention planning, is more cost-effective than traditional restorative treatment and will improve overall outcome. The purposes of this article are to briefly describe current issues and challenges related to oral health promotion for older adults and to examine strategies for disease prevention and health promotion in health and dental care settings. PMID: 20930239 [PubMed - indexed for MEDLINE]

## READING 5 – Oral health in children guidelines

**Chandna P, Adlakha VK. Oral health in children guidelines for pediatricians. Indian Pediatr. 2010 Apr;47(4):323-7. Review. PubMed PMID: 20431159.**

URL: <http://www.indianpediatrics.net/apr2010/323.pdf>

Department of Pedodontics and Preventive Dentistry, Subharti Dental College, NH- 58, Delhi Haridwar Bypass, Meerut, UP, India. [drpreetikachandna@gmail.com](mailto:drpreetikachandna@gmail.com)

Comment in:

Indian Pediatr. 2010 Oct;47(10):897-8; author reply 898.

Indian Pediatr. 2010 Sep;47(9):812; author reply 812.

### SUMMARY

Dental caries in the primary dentition can have significant damaging effects on a child's growth due to impairment of oral functions. Since the first encounter of a child to a medical environment is often through pediatricians and medical practitioners, it is important that they be aware of the prevention of oral disease that begins early in life. The aim of this article is to diminish the existing ambiguity among pediatricians and medical practitioners regarding oral disease and its prevention. PMID: 20431159 [PubMed - indexed for MEDLINE]

---

## READING 6 – Oral health of patients with intellectual disabilities

**Anders PL, Davis EL. Oral health of patients with intellectual disabilities: a systematic review. Spec Care Dentist. 2010 May-Jun;30(3):110-7.**

URL: <http://onlinelibrary.wiley.com/doi/10.1111/j.1754-4505.2010.00136.x/pdf> (free full text)

Department of Oral Diagnostic Sciences, State University of New York at Buffalo School of Dental Medicine Buffalo, New York, USA. [planders@buffalo.edu](mailto:planders@buffalo.edu)

Comment in:

Evid Based Dent. 2010;11(3):81.

### SUMMARY

A systematic review of original studies was conducted to determine if differences in oral health exist between adults who have intellectual disabilities (ID) and the general population. Electronic searching identified 27 studies that met the inclusion criteria. These studies were assessed for strength of evidence. People with ID have poorer oral hygiene and higher prevalence and greater severity of periodontal disease. Caries rates in people with ID are the same as or lower than the general population. However, the rates of untreated caries are consistently higher in people with ID. Two subgroups at especially high risk for oral health problems are people with Down syndrome and people unable to cooperate for routine dental care. Evidence supports the need to develop strategies to increase patient acceptance for routine care, additional training for dentists to provide this care, and the development of more effective preventive strategies to minimize the need for this care. PMID: 20500706 [PubMed - indexed for MEDLINE]

---

**READING 7 – Barriers to the adoption and implementation of preventive dental services in primary care**

**Close K, Rozier RG, Zeldin LP, Gilbert AR. Barriers to the adoption and implementation of preventive dental services in primary medical care. *Pediatrics*. 2010 Mar;125(3):509-17. Epub 2010 Feb 1. PubMed PMID: 20123767.**

URL: <http://pediatrics.aappublications.org.libproxy1.nus.edu.sg/cgi/reprint/125/3/509>

MSUP, University of North Carolina, Gillings School of Global Public Health, Department of Health Policy and Management, 1105-F McGavran-Greenberg Hall, 135 Dauer Dr, CB 7411, Chapel Hill, NC 27499, USA.

SUMMARY

**OBJECTIVE:** To determine the barriers to adopting preventive oral health procedures in medical primary care. **METHODS:** Medical providers who participated in a Medicaid demonstration in North Carolina completed questionnaires reporting their experiences with providing preventive dental services for children from birth to 3 years of age. Eleven factors were established as possible obstacles to the adoption of an oral health program. After 12 months of participation in the Into the Mouths of Babies training program, providers (N = 231) from 49 pediatric practices and 28 family physician practices reported if any of the 11 factors had been an obstacle to adoption and, if so, whether these obstacles were overcome. Program adoption and implementation, defined as providing all of the services on a regular basis, were predicted by using logistic regression to analyze the responses from providers who reported 1 or more barriers, the number of barriers identified (knowledge, attitudes, and external factors), and the number that were overcome.

**RESULTS:** Program-adoption rates were high, with 70.3% of the participants providing dental services on a routine basis. Attitude and external factors were positively associated with adoption, particularly with difficulty in applying the varnish, integration of the dental procedures into practice, resistance among staff and colleagues, and dentist referral difficulties. From 40.4% to 61.5% of providers overcame these 4 most common barriers. Those who reported external barriers and were unable to overcome them were less likely to provide the services, compared with those providers who reported no barriers (odds ratio: 0.08 [95% confidence interval: 0.01-0.44]).

**CONCLUSIONS:** The number of barriers to adopting preventive dental procedures in primary care medical practices is associated with implementation. A large proportion of these barriers can be overcome, leading to high adoption rates in a short amount of time. The barriers to adoption are similar to those identified in the literature on changing patient care, with the unique aspects of fluoride application to teeth. Interventions to promote preventive dental care in medical settings should rely heavily on empirical literature. Training physicians in preventive dentistry should identify and target potential barriers with information and options for introducing office-based systems to improve the chances of adoption.

PMID: 20123767 [PubMed - indexed for MEDLINE]

**READING 8 – Methodological issues in epidemiological studies of periodontitis**

**Leroy R, Eaton KA, Savage A. Methodological issues in epidemiological studies of periodontitis--how can it be improved? BMC Oral Health. 2010 Apr 21;10:8.**

URL: <http://www.biomedcentral.com/1472-6831/10/8>

Catholic University Leuven, Leuven, Belgium. roos.leroy@med.kuleuven.be

SUMMARY

**BACKGROUND:** This position paper was commissioned by the European Association of Dental Public Health, which has established six working groups to investigate the current status of six topics related to oral public health. One of these areas is epidemiology of periodontal diseases.

**METHODS:** Two theses “A systematic review of definitions of periodontitis and the methods that have been used to identify periodontitis” 1 and “Factors affecting community oral health care needs and provision” 2 formed the starting point for this position paper. Additional relevant and more recent publications were retrieved through a MEDLINE search.

**RESULTS:** The literature reveals a distinct lack of consensus and uniformity in the definition of periodontitis within epidemiological studies. There are also numerous differences in the methods used. The consequence is that data from studies using differing case definitions and differing survey methods are not easily interpretable or comparable. The limitations of the widely used Community Periodontal Index of Treatment Need (CPITN) and its more recent derivatives are widely recognized. Against this background, this position paper reviews the current evidence base, outlines existing problems and suggests how epidemiology of periodontal diseases may be improved.

**CONCLUSIONS:** The remit of this working group was to review and discuss the existing evidence base of epidemiology of periodontal diseases and to identify future areas of work to further enhance it.

PMCID: PMC2874507 PMID: 20409298 [PubMed - indexed for MEDLINE]

**READING 9 – Oral health status of adults in Southern Vietnam – a cross-sectional epidemiological study**

**Nguyen TC, Witter DJ, Bronkhorst EM, Truong NB, Creugers NH. Oral health status of adults in Southern Vietnam - a cross-sectional epidemiological study. BMC Oral Health. 2010 Mar 13;10:2. PubMed PMID: 20226082; PubMed Central PMCID: PMC2841650.**

URL: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2841650/?tool=pubmed> (Free full text)

Department of Prosthodontics, Dental School, University of Medicine and Pharmacy, Can Tho, Vietnam.

SUMMARY

**BACKGROUND:** Before strategies or protocols for oral health care can be advised at population level, epidemiological information on tooth decay patterns and its effects on oral function are indispensable. The aim of this study was to investigate influences of socio-demographic variables on the prevalence of decayed, missing, filled (DMF) and sound teeth (St) and to determine the relative risk of teeth in different dental regions for D, M, and F, of adults living in urban and rural areas in Southern Vietnam.

**METHODS:** Cross-sectional DMF and St data of 2965 dentate subjects aged 20 to 95 living in urban and rural areas in three provinces were collected by means of a self-administered questionnaire and an oral examination. The sample was stratified by age, gender, residence and province.

**RESULTS:** The percentage of subjects having missing teeth was high for all ages while it was low for subjects with decayed and filled teeth. The mean number of missing teeth increased gradually by age from approximately 1 in each jaw at the age of 20 to 8 at the age of 80. The number of decayed teeth was relative low at all ages, being highest

in molars at young ages. The mean number of filled teeth was extremely low at all ages in all dental regions. Every additional year of age gives a significantly lower chance for decay, a higher chance for missing, and a lower chance for filled teeth. Molars had a significantly higher risk for decay, missing and filled than premolars and anterior teeth. Females had significantly higher risk for decayed and filled teeth, and less chance for missing teeth than males. Urban subjects presented lower risk for decay, but approximately 4 times greater chance for having fillings than rural subjects. Low socio-economic status (SES) significantly increased the chance for missing anterior and molar teeth; subjects with high SES had more often fillings.

**CONCLUSIONS:** The majority of adults of Southern Vietnam presented a reduced dentition. The combination of low numbers of filled teeth and relative high numbers of decayed and missing teeth indicates that the main treatment for decay is extraction. Molars are more at risk for being decayed or missing than premolars and anterior teeth.

PMCID: PMC2841650 PMID: 20226082 [PubMed - indexed for MEDLINE]

### **READING 10 – Determinants for high and low dental caries prevalence in Nevada youth – a case-control study**

**Ditmyer M, Dounis G, Mobley C, Schwarz E. A case-control study of determinants for high and low dental caries prevalence in Nevada youth. BMC Oral Health. 2010 Nov 11;10:24. PubMed PMID: 21067620; PubMed Central PMCID: PMC2989299.**

URL: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2989299/?tool=pubmed> (Free full text)

UNLV School of Dental Medicine, Las Vegas, NV 89106, USA. [marcia.ditmyer@unlv.edu](mailto:marcia.ditmyer@unlv.edu)

#### SUMMARY

**BACKGROUND:** The main purpose of this study was to compare the 30% of Nevada Youth who presented with the highest Decayed Missing and Filled Teeth (DMFT) index to a cohort who were caries free and to national NHANES data. Secondly, to explore the factors associated with higher caries prevalence in those with the highest DMFT scores compared to the caries-free group.

**METHODS:** Over 4000 adolescents between ages 12 and 19 (Case Group: N = 2124; Control Group: N = 2045) received oral health screenings conducted in public/private middle and high schools in Nevada in 2008/2009 academic year. Caries prevalence was computed (Untreated decay scores [D-Score] and DMFT scores) for the 30% of Nevada Youth who presented with the highest DMFT score (case group) and compared to the control group (caries-free) and to national averages. Bivariate and multivariate logistic regression was used to analyze the relationship between selected variables and caries prevalence.

**RESULTS:** A majority of the sample was non-Hispanic (62%), non-smokers (80%), and had dental insurance (70%). With the exception of gender, significant differences in mean D-scores were found in seven of the eight variables. All variables produced significant differences between the case and control groups in mean DMFT

Scores. With the exception of smoking status, there were significant differences in seven of the eight variables in the bivariate logistic regression. All of the independent variables remained in the multivariate logistic regression model contributing significantly to over 40% of the variation in the increased DMFT status. The strongest predictors for the high DMFT status were racial background, age, fluoridated community, and applied sealants respectively. Gender, second hand smoke, insurance status, and tobacco use were significant, but to a lesser extent.

**CONCLUSIONS:** Findings from this study will aid in creating educational programs and other primary and secondary interventions to help promote oral health for Nevada youth, especially focusing on the subgroup that presents with the highest mean DMFT scores.

PMCID: PMC2989299 PMID: 21067620 [PubMed - indexed for MEDLINE]