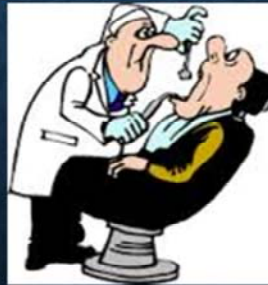


ORAL HEALTHCARE: OPEN YOUR MOUTH AND SAY “AHHHH”!

Jeremy Teoh, DDS, MPH



OBJECTIVES:



1. Overview of the role of oral health provider
2. Common oral health problems and what to look for
3. Psychosocial issues
4. Inter-Professional Team Care
5. The Kayser-Jones Brief Oral Health Status Examination (BOHSE)
6. Practicing oral screenings using BOHSE
7. Questions

1. WHAT DO DENTISTS DO AND USE?

- Health care practitioners who specialize in the diagnosis, prevention, and treatment of diseases and conditions of the oral cavity
- Procedures include cleanings, fillings, crowns, endodontics, extractions, implants, dentures, surgery, and orthodontics
- Most dental procedures can cause bleeding and bacteremia
- Routine use of dental anesthesia (2% Lidocaine with 1:100K epinephrine)
- Dental procedures are **STRESSFUL!!!**



WHAT DO DENTISTS NEED TO KNOW ABOUT THEIR PATIENTS AND WHY?

- Medical conditions (Type, Treatments, Status, Lab results)
 - Ex. Cardiovascular diseases and conditions, Diabetes, Bleeding disorders
- History of surgery and hospitalization (when, for what reason, what treatments were rendered)
 - Ex. Total joint replacements, Cancer treatments
- Medications patient is taking
 - Ex. Bleeding risks, oral side effects
- Allergies to medications



Example: HbA1c important for assessment of proper healing following invasive dental procedures.

Joint replacements may often require use of prophylactic antibiotics.

Bleeding risks – example Coumadin levels and knowing the INR (<3.5 ideal 24 hours prior).

2. COMMON ORAL HEALTH PROBLEMS

- Periodontal disease (gum disease)
- Dental caries (cavities)
- Tooth loss (full or partial edentulism) and denture-related problems
- Oral cancer
- Tooth wear



These oral health problems are conditions that any health care provider can help to identify and refer to a dental colleague for treatment and care.

PERIODONTAL DISEASE

- Slow progressing chronic disease
- Exacerbated by presence of plaque/calculus
- Tissue destruction is largely irreversible
- Presence of gingival recession and periodontal pocketing



Source: Clinical periodontology and implant dentistry

[Diabetologia. 2012 January; 55\(1\): 21-31.](#)

Has anyone experienced a periodontal exam at your dentist?

DENTAL CARIES (CAVITIES)



Can you identify where the cavities are?

Can anyone help me identify where the cavities are?

DENTAL CARIES (CONT...)

- Younger patients tend to have more cavities in the pits/grooves of their teeth
- Interproximal decay occurs between teeth and is often the result of lack of proper flossing and oral hygiene
- Root decay occurs in the later stages of life (see next slide)

DENTAL ROOT CARIES

- Gingival recession can lead to exposed root surfaces (less mineralized)
- Poor oral hygiene and accumulation of plaque
- Exacerbated by lack of saliva (xerostomia or dry mouth) through use of multiple medications



Source: *JADA* 2007;138(9 supplement):15S-20S.

Incidence of cavities vary by age: In children and young adults, they are typically in the pits/grooves and in between teeth (due to lack of flossing), as patients get older, root caries are more present.

CAMBRA – caries risk assessment

TOOTH LOSS

- Vary according to ethnicity, gender, socioeconomic status and general health condition (ie. older seniors, women, African Americans, lower SES, lower education status, current smokers)
- Complete tooth loss declined from 50% to 18% in the past 60 years.
- 27.27% of seniors over age 65 have no remaining teeth

Data Source: The National Health and Nutrition Examination Survey (NHANES)



DENTURE-RELATED PROBLEMS

- Associated with greater tooth loss
- Denture-related stomatitis – inflammation and redness occur on the mucous membranes under the denture (usually fungal - *Candida* species in close to 90%)
 - Ways to treat: Plaque control
 - Verify proper denture fit and adaptation
 - Denture sanitization
 - Removal of denture at night
 - Antifungal agents (Clotrimazole or Nystatin lozenges)



British Dental Journal 190, 235 - 244 (2001)

ORAL CANCER

- **Incidence:** Nearly 40,000 new cases of cancer of the oral cavity and pharynx were diagnosed in 2012.
- **Over 8,000 deaths** due to oral cancer occur.
- **More than half** of these deaths occur among persons 65 years of age and older.

Source: CDC, National cancer institute at NIH and oral cancer foundation.

ORAL CANCER SCREENING



Source: Cawson's essentials of oral pathology and oral medicine

Am Fam Physician. 2010 Mar 1;81(5):627-634.

High risk areas: lateral borders, base of the tongue, floor of the mouth, oropharynx and tonsillar areas



Examples of oral cancer: Squamous cell carcinoma seen in the above three cases



Malignant melanoma



Verrucous carcinoma



Squamous cell carcinoma, arising
actinic cheilitis

<http://oralcancerfoundation.org/dental/oral-cancer-images.php>

Need biopsy to determine exact etiology and type of cancer.

EXCESSIVE TOOTH WEAR

- Daily wear and tear
- Excessive grinding or clenching (Bruxism)
- Attrition (includes bruxism and other parafunctional habits)
- Erosion (ex dissolution by acidic foods)
- Malocclusion



Source: Guldag MU, Buyukkaplan US, Ay ZY, Katirci G - Eur J Dent (2008)

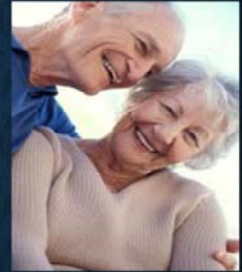
ORAL - SYSTEMIC CONNECTIONS

- There is a cyclical pattern between oral and systemic health
- Poor systemic health often leads to more medications, inability to do oral hygiene and care
- More meds and poor OH lead to dry mouth and increased plaque
- This leads to more decay and periodontal disease
- Resulting in chronic inflammation and thus leads to even poorer systemic health
- It is a vicious cycle!



3. ORAL HEALTH AND PSYCHOSOCIAL CONNECTION

- Good oral health enhances our ability to:
 - Speak (ex. “F” and “S” sounds are difficult for those missing front teeth)
 - Smile
 - Smell and taste
 - Masticate (chew) and swallow
- Loss of teeth and untreated oral disease (caries and periodontal diseases) are associated with lower self-esteem and confidence
- Financial constraints can play a huge role in access to care
 - Paucity of dental insurance programs for the elderly (Dental now covers more dental treatment)
 - Rise in cost of dental care



However, oral diseases, which range from cavities to oral cancer, cause pain and disability for millions of Americans each year.

4. INTER-DISCIPLINARY TEAM CARE

- Oral screenings can be done by all health care providers!
- Can potentially help save lives (early detection and/or prevention)
- Referral to a dental specialist if suspected oral health issues are present (if screening yielded any items with an asterisk on the BOHSE)

EXAMPLES OF INTER-PROFESSIONAL ROLES IN ORAL CARE

- Learn about and teach oral health screenings and educating other health care providers and patients about importance of oral health (all providers)
- Evaluate medical conditions and effects and contraindications to dental procedures (Medicine, Physician Assistant)
- Check drug interactions and allergies to meds (Pharmacy)
- Access to dental care, psychosocial conditions (Social Work)
- Implementation and individualization of oral hygiene care and nutritional needs (Physical Therapy, Occupational Therapy)

5. THE KAYSER-JONES BRIEF ORAL HEALTH STATUS EXAMINATION (BOHSE)

The Kayser-Jones Brief Oral Health Status Examination (BOHSE)

Resident's Name _____ Date _____
 Examiner's name _____ TOTAL SCORE _____

CATEGORY	MEASUREMENT	0	1	2
LEPUS INDEX	Observe and feel nodes	No enlargement	Enlarged, not tender	Enlarged and tender*
LIPS	Observe, feel tissue and ask subject, family or staff (e.g. primary caregiver)	Smooth, pink, moist	Dry, chapped, or red at corners*	White or red patch, bleeding or ulcer for 2 weeks*
TONGUE	Observe, feel tissue and ask subject, family or staff (e.g. primary caregiver)	Normal roughness, pink and moist	Coated, smooth, patchy, severely fissured or sore redness	Red, smooth, white, or red patch, ulcer for 2 weeks*
THREE INNER CHEEK, FLAVOR AND ROOF OF MOUTH	Observe, feel tissue and ask subject, family or staff (e.g. primary caregiver)	Pink and moist	Dry, shiny, rough red, or swollen*	White or red patch, bleeding, hardness, ulcer for 2 weeks*
GUMS BETWEEN TEETH AND/OR UNDER ARTIFICIAL TEETH	Gently press gums with tip of tongue blade	Pink, small indentations; firm, smooth and pink under artificial teeth	Redness at border around 1-2 teeth; one red area or sore spot under artificial teeth*	Swollen or bleeding gums, redness at border around 2 or more teeth; one or more swollen red, or sore spots, artificial teeth*
SALIVA (EFFECT ON TONGUE)	Touch tongue blade to center of tongue and floor of mouth	Tongue moist, saliva free flowing and watery	Tongue dry and sticky	Tongue swollen and red (no saliva)*
CONDITION OF NATURAL TEETH	Observe and count number of decayed or broken teeth	No decayed or broken teeth/teeth	1-3 decayed or broken teeth/teeth*	4 or more decayed, or broken teeth/teeth; fewer than 4 teeth in either jaw*
CONDITION OF ARTIFICIAL TEETH	Observe and ask patient, family or staff (e.g. primary caregiver)	Unbroken teeth, worn most of the time	1 broken/missing tooth, or worn for eating or cosmetic's only	More than 1 broken or missing tooth, or either denture missing or loose/loose*
PAIRS OF TEETH IN CHEWING POSITION (NATURAL OR ARTIFICIAL)	Observe and count pairs of teeth in chewing position	12 or more pairs of teeth in chewing position	9-11 pairs of teeth in chewing position	5-7 pairs of teeth in chewing position*
ORAL CLEANLINESS	Observe appearance of teeth or dentures	Clean, no food particles/tartr in the mouth or on artificial teeth	Food particles/tartr in one or two places in the mouth or on artificial teeth	Food particles/tartr in more places in the mouth or on artificial teeth

Upper dentures labeled: Yes _____ No _____ None _____ Lower dentures labeled: Yes _____ No _____ None _____
 Is your mouth comfortable? Yes _____ No _____ If no, explain: _____
 Additional comments: _____

Underlined* -refer to dentist immediately

Kayser-Jones, J., Bird, W.F., Paul, S.M., Long, L., & Schulz, E.S. (1990). An instrument to assess the oral health status of nursing home residents. *The Gerontologist*, 30(5), 614-624. Figure 2, p. 622.
 Copyright © The Gerontological Society of America. Reproduced with permission from publisher.
 The Harvard Institute for Geriatric Nursing would like to acknowledge the original author of this issue: Cheryl Chia-Shai Chen, DMS, APRN, GNP
 National Taiwan University School of Nursing, Taipei, Taiwan.



A table provided by The Harvard Institute for Geriatric Nursing, Harvard Medical University, College of Nursing
 www.harvardgeriatrics.org | www.nursing.harvard.edu | www.harvardhgn.org
 Contact: christy.slavin@connect.harvard.edu

BOHSE

- The BOHSE was designed to evaluate the oral condition of nursing home residents, with and without cognitive impairment, by those providing nursing care.
- The BOHSE assessment begins with observation and palpation for enlarged cervical lymph nodes and includes a complete oral cavity evaluation.
- Using a tongue depressor and gauze, the conditions of the oral cavity, surrounding tissues, and natural/artificial teeth are examined and categorically graded from 0 (normal) to 2 (significantly problematic).
- Helps determine if urgent referral to dental provider is needed.

Let's practice a basic oral health exam!

Pair up, grab some gauze, tongue depressor, mouth mirror, mask, and gloves, and a BOHSE form, with lights

REFERENCES

- Susan O. Griffin, Judith A. Jones, Diane Brunson, Paul M. Griffin, and William D. Bailey. Burden of Oral Disease Among Older Adults and Implications for Public Health Priorities. *American Journal of Public Health*: March 2012, Vol. 102, No. 3, pp. 411-418.
- http://www.oralcancerfoundation.org/facts/pdf/Us_Cancer_Facts.pdf accessed at 01/06/2013.
- Dye BA, Li X, Beltrán-Aguilar ED. Selected oral health indicators in the United States, 2005–2008. NCHS data brief, no 96. Hyattsville, MD: National Center for Health Statistics. 2012
- Seirawan H, Sundaresan S, Mulligan R. Oral health-related quality of life and perceived dental needs in the United States. *J Public Health Dent*. 2011 Summer;71(3):194-201.
- Vargas CM, Kramarow EA, Yellowitz JA. The Oral Health of Older Americans. *Aging Trends*; No.3. Hyattsville, Maryland: National Center for Health Statistics. 2001.
- Preventing Cavities, Gum Disease, Tooth Loss, and Oral Cancers At A Glance 2011 at <http://www.cdc.gov/chronicdisease/resources/publications/AAG/doh.htm> accessed at 01/06/2013
- **Casiglia JM, Mirowski GW. Oral Manifestations of Systemic Diseases at** <http://emedicine.medscape.com/article/1081029-overview#showall> accessed at 01/06/2013.
- Smiles for life: A national oral health curriculum at <http://www.smilesforlifeoralhealth.org/default.aspx?tut=555&pagekey=62948&s1=2226229> accessed at 01/11/2013.
- Reamy BV, Derby R, Bunt C. *Common Tongue Conditions in Primary Care Am Fam Physician*. 2010 Mar 1;81(5):627-634.

6. QUESTIONS?

Acknowledgement to Dr. Phuu Han

