



OralLongevity™ Outline for Dentists Presentation to Dentists

Keeping older adults healthy for a lifetime

The American Dental Association and GlaxoSmithKline Consumer Health Care have teamed up to provide today's program on OralLongevity™. My goal is to provide you with information to help today's older adults preserve oral health for their lifetime. Many older adults are staying healthier, keeping their teeth longer and looking better than ever before. However, they need to be made aware of the dental options now available to maintain a healthy mouth as they age.

Oral infections have been associated with heart disease, stroke, diabetes, pneumonia and other health problems. Although we are not sure if treating oral disease will improve a specific health problem, we know that a healthy mouth is important for overall health, and that overall health is important for a healthy mouth. Therefore, it is important that both dentate and edentate older adults are aware of the need to get an oral examination on a regular basis.

The focus of today's program is educating older adults about Oral Longevity. We will:

- Describe some basic concepts of aging and oral health
- Discuss the relationship of oral disease to common age-related systemic diseases
- Discuss complications associated with chronic disease and related medications
- Review information needed in dental practice
- Discuss ways to help family and friends become good oral caregivers to dependent elders

1. With the population rapidly aging, dentists must understand the critical relationship between aging and oral health.

- A. The population is aging
 - i. In 1900, 3.1 million or 4% were 65 years or older compared to 2005 when 34.3 million or 12.4% of the population were 65 or older - more than a 10-fold increase.
 - ii. In 2030, close to 20% or 67 million people will be 65 years and older
 - iii. People are living longer than ever before. In 2000, there were 50,000 centenarians in the US.
 - iv. New data indicates that average human life expectancy is likely to reach 100 by the year 2060
- B. Older adults are diverse and heterogeneous; their health and health-related behaviors vary greatly.
 - i. No two older adults are alike. They differ in their biological, psychological, behavioral and environmental makeup.
- C. People are keeping their teeth for their lifetime. They should not expect to lose them as a result of aging.
 - i. With regular dental care and healthy habits, teeth can last a lifetime
 - ii. Edentulism in US declined from 20.3% in 1972 to 13.9% in 2001. In 2004, 27% of those 65+ years were edentulous.

- D. As more teeth are retained and people live longer, the complexity of care often increases.
 - i. Tooth wear occurs over time – treatment decisions need to include life expectancy and health status of the individual; the life expectancy of the restoration; the patients’ desires, as well as identifying if the process is active or passive.
 - ii. Many older people need to be reminded that they are never too old to have their teeth fixed or replaced.
- E. While treatment decisions are often more difficult and complex in older elders, many options are now available. For example, using two implants to retain a lower denture is an accepted treatment option for those who can afford it and for whom it will improve the quality of life.
 - i. When lost teeth are not replaced, faces change, and people have a reduced ability to chew and speak, and occlusal and joint problems can be precipitated, i.e., checking, popping or headaches.
- F. Prevention is of paramount importance.
 - i. Given their age and health status, consider how well the patient can comply with care given their health, medical and cognitive status.
- G. Oral health care providers need to be aware and to educate themselves about medical concerns of older adults, and how these impact oral health and oral care.
 - i. The relationship between the medications used to treat chronic diseases, as well as the oral side effects of medications and disease, can be significant in number.
 - ii. Older folks tend to be more sensitive to drugs and trauma.
 - iii. Older folks heal more slowly than younger ones, especially when tissues are not well-managed.
- H. Age-related nerve changes are common.
 - i. Nerves become smaller and less sensitive, making restorative procedures more comfortable than in the past.
 - ii. With less sensitive nerves, by the time pain is identified, severe damage may have occurred.
 - iii. Preventive appointments are important and need to be scheduled at a minimum of once, but preferably twice a year, or more often.

2. Older adults enter a second round of “cavity prone years,” even if they have not had any for years! Although children in the US have an overall decreasing caries rate, older adults have an increasing rate of coronal and root caries.

- A. People 65 years and older have more caries than children younger than 14 years who live in an area with non-fluoridated water. Caries can be the result of :
 - i. A consequence or a side effect of medications
 - ii. Old and worn out restorations, with open margins and secondary caries
 - iii. Changes in health and/or habits
- B. The percentage of teeth with decayed or filled root surfaces increase with each decade of adulthood affecting more than one-half of all remaining teeth by age 75 years. Fluoride helps to keep teeth healthy and can reduce decay.
 - i. Fluoride options– need to check source and fluoride content.
 - 1) Bottle water

- 2) Home filters
- 3) Community water systems

3. Regular dental visits are important. The early stages of most diseases do NOT cause pain. It is always better to treat early.

- A. Oral examinations are important for both dentate and edentate older adults. Soft tissues are vulnerable to change.
- B. Dentists/ dental hygienists provide oral health and oral cancer examinations to identify disease and suspicious changes, so that care can be provided in a timely manner.
- C. Prevention is of paramount importance.

4. Many older adults have one or more chronic diseases with associated medication management. These issues can impact the delivery of oral health care. To provide good care, dental professionals need to understand the complexities of older adults, their special needs and their ability to undergo and respond to care.

- A. The 10 most common systemic diseases seen in functionally independent older adults in the developed world are: arthritis, mouth cancer, COPD, diabetes, ischemic heart disease, hypertension, dementia, depression, osteoporosis, and stroke.
 - 1) Arthritis is found in approximately 49% in US and limits daily activities in close to 12% of the population
 - a. Arthritis may cause the patient to become immunocompromised. If so,
 - i. Utilize American Dental Association// American Association of Orthopedic Surgeon guidelines for antibiotic coverage when necessary.
 - b. Rheumatoid arthritis often restricts manual dexterity, which will likely cause problems with daily oral care.
 - i. See modifications of daily oral care products
 - c. Joint stiffness tends to improve during the day
 - i. Short appointments in late morning/early afternoon are recommended
 - ii. May need neck and leg pillows available to help make the patient comfortable.
 - 2) Mouth cancer kills. Early detection saves lives.
 - a. In 2007, approximately 34,360 new cases with 7,550 deaths from oral cancer were documented.
 - i. Mouth cancer is common in older adults. Older adults are at a greater risk now than earlier in their life. And it is not painful in its early phase.
 - b. Patients can reduce their mouth cancer risk by:
 - i. Stopping tobacco use
 - ii. Reducing alcohol intake if heavy
 - iii. Staying out of the sun, and wearing sunscreen when they are in the sun
 - iv. Having an oral cancer examination regularly
 - c. There are treatment protocols for individuals with head and neck cancer:
 - i. Before Therapy – meticulous oral hygiene, restore salvageable teeth in radiation path at least 2 weeks prior to the start of radiotherapy.

- ii. During Therapy – avoid invasive procedures if possible, address mucositis and xerostomia . Recommend: Ice cold water or suck ice during infusion; Warm normal saline mouthwashes and benzydamine oral rinses or lignocaine (lidocine) viscous 2%; 0.12% alcohol-free chlorhexidine mouth rinses twice daily; Salivary substitutes; Prophylactic antifungals; Prophylactic acyclovir
 - iii. After Therapy – Continue oral hygiene and preventive services. Manage symptoms of hyposalivation (see later in outline) – recommend non-cariogenic diet and daily application of neutral sodium fluoride (5,000 parts per million) in custom carriers.
- 3) In 2000, more than 2.3 million older adults were diagnosed with chronic obstructive pulmonary disease (COPD) in US.
 - a. Best treated in upright position – mid-morning or early afternoon.
 - b. Often mouth-breathers -- difficult to use rubber dam
 - c. Respiratory disease is a common cause of mortality in older adults.
 - i. The oral cavity is an entry point for respiratory pathogens and teeth serve as a reservoir for these pathogens.
 - ii. Those with worse oral health and worse general health (oftentimes those in long term care) are at greatest risk for developing respiratory infection.
- 4) More than 80% are adult onset type 2 diabetics; annual incidence is 680 per 100,000 people aged 65 years and older (625,000 per year).
 - i. Uncontrolled type 2 diabetes is thought to be a risk factor for severe periodontitis.
 - ii. The treatment of periodontal disease may improve glycolic control in diabetic patients.
 - a. Primary concern is hypoglycemia. To reduce risk, ensure patient has taken medication and food. If not, treat appropriately
 - b. Avoid tetracyclines, aspirin and corticosteroids – can disturb diabetic control
 - c. Amoxicillin and acetaminophen alone or with codeine can be used safely
 - d. Manage infections aggressively
 - e. Minor surgery is best within 2 hours of eating and receiving insulin
- 5) Ischemic heart disease is responsible for 70% of deaths after age 75 years.
 - a. Cardiac events most likely to occur in early morning – best to see patients in late morning or early afternoon.
 - b. Ensure medication is taken prior to treatment.
 - c. Prophylactic administration of 0.3 to 0.6 mg of nitroglycerine may be indicated prior to care for those with angina more than once a week.
 - d. Medication precautions for those with heart disease include:
 - i. NSAIDs use for more than 3 weeks can impair the effect of beta blockers and angiotensin-converting enzyme inhibitors
 - ii. Antimicrobial drugs can affect the function of cardiac drugs.
 - 1. Prolonged use of ampicillin reduces atenolol levels;

2. Erythromycin and tetracycline can induce digitalis toxicity;
 3. Azole antifungals and macrolides such as erythromycin and clarithromycin can interact with statins to increase muscle damage;
 4. Antihypertensives may lead to orthostatic hypotension;
 5. Warfarin (Coumadin) may put patient at increased risk of intra- and postoperative bleeding and bruising.
- 6) Hypertension procedures and treatments are similar to those with patients having heart disease.
- a. High BP – one of the most modifiable risk factors for cardiovascular disease.
 - b. Have blood pressure under control prior to care.
 - c. Obtain physician's opinion when high BP is persistently high.
 - d. When treating those with high BP –
 - i. Continuous or periodic monitoring may be indicated.
 - ii. If BP is consistently high - call 911
- 7) Dementia is a variety of syndromes, with progressive irreversible changes.
- a. The patient's stage of disease helps determine the optimal treatment plan. The disease disrupts normal thought process, and with time, individuals have increased difficulty with communication and self-care. Individuals with dementia:
 - i. May be unable to express pain/discomfort, or provide good daily care
 - ii. Require more frequent checkups and cleanings
 - iii. Need to receive comprehensive oral care as early as possible in course of disease
 - iv. Informed consent is a complex issue – consult with patient's guardian or significant other
 - v. Preventive dentistry is critical at all stages of dementia (See section on caring for others.)
 - b. Approximately 25% of older adults report having some symptoms of depression, which can lead to impairment in physical, mental and social functioning.
 - i. Optimally, defer treatment until symptoms/disease is under control
 - ii. Drug precautions:
 1. If taking monamine oxidase inhibitors (MAOIs) or within 21 days of withdrawal of MAOIs, at risk of precipitating a coma
 2. Selective serotonin reuptake inhibitors may be potentiated by benzodiazepines and erythromycin
 3. Tricyclic antidepressants (TCAs) metabolism can be inhibited by acetaminophen.
 4. TCAs and MAOIs can cause postural hypotension and increase one's risk of falls.
- 8) Fractures from minimal trauma can result in significant morbidity and mortality due to underlying osteoporosis.
- a. Bisphosphonates, especially those used intravenously can lead to painful refractory bone exposures in the jaws, i.e., osteonecrosis of the jaws (ONJ).

- i. Occurs in approximately 1%-10% of patients who have a malignancy being treated with very high doses of intravenous bisphosphonates.
- 9) Parkinson disease is a progressive degenerative disorder of the CNS and is generally seen in those older than 55 years.
 - a. Includes involuntary drooling and spasmodic movements of the head which can compromise the clinician's ability to provide care. Medications to be concerned about include:
 - i. Catechol-O-methyltransferase (COMT) inhibitors, used to allow a larger amount of levodopa to reach the brain and raise dopamine levels, may interact with epinephrine to cause tachycardia, arrhythmias and hypertension.
 - ii. Erythromycin and other macrolides may increase levels of bromocriptine or cabergoline, dopamine receptor agonists used to treat this disease either alone or in combination with levodopa.
- 10) Stroke is the acute onset of neurological deficits persisting for at least 24 hours.
 - a. About 8% of older adults have a history of stroke.
 - b. Initial symptoms include confusion and emotional lability;
 - c. Access, mobility and communication may be impaired.
 - d. Oral hygiene tends to deteriorate on the paralyzed side (See daily oral care aides).
 - e. Defer elective and invasive dental care for 3 months after the stroke.
 - f. Short appointment in midmorning may be best, treat upright to avoid foreign bodies entering the pharynx if partially paralyzed.
 - g. Monitor BP and anticoagulation status before procedure.
- B. Mouth infections can be more serious in diabetics and may be associated with heart disease, stroke and pneumonia in ill older adults. Traditional risk factors for cardiovascular disease and stroke such as smoking, being male, sedentary lifestyle, obesity, hypertension and dyslipidemia may be related to the association of poor oral health influencing systemic health. Other common health conditions of concern in older adults include:
 - i. Heart concerns - Infective endocarditis is a severe heart infection; while uncommon, it can be fatal
 - ii. Pneumonia - Bacteria from plaque in your mouth has been identified with pneumonia in hospitalized patients and residents of long-term care facilities
 - iii. Coumadin or blood thinners - Precautions needed before teeth cleaning, gum surgery or extractions
 - iv. Diabetics - Need to take medications and to eat prior to treatment
 - v. Gum disease is associated with uncontrolled blood sugar levels - It is best to prevent, if not, treat immediately
- C. Having a dry mouth can be a serious problem, but it is NOT due to age!
 - a. Saliva (spit) is one of the most precious fluids.
 - b. Without saliva - having a dry mouth - can be a serious problem.
 - i. Cracked lips and frequent cold sores, difficulty chewing, and/or having to drink while eating or talking can be a sign of having a dry mouth.

- ii. Increased risk of caries, gingivitis, halitosis and difficulty wearing prosthesis
 - c. A dry mouth is most often a side effect of a medication.
 - i. Common medicines include: allergy and asthma medications, blood pressure pills, water pills, cholesterol pills, pain medication, anxiety and depression drugs, and many others
 - 1. If this occurs – Recommend
 - a. An alternative medicine, a smaller dose or a change in frequency may help reduce the drying effect
 - b. Sip on water throughout the day – don't wait to be thirsty
 - c. Over the counter oral moisturizers, patients can suck on sugar-free candies or chew sugar-free gum
 - d. Professionally applied fluoride treatments at the dental office as well as self-applied fluorides at home
- D. Dentists can help patients develop healthy oral care habits to promote a satisfying and healthy life. Dentists can encourage patients to:
 - a. Brush their teeth *at least* twice a day.
 - b. Use a toothbrush with a small head and SOFT bristles
 - i. Replace a toothbrush when the bristles start to flare or fan out.
 - c. Use a fluoride toothpaste (with the ADA seal of Approval)
 - d. Use dental floss or an interdental cleaner every day.
 - i. There are many types of floss, patients should use the one they like the best.
 - ii. To help floss, patients can try floss-holders, floss-picks and/or floss-threaders
 - e. Work around difficulties holding a toothbrush or getting toothpaste out of the tube by trying:
 - i. An electric toothbrush with a thick handle and large buttons (on/off)
 - ii. A powered rotating-oscillating toothbrush
 - iii. Add a tennis ball or bicycle handle to the handle of your toothbrush
 - iv. Get toothpaste in a pump, not a squeeze tube
 - v. Fluoride mouthrinse
 - f. Care for dentures or partial dentures
 - i. Dentures and partial dentures need to be cleaned every day – out of the mouth.
 - ii. Patients should use a denture brush for dentures
 - 1. The bristles are harder and stiffer and better than a toothbrush
 - 2. Brush dentures under running water, then soak them in a container with an effervescent denture cleaner (not regular toothpaste).
 - 3. Denture cleaners help remove bacteria and stains
 - iii. Patients should clean their mouths after removing the denture
 - 1. Patients should use a soft bristled toothbrush for natural teeth.
 - 2. Patients should use a face cloth or gauze squares or a soft toothbrush to gently clean the tongue and palate being careful not to gag.

- E. Dentists can maximize each appointment by asking patients to be honest about their habits, behaviors, finances and other related concerns.
 - a. Because life is in a constant state of change, at every appointment, it is important for dentists to update:
 - i. All medications and over the counter drugs, vitamins, herbal remedies
 - ii. Changes in medical conditions, medications and allergies
 - iii. Name and telephone number of key physicians and health care providers
 - iv. Name and telephone number of emergency contact and the individual who can make decisions in case of a medical emergency
 - v. Dental insurance or Medicaid card
 - vi. Dentures or partials – even if not worn (important at routine examinations)
 - vii. The name and contact information of a friend or family member if help and support is needed.

5. Dentists can support caregivers who are helping with oral care. It is important to determine who is responsible for treatment and financial decisions early on to ensure needed care is provided on a timely basis.

- A. The caregiver's goal is to help maintain the individual's skills and self-reliance as long as possible. Caregivers should:
 - i. Begin by observing and supervising to allow for maximum independence
 - ii. Start with easy steps with frequent breaks
 - iii. Use non-verbal communication to build trust. Caregivers should:
 - 1. Maintain eye contact, smile and check on patients comfort frequently.
 - 2. If patients resist, stop and try another time during the day.
 - iv. Taking care of someone else's mouth takes longer than caring for your own mouth. Caregivers should:
 - 1. Start with short sessions and extend them over time.
 - 2. Start with easy steps and take frequent breaks.
 - 3. Plan on several sessions to get the whole mouth clean.
 - v. Before helping, caregivers should ask patients for permission to help them. Caregivers should:
 - 1. Explain each step, encourage the patient, and thank them for helping you.
 - 2. Not speak too loudly unless the patient has a hearing problem.
 - vi. Wear gloves, a mask and protective eyewear. Caregivers should:
 - 1. Keep a towel draped over their shoulders to protect their clothing
 - 2. Use good lighting – a flashlight might be needed.
- B. Caregivers should work with the dentists to schedule regular dental check-ups, at least twice a year.
 - i. More frequent appointments may be necessary.
 - ii. Review the Daily Oral Care Plan at each dental visit
 - iii. Demonstrate daily care techniques to ensure completeness.

- C. Caregivers should make appropriate treatment choices, when authorized.
- i. Work closely with the dentist
 - ii. Knowing the patient's previous patterns of dental care can help guide decision making.
 - iii. Ask if unsure about treatment options.
 1. Remember age alone is not a good basis for making treatment decisions.
 - iv. Consider the following when making treatment decisions:
 1. What would the patient have chosen?
 2. What is in the patient's best interest?
 3. What will best respect and preserve comfort, hygiene and dignity?

How to get more information on dentistry and oral health

Learning more about oral health care is easy. There are many great resources on the web that are written specifically for older adults. Here are just a few key resources that dentists can use and recommend to patients:

- Start with the American Dental Association's website at www.ADA.org. Here you'll find a wide variety of dental topics
- At the Special Care Dentistry Association's website at www.SCDonline.org, you'll find information on consumer products
- To find information on dry mouth, oral cancer and a variety of other topics, you can visit the National Institutes of Health at www.nidcr.nih.gov
- Product manufacturers offer helpful information at: www.GSK.com
- On the US Department of Agriculture's website, you'll find the latest information on dietary guidelines at www.mypyramid.gov/guidelines/index.html

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