Course Objectives

- Define periodontal disease
  - disease cycle
  - effect on oral cavity
  - connections to systemic health
- Identify treatments for periodontal disease
  - options for uninsured or underinsured patients
- Identify participant’s individual and /or agency role
  - raising awareness, prevention, treatment
- Discuss the role of fluorides for older adults
Periodontal Health in Ohio

- 50% adults age 30+ have periodontitis
- 4%–12% of U.S. adults have advanced cases
- Half of the cases are due to cigarette smoking
  - Prevalence is 3x higher among smokers than among people who have never smoked
- One-fourth of U.S. adults aged 65 or older have lost all of their teeth
- Disparities: adults aged 35+, men, African-Americans, Mexican-Americans, low-income, no high school diploma
What patients say....

• I was told I have pyorrhea of the “gooms”.
• Everyone in my family has soft teeth.
• I have 5 children so my teeth are really bad.
• I didn’t have insurance so I couldn’t fix my teeth.
Why Oral Health Matters
OH Matters to Quality of Life

- Attitude and demeanor
- Oral pain: disease or ill-fitting dentures
- Difficulty eating/drinking
  - xerostomia
- Missing teeth, halitosis
- Fewer social interactions, isolation
OH Matters to Nutrition

• Mastication, Swallowing
  • Food choices
• Eating & drinking with comfort
  • Weight loss / gain
  • Dehydration
  • Nutritional deficiencies
    • Immune response
    • Oral lesions
• Maintenance of tissues
  • Repair / healing
• Energy
Oral Health Matters to Total Health

Chronic inflammation is a risk factor in many conditions:

- Cardiovascular
  - Heart attack, stroke
- Diabetes
  - Glucose control, wound healing (gums)
- Respiratory
  - VAP: Ventilator assisted pneumonia
- Preterm, LBW babies
- Alzheimer’s Disease
Researching more connections

- Meningitis
- Cystic fibrosis
- Asthma
- Cirrhosis of the liver
- Inflammatory bowel disease
- Osteoporosis
- Psoriasis
Inflammatory Response

• Key process of the body's defense system
  • Acute inflammation: few days
  • Chronic inflammation: weeks, months, or years
• Reaction by the body to disease and injury
  • Classical signs: pain, heat, redness, and swelling
• Specialized blood cells and chemical mediators are dispatched to the site to repair the damage
  • Leukocytes, C-reactive proteins, cytokines, etc.
• Chronic inflammations: fibrosis and tissue necrosis
Bacteremia

- Endocarditis
- Cardiac stents
- Valve replacements
- Joint replacements

- Guidelines for Antibiotic Prophylaxis
  - ADA
  - AHA
Healthy Periodontium
Periodontium

- Gingiva
- Periodontal ligament
- Cementum
- Alveolar Bone
Periodontal Ligament

Alveolar Bone

Cementum
Gingival Epithelium

- Oral, Sulcular, Junctional
- Stratified, squamous keratinizing epithelium
Gingival Connective Tissue

- Collagen fibers
- Blood/lymphatic vessels
- Nerves
- Assorted cells: fibroblasts, cementoblasts, osteoblasts, “clast” cells, macrophages, mast cells, inflammatory cells (leukocytes, lymphocytes, plasma cells)
Clinical Observation

- Gingiva
  - Color
  - Consistency
  - Margins
  - Papillae
  - Exudate
  - Attached Gingiva
Periodontal Diseases

Primary Cause of Tooth Loss in Adults
Groups of Periodontal Diseases

- Gingivitis
- Periodontal Disease
  - *Chronic Periodontitis* — inflammatory, adults, periods of on/off
  - *Aggressive Periodontitis* — rapid loss of attachment, clinically healthy, family aggregation
  - *Perio as manifestation of systemic disease*
  - *Necrotizing Periodontitis* — necrosis of gingiva, ligament, bone. Associated with malnutrition, immunosuppression, HIV
Gingivitis

- Inflammation of gingiva only
- Common: non-flossers
  - 75% of adults over age 35
- Reversible with proper oral hygiene care
Individuals at risk for gingivitis

- People with poorly controlled diabetes
- Pregnant women
- Teenagers
- People taking medicines
  - birth control pills
  - steroids
  - cyclosporine
  - seizure medicine
  - calcium channel blockers (Norvasc®)
Risk Factors

External Acquired
- Smoking
- Alcohol abuse
- Drug abuse
- Medication use (blood thinners)
- Stress

Local
- Poor oral hygiene
- Presence of calculus
- Overhanging restorations
- Carious margins
- Areas of food impaction
- Occlusion

Intrinsic
- Gender
- Race
- Socioeconomic
- Education
- Age
- Hormonal changes
- Genetics
- Autoimmune disease
- Diabetes
Warning Signs

- Bleeding on provocation
- Erythema
- Edema
- Gingival recession
- Suppuration
- Mobility: Changes in occlusion
- Persistent halitosis

What’s not on the list?
Periodontitis

- Treatable; not reversible
- Infection of periodontium
- Specific gram negative bacteria
  - P. gingivalis, B. forsythus, and P. intermedia
Necrotizing Periodontitis

- aka Trench Mouth, Vincent’s Disease
- Malnutrition, stress, lack of rest, poor oral hygiene
- Immunosuppression
Treatment Options
Modalities

**Non surgical**
- Scaling / root planing
- Curettage
- Antimicrobial agents
- Maintenance

**Surgical**
- Gingivectomy
- Osseous bone
- Laser therapy
- Gingival tissue grafts
- Bone grafts
- Implants
Non Surgical

- Scaling / Root Planing
  - Debridement
  - Local anesthesia
  - Multiple visits

- Curettage
  - Removal of necrotic soft tissue

- Antimicrobial agents
  - Minocycline (Arestin®) broad spectrum antibiotic applied directly to diseased pocket. Systemically, tetracycline might be prescribed.
  - Chlorhexadine Gluconate rinse or as Perio Chip® placed in diseased pocket.
Surgical Laser therapy

Gingival Tissue Grafts

www.dental-treatment-center.com

www.vanwinkleperio.com
Osseous Surgery

- Supportive bone around the root is diseased and partially destroyed.
- First, plaque and tartar are removed from the infected pocket.
- The bone is smoothed and reshaped, reducing spaces where bacteria can grow. A substance may be used to help the gum attach to the tooth.
- The gum is then closed over reshaped bone at or below the original gumline.

www.periodontalhealthcenter.com
Alveolar Bone Grafts
Implants

www.saratogasmiles.com

www.venicasadental.com
Dentures
Fluoride Treatments for Adults
Caries: calcium & phosphate ions leach from tooth during acid attacks (pH 3.8-4.8)

Root & Occlusal Caries

High Risk Factors

- Exposed roots
- Gingival recession
- Post Perio therapy
- Xerostomia
  - Medications
  - Cancer treatments
- Frequent meals/snacks
  - Acidic foods/beverages
Benefits of topical fluoride

- Prevent demineralization
- Promote remineralization
- Inhibits formation of bacterial acid
- Reduces dentinal sensitivity
- Fluoride varnish effective in adults
### ADA Recommendations

<table>
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<tr>
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<th>Low-risk patients*</th>
<th>Moderate-risk patients**</th>
<th>High-risk patients</th>
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<tbody>
<tr>
<td>&lt; 6 years of age</td>
<td>Professional fluoride may be of no benefit</td>
<td>Fluoride varnish 2 times per year</td>
<td>Fluoride varnish 2 - 4 times per year</td>
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<tr>
<td>6 - 18 years of age</td>
<td>Professional fluoride may be of no benefit</td>
<td>Fluoride varnish or gel 2 times per year</td>
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</tr>
<tr>
<td>18+ years of age</td>
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</tr>
</tbody>
</table>

* Use professional judgment. Fluoride dentifrice may be sufficient. **Moderate-risk may benefit from up to 4 times per year. Adapted from: Evidence-based Clinical Recommendations: Professionally Applied Topical Fluoride.
It isn’t that they can’t see the solution.
It’s that they can’t see the problem.
G.K. Chesterton
Barriers to dental care

General Barriers
- Cost
- Lack of insurance
- Transportation
- Lack of providers
- Office hours

Dental Insurance
- Medicare
  - No dental coverage
  - Supplemental “coverage”
- Medicaid
  - Dental coverage: $3 co-pay
  - Limited coverage, types of procedure, timing of repairs,
  - Spend downs
Problems not being addressed

- Class-ism
  - Public towards dental care
  - Professionals towards public
- **Dental fear / anxiety**
- Health literacy
- Values / Priorities (culturally acceptable)
- Culture of Crisis
- “Laziness” – current MPH research
Informed Consent

Resident vs. Guardian vs. Policies?

“Resistance to receiving care is a significant barrier to good oral care among long-term care residents.”

2009, Stein and Henry, ANJ, Vol. 109
Decision making...

Goals / Priorities / Resources / Compliance

- Arrest oral disease prior to medical treatment
- Improve outcomes to current medical condition
- Reduce risk factors
- Improve / restore quality of life
- Stop the cycles of pain
Possibilities

- Dental / Dental Hygiene Schools
- Safety Net Clinics
- Dental OPTIONS: 888-765-6789
- Perio consultation – payment plans?
- Prevention programs congruent with treatment programs
Oral Health via Teamwork

Roles of Non-dental Professionals
Take care of yourself first!

- Do your homework.
  - Brush teeth and gums every day!
  - Interdental care
- Improve your immune system.
  - Proper nutrition
  - Adequate sleep
  - Reduce stress
  - Regular exercise
Your Role is Important

- Assessment
- Planning
- Implementation
- Evaluation

- CNA, LPN, RN
- Dietician
- Social Worker
- Activity Director
- Physician
- Others
Look! Refer!
Critical and Long Term Care

- Maintain cleanliness
- Prevent infection
- **Moist** oral tissues
- Patient comfort
- Medically frail patients may be intolerant of dental treatment
- Palliative OH care
  - Comfort
You Can Make a Difference!

- Provide oral health risk assessments
- Provide oral health anticipatory guidance
  - Proper nutrition supports healthy gums & teeth
- Make referrals for dental care
  - Network with dental professionals
More Than Just a Pretty Smile...

Thank you!
References

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