
Theresa Brennan RDH, BS Health Education
Tufts Dental Facilities
Tufts Community Dental Program

Speaker Introduction

Theresa Brennan RDH, BS Health Education is a dental hygienist with over 34 years of experience working with people who have intellectual disabilities. She divides her time managing a portable dental program for at risk children in Head Start and School Programs and working as a clinical hygienist for Tufts Dental Facilities.
Today’s Agenda

- Oral health problems associated with persons who have an intellectual/developmental disability
- Signs and Symptoms of Dental Disease
- Risk Factors
- Barriers to Care
- Intervention and Prevention Strategies
- Case Study
- Questions

The Oral Health Problem

People with Intellectual/Developmental Disabilities are more likely to have poor oral hygiene, periodontal disease and untreated dental caries than are members of the general population.*

The Oral Health Problem

- Electronic dental records for 4,732 adults with ID/DD
- Dental visit at a Tufts Dental Facility in Massachusetts
- Between April 2009 and March 2010 were analyzed

The Oral Health Problem

- 87% of participants had caries experience (cavities)
- 32% had untreated dental caries (cavities)
- 80% had periodontitis (gum disease)
- 11% had edentulism (missing teeth)
The Oral Health Problem

Adults with Intellectual Disabilities remain vulnerable to dental diseases, despite access to comprehensive dental services.

Oral Health Problem: Tooth Decay

FOOD

BACTERIA

TOOTH

DECAY

FOOD
Occlusal Dental Decay
(On the chewing surface)

Interproximal Decay
(Between the Teeth)
Cervical Dental Decay
(Along the gum line)

Root Canal Therapy
Dental Abscess

Oral Health Problem: Gum Disease
Healthy Gum Tissue

- Healthy gums are pale pink in color.
- They lay flat against the teeth.
- They fill the space between the teeth.
- They do not bleed when brushed.

Gingivitis (Gum Inflammation)

- Unhealthy gums are red in color.
- They do not lay flat against the teeth.
- They will bleed when brushed.
- Bacterial plaque is visible on the tooth surface.
Gingivitis risk factors

- Diabetes
- Smoking
- Aging
- Genetic predisposition
- Systemic diseases and conditions
- Stress
- Inadequate nutrition
- Certain medication use

Dilantin Hyperplasia
(Overgrowth of the Gums)

Poor Oral Hygiene + =
Dilantin Hyperplasia

Periodontal Disease (Gum Disease)

- Gums are red/purplish in color.
- They are not firmly attached to the teeth.
- They bleed when brushed.
- Teeth become loose.
Gum Disease and Down Syndrome

- Periodontal disease (Gum Disease) is the most significant oral health problem in people with Down Syndrome
- Loss of front teeth in early teens

Contributing Factors

- Poor oral hygiene
- Poor tooth alignment
- Grinding
- Abnormal host response because of a compromised immune system
Signs of Mouth Pain

- Ear-rubbing
- Head banging
- Face striking
- Disturbed sleeping and eating patterns
- Gum rubbing
- Drooling
- Biting or chewing
- General unhappiness or irritability

Risk Factors
Cognitive Impairment

ENILMUG EHT GNOLA SELCRIC NI HSURB

Physical limitations: Adaptive Aids
# Behavioral Considerations

*Developed by clinicians at Tufts Dental Facilities*

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>0</td>
<td>Patient did not enter clinic</td>
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<tr>
<td>1</td>
<td>Sat in chair, didn’t allow exam</td>
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<tr>
<td>2</td>
<td>Allows brushing or visual exam</td>
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<tr>
<td>3</td>
<td>Allows instruments with assistance</td>
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<tr>
<td>4</td>
<td>Allows procedures with assistance &gt; 50%</td>
</tr>
<tr>
<td>5</td>
<td>Allows procedures with assistance &lt;50%</td>
</tr>
<tr>
<td>6</td>
<td>Allows procedures without assistance</td>
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## Appointment Evaluation

- **Dental Decay:** No
- **Fair (moderate plaque/tartar):** Allows instruments with assistance
- **No Change:**
- **Premedication:** No Dental Premed Required
- **Needs help brushing along the gumline:** Continue to brush even when gums bleed
- **Do not brush until bedtime:** (Fluoride)
Strategies for a good dental visit

Before the Dental Visit
- Dental visit history
- Use pictures/dental equipment to familiarize the individual
- Schedule appointment to a time that best suits individual
- Communicate with office staff
- Provider continuity
- Control environmental stimulus

During the Dental Visit
- Bring comfort items from home
- Verbal reassurances
- Accompany individual into operatory
- Modeling
- Allow extra time
- Clearly explain the procedures
- Consider sedation prior to appointment

Barriers to Care
Finances

Consent for treatment
Fear and Apathy

• Negative past dental experiences
• Afraid that there will be pain involved
• Medically compromised

Lack of Providers
Intervention and Prevention Strategies

Prevention

- Toothbrushing
- Flossing
- Chlorhexidine Therapy
- Fluoride Therapy
- Routine Dental Care
Prevention: Practicing good homecare

Toothbrushing Dress code

- Mask
- Gloves
- Eyewear
**Location**

- In front of the television
- In bed
- In the shower
- In the kitchen
- Dry brushing is acceptable

**Brushing Approaches- Positioning**

- Good lighting
- Stand behind person
- Lean against a wall for support
- Gently hold the person’s head against your body
Toothbrush Choices

Hard or Soft Toothbrush?

Toothbrush Abrasion
Change your Toothbrush!

Technique

Basic Brushing Techniques:
### Toothbrushing Task Analysis

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**KEY**
- **I** = Independent
- **A** = Assistance
- **N/A** = Not Applicable

**NAME:** _______________________________

**DATE:** 7/18/2014

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### Disclosing Solution

![Disclosing Solution Image 1](image1)

![Disclosing Solution Image 2](image2)
Prevention: Flossing

• Wrap 18” of floss between index fingers

• Gently slide floss between the teeth in a back and forth motion

• Wrap around each tooth

Prevention: Fluoride Therapy
Prevention: Chlorhexidine Therapy

Prevention: Routine Dental Care
Intervention Strategies

- Understand risk factors for oral disease
- Eat a healthy diet
- Maintain a healthy lifestyle

Risk Factors for Oral Disease

- Dependence on others for oral care
- Tobacco use
- Mouth breathing
- Dry mouth
- Certain medications
- Age
- Self-Abusive Behaviors
Self-Abusive Behaviors

• Rumination: regurgitation, re-chewing, or re-swallowing food
• Pica: Eating non-edibles
• SIB: Self-injurious behaviors

Intervention: Limit Sugar Intake

eat
less sugar
{you're sweet enough already}
Intervention: Limit Sugar Intake

CONTAINS
- GRAVE NECTAR, BROWN
- RICE SYRUP, HIGH-FRUCTOSE
- CORN SYRUP, DEXTROSE
- EVAPORATED CANE JUICE
- GLUCOSE, LACTOSE, MALT

Intervention: Limit sugar intake

Choose Real Food
Sugar Intake = Dental Decay

Amount of sugar + Stickiness of food + Timing of meals

Sugar Facts:
4 Grams = 1 Teaspoon Sugar

- Find # grams of sugar listed on label
- Divide by 4
- This number equals the # of teaspoons of sugar per serving
Hidden Sugars

Hidden Sugars

= 7
Hidden Sugars

Serving Size

Nutrition Facts
Serving Size: 1 cup (226g)
Servings Per Container: 2

- Calories: 160
- Total Fat: 0g
- Cholesterol: 0mg
- Sodium: 20mg
- Total Carbohydrate: 41g
- Sugars: 33g
- Protein: 1g

* Percent Daily Values are based on a 2,000 calorie diet.
Serving Size

First Ingredient on the Label

INGREDIENTS: SUGAR, FRUCTOSE, CITRIC ACID (PROVIDES TARTNESS), CONT.
LESS THAN 2% OF ARTIFICIAL FLAVOR, ASCORBIC ACID (VITAMIN C), VITAMIN
ACETATE, CALCIUM PHOSPHATE (PREVENTS CAVING), ACESULFAME POTASSIUM
AND SUCLASUW (SWEETENERS), ARTIFICIAL COLOR, RED 40.
Sugary Snacks as Rewards

Alternative Food Choices
Intervention: Sugary Medications

• 15 grams of sugar in one dose!
• Rinse with water
• Drink more water
• Take medicine prior to brushing
• Look for sugar free medications when available

Case Study

• 32 year old male named Roger
• Cerebral palsy
• Seizure Disorder
• Takes Dilantin for seizures
• Has not seen a dentist for over a year
Clinical Findings

- Fractured front tooth that is beginning to discolor
- Gingival hyperplasia (Gum overgrowth)
- Lost fillings
- Broken clasp on lower partial denture but wears it anyway

Oral Hygiene Habits

- Brushes independently once a day with Crest toothpaste
- Uses a hard toothbrush
- Uses a denture brush on lower partial denture when he remembers to take it out
24 Hour Diet Recall

<table>
<thead>
<tr>
<th>BREAKFAST</th>
<th>DINNER</th>
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<tbody>
<tr>
<td>1 cup coffee with cream and 4 teaspoons sugar</td>
<td>2 cups beef stew</td>
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<tr>
<td>2 scrambled eggs</td>
<td>1 dinner roll</td>
</tr>
<tr>
<td>2 toast with jelly</td>
<td>1 cup milk 2%</td>
</tr>
<tr>
<td>8 oz. apple juice</td>
<td>1 cup Jell-O</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LUNCH</th>
<th>SNACKS</th>
</tr>
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<tr>
<td>2 cups micro waved macaroni and cheese</td>
<td>2 Cheese Danish</td>
</tr>
<tr>
<td>1 cup granola</td>
<td>3 cups microwave popcorn</td>
</tr>
<tr>
<td>1 (16 oz. bottle) Vitamin Water</td>
<td>3 (6 oz.) servings Yoplait yogurt</td>
</tr>
<tr>
<td>1 cup mixed fruit in light syrup</td>
<td>2 cups coffee with cream and 4 teaspoons sugar</td>
</tr>
</tbody>
</table>

Intervention and Prevention

- Routine dental appointments and cleanings
- Educate staff and Roger about the side effects of Dilantin and poor oral hygiene = gum overgrowth
- Possible root canal therapy on front tooth
- Replace lost fillings
- Replace broken partial denture
Homecare

- Help Roger brush 2-3 times daily targeting the gumline with a fluoridated toothpaste
- Floss once a day

Denture/Partial Care

- Line a sink with wet paper towels or fill the sink with warm water.
- Remove the denture and place it in the palm of your hand.
- Gently hold the denture over the sink and brush all parts of the denture.
- Turn the denture around and brush the inside too!
- Rinse the denture with cool water.
- Brush gums and tongue using a small soft toothbrush.
Diet Considerations

Important facts to remember:

- Build tooth brushing into a consistent, daily routine.
- Be methodical so you don’t miss any teeth.
- Routine dental care – TDF recommends 4 cleanings a year.
- Limit sugar intake to avoid dental decay.
Questions?