

# **BUILDING AN ORAL HYGIENE PROGRAM FOR INDIVIDUALS WITH INTELLECTUAL AND DEVELOPMENTAL DISABILITIES**

**Katie Jo Lawton**  
**Occupational Therapist**  
**Center of Excellence**

**Sheila A. Sparling**  
**Speech-Language Pathologist**  
**Center of Excellence**

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# Oral Care Presentation

Oral Care Information

Importance of Oral Health

Toothbrushing Strategies

Sensory Challenges

Tools for Oral Care

When to Seek Care

# Oral Care Information

Statistics on Oral Cares

Issues with Oral Cares

Barriers to Oral Cares

# Overview of a few statistics

In years prior, there has been an increase in babies born with developmental disability/intellectual disability (ID/DD). (up to 4% in 2017; 2019 to 2021 up to 7-8.5%)  
(CDC, 2023)

Approximately 40% of young children with ID/DD have access to a private dentist and 35% have access to a community dentist. (Milano, 2017)

Young children with ID/DD are likely to have their first dental visit delayed and often have no preventative care.  
(Milano, 2017)

They are also less likely to have restorative care. (Wilson et al, 2019)

Training in dental schools/ education for dentists to learn/spend time with someone with ID/DD (AAMD Webinar, 2024)

# What are some issues?



Access to dental care (Milano, 2017)



Increase in population with increase in life expectancy (Milano, 2017)



Change in living arrangements (moved from institutions (deinstitutionalization) to family or small group home) (Milano, 2017)



More cavities and/or tooth decay (means more pain and more extractions) (Milano, 2017)



Untreated dental needs

Poor oral health

Negative impact on quality of life

Increase in gingivitis and periodontitis (Milano, 2017)

# Anxiety related to dental treatment

- ▶ It is a real thing and not just for individuals with ID/DD.
- ▶ Ways to help ease the anxiety
  - Validate their feelings
  - Reward with a fun activity after the examination
  - Provide support and comfort during the process
  - Explain what the dentist does – maybe plan a visit without any examination, use a task analysis, social stories, or pictures to help in understanding the dental examination process. (Mehrl, 2016)

# Barriers

## ► Individuals with Intellectual Disability/Developmental Disability

### Mental co-morbidities

- Degree of the disability
- Anxiety, fear-related emotions

### Medical co-morbidities

- Seizure disorder, most often recorded with gingival hyperplasia, a side effect of medication
- Phenytoin gingival hyperplasia – over-growth of gum tissue around teeth
- Tegretol – alveolar bone loss (mandible and maxilla)

• (Cornacchio, et al. 2011)

# Barriers

## ► Cost

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Is often the greatest barrier by almost 40% (Milano, 2017)

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Dentists may choose not to accept Medicaid patients and if they do it is low reimbursement. (Milano, 2017)

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The process for dental care is longer than a neurotypical individual. (National Institute of Dental and Craniofacial Research, 2009)

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High rate of failed dental appointments (Milano, 2017)

# Barriers

## ► Dentists

The dentist may not feel comfortable with the individual's potential behavior during visits

Overwhelmed by the severity of dental disease

The dentist may not feel comfortable assisting individuals with a severe to profound intellectual disability

Training hours are often reduced to less than 10 hours spent in dentistry school related to ID/DD. (Milano, 2017)

The National Council on Disability (NCD) in 2019 recommended more education for dentists to be inclusive of individuals with ID/DD. This was passed by Dental Accreditation to be effective on July 1 2020. (NCD, 2019)

Often, pediatric dentists are more equipped to work with ID/DD; however, as they move to adult age, they often need to find a new dentist. (NCD, 2019)

# Challenges

Individual with ID/DD

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Behavior – refuse oral care or part of oral care, act in unsafe way before, during or after oral care, engage in aggression or running away. May be agitated

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Environment – making a mess, difficulty completing steps due to needing help, distracted by the environment.

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Communication – not listening or following directions, trouble understanding the process of oral care, trouble communicating they are in pain or uncomfortable, anxious, confused, etc.

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Physical – they may have motor issues (i.e. tremors etc.) that makes oral care difficult, embarrassment, not able to do a thorough job, frustration, lack of stamina to complete the task.

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Medical – may be in pain or uncomfortable during the process of oral care, etc

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Emotional – may be fearful of the process, the dentist, etc.

# Importance of Oral Care

# Why are we concerned?

## ► Overall oral health

- Plaque is a thin, colorless film of living bacteria that sticks to teeth and gums. Plaque is the major factor of periodontal disease (Denizer, et al, 2024)
- If plaque is not removed daily, it will turn into hard deposits called calculus.
- Calculus can be removed, but only by the dentist.
- Plaque leads to calculus, calculus leads to gum loss, gum loss leads to bone loss, and finally, bone loss leads to tooth loss.

## ► External Factors

- Some individuals may have difficulty clearing food out of their mouth due to poor tongue movement.
- Food left sitting in the mouth for an extended length of time has a higher likelihood of creating calculus, which can lead to gum loss, bone loss, and finally loss of your tooth.

# Ways to minimize these concerns

- ▶ Education to caregivers and individuals regarding a healthy mouth. (NCD, 2009)
- ▶ Programming for any sensory and behavioral needs. (NCD, 2009)
- ▶ Making oral hygiene plans more individualized vs general staff training.  
(Altabet, S., Rogers, K., et.al. (2003)
- ▶ Brushing after eating a meal assists in removing the food that may create bacteria in the mouth.

So why? It is important to have a clean mouth, especially for medically fragile and more dependent individuals who are at higher risk for aspiration pneumonia. If their mouth is clean, their saliva is clean. If they happen to aspirate their “clean” saliva, it is easier on their lungs.

- Overall quality of life

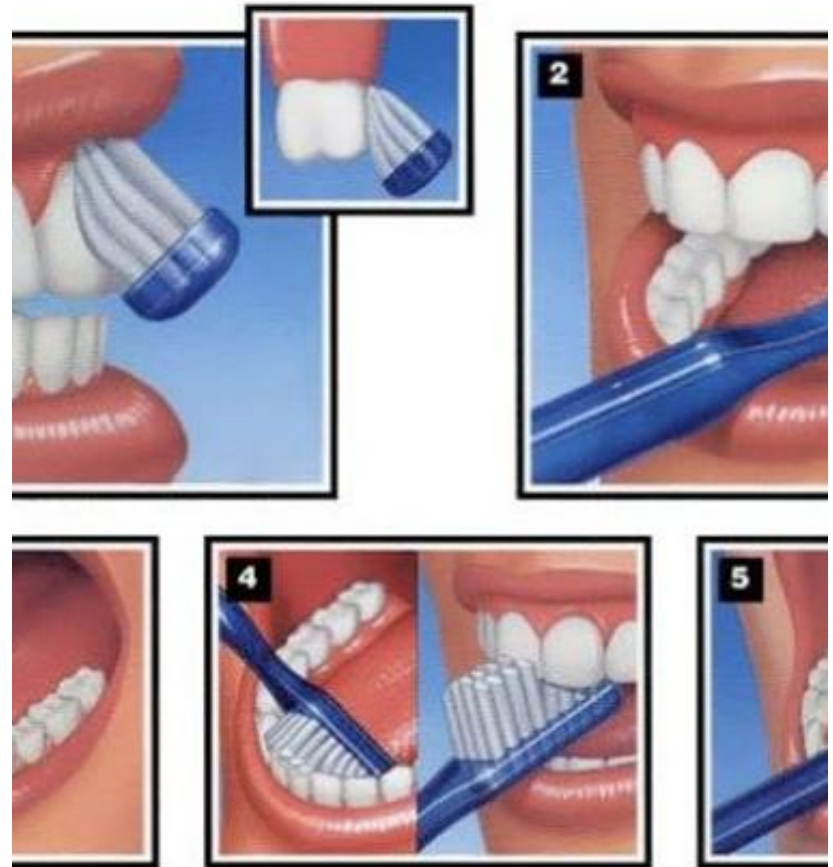
# Strategies

- ▶ Recommended use of gloves when assisting individuals.
- ▶ Brush 2x a day.
- ▶ If edentulous (no teeth) – brush at least 2x/day with mouth rinse
- ▶ Always be at eye level when brushing someone's teeth.

# Strategies

- ▶ Brush for 2 minutes
- ▶ Brush at the gum line using a 45-degree angle.
- ▶ Ensuring you brush all three sides of their teeth, tongue as tolerated, and floss between teeth when possible.

- American Dental Association



# Strategies

## ▶ Procedures for using toothpaste:

- Pea-sized amount on a moistened toothbrush and press into the bristles.
- To clear toothpaste from the mouth, provide either a cup of water (spit or swallow saliva if they can do either action) or use water on the toothbrush or a wet washcloth as a rinse.

# Strategies

- ▶ Procedures for using mouth rinse: (if unable to swish and spit)
  - Put a small amount in a paper cup or plastic med cup
  - Dip the brush into the cup and shake off the excess, then brush their teeth, gums, and tongue if tolerated.
  - Do not dip the brush inside the bottle or lid, as this could contaminate the whole bottle.
  - No need to follow with a water rinse.
  - Disclaimer – drinking mouth rinse can be hazardous to the individual. Call your local Poison Control.

# Strategies

- ▶ Nonalcoholic mouth rinse is safer for lung tissue. Biotene, Crest Pro-Health, and Chorinz oral rinse are a few good options that will not damage lung tissue.
- ▶ Toothpaste – really any kind of toothpaste. Squiggles is a brand that has been recommended by the University of Iowa as a toothpaste known to be safe for individuals who are at high risk for aspiration pneumonia.
- ▶ Flossing and brushing tongue as tolerated.

\*\*\*The State of Iowa does not endorse specific brands of nonalcoholic mouth rinse.

# Statistics

- ▶ 69%-95% of individuals diagnosed with Autism experience sensory challenges that affect Activities of Daily Living (ADLs) (Baker et al, 2008)
- ▶ Individuals with sensory over responsiveness are more likely to have poor oral habits and higher rates of sensory driven distress in the dental office (Duker et al, 2021) (Stein et al, 2013)
- ▶ 50% of parents report that both sensory sensitivities and behavioral difficulties make dental appointments challenging (Cermac et al, 2015)

# Oral Sensory Challenges- what they can look like?

## **Oral Sensory Over-Responsivity**

- ▶ Responds negatively to new textures, flavors, temperatures.
- ▶ Gagging
- ▶ Dislikes hygiene activities
- ▶ Avoids touching utensils with mouth

# Oral Sensory Challenges- what they can look like?

## **Oral Sensory Under-Responsivity**

- ▶ Likes intense flavors
- ▶ Messy eater
- ▶ Large bites
- ▶ Stuffing Mouth
- ▶ Pocketing
- ▶ Drooling
- ▶ Likes to mouth objects and seems to crave oral input

# How can sensory affect oral cares?

- ▶ Decreased ability to tolerate oral care task.
- ▶ Decreased ability to tolerate oral sensory input/challenges.
- ▶ “fight/flight” can trigger abnormal tone that influences positioning and airway protection.
- ▶ Contributes to poor oral- motor abilities and dysphagia.

# What can we do?

- ▶ Consider the environment (both at home and at the dental office)
  - Lighting
  - Sound
  - Visual effects
- ▶ Use of tactile objects and weighted objects (i.e., X-ray vest) during dental exams
- ▶ Use of noise-cancelling headphones and/or headphones that offer music
- ▶ Type of Toothbrush
- ▶ Educate caregivers about firm touch, maintaining contact, and using rhythm to help establish expectation and control.
- ▶ Give the individual choice and control
- ▶ Establish communication, trust, and routine.
- ▶ Consult with an Occupational Therapist for individualized sensory activities to increase overall oral care participation

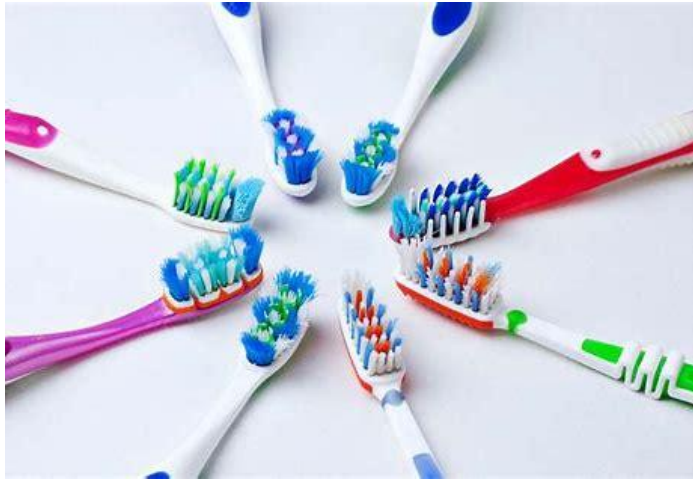
# Tools - Toothbrushes

- ▶ Manual toothbrushes
- ▶ Electric toothbrushes
- ▶ Toothettes – shorter and longer handles
- ▶ Specialty toothbrushes (tuft toothbrush)



# Tools – Manual toothbrushes

## ▶ Manual toothbrushes



Manual soft toothbrushes



Ergonomically



Unbreakable

# Tools – Battery-operated toothbrushes

## ▶ Battery-operated toothbrushes



Battery operated soft toothbrushes – no plug in or recharge capability



May require a battery replacement or plug in to recharge

# Tools – Toothettes

## ► Toothettes



Regular hospital toothette



Sage system Toothettes – longer handle

# Tools – Specialty

## ► Specialty toothbrushes



Tuft end toothbrush



3-sided toothbrush



Double sided



Full mouth toothbrush  
Ask your dentist first!!!

# Tools – Others

## ► Other tools



Dental floss picks



Water piks - be cautious here



Disclosing tabs

# Tools – Others

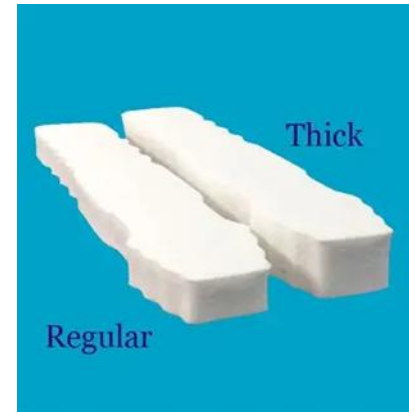
## ► Other tools



Armor Dental  
soft  
retractor



Humm battery-  
operated toothbrush



Open Wide Mouth rests

# Tools – Others

## ▶ Grasping toothbrush



- Wrist cuffs
- Ergonomic style handles
- Built up handles

# Tools- Others



Squeezes Toothpaste



Toothpaste  
Dispensers

# Other Tools

- ▶ Social Stories
- ▶ Desensitization program
- ▶ Visual or auditory timers
- ▶ Picture sequencing
- ▶ Shorter appointments
- ▶ Video modeling (Campbell et al., 2015; Piccin et al., 2018; Popple et al., 2016 and Rosenberg et al., 2010)
- ▶ Behavioral training (connect with a Board Certified Behavioral Analyst)
  - Backward chaining
  - Forward chaining
  - Antecedent manipulation
  - Consequence manipulation
  - Self-management (Miak et al., 2024)

# When to seek care

# Something may be wrong if you see any of the following

- ▶ Trouble eating
- ▶ Loose teeth
- ▶ Halitosis – has it changed
- ▶ Bleeding or Swollen gums
- ▶ Mouth sores
- ▶ Lack of eating foods they used to enjoy
- ▶ Rubbing their jaw
- ▶ Moaning
- ▶ Acting differently
- ▶ Self-injurious behavior, particularly to the mouth area
- ▶ Fever
- ▶ Resistant to having teeth brushed outside of the norm.

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# Thank you!

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Katie Jo Lawton, M.S., OTRL  
Occupational Therapist  
Sheila A. Sparling, M.S. CCC-SLP  
Speech-Language Pathologist  
WRC Center of Excellence



Health and  
Human Services