"Oral Health for Children with Special Health Care Needs"

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Disclosure
Maria Czarnecki, DMD has nothing to disclose.

In this lecture, will discuss the “off-label” use of an FDA-approved pharmaceutical (fluoride varnish).

Definition (CYSHCN)
Broad classification
Children with a range of conditions and medical needs that range from mild to severe:
- Children with chronic physical health conditions (asthma, Diabetes type 1)
- Children with acquired disabilities (paralysis or brain injury)
- Children with developmental disabilities (retardation or cerebral palsy)
- Children with Behavioral and mental health condition (ADHD, depression)

Learning Objectives:
- Review different types of developmental disabilities and how they impact oral health
- Discuss complications of special consideration in dental treatment planning for children with developmental and intellectual disabilities (I/DD)
- Provide best practice tools and strategies for health care professionals serving children with developmental and intellectual disabilities
Disabilities & Dental Care

INTRODUCTION
Children with disabilities often need extra help to achieve and maintain good health. Oral health is no exception.
- deinstitutionalization
- 80% community-based group residences or at home
- requires adaptation of the skills we use every day
- mild or moderate developmental disabilities can be treated successfully in the general practice setting.

Providing Dental Care to Children with Special Health Care Needs

- Medical Clearance: Consultation with physicians, family, and caregivers is essential.
- Team Approach: Share patient's preferences unique details and techniques.
- Informed Consent: Also, determine who can legally provide informed consent for treatment.

Mental Capabilities

MENTAL CAPABILITIES Variable!!
How well they can follow directions in the operatory and at home?
- Determine mental capabilities and communication skills.
- Allow time for adjustment
- Communicate respectfully
- Repeat instructions
- Involve patients in hands-on demonstrations.

Behavioral Problems

Behavior Problems
- Anxiety and fear can lead to uncooperative behavior:
  - fidgeting
  - temper tantrums
  - violent behavior
  - self-injurious
  - head banging

Strategies to Reduce Behavior Problems
- Involve the entire office team
- Desensitization Appointments
- Use least restrictive approach
- Comfort items & people
- Short appointments
- Positive Reinforcement
- Immobilization Techniques
- Sedation
**Mobility Problems**

Some rely on a wheelchair or a walker to move around.
- Dental chair
  - Wheelchair
  - Lock
  - Slip a sliding board (also called a transfer board—behind the patient’s back to support the head and neck)

**Assess & Address**

- Observe how the patient moves
- Be ready for uncontrolled body movements
- Address concerns about posture
- Maintain a clear path for movement throughout the treatment setting
- Ask about special preferences such as padding, pillows, or other things you can provide.

**Neuromuscular Problems**

Can affect the mouth and complicate oral care.
- Rigid or loose masticatory muscles
- Drooling
- Gagging
- Problems swallowing

**Strategies**

- Gagging
  - Early appointment, before eating or drinking.
  - Chin in a neutral or downward position
- Swallowing
  - Upright position
  - Tilt to side
- Anesthesia
  - Short acting
  - Watch for tongue and lip chewing

**Body Movements**

**UNCONTROLLED BODY MOVEMENTS** can jeopardize safety and your ability to deliver dental care. Pay special attention to the following:

- Treatment setting:
  - Calm and supportive.
  - Place instruments behind the patient
- Patient’s position:
  - Wheelchair vs. Dental Chair
  - Pillows = Comfort/Cushion
- Your position:
  - Anticipate direction
  - Behind the patient
  - Gently cradle the head
  - Rest hand around the mandible

**Gastroesophageal Reflux**

Sometimes affects people with central nervous system disorders such as cerebral palsy.

- Teeth may be sensitive or display signs of erosion.
- Consult your patient’s physician about the management of reflux.
- Place patients in a slightly upright position for treatment.
- Talk with patients and caregivers
  - Rinsing with a water and baking soda solution
  - Stress that using a fluoride gel, rinse, or toothpaste every day is essential.
Visual Impairments
Affect many people with developmental disabilities.
- Level of assistance required
- Use other senses to connect
- Face your patients when you speak
- Keep them apprised of each upcoming step
- Provide written instructions in large print (16 point or larger).

Hearing Loss and Deafness
- Speak loud and clear
- Adjust hearing aids or turn them off
- Interpreter, sign language, or reads lips
- Visual feedback is helpful.
- Maintain eye contact with your patient.
- Turn off the radio and the suction
- Remove your facemask first or wear a clear face shield.

Latex Allergies
Can be a serious problem.
- Spina bifida or frequent surgeries - risk factors
- Schedule at beginning of the day when there are fewer airborne allergens circulating through the office.
- Use latex-free gloves and equipment and keep an emergency medical kit handy.

Developmental Disabilities
DENTAL CARIES
Common in people with developmental disabilities.
- Fluorides and sealants
- Diet and hygiene
- Xerostomia
- Medicines that contain sugar
- Rinse with water after taking any medicine.
Oral Health Problems & Strategies for Care

DENTAL CARIES
- Offer alternatives to cariogenic foods and beverages as incentives or rewards.
- Educate caregivers about preventing early childhood caries.
- Encourage independence in daily oral hygiene.
- Use the Teach Back Method
- Perform hands-on demonstrations

Dental Hygiene
If necessary, adapt a toothbrush to make it easier to hold. For example, place a tennis ball or bicycle grip on the handle, wrap the handle in tape, or bend the handle by softening it under hot water. Explain that floss holders and power toothbrushes are also helpful.

Oral Hygiene

PERIODONTAL DISEASE
More prevalent and at a younger age in people with developmental disabilities.
- Poor oral hygiene
- Damaging oral habits
- Gingival hyperplasia
  - Anticonvulsants
  - Some antihypertensive agents
- Immunosuppressant
- Some patients benefit from the daily use of an antimicrobial agent such as chlorhexidine.
- Stress the importance of conscientious oral hygiene and frequent prophylaxis

MALIGNANT DISEASE
Associated with intracranial and perioral muscular abnormalities, delayed tooth eruption, underdevelopment of the maxilla, and oral habits such as bruxism and tongue thrusting.
- Chewing and speaking
- Risk of oral trauma, periodontal disease, dental caries.
- Orthodontic treatment may not be an option.

MALOCLUSION

**DAMAGING ORAL HABITS**

- bruxism
- food pouching
- mouth breathing
- tongue thrusting
- self-injurious behavior such as picking at the gingiva or biting the lips;
- rumination, where food is chewed, regurgitated, and swallowed again
- pica, eating objects and substances such as gravel, sand, cigarette butts, or pens.

**ORAL MALFORMATIONS & TRAUMA**

**ORAL MALFORMATIONS**

- **Enamel Defects**: Patients may present with enamel defects, high lip lines with dry gingiva, and variations in the number, size, and shape of teeth.
- **Craniofacial anomalies**: Such as facial asymmetry and hypoplasia of the mid-facial region are also seen in this population.
- **Recommendations**: Identify any malformations and explain to the caregiver the implications for daily oral hygiene and future treatment planning.

**TOOTH ERUPTION**

- May be delayed - First primary tooth eruption by age 2. Characteristic of Down Syndrome or eruption problems caused by gingival hyperplasia (medication: phenytoin and cyclosporine)
- Dental examination by a child’s first birthday can regularly thereafter can help identify atypical patterns of eruption.

**TRAUMA and INJURY**

- to the mouth from falls or accidents occur in people with seizure disorders or cerebral palsy.
- Suggest a tooth-saving kit for group homes.
- Require immediate professional attention and explain the procedures to follow if a permanent tooth is knocked out. Also, instruct caregivers to locate any missing pieces of a fractured tooth, and explain that radiographs of the patient’s chest may be necessary to determine whether any fragments have been aspirated.

**TRAUMA VERSUS ABUSE**

- Physical abuse often presents as oral trauma. Abuse is reported more frequently in people with developmental disabilities than in the general population.
- If you suspect that a child is being abused or neglected, State laws require that you call your Child Protective Services agency.
- Call NJ Child Abuse/Neglect Hotline at 1-877-NJABUSE (Available 24-7)

**Autism**

- Autism is a complex developmental disability that impairs communication and social, behavioral, and intellectual functioning.
Autism & Oral Health

1. Rates of caries and periodontal disease in people with autism are comparable to those in the general population.
2. Delayed Tooth Eruption
   - Medications: Tooth eruption may be delayed due to phenytoin-induced gingival hyperplasia. Phenytoin is commonly prescribed for people with autism.
3. Damaging Oral Habits

AUTISM: Damaging Oral Habits

Include:
- bruxism;
- tongue thrusting;
- self-injury
- Pica

If a mouth guard can be tolerated, prescribe one for patients who have problems with self-injurious behavior or bruxism.

AUTISM: Dental Caries

- Caries risk increases in patients who have a preference for soft, sticky, or sweet foods; damaging oral habits; and difficulty brushing and flossing.
- Recommend preventive measures such as fluorides and sealants.
- Caution patients or their caregivers about medicines that reduce saliva or contain sugar
  - Sugar free alternatives
- Suggest that patients drink water often, take sugar-free medicines when available, and rinse with water after taking any medicine.
  - Advise caregivers to offer alternatives to cariogenic foods and beverages as incentives or rewards.

AUTISM: Caries & Periodontal Disease

- Daily Oral Hygiene:
  - Encourage independence
  - Use Teach-back

- Caregiver’s Role:
  - Position behind
  - Consistency/Habits

- Periodontal Disease:
  - Chlorhexidine
  - Frequent prophylaxis
  - Insurance Coding
**AUTISM: Trauma & Injury**

Falls or accidents occur in people with seizure disorders.

- Suggest a tooth saving kit for group homes.
- Emphasize to caregivers that traumas require immediate professional attention.
- Instruct caregivers to locate any missing pieces of a fractured tooth, and explain that radiographs of the patient’s chest may be necessary to determine whether any fragments have been aspirated.

**Autism Challenges to Patient Management**

- Obsessive routines, repetitive behaviors, unpredictable body movements, and self-injurious behavior may all be symptoms that complicate dental care.
- Communication and behavioral problems pose the most significant challenges in providing oral care.
- Some children with the disorder appear distant, aloof, or detached from other people or from their surroundings.
- Others do not react appropriately to common verbal and social cues, such as a parent’s tone of voice or smile. In severe cases, this makes verbal management in the dental chair difficult.

**COMMUNICATION PROBLEMS and MENTAL CAPABILITIES**

A central concerns when treating people with autism.

- **Determine Intellectual Capacity:** Talk with the parent or caregiver to determine your patient’s intellectual and functional abilities, and then communicate with the patient at a level he or she can understand.
- **Use a “tell-show-do” approach to providing care:** Start by explaining each procedure before it occurs. Take the time to show what you have explained, such as the instruments you will use and how they work. Demonstrations can encourage some patients to be more cooperative.
- **Perseveration:** Avoid demonstrating dental equipment if it triggers perseveration, and note this in the patient’s record. People with autism often engage in perseveration, a continuous, meaningless repetition of words, phrases, or movements. Your patient may mimic the sound of the suction, for example, or repeat an instruction over and over again.

**Autism: Preparing for Behavior Problems**

- **BEHAVIOR PROBLEMS** --which may include hyperactivity and quick frustration--can complicate oral health care for patients with autism.
- The invasive nature of oral care may trigger violent and self-injurious behavior such as temper tantrums or head banging.
AUTISM: Avoiding Behavior Problems

- Desensitization
- Short and positive
- Positive Reinforcement
- Comfort Items
- Stimulus

AUTISM: Unusual Response to Stimuli

UNUSUAL RESPONSES TO STIMULI

Reactions vary to sound, bright colors, and touch. Some people with autism may overreact to noise and touch, while exposure to pain and heat may not provoke much reaction at all.

- Consistency & Familiarity
- Minimize the number of distractions
- Allow time for your patient to adjust
- Touching and Cradling of the Head
- Note your findings
- Be prepared to manage a seizure

AUTISM: Managing Behavior Problems

- Use immobilization techniques
- Only when absolutely necessary
- Obtain consent from your patient’s legal guardian and choose the least restrictive technique that will allow you to provide care safely. Immobilization should not cause physical injury or undue discomfort.
- Pharmacological options:
  - If all other strategies fail, pharmacological options are useful in managing some patients.
  - Others need to be treated under general anesthesia. However, caution is necessary because some patients with developmental disabilities can have unpredictable reactions to medications.

Intellectual Disability

- Intellectual disability is a disorder of mental and adaptive functioning, meaning that people who are affected are challenged by the skills they use in everyday life.
- Intellectual disability is not a disease or a mental illness; it is a developmental disability that varies in severity and is usually associated with physical problems.
- While one person with intellectual disability may have slight difficulty thinking and communicating, another may face major challenges with basic self-care and physical mobility.
Intellectual Disability & Oral Health

In general, compared to the general population, people with intellectual disability have:
- Poorer oral health and oral hygiene
- More untreated caries
- Higher prevalence of gingivitis
- Higher prevalence of periodontal diseases

Intellectual Disability: Dental Caries

People with intellectual disability develop caries at the same rate as the general population. The prevalence of untreated dental caries, however, is higher among people with intellectual disability, particularly those living in noninstitutionalized settings.

- **Talk to caregivers:**
  - Emphasize non cariogenic foods and beverages as snacks.
  - Advise to avoid using sweets as incentives or rewards.

- **Medications:**
  - Xerostomia – drink water often.
  - Suggest sugar-free medicine if available
  - Rinse – stress importance of rinsing with water after dosing.

- **Recommend fluorides and sealants.**

Intellectual Disability: Malocclusion

- The prevalence similar to general population, except with coexisting conditions such as cerebral palsy or Down syndrome.
- A developmental disability in and of itself should not be perceived as a barrier to orthodontic treatment.

- **Critical Factor:** The ability of the patient or caregiver to maintain good daily oral hygiene is critical to the feasibility and success of treatment.

Intellectual Disability: Dental Anomalies

- Dental anomalies are more common in people with intellectual disability and coexisting conditions than in people with intellectual disability alone.
  - Missing teeth
  - Delayed eruption
  - Enamel hypoplasia
- Examine a child by age 1.
- Consider using a panoramic radiograph.
- Take appropriate steps to reduce sensitivity and risk of caries in your patients with enamel hypoplasia.
Enamel Hypoplasia

- Genetic Factors
  - Amylogenesis Imperfecta
- Local Factors
  - Trauma
- Systemic Factors
  - Fluorosis
  - Microbial Infection with elevated temperature
  - Nutritional deficiencies
    - Vitamin D deficiency

Intellectual Disability: Trauma & Injury

Falls or accidents occur in people with seizure disorders:

1. a tooth saving kit,
2. immediate professional care,
3. locate any missing pieces and radiographs of chest may be necessary

Intellectual Disability: Periodontal Disease

Medications, malocclusion, multiple disabilities, and poor oral hygiene combine to increase the risk of periodontal disease in people with intellectual disability.

- Daily oral hygiene
- Power brush/ floss holder
- Chlorhexidine - antimicrobial agent
  - Rinsing
  - Spray bottle
  - Toothbrush
  - "Toothette" or sponge
- Frequent professional cleanings
Providing Dental Care to Patients with Intellectual Disability

Cardiovascular Anomalies
Visual Impairments
Hearing Loss and Deafness
Seizures
Behavior Problems

Behavioral Problems

Strategies to Reduce Behavior Problems
- Consult physician
- Involve entire office team
- Desensitization Appointments
- Least restrictive approach
- Avoid perseveration
- Comfort items & people
- Short appointments
- Positive reinforcement
- Immobilization Techniques
- Sedation / Hospitalization

Cerebral Palsy

- Cerebral palsy is a complex group of motor abnormalities and functional impairments that affect muscle coordination.
- May be associated with uncontrolled body movements, seizure disorders, balance-related abnormalities, sensory dysfunction, and intellectual disability.
- Mild disorder: Body movements to appear merely clumsy or awkward. These patients may need little or no day-to-day supervision.
- Severe disorder: Require a wheelchair and a lifetime of personal care.

Types of Cerebral Palsy

The different types of Cerebral Palsy are classified according to associated motor impairments:

- **Spastic Palsy** presents with stiff or rigid muscles on one side of the body or in all four limbs, sometimes including the mouth, tongue, and pharynx. People with this form of cerebral palsy may have legs that turn inward and scissor as they walk, or arms that are flexed and positioned against their bodies. Many also have intellectual disability, seizures, and dysarthria (difficulty speaking).

- **Dyskinesia** or **Atetoid Palsy** is characterized by hypotonia and slow, uncontrolled writhing movements. People with this type of cerebral palsy experience frequent changes in muscle tone in all areas of their bodies; muscles may be rigid during waking hours and normal during sleep. Dysarthria is also associated with this type.

- **Ataxic Palsy** is marked by problems with balance and depth perception, as well as an unsteady, wide-based gait. Hypotonic and tremors sometimes occur in people with this rare type of cerebral palsy.

- **Combined Palsy** reflects a combination of these types.
Treating Intellectual Disability and Cerebral Palsy

Place and maintain your patient in the center of the dental chair. Do not force arms and legs into unnatural positions, but allow your patient to settle into a position that is comfortable and will not interfere with dental treatment.

Pattern of Movement: Observe your patient’s movements and look for patterns to help you anticipate direction and intensity.
- Softly cradle your patient’s head during treatment. Be gentle and slow if you need to turn the patient’s head.
- Gag Reflex: Help minimize the gag reflex by placing your patient’s chin in a neutral or downward position.
- Stay alert and work efficiently in short appointments.
- Exert gentle but firm pressure on your patient’s arm or leg if it begins to shake.
- Muscle Relaxants: Take frequent breaks or consider prescribing muscle relaxants when long procedures are needed.
- People with cerebral palsy may need sedation, general anesthesia, or hospitalization if extensive dental treatment is required.

Cerebral Palsy & Oral Health

Cerebral palsy itself does not cause any unique oral abnormalities. However, several conditions are more common or more severe in people with cerebral palsy than in the general population.

- **Bruxism**: Consider using a mouth prop.
- **Gag Reflexes**: Affect daily oral care as well as social interaction. Hypotonia contributes to drooling, as does an open bite and the inability to close the lips.

Cerebral Palsy: Dental Caries

DENTAL CARIES is prevalent primarily because of inadequate oral hygiene. Other risk factors include:
- Mouth breathing, the effects of medication, enamel hypoplasia, and food pouching.
- Caution patients or their caregivers about medicines that reduce saliva or contain sugar. Suggest that patients drink water often, take sugar-free medicines when available, and rinse with water after taking any medicine.
- Advise caregivers to offer alternatives to cariogenic foods and beverages as incentives or rewards.
- Food pouching: talk to caregivers about inspecting the mouth after each meal or dose of medicine. Remove food or medicine from the mouth by rinsing with water, sweeping the mouth with a finger wrapped in gauze, or using a disposable foam applicator swab.
- Recommend preventive measures such as fluorides and sealants.

Cerebral Palsy: Periodontal Disease

PERIODONTAL DISEASE is common due to poor oral hygiene and complications of oral habits, physical abilities, and malocclusion. Another factor is the gingival hyperplasia caused by medications.
- Daily oral hygiene
- Power brush/ floss holder
- Chlorhexidine - antimicrobial agent
  - Rinse
  - Spray bottle
  - Toothbrush
- Frequent professional cleanings
- If use of particular medications has led to gingival hyperplasia, monitor for possible delayed tooth eruption and emphasize the importance of daily oral hygiene and frequent professional cleanings.
Cerebral Palsy: Malocclusion

MALOCCLUSION involves more than just misaligned teeth—it is also a musculoskeletal problem. An open bite with protruding anterior teeth is common and is typically associated with tongue thrusting. The inability to close the lips because of an open bite also contributes to excessive drooling.

- Unfortunately, correcting malocclusion is almost impossible in people with moderate or severe cerebral palsy.
- The ability of the patient or the caregiver to maintain good daily oral hygiene is critical to the feasibility and success of orthodontic treatment.
- Inform caregivers of emergency procedures for accidents involving oral trauma, since protruding anterior teeth are more likely to be displaced, fractured, or avulsed.

Positioning in Treatment of Patients with Cerebral Palsy

Everyone who has cerebral palsy has problems with movement and posture. Observe each patient, then tailor your care accordingly.

- Maintain clear paths for movement
- Wheelchair vs. Dental Chair

Providing Dental Care to patients with Cerebral Palsy

Uncontrolled Body Movements
- Their limbs move often, so providing oral care can be difficult.
- When patients with cerebral palsy attempt to move in order to help, their muscles often tense, increasing uncontrolled movements.

Management
- Make the treatment environment calm and relaxing
- Do not force arms and legs into unnatural positions
- Observe your patient’s movements and look for patterns
- Softly cradle your patient’s head during treatment
- Be gentle and slow if you need to turn the patient’s head
- Exert gentle but firm pressure on your patient’s arm or leg if it begins to shake
- Try to keep appointments short, take frequent breaks, or consider prescribing muscle relaxants

Reflexes and Mental Capacity in patients with Cerebral Palsy

PRIMITIVE REFLEXES are common in many people with cerebral palsy and may complicate oral care. These reflexes often occur when the head is moved or the patient is startled, and efforts to control them may make them more intense.

Three types of reflexes are most commonly observed during oral care.
- Asymmetric tonic neck reflex: When a patient’s head is turned, the arm and leg on that side stiffen and extend. The arm and leg on the opposite side flex.
- Tonic labyrinthine reflex: If the neck is extended while a patient is lying on his or her back, the legs and arms extend, and the back and neck arch.
- Startle reflex: Any surprising stimuli, such as noises, lights, or a sudden movement on your part, can trigger uncontrolled, often forceful movements involving the whole body.

Be empathic about your patient’s concerns and frustrations. Tell him or her about any such stimulus before it appears. For example, tell the patient before you move the dental chair.

Minimize the number of distractions in the treatment setting. Movements, lights, sounds, or other stimuli can make it difficult for your patient to cooperate.

MENTAL CAPABILITIES vary. Many people with cerebral palsy have mild or moderate intellectual disability, but only 25 percent have a severe form. Some have normal intelligence.
Cerebral Palsy: Considerations for Dental Care

DYSARTHRIA is common in people with cerebral palsy, due to problems involving the muscles that control speech and mastication.

- Be patient. Allow time for your patient to express himself or herself. Remember that many people with dysarthria have normal intelligence.
- Consult with the caregiver if you have difficulty understanding your patient’s speech.

Providing Dental Care: Patients with Cerebral Palsy

HEARING LOSS and DEAFNESS

VISUAL IMPAIRMENTS

GASTROESOPHAGEAL REFLUX

SEIZURES

Down Syndrome

- Down syndrome, a common genetic disorder, ranges in severity and is usually associated with medical and physical problems.
- For example, they may have cardiac disorders, infectious diseases, hypotonia, and hearing loss.
- Mild or moderate intellectual disability, while a small percentage are severely affected.
- Developmental delays, such as in speech and language, are common.

Down Syndrome & Oral Health

- People with Down syndrome have no unique oral health problems. However, some of the problems they have tend to be frequent and severe. Early professional treatment and daily care at home can mitigate their severity and allow people with Down syndrome to enjoy the benefits of a healthy mouth.
- Several orofacial features are characteristic of people with Down syndrome.
- Malocclusion is found in most people with Down syndrome because of the delayed eruption of permanent teeth and the underdevelopment of the maxilla.
- Tooth anomalies are common in Down Syndrome.
Oral Features

The mid-facial region may be underdeveloped, affecting the appearance of the lips, tongue, and palate.
- Smaller Maxilla
- Mouth breathing - smaller nasal passages
- Tongue may protrude, may develop cracks and fissures with age
- Strong gag reflex
- The palate may appear highly vaulted and narrow - affect speech and chewing

Tooth Anomalies

TOOTH ANOMALIES
- Congenitally missing teeth: Third molars, laterals, and mandibular second bicuspids are the most common missing teeth.
- Delayed eruption of teeth, often following an abnormal sequence, affects some children with Down syndrome. Primary teeth may not be lost until age 6, with complete dentition delayed until age 4 or 5. Primary teeth are then retained in some children until they are 14 or 15.
- Irregularities in tooth formation, such as microdontia. Crowns tend to be smaller, and roots are often small and conical, which can lead to tooth loss from periodontal disease.
- Severe illness or prolonged fevers can lead to hypoplasia and hypo calcification.

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Malocclusion

MALOCCCLUSION because of the delayed eruption of permanent teeth and the underdevelopment of the maxilla. A smaller maxilla contributes to an open bite, leading to poor positioning of teeth and increasing the likelihood of periodontal disease and dental caries.
- Orthodontia should be carefully considered. Some may benefit, while others may not.
- In and of itself, Down syndrome is not a barrier to orthodontic care. The ability of the patient or caregiver to maintain good daily oral hygiene is critical to the feasibility and success of treatment.

TRAUMA and INJURY to the mouth from falls or accidents
- Suggest a tooth-saving kit for group homes.
- Requires immediate professional attention and explain the procedures to follow if a permanent tooth is knocked out.
- Important to locate any missing pieces of a fractured tooth, X-rays of the patient’s chest may be necessary to determine whether any fragments have been aspirated.

Down Syndrome & Dental Caries

DENTAL CARIES. Down syndrome have fewer caries than people without this developmental disability. Why?
- Delayed eruption of primary and permanent teeth;
- Missing permanent teeth;
- Small-sized teeth with wider spaces between them, which make it easier to remove plaque.
- Superved Ice: to prevent obesity; this helps reduce consumption of cariogenic foods and beverages.

Adults with Down syndrome are at an increased risk of caries due to xerostomia and cariogenic food choices.
- Hypotonia: contributes to chewing problems and inefficient natural cleansing action, which allow food to remain on the teeth after eating.
- Emphasis non cariogenic foods and beverages as snacks.
**Down Syndrome & Periodontal Disease**

**PERIODONTAL DISEASE**

Most significant oral health problem for children with Down Syndrome, experience rapid, destructive periodontal disease. Consequently, large numbers of them lose their permanent anterior teeth in their early teens.

**Factors:**
- Poor oral hygiene
- Malocclusion
- Bruxism
- Conical shaped tooth roots
- Immune system compromised due to abnormal host

**Recommendations:**
- Daily use of chlorhexidine
- Daily oral hygiene/ professional cleanings, if gingival hyperplasia due to medication

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**Intellectual Disability:**

Mild or moderate intellectual disability may vary although the limits their ability to learn, communicate, and adapt to their environment.

- Language development is often delayed or impaired; they understand more than they can verbalize.
- Challenges with ordinary activities of daily living and understanding the behavior of others/own

**Recommendations:**
- Listen actively, since speaking may be difficult for people with Down syndrome. Show your patient whether you understand.
- Talk with the parent or caregiver to determine your patient’s intellectual and functional abilities, then explain each procedure at a level the patient can understand. Allow extra time to explain oral health issues or instructions and demonstrate the instruments you will use.
- Use simple, concrete instructions, and repeat them often to compensate for any short-term memory problems.

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**HYPOTONIA**

**HYPOTONIA** affects the muscles in various areas of the body, including the mouth and large skeletal muscles. When it involves the mouth, problems with chewing, swallowing, drooling, and speaking can result.

**Recommendations:**
- Maintain a clear path for movement throughout the treatment setting.
- Determine the best position for your patient in the dental chair and the safest way to move his or her body, especially the head and neck. Talk with the physician or caregiver about ways to protect the spinal cord. Use pillows to stabilize your patient and make him or her more comfortable.

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**MEDICAL CONDITIONS**

Life expectancy has risen to the mid-50s, but still at risk for problems in nearly every system in the body. Some problems are manifested in the mouth. For example, oral findings such as persistent gingival lesions, prolonged wound healing, or spontaneous gingival hemorrhaging may suggest an underlying medical condition and warrant consultation with the patient’s physician.

**Recommendations:**
- Treat acute necrotizing ulcerative gingivitis and other infections aggressively.
- Talk to patients and their caregivers about preventing oral infections with regular dental appointments and daily oral care.
- Stress the importance of using fluoride to prevent dental caries associated with xerostomia.
- Use lip balm during treatment to ease the strain on your patient’s lips.
Compromised Immune System
Leads to frequent oral and systemic infections and a high incidence of periodontal disease. Aphthous ulcers, oral Candida infections, and acute necrotizing ulcerative gingivitis are common. Chronic respiratory infections contribute to mouth breathing, xerostomia, and fissured lips and tongue.

Providing Dental Care for Patients with Down Syndrome
SEIZURES
HEARING LOSS and DEAFNESS
VISUAL IMPAIRMENTS
CARDIAC DISORDERS
BEHAVIOR MANAGEMENT

Oral Health Resources
www.healthyteethnj.com

No Dental Insurance? No Problem
New Jersey Dental Clinic Directory provides a central source of information on public dental clinics and services in New Jersey:
- Federally Qualified Health Services (FQHC), that provide dental services with mobile vans:
  - Jewish Renaissance Medical Center
  - Zufall Health Center
  - North Hudson Community Action Corp.
  - Southern Jersey Family Medical
- NJAAP can assist with providing linkages to local dentists in your community

https://www.state.nj.us/health/fhs/oral/documents/dental_directory.pdf
Questions?

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