

# Quality Resource Guide

## Introduction to Patients with Special Healthcare Needs

### Author Acknowledgements

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### Educational Objectives

Following this unit of instruction, the practitioner should be able to:

1. Be aware of the lack of access to dental health care for patients with special needs.
2. Appreciate the importance of differentiating the unique physical and mental challenges of each patient.
3. Develop a full team approach to treating those with special needs.
4. Understand the keys to successfully treating patients with special needs.
5. Take the appropriate protective steps that minimize future dental caries for patients with special needs.

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The following commentary highlights fundamental and commonly accepted practices on the subject matter. The information is intended as a general overview and is for educational purposes only. This information does not constitute legal advice, which can only be provided by an attorney.

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Access to dental care can be one of the greatest challenges that patients with special health care needs (SHCN) face. When dental teams practice a few guiding principles in managing the care of this group, it can be a win-win equation, providing deeply satisfying experiences for the dental team and huge strides in improving oral health outcomes for this vulnerable and deserving population. The Quality Resource Guide (QRG) discusses the oral health care needs of patients with SHCN and provides guidance to allow the dental team to deliver effective and efficient care to a patient with SHCN in a general dental practice.

## Introduction

According to the CDC, developmental disabilities are a group of conditions due to impairment in physical, learning, language, or behavior areas. About one in six children have one or more developmental disabilities or delays.<sup>1</sup> Unfortunately, many patients who are developmentally delayed also suffer comorbidities that further complicate their oral health.

A diagnosis of “Developmental Disability”:

1. Requires an onset of the condition before 18 years of age;
2. Must be chronic in nature;
3. Will require lifelong services, and;
4. Is associated with substantial functional limitations in most areas of daily living.

Developmental disabilities can be caused by environmental or genetic factors. Symptoms and conditions may present themselves in a variety of ways and in varying degrees.

### **Environmentally Related Neurodevelopmental Disorders:**

Environmental elements such as lead, mercury and alcohol may affect the brain, resulting in cerebrogenic conditions such as: intellectual disability; sensory impairment; neuromotor dysfunction; seizure disorder, and; abnormal behaviors. The conditions may occur at birth or be acquired later in life.

### **Genetic Related Neurodevelopmental Disorders:**

Genetic abnormalities result in syndrome specific conditions that affect growth and development in either the cephalic, cervical, cardiac, pulmonary, skeletal, connective tissue, endocrine, metabolic and/or gastrointestinal systems.

To complicate the matter, not all diagnoses present in the exact same manner and may have varying degrees of severity or even multiple diagnoses and comorbidities.

Some of the most common developmental disabilities are:

1. Down Syndrome (most common genetic cause of intellectual disability);
2. Fragile X Syndrome (most common inherited cause of intellectual disability);
3. Fetal Alcohol Syndrome (most preventable birth defect and intellectual disability);
4. Cerebral Palsy (neuromuscular function disorder usually from brain hypoxia acquired around the time of birth) and;
5. Autism Spectrum Disorder, the most prevalent disorder and the one showing the fastest rise in the number of diagnoses.

Access to oral health care is the greatest unmet need that people with intellectual disabilities face.<sup>2</sup> There are many barriers to care for the SHCN population including economic, stigma, communications, culture, regulations, accountability and lack of provider participation. In addition, there is often a lack of education and training in this area among dental professionals, leading to a lack of provider’s comfort level and willingness to treat this population.

Pediatric dentists who are trained in delivering care to patients with SHCNs have now become an age-defined specialty<sup>3</sup> and usually do not treat patients over the ages of 18-21. The responsibility of treating patients with SHCN therefore falls upon general dentists. Although dental schools have revised their curriculums to address revised Commission of Dental Accreditation (CODA) Guidelines that state

that students must be competent in the diagnosis and treatment planning of patients with special needs, there are no requirements for competence in delivering clinical care.<sup>3</sup> Postdoctoral general dentistry residency programs (GPR or AEGD) have increased expectations in their training to cover basic concepts of care for patients with SHCN for those dentists still in training.

Continuing education courses for dental professions already in practice are rarely offered, however. Many of the large national or regional dental meetings do not typically offer SHCN training. Oral health professionals who desire more training to better serve the SHCN population should consider volunteering with programs such as the *Special Olympic Special Smiles* program that offers a combination of didactic training and “hands-on” experience for dental professionals. The *Special Smiles* program includes dental screenings, oral hygiene instructions and health promotion for athletes competing in the *Special Olympics*. Continuing education credit is provided as well as the positive interactions with the athletes. Clinicians may contact their local Special Olympics office <[https://www.specialolympics.org/Common/Special\\_Olympics\\_Program\\_Locator.aspx?src=navbar](https://www.specialolympics.org/Common/Special_Olympics_Program_Locator.aspx?src=navbar)> for information regarding future events in their region. **Special Smiles can serve as a great introduction to patients with SHCN although interactions may be limited to healthier and higher functioning patients.** In addition, many professional organizations, such as the Special Care Dentistry Association, offer online educational resources for oral health professionals. A list of resources is provided at the end of this QRG.

## Dental Needs for a SHCN Patient

Many patients with SHCN experiencing chronic pain are unable to express themselves. This may lead to untoward behaviors, including aggression. Often psychotropic drugs are erroneously prescribed when the underlying medical problem may be of dental origin. A broken restoration, fractured tooth or an abscess can result in intraoral pain and the inability to eat, sleep or rest. It is no

wonder that a patient with a tooth or gum problem may be uncooperative after suffering constantly for days or weeks when someone is simply trying to “brush his or her teeth”. That patient may be mislabeled as uncooperative and combative, and may be overmedicated. As a result, many times the caregiver gives up on trying to brush or care for the oral cavity to avoid more complications.

Clinicians and caregivers should pay careful attention to non-verbal cues for pain such as avoidance and defensive actions, a change of eating pattern, increased drooling, grinding of teeth, biting, abrupt change in behavior (aggression), holding or pointing to their face.

## Providing Oral Health Care for the SHCN Patient

A clinician’s willingness to provide care will lead to increased access to the treatment for challenged patients with SHCN. The key to treating patients with SHCN is to evaluate, understand and modify treatment and techniques to address the patient’s oral health needs. It is not as important to have expert knowledge in the field as it is to have a willingness to learn about the patient and try to improve their oral and overall health.

Regular and frequent care can support the adage that “it is often easier to prevent a dental problem than to treat it”. A patient with SHCN may have never been able to access or receive routine dental care so his/her past experiences may have resulted in trauma and anxiety especially if the visit was for dental pain. In addition, he/she may have felt rushed and even “violated” from lack of empathy from the care providers who were equally anxious and nervous. When a patient and their parent/caregiver have trust in the dental team, the outcomes can be very positive and rewarding.

Instead of focusing on what a patient cannot, or is not, able to do, the dental care team should consider what the patient can do. Given time and proper positive encouragement many clinicians often describe patients with SHCN as genuine, pure of heart and truly deserving.

## Principles to Guide Delivery of Care

### 1. Seek to understand, then be understood

Obtaining a thorough medical, dental and social history can provide the clinician with an appreciation of the patient’s past conditions and care. Whenever possible, it is advisable to receive and review this information prior to the appointment. If the patient’s family or caregiver can provide relevant information in advance, it allows the dental team to consider the patient’s past experiences and anticipate and prepare for conditions or situations with which they may be unfamiliar. The end result will be safer and more effective care.

### 2. An ounce of prevention is worth a pound of cure

Treating patients with SHCN may require modifications in appointment scheduling, including additional time for the appointment and more frequent, shorter visits. These adjustments should be based on the complexity of the case, the patient’s ability to cooperate, their behavior, and/or physical and cognitive limitations. Desensitization and other behavior guidance methods may be necessary. The desired outcome for the patient’s visit is to provide a positive experience that can be reinforced at subsequent visits. It is critical that the patient or parent/caregiver understand the overall goal of the dental visit in order to reinforce the objectives of the dental team.

### 3. Nonverbal communication is loud, be careful how you sound

Patients with developmental disabilities, including those with autism spectrum disorders, may be more highly perceptive of the dental team’s actions and interactions. It is therefore important to reinforce positive behavior with a smile or gestures of approval. Everyone wants to succeed and the dental team should be supportive of one another.

## Developing the Dental Team

Clinical dental treatment is the most exacting and demanding medical procedure that persons with developmental disabilities undergo on a regular

basis throughout their lifetime. Helping them develop successful coping mechanisms can have a lasting impact on future episodes of care.

Clinical dental treatment, including some preventative care, is surgical in nature, usually requiring controlled placement of sharp instruments in intimate proximity to personal space, airway and highly vascularized and innervated oral tissues. It is imperative that the entire dental team remains alert and maintains a stable environment throughout the delivery of all procedures for a patient with SHCN.

Many patients with SHCN find comfort in predictable routines, and conversely, changes in routine procedures can create patient anxiety and fear. The dental team should minimize variables that could prove a distraction or hurdle for the patient.

The team can best function when everyone is familiar with the office philosophy for managing a patient with SHCN. The front desk staff, dental assistants, hygienists and other staff members need to know the goals, limitations and expectations for the outcome of care, as well as any individual idiosyncrasies of the patient. Each office should work to create a culture regarding treatment of patients with SHCN.

The caregiver is a critical part of the team. His/her involvement must not be overlooked. All caregivers need to be properly trained on how to best care or modify care for the person they are attending. The caregiver should be included in the strategy for desensitization as well as post-visit instructions. The caregiver can be the one who has legal authority to make decisions or a hired person to just help (without legal authority). The caregiver without legal authority is sometimes referred to as the dental service provider.

## Scheduling the Patient

A well-planned initial appointment is key to establishing a safe and trusted environment for a patient with SHCN. If a patient has behavioral or sensory concerns, an early morning appointment is advisable. Typically, the dental team will be fresh

and the office calmer. As mentioned previously, the health history should be given to the parent/caregiver, completed and returned prior to the visit so the clinician may review and appropriately prepare the team. By providing the information in advance, the caregiver/parent can work with the dental team and focus on helping the patient remain calm before and during the appointment.

A call from the dental office to the parent/caregiver prior to the appointment asking if they have any questions or need any additional information can help alleviate tension and apprehension as well as reinforce the goals of the appointment.

## Desensitizing

Gradually exposing the patient with SHCN to new situations in a positive manner can minimize anxiety and fear. Developing a trusting relationship should be the office's main goal. A desensitization process breaks down the task of exposure into short segments so the patient can process and become more comfortable. Desensitization can be as simple as a tour of the office with an introduction of instruments and equipment. Demonstrations using mouth models can be helpful. The staff should offer information at a pace that is comfortable for the patient and does not overload or overstimulate them. Some offices use storyboards, puppets or books to assist in familiarizing the patient with dental care. These may be shared with the parent/caregiver so they may review the pictures and process at home before coming in for an appointment.

## Additional Assistance

Additional aids to assist with therapy, including the use of sedation and/or medical immobilization protective stabilization should NOT be considered for the first encounter with a patient with SHCN. If it determined that additional assistance is required, the office must be completely familiar with state regulations regarding use of assistive medications and/or devices.

## Special Concerns

Dental caries is a multifactorial disease to which each patient responds differently. Teeth undergo a

cycle throughout the day (times of demineralization and times of remineralization) dependent upon personal and external factors. If the balance is towards demineralization, dental caries will develop. The dentist must be astute to recognize demineralization factors and patterns so attempts to control risk factors and enhance protective factors are implemented if dental caries formation is to be reduced.

Most patients with special needs have an increased dental caries risk (usually Extreme Risk) due to poor oral hygiene and medications that reduce saliva. Patients with a physical disability may not be able to accomplish effective oral hygiene practices due to low dexterity and coordination. Patients with intellectual disabilities may not comprehend the need or the technique. These patients will depend on others to guide and assist them towards success.

For those patients who understand but unable to grip a tooth brush, there are commercial brushes with larger or modified handles for better grip or one can modify a handle with adding a grip (like a bicycle handle grip), wrapping the handle with tape and tongue blade, or inserting the handle through a tennis ball. The use of an electric or battery-powered toothbrush allows greater ease and efficacy for those with dexterity issues. It would be beneficial for the patient to bring his/her toothbrush to the appointment for the dental team to help review the best way to use it.

Saliva is the most important variable in the oral health due to its protective mechanism and its role in remineralization. Healthy saliva has the consistency of water, should be abundant, is responsible for buffering acids towards neutrality and contains phosphates and calcium to aid in remineralization. Stringy, bubbly and/or thick saliva, or a poor salivary flow, contributes to demineralization (increasing caries risk). A diet consistent with decreasing acidic foods and beverages, and with an emphasis in rehydration with water throughout the day should be part of a preventive strategy for patients with SHCN.

When reviewing the medical history, the dental office should pay particular attention to the patient's current medication list and his/her diet. Many medications contribute to xerostomia (dry mouth) which increases dental caries and periodontal risk. The lack of saliva in the oral cavity along with medications that alter the oral flora may also contribute to growth of yeast (*Candida albicans*), bacteria or staining of tongue (black hairy tongue).

Patients with SHCN having a compromised swallowing ability or impaired gag reflex, experience greater risk for aspiration pneumonia. Whether or not a person has teeth, the epithelial cells of the mouth can shed and be accidentally introduced to the lung. For these patients, the clinician should not recline the chair beyond the patient's comfort zone, limit the amount of irrigation, and have the suction readily available.

## Decreasing Acids

Increased proportions of acid-producing and acid-tolerating species, such as *mutans Streptococci* and *Lactobacilli* as well as others in the oral cavity may increase dental caries activity.<sup>4</sup> There are many strategies for neutralizing acids in the mouth that the clinician may recommend. The quickest method to neutralize a mouth may be to have the patient rinse with plain water or water augmented with sodium bicarbonate (baking soda) whenever a person feels their mouth is dry, and especially at night before bedtime. Although the acid neutralizing ability of baking soda has been known for many years, its anticaries potential as an additive to fluoride dentifrice has received only limited investigation.<sup>5</sup> One to two teaspoons of baking soda in a glass of water may taste very salty to the patient and it could be a negative factor if the patient is hypertensive. One should start a patient with SHCN using a very small amount of baking soda at first to desensitize. One-half teaspoon of baking soda in a glass of water is only mildly noticeable but can significantly change the acidity of the oral cavity. When possible, recommend rinsing for a minute and expectorating. If rinsing and spitting is a challenge, the clinician or caretaker can dip the

toothbrush or toothette (sponge or foam on a stick) into the solution and brush the teeth, tongue and cheeks with frequent dips of the applicator.

A neutral or basic oral environment not only decreases demineralization, it also favors remineralization of the teeth. Other over-the-counter and prescription rinses advertise remineralization qualities in their products and should be reviewed thoroughly before they are suggested for a patient's use. Rinses that have an alcohol base should be avoided in patients with a history of dry mouth or liver concerns.

## Fluoride and Tooth Remineralization

As mentioned before, dental caries is a multifactorial disease. Fluoride is an important element for protecting teeth from dental caries and rebuilding tooth structure following demineralization. However, it is overly simplistic to say, "just brush with fluoride toothpaste". The process of remineralization occurs optimally in a neutral or basic environment where there are sufficient building blocks of fluoride, calcium and phosphate present. Fluoride can be found in various vehicles such as toothpastes, gels, rinses, foams, tablets and varnishes. There are toxic

levels of fluoride ingestion and the clinician should be familiar with the total exposure of fluoride to a patient when creating a treatment approach. The most effective delivery of fluoride in an office setting is the application of fluoride varnish, which can be effective up to 3 months. Daily application of fluoride toothpaste (or high fluoride toothpaste) is a good method to continue the therapy between visits for the patient with SHCN. Remind the patient and parents/caregivers to allow the toothpaste to stay on the teeth for a few minutes before rinsing, and avoid eating or drinking for 30 minutes, to gain maximum benefit.

## Caries Arrest (Silver Diamine Fluoride)

The Federal Drug Authority cleared Silver Diamine Fluoride (SDF) in 2014 for use as a desensitizing agent in the United States. An off-label use of SDF has been for caries arrest and remineralization which is now permissible and appropriate under U.S. law. A CDT code was approved for caries arresting medicaments in 2016 to facilitate documentation and billing.<sup>6</sup> SDF is a liquid that is applied with a microbrush. It contains silver ion that arrests caries and diamine fluoride that aids in remineralization.

Indications for SDF use are asymptomatic teeth without pulpal involvement and clearly reversible, or no, symptoms. Local anesthesia is usually not needed for SDF application. SDF has been used to control dental caries in uncooperative patients, buy time to more adequately address problems, and chemically treat multiple caries in children, geriatric and SHCN populations.

SDF may be applied once and covered with glass ionomer cement restorative material or used alone with multiple applications. Staining of the pathologic materials in the lesion will occur (brown to black) but SDF does not stain healthy tissue.

The application of 38% SDF in non-compliant patients might be used as an adjunct to fluoride toothpaste, and to remineralize incipient caries lesions of permanent teeth where esthetics is not a concern.<sup>7</sup>

## Summary

Understanding the process of providing dental care to the patients with special healthcare needs will lead to respect for the individual and reveal the need for building a team approach that facilitates successful results.

### Online Resources for Clinicians Interested in Providing Care for Patients with SHCN

**American Academy of Developmental Medicine and Dentistry:**

[www.aadmd.org](http://www.aadmd.org)

**Special Care Dentistry Association:**

[www.scdonline.org](http://www.scdonline.org)

**ADA Mouthwatch:**

<https://www.mouthhealthy.org/en/az-topics/s/special-needs>

**American Academy of Pediatric Dentists:**

[http://www.aapd.org/media/Policies\\_Guidelines/G\\_SHCN.pdf](http://www.aapd.org/media/Policies_Guidelines/G_SHCN.pdf)

(Guideline on Management of Dental Patients with Special Health Care Needs)

**Colgate:**

<https://www.colgate.com/en-us/oral-health/conditions/developmental-disabilities/whats-different-about-special-needs-dentistry-0215>

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## POST-TEST

Internet Users: This page is intended to assist you in fast and accurate testing when completing the “Online Exam.” We suggest reviewing the questions and then circling your answers on this page prior to completing the online exam.

(1.0 CE Credit Contact Hour) Please circle the correct answer. 70% equals passing grade.

1. **Why is access to dental care the greatest unmet need people with intellectual disabilities face?**
  - a. Barriers to communication, culture, regulations and accountability
  - b. Lack of provider participation due to their comfort level
  - c. Continuing education courses for dental professions rarely offered
  - d. All of the above
2. **What leads to a special needs patient being mislabeled as uncooperative or combative?**
  - a. Inability to express chronic pain and constantly yells
  - b. Traumatic experience with treatment of past dental pain
  - c. The dental provider is anxious and impatient with the patient's idiosyncrasies
  - d. All of the above
3. **The most important keys to treating special needs patients are:**
  - a. Knowledge over willingness
  - b. Focusing on what the patient can't do
  - c. Evaluate, understand and modify treatment techniques to accomplish a procedure
  - d. All of the above
4. **The role of a provider for patients with SHCN is to:**
  - a. Seek to understand the patient's past treatment experiences, in order to provide safer more effective care
  - b. To reinforce positive behavior, the dental team should be businesslike with appropriate communication for the patient
  - c. Modify appointment scheduling based on the complexity of the case and the patient's cognitive limitations
  - d. All of the above
5. **The office dental team can best function when:**
  - a. The philosophy regarding special needs populations is known primarily by the dentist only
  - b. The entire staff knows the treatment goals and understands the limitations of the patient
  - c. The dental team changes the routine procedures to distract and confuse the patient into compliance
  - d. All of the above
6. **To control the risks and enhance the protective factors in order to avoid dental caries formation in patients with SHCN, the dentist must recognize the following patterns:**
  - a. The extreme risk special needs patients have in increased dental caries due to poor oral hygiene and medications that reduce saliva
  - b. Due to low dexterity or the inability to comprehend the technique, patients may not be able to accomplish effective oral hygiene practices
  - c. Saliva is one of the most important variables in the oral health due to its protective mechanism and role in remineralization
  - d. All of the above
7. **Strategies to decrease acids in the mouth include:**
  - 1) Rinsing with water or modified water with baking soda whenever a person's mouth is dry
  - 2) Rinses that have an alcohol base
  - 3) A diet low in acidic foods and beverages with an emphasis in water rehydration during the day
  - a. 1 only
  - b. 2 & 3 only
  - c. 1 & 3 only
  - d. 1, 2, & 3
8. **The process of remineralization is built on:**
  - a. A neutral or basic environment where there are sufficient building blocks of fluoride, calcium and phosphate present
  - b. Fluoride varnish applied in a dental office setting in conjunction with a daily application of fluoride toothpaste
  - c. Familiarity with the total exposure of fluoride to a patient when making a treatment plan to avoid toxicity
  - d. All of the above
9. **Silver Diamine Fluoride is effective in:**
  - a. Caries arrest and remineralization
  - b. Chemically treating multiple caries in children geriatric and special needs populations
  - c. Desensitizing teeth
  - d. All of the above
10. **Indications and application of Silver Diamine Fluoride include:**
  - a. Asymptomatic teeth with pulpal involvement and irreversible symptoms
  - b. Use of local anesthesia
  - c. Use as an adjunct to fluoride toothpaste, to remineralize incipient caries and lesions of permanent teeth where esthetics is not a concern
  - d. All of the above

