

Review Article**Dental Practice Management for Patients with Special Needs and Disability: Special considerations for the Dental Practice**

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Abstract: Special need individuals are at a risk of attaining oral health diseases throughout their life. Oral health diseases can have serious implications and devastating effects on the quality of life and the health of the individual. The common oral health issues associated with immunocompromised patients are Candidiasis and Herpes viral infections, ulcers, periodontal disease, and malignant neoplasms. Individuals suffering from these conditions require oral health care of a specialised nature. Depending on the patients' condition/s, certain measures may need to be taken in order to safely and successfully treat the patient in a general dental setting. The Oral Health Therapist and Dentist are readily needed in these areas to help treat and prevent the further progression of dental disease. Thus, this review paper deals with some of the methods like protective body stabilization, desensitization etc. which can help in treating the patients with special needs or disabilities.

Keywords: Dental office; Candidiasis; Leukoplakia; Preventive strategies; Neoplasms; Leukemia.

INTRODUCTION

The patients with special need struggling with dental problems encompass a wide range of disabling conditions that include: acquired via any disease, developmental, congenital, environmental cause and trauma. Some of the individuals having such conditions can be treated in routine dental practices with requirement of minimal special considerations. However, there are patients who require more complex arrangements for their treatment and therefore they must be treated with other management techniques. Some of them include: therapeutic immobilization, anti-anxiety medications, sedation etc. The American Academy of Paediatric Dentistry (AAPD) defines special health care needs as *'any physical, developmental, mental, sensory, behavioural, cognitive or emotional impairment or limiting condition that requires medical management, health care intervention, and/ or use of specialized services or programs'*.¹

It is estimated by the WHO that around 6 million people globally are disabled due to many factors like violence, malnutrition, chronic diseases, injuries etc.² These individuals are susceptible to many deprivations in regards to education, rehabilitation facilities or employment. Widespread social stigma plays a major role in hindering their normal social and economic life.³ About 21 million people in

India were found to have disability as per the official statistics. These included persons with visual, hearing speech, locomotor or mental disabilities, who constituted about 2% of the population. This is equivalent to 2.1% of the population. Among the total disabled in the country, 12.6 million are males and 9.3 million are females. However, some sources claim that the magnitude in actuality is more with at least 5% of population suffering from one disability or other and the official statistics accounting for only the most severe ones.^{4,5}

Special need individuals are at a risk of attaining oral health diseases throughout their life. Oral health diseases can have serious implications and devastating effects on the quality of life and the health of the individual. The common oral health issues associated with immunocompromised patients are Candidiasis and Herpes viral infections, ulcers, periodontal disease, and malignant neoplasms. The Candidiasis is usually an early manifestation of the immunodeficiency. The Herpes viral infections include condition like Herpes labialis. In addition, Hairy Leukoplakia which is a corrugated white lesion is commonly seen in HIV or AIDS patients and also in other immunocompromised patients.

The presence of ulcers is also common in these patients. These ulcers can be aphthous ulcers or associated with infections such as

herpes viruses, mycoses, mycobacteria, syphilis, protozoa or malignant neoplasms or medication such as cytotoxic or antiretroviral drugs. The periodontal diseases like Necrotising ulcerative gingivitis and periodontitis are commonly seen in immunocompromised patients. Furthermore, malignant neoplasms such as Kaposi's sarcoma and Non-Hodgkin's lymphomas are often associated with these patients. The oral manifestations of Leukemia depend on the general status of patients. It includes petechiae, ecchymosis and gingival bleeding before treatment. Ecchymosis mainly presents on buccal mucosa or tongue. The gingival enlargement or overgrowth is another common manifestation of this condition. Its severity is associated with the local and systemic factors. The local factors include poor oral hygiene, mouth breathing, food impaction. In addition, the hormonal change and drug therapy are considered as systemic factors. The paleness of oral mucosa and ulcers are also commonly found in these patients.⁶ Special health care needs also includes conditions that can occur in the orofacial complex. These conditions are: cleft lip, cleft palate, amelogenesis imperfect, dentinogenesis imperfect and oral cancer. Following objectives must be taken into consideration while providing care to the patients with special needs:

1. Motivating the patient and the caregiver in order to maintain the oral health of the patient
2. Preventing loss of tooth
3. Prevention of infection
4. Minimising the need of extensive and time taking treatments as some of the patients cannot tolerate because of their mental and physical conditions
5. Scheduling comfortable appointments
6. Making the patients feel relaxed

Individuals suffering from these conditions require oral health care of a specialised nature. The Oral Health Therapist and Dentist are readily needed in these areas to help treat and prevent the further progression of dental disease. Apart from being treated, there are various barriers which prevent the patient from seeking a dental treatment like language issues, cultural issues, taboos, financial support, distance to the dental practice, family support, peer pressure and

lack of special requirements available at the dental practice.⁷

Recommendations:⁷ For a special needs patient, some recommendations are to be made by the dentist in the dental practice. The recommendations include:

1. **Having a barrier free environment:** For creating a barrier free environment following measures must be taken:

- I. Clear marking and designation of wider parking spaces that are close to the building
- II. To access the main entrance, proper ramp must be there and the floor must be plain with no cuts
- III. The doors must be wide too open
- IV. The signs must be put five feet above the floor
- V. Wider corridors so that the wheel chairs can enter without any bumping into the wall
- VI. Elevators in building with two or more floors

2. **Assessment, planning and scheduling appointments:** Pre-treatment planning is essential as it helps us to determine what preparations have to be done. The patient's or the caregiver must have an initial contact at the dental practice about the patient's disability and its special requirements needed before scheduling an appointment. It is the duty of the administrative assistant to assess the complete picture of the patient with special needs as sometimes there may be a requirement of a longer appointment, more auxiliary staff etc. In addition, proper past and current medical and dental history must be recorded, thus ensuring the treatment to be effective and safe.

For example: Individual on a wheelchair needs a dental treatment so it must be ensured by the practitioner or its staff at the dental practice that what is the degree of the mobility and will there be need for help in transferring the patient to the dental chair? Will the patient require any antibiotic pre-medication for treatment? Who will legally provide consent for treatment? What are the patient's likes, dislikes, fears and limitations?

While scheduling appointments, the issues regarding transportation must also be kept in mind as sometimes special vehicles may be required. Ideally, a mid-morning appointment is considered to be the most

ideal time for such patients as people with disabilities often need time to prepare for the visit, there are minimal waiting times and early in the day the staff and the patient are at their best.⁸

External/Internal Building Features	Gradient	Length	Width	Surface, Other Specifics
Parking space	1:50 max slope	Standard	Auto: 96 inches Van: 144 inches	Nonskid, paved, sign-posted, adjacent to walkway
Walkway	1:12 max slope	Not applicable	36 inches	Nonskid, no obstructions, overhangs, smooth
Passenger loading zone	Flat	20 feet	60 inches	Same as above
Curb ramps	1:12 max slope		36 inches	Nonskid, side flair <1:10 slope
Door	5-foot entrance and exit platform area	Standard	32-inch minimum; preferably 36 inches	Away from prevailing winds, lever with 10-lb pull, auto-assisted door available, kick plate
Interior ramp	1:20 max slope	72-inch minimum length if rise > 6 inches	36 inches	Nonskid, handrails
Wheelchair lift	Bilevel	8-foot max drop	36x48 inches	Nonskid, dependent on specific chair
Corridor		Standard	48 inches/64 inches	New facility, no obstacles
Flooring	Flat, firm carpet	Not applicable	½-inch maximum thickness	No doormats, level thresholds
Signs	Braille, raised letters	Above 5 feet	Readable	Near latch of office door
Waiting room	Flat	Standard	36-inch aisle One cleared area: 36x52 inches	No carpet pad, well insulated, minimum low frequency background noise
Restrooms	Flat		32-inch stall min, preferably 36 inches	Nonskid, magnetic catch door
Public telephone	No higher than 4 feet	3 feet above floor	26-inch clearance	Phone directory near phone, adjustable volume control
Elevator	Flat		54x68 inches	Nonskid, call and control box 48 inches high, include Braille or incised letters
Operatory	Flat 8x10 feet	Standard	32- to 36-inch door	Nonskid, rotating or movable chair, drill, and suction

Figure 1: Showing the guidelines for accessibility of patients with special needs.

Source: <http://pocketdentistry.com/23-dental-problems-of-children-with-special-health-care-needs/>

3. Desensitization: Patients with special needs may benefit from the procedures that may contribute them to desensitising from the complex dental procedures. Before the visit to the dental office, it is essential for the caregiver or the family members to familiarise the patient towards routine oral health care like tooth brushing and flossing. However, this may help the patient whilst he/she is given instructions regarding the same in the dental practice and also to avoid any injury while practising these techniques.

4. Protective body stabilization: Stabilization of the body is very important as disabled patients frequently have issues regarding balance and support. In addition, stabilization in the dental office may also be used to make the patient feel comfortable, relax and secured. Blankets, towels or pillows can used to place it under the patient’s knees and neck in order to prevent

spasms and provide adequate support. In order to reduce the movement of the patient, one of the auxiliary staff holds the patient gently and maintains the arms and legs in a relaxed and a comfortable position. Sometimes, if required a member of the dental team may sit across the dentist and lightly place their arm across the patient’s upper body in order to keep the working field clear for the operator.

In case of paediatric patients with special needs, the child may lay on top of the parent or guardian in the dental chair with the parent’s arm around the child. Mouth props are provided in cases of unwillingness of keeping their mouth open. Usage of mouth props not only gives protection, but also helps in clear visibility and access for the dentist while performing ant dental procedure.



Figure 2(A&B): Showing Assistance for protective stabilization. A. Parental aid during an examination. B. Additional assistance during the dental procedure.

Source: <http://pocketdentistry.com/23-dental-problems-of-children-with-special-health-care-needs/>)



Figure 3(A-F): Showing the common positions for removal of plaque in patients with special needs. A. Standing B. Upright wheelchair C. Reclining on couch D. Reclining on bed E. Leg lock position F. Reclining on floor

Source: <http://pocketdentistry.com/23-dental-problems-of-children-with-special-health-care-needs/>)

1. Informed consent: In cases of patients with special needs, informed consent must be obtained before starting any dental treatment. The consent can be provided by the parents, guardians or the caregivers. While obtaining the consent it must be ensured that proper explanation is mentioned or given regarding the stabilization, methods or techniques involved, risks, benefits and any complications.⁹

For a proper informed consent the documentation must include the following: 1. Procedure to be undertaken, 2. Indications for use, 3. Stabilization procedure, 4. Duration of treatment, 5. Risks involved, 6.

Complications involved if any, 7. Sterilisation methods, 8. Level or success or failure of the procedure.

2. Preventive strategies: It is essential for the dentist to develop a program related to oral health hygiene that takes into account the unique disability of the patient. Some of the strategies include:

- Brushing twice daily in order to prevent gingivitis and dental caries (If needed: electric toothbrushes to improve patient compliance)
- Fluoridated mouth wash
- Non cariogenic diet

- Application of pit and fissure sealants and topical fluorides
- Diet counselling¹⁰

3. **Referrals:** Referrals are required in case of when the needs of the patient are beyond the skills of the dentist and in order to ensure the overall health of the patient.¹¹

CONCLUSION: The patient should be supported emotionally and most importantly physically with the use of protective measures to ensure their safety. Protective measures can include pillows to support and stabilise their head, neck and/or back, making sure the pathway for the patient is clear, with no chairs, cables or foot pedals in the way, and identifying hazardous objects are away from the patient such as sharp instruments on the bracket tray. Depending on the patients' condition/s, certain measures may need to be taken in order to safely and successfully treat the patient in a general dental setting. Therefore, it is essential to understand the need of the patient and each individual patient's cognitive functioning, behavioural capabilities and medical status before performing any dental treatment.

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REFERENCES

1. American Academy of Paediatric Dentistry. Definition of special health care needs. *Pediatr Dent.* 2012; 34 (special issue):16.
2. World Health Organization. Disabilities. [Online] Available from: <http://www.who.int/topics/disabilities/en/> [Accessed 21st December 2016].
3. World Health Organization. Better health for people with disabilities. [Online] Available from: http://www.who.int/disabilities/facts/Infographic_en_pdf.pdf?ua=1 [Accessed 21st December 2016].
4. Central Statistics Office Ministry of Statistics & Programme Implementation Government of India. Disability in India - A Statistical Profile. New Delhi: Government of India; 2011.
5. Censusindia.gov.in. Census of India: Disabled Population. [Online] Available from: http://censusindia.gov.in/Census_And_You/disabled_population.aspx [Accessed 20th December 2016].
6. American Academy of Paediatric Dentistry. Guideline on Management of Dental Patients with Special Health Care Needs. USA: Council on Clinical Affairs; 2016 p. 166-71.
7. Nowak AJ. Patients with special health care needs in paediatric dental practices. *Pediatr Dent.* 2002; 24(3):227-8.
8. Glassman P, Subar P. Planning dental treatment for people with special needs. *Dent Clin North Am.* 2009; 53(2):195-05, vii-viii.
9. American Academy of Paediatric Dentistry. Guideline on informed consent. *Pediatr Dent.* 2012; 34(special issue):295-7.
10. American Academy of Paediatric Dentistry. Policy on dietary recommendations for infants, children, and adolescents. *Pediatr Dent.* 2012; 34(special issue):56-8.
11. American Academy of Paediatric Dentistry. Policy on the ethical responsibility to treat or refer. *Pediatr Dent.* 2012; 34(special issue):102.

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