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Research Article

Dentistry for People with Disabilities and Special Groups in Life Cycles: Professional Training, Strategies and Clinical Guidelines in Brazil

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Abstract

Introduction: Oral health promotion and the quality of life of individuals with disabilities or special groups in life cycles are challenges yet to be overcome by both dentist teams and the general society.

Aim: Approaching the dentistry context faced by patients with disabilities with emphasis on clinical strategies, guidelines and experiences.

Materials and Methods: Literature review based on publications indexed between 2012 and 2022, in Brazilian Portuguese and English, found in Lilacs, Pubmed, Google Scholar and guidelines databases, according to the following keywords: dental care for people with disabilities, dentistry for people with disabilities, dentistry for disabled patients, dentistry for disabled, special care dentistry; it totaled 31 references.

Results: Professional training does not cover dentistry for disabled people in discipline matrices, so often, a fact that contributes to lack of these professionals and demotivation in acting in this field. Specific professional management and adjustment strategies are essential to implement qualified services and to inclusion in dignifying and qualified treatments. Educational, preventive and multidisciplinary activities are crucial to prevent oral issues in disabled patients.

Conclusion: Lack of professional qualification in dental care for people with disabilities remains a challenge to be overcome within the educational training process. Individual knowledge about each disabled patient and about their particularities enables proper clinical planning and their inclusion in qualified dental treatments.

Keywords: *Dental Care for People with Disabilities; Disabled Persons; Oral Health*

Introduction

Dental care for people with disabilities and for special groups in life cycles remains a great challenge because we still face lack of qualified professionals and disciplines about this subject at graduation level, lack of professors qualified to provide proper training for interested dental surgeons and unqualified services to provide dental healthcare to this population [1-3].

Dental care provided to disabled patients is based on multi-disciplinary strategies, individual planning and protocols, aimed at adjusting both the oral medium and the insertion of these patients in dignifying and qualified treatments [2,4,5].

The search for services qualified to provide care for both people with disabilities and special groups is a great challenge reported by family members. This population is, oftentimes, subjected to several unnecessary dental treatments without any scientific evidence, which are performed by professionals who do not know how to provide care to it [6,7].

Individuals who need total or partial care, be it temporary or not, of physical, mental, intellectual, sensory, social, behavioral or genetic order, linked to age or aging (development), or who need adjusted support or care during treatment feature the group of disabled patients [1,8,9].

The main oral health issues observed in these patients are related to hard time providing oral care due to physical or neuro-cognitive issues that favor the emergence of periodontal problems and caries, which, in their turn, are seen as likely foci for systemic infection. Rehabilitating actions must be planned in order to effectively help the adoption of functional, social and quality of life actions focused on these patients [10-12].

It is essential having dentistry offices and dental-surgeon team members with specific adjustments for this population and able to adopt strategies other than the conventional ones applied to disabled patients. These requirements must be met in order to promote comfort, safety and effective clinical actions [9,13].

Aim of the Study

The aim of the current study was to approach experiences used in professional clinical, management and adaptation strategies carried out in Brazil to expand the access of disabled patients to dental care.

Materials and Methods

A narrative literature review was carried out based on using publications indexed in Brazilian Portuguese and English, between 2012 and 2022, found in Lilacs, Pubmed, Google Scholar and guidelines databases. The following keywords were used in the search: dental care for people with disabilities, dentistry for people with disabilities, dentistry for disabled patients, dentistry for disabled, special care dentistry; it totaled 31 references.

Literature Review

People with disabilities and those belonging to special groups, in life cycles, need differentiated, individualized, humanized and emphatic oral healthcare based on bond creation and on the use of multi-disciplinary strategies to effectively overcome difficulties imposed by lack of their inclusion in general society [3,9,14].

Dental care based on longer consultation time, systemic investigation and detailed evaluation of oral health conditions help effectively planning inclusive treatments focused on oral medium adjustment, social insertion and on the quality of life of disabled patients [8,15,16].

Dentistry focused on disabled patients is an expertise regulated by the Federal Council of Odontology in Brazil. This regulation allowed more dental-surgeons to get qualified to provide dental care for this population. It is essential pointing out that specialization degree is not mandatory for professionals to provide care to disabled patients, since the other dentistry specialties encompass knowledge about the likely clinical needs assumingly presented by these patients [8,9,17].

Patients with motor and neuro-cognitive disabilities can have limitations to get an effective daily oral hygiene action and it contributes to biofilm accumulation and favors the development of diseases such as caries and periodontopathies. Thus, it is crucial having qualified professionals to help health education on preventive and interventionist protocols aimed at broader inclusion in qualified treatments [11,18,19].

Education and playful actions must focus on disabled patients, caregivers and family members. They must the provided not just through technical care, but through motivational and humanized care, as well [9,14,20].

It is important highlighting that most families and caregivers have a hard time conducting oral hygiene activities and implementing a daily routine of it, as well as finding professionals for special dental care. These facts are associated with architectonic barriers, fear, financial limitations to afford specialized treatments and with their own structure to provide the necessary dental care [21,22].

Some disabled patients can be considered of the high-risk type to develop oral diseases, because they have systemic illnesses, are under medication (polypharmacy) that change salivation, follow cariogenic diets, lack oral hygiene and have muscle changes (involuntary moves) that impair oral health maintenance [1,10,11,16].

Biofilm accumulation and white tongue are associated with lack of hygiene, oral breathing, occlusion anomalies, dental trauma and cariogenic diet, as well as with the use of several medications - these are common features of disabled patients. They have negative influence on the quality of life of these individuals [7,17,20].

Individuals presenting neurological changes can show reduced saliva flow and changes in saliva pH, as well as dry mouth sensation (xerostomia), due to the routine use of medication such as anticonvulsants, antipsychotics, anxiolytics, antiepileptics and antidepressants [10,19].

Some of the used medications can contribute to gingival growth (hyperplasia) - when it is associated with lack of oral hygiene, it can cause gingival inflammation and periodontal diseases [9,22].

Factors such as malocclusion, poor chewing and bruxism are often observed in patients with Down syndrome and cerebral palsy. It is very important having dental evaluation in childhood in order to set and plan protocols aimed at mitigating these effects and at helping these patients to be functional and to achieve good quality of life [11,14].

Early oral healthcare giving contributes to greater participation of disabled patients in dental treatments. Actions aimed at non-sensitivity, motivation, adaptation and integration, based on individualized and multi-disciplinary strategies, are essential for dental caregiving [2,6,21].

Older patients (adults and elderly) demand more healing and extensive rehabilitating treatments. However, in many cases, they can have mutilating profile associated with tooth loss. Such a situation is often linked to lack of patients' cooperation during oral care activities performed in adult disabled patients [1,10,15,16,19].

Bond among disabled patient, dental-surgeon and its team is essential to identify and likely treat oral issues associated with pain, for example. A professional capable of listening, perceiving and interpreting the verbal and non-verbal language of disabled patients, such as feelings, gestures and specific behaviors, can built greater trust and sense of security during care giving [20,22,23].

Professional features are key elements in dental care provided to disabled patients, with emphasis on attention, manual skills, clinical reliability, empathy, universal communication strategies like say-show-do, playful and audio-visual activities, adjustment to the disabled patient's context and professional action by the team followed by effective family participation [1,4,6,9,24].

Facilitating strategies help understanding disabled patients in a more effective and safe way, such as the case of providing care to patients in their wheelchairs, making and using mouth openers (made with wooden spatulas and gauze - low cost) and using pre-manufactured ones (Figure 1a-1c). These procedures help getting better access to the oral cavity in the most posterior regions, showing difficult visualization, as well as contribute to likely control involuntary moves of the tongue - this procedure makes care giving easier [9,14].

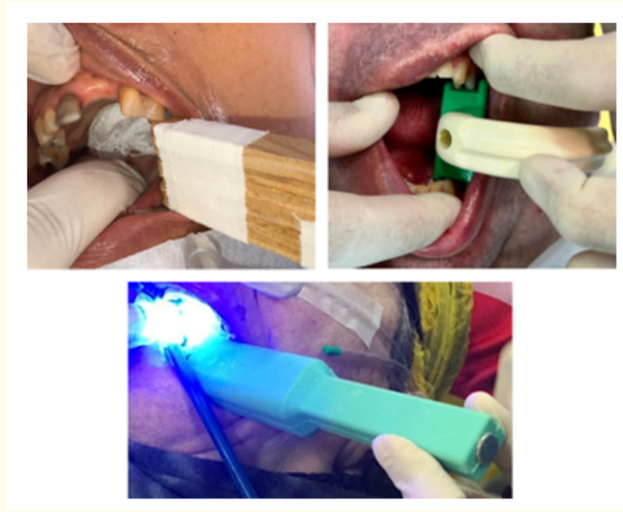

Figure 1a-1c: *Using the mouth opener to achieve wider amplitude and better access to the most posterior regions of the oral cavity. Ethical and professional accountability of dental surgeons AFM and TMC.*

The dental office must be equipped with stabilizer straps, vacuum mattress and pillows (Figure 2a and 2b), since they give more stability and comfort to disabled patients during less cooperative care giving [4,9,14].

Figure 2a and 2b: *Using vacuum mattress and pillows, and monitoring vital signs for the best adjustment, comfort and safety during dental care provided to people with disabilities at outpatient level - adult patients with cerebral palsy. Ethical and professional accountability of dental-surgeons AFM and TMC.*

Music and the use of audio-visual resources (Figure 3a and 3b) are strategies broadening bond and trust built with disabled patients. It is possible making adjustments to make the dental environment easier [24].

Figure 3a and 3b: *Figure 3a - Using audiovisual resource to desensitize the dental care provided to children with autism due to constant family participation in all clinical stages. Figure 3b - Using audiovisual resources to provide better comfort during elderly's care giving. Ethical and professional accountability of dental-surgeons AFM and TMC.*

Music also helps behavioral control, patient's acclimation to the physical space, relaxation and emotions' externalization. These outcomes make the interaction between patient and dental-surgeon easier and more positive [14,24].

There are multi-disciplinary strategies that can favor safe care whenever one cannot be successful in controlling the behavior and acceptance of disabled patients towards treatment, namely: drug sedation, conscious sedation with nitrous oxide (Figure 4a) and intravenous sedation under constant monitoring by an anesthesiologist, on an outpatient basis (Figure 4b) [25,26].

Figure 4a and 4b: *Figure 4a - Conscious sedation with nitrous oxide in children with Down syndrome under constant family participation. Figure 4b - Intravenous sedation under constant support and monitoring by an anesthesiologist during dental care provided to a non-cooperative patient with Down syndrome. Ethical and professional accountability of dental-surgeons AFM and TMC.*

Hospital care, in some cases, is mandatory due to non-cooperative, aggressive and systemic high complexity behavior by the disabled patient. These are specific situations when all conditioning and professional adjustment strategies do not work for the patient. It is essential for the professional to understand action limitations [27,28].

Figure 5: *Dental intervention performed in surgical centers, applied to high systemic complexity patient - multi-disciplinary planning and strategy to fulfil clinical needs in a single session - Full Mouth Disinfection. Ethical and professional accountability of dental-surgeon AFM.*

However, one of the concerns related to hospital care regards the patient's future incapacity to adjust to outpatient care. It is important pinpointing that association among hospital strategy, focus on the oral medium and the resolution of the most complex oral issues and further preventive and non-sensitive care in dental office can be successful strategies [1,9,14,29].

Dental professional qualification and adjustment to patients' context remains a great challenge. Lack of knowledge about the main oral issues, care strategies and safe planning, stops most dental surgeons from getting interested in this dental expertise [3,6,17,18].

It is crucial for future dental surgeons to have the opportunity to get in touch with theoretical and practical knowledge in this field during graduation and to current professionals to enhance their skills in order to provide dignifying dental care for this population in life cycles [2,3,5,13,23].

Results and Discussion

Dental care provided to people with disabilities and to special groups is seen as a great challenge by most dental-surgeons, because they did not have this discipline during the graduation time and in post-graduation courses, or the opportunity to get theoretical and clinical references in this field [5,23].

Most dental-surgeons avoid treating these patients in dental offices because they do not feel ready for it and because they do not have the physical infrastructure to provide care for the most diverse clinical situations and needs [2,20].

It is important highlighting that providing care to disabled patients means giving them the opportunity to have equality, accessibility and inclusion focused on oral health promotion [1,15].

Professional training time is the very moment to trigger the learning and interest in disabled patients by dentistry students, as observed in other specialties. However, most discipline matrices in learning institutions do not encompass such an educational strategy. It is so, likely because of lack of physical infrastructure and of a faculty with clinical-educational experience [3,13,21].

Dental care provided to people with disabilities must be emphasized at all life cycles: childhood, adolescence, adulthood and to elderly. This statement explains the importance of having dental surgeons as generalist professionals with broad, multi-disciplinary professional view, and capable of taking clinical actions based on the needs of each age group. They must focus on individuality, humanization and strategies based on effective family participation [20,22].

The main oral issues observed in disabled patients remain linked to caries and periodontal diseases due to lack of preventive actions, measures focused on health education and access to dental services for concrete treatment [10,11,19].

Initially, dental conducts aim at adjusting the oral medium; in other words, they aim at ruling out likely foci of infection, inflammation processes, injuries or clinical conditions that can have straight influence on these patients' systemic health and quality of life [10,11,19].

More aggressive, non-cooperative, patients who present neuromotor difficulties and neurocognitive impairment often show more oral issues because of difficulty in getting care provided by their parents and of lack of dental services capable of hosting, planning and performing the necessary dental conducts [25,28,29].

The use of professional management and adjustment strategies by dental surgeons and their team is essential for the successful dental care provided to people with disabilities and special groups based on using stabilizing straps, mouth openers, vacuum mattress, laser therapy, ozone therapy, conscious sedation with nitrous oxide and the use of drug sedation. These procedures can positively contribute to excellency care giving at outpatient level [9,14,26].

Intravenous sedation under constant monitoring by an anesthesiologist can also be a positive strategy to provide care for less cooperative and aggressive disabled patients, since it allows solving several oral issues in a single session. It is important requesting complementary exams such as surgical risk (cardiologist), responsible medical assessment and multi-disciplinary relationship with all involved ones [25].

Using general anesthesia is an alternative to be adopted when all other strategic possibilities did not work. All dental procedures are carried out in a single session because it allows adjusting the disabled patient's oral medium. Important questions such as surgical risk, professional and team registration in the hospital, and accountability for hospitalization are some of the dental surgeon's responsibilities.

It is essential emphasizing the need of assessing the cost effectiveness of using professional management and adjustment strategies based on patient's dental needs and features, as well as supported by individualized, human and ethical planning [1,6,16,17,20,21].

Ethical and legal aspects are essential for dental care provided to disabled patients in order to promote patients and professionals' legal protection during the carried out clinical interventions. Having the patients signing the free consent form (depending on their cognitive skills and understanding), or the signature of their legal guardians, ensures such a reliability [14,31].

It is very important shining light on the autonomy of decisions made by disabled patients, themselves, and by their family members, during dental conducts. The dental surgeon, and its team, must act with disabled patients to assess their main oral health needs and to suggest dental treatments based on their reality [31].

Dental care is essential for the quality of life of both people with disabilities and special groups. Therefore, parents must seek professional help as soon as possible in order to get educational and preventive treatments, and to avoid further oral issues [11,15,17,18].

Special dentistry needs more professionals involved in the clinical, technical, scientific and educational practices in order to set greater quality care for both patients and their families, as well as to give direct contribution to the process aimed at demystifying this type of care [2,6,9,13,20,22,23,27].

Conclusion

Lack of professional qualification in dental care provided to disabled patients remains a challenge to be overcome during the educational training process in learning institutions.

Dental surgeons ready to provide care to people with disabilities and special groups must have generalist and multi-disciplinary training based on humanization and empathy in order to promote inclusive treatments.

Knowing management and professional techniques associated with equipment and physical infrastructure is essential to promote dental accessibility and comfort to people with disabilities and special groups in life cycles.

Conflict of Interest

The authors declare no conflict of interest.

Ethical and Legal Aspects

All patients and their legal guardians mentioned in the specific scientific article signed an informed consent form authorizing the use of the images.

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