


# Public oral health care offered to people with disabilities: continuing education in the Unified Health System

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**Abstract** This study aimed to evaluate continuing health education for dental surgeons linked to the Unified Health System (SUS) and the skills and competencies developed during an oral health care and attention course for people with disabilities. This cross-sectional, qualitative study used a semi-structured questionnaire and convenience sample. Most participants were women (90%), with an average age of 40 years and average training duration of 16.9 years. After finishing the course, 90% of the students continued working in the SUS, and of these, 82.5% worked in primary care. When reporting feeling able to serve people with disabilities after completing the course, 80% responded yes in cases of less complexity. There was a significant difference between the time since graduation and whether there was a subject with special needs at graduation ( $p=0.02$ ). It was concluded that graduates participating in the study could solve cases that require less complexity if the qualifications received allowed them to respond with greater resoluteness to the care of patients with disabilities.

**Descriptors:** Disabled Persons Unified Health System. Education, Continuing.

## Atención pública de salud bucal ofrecida a personas con discapacidad: educación continua en el Sistema Único de Salud

**Resumen** El objetivo fue evaluar la educación continua en salud dirigida a cirujanos dentistas vinculados al Sistema Único de Salud (SUS) y sus habilidades y competencias desarrolladas durante el Curso de Atención y Atención en Salud Bucal a Personas con Discapacidad. Fue un estudio transversal y cualitativo mediante el uso de un cuestionario semiestructurado, la muestra se utilizó por conveniencia. La mayoría de los participantes eran mujeres (90%), con una edad media de 40 años y un tiempo medio de formación de 16,9 años. Después de finalizar el curso, el 90% continuó trabajando en el SUS y, de ellos, el 82,5% trabajó en la atención primaria. Al reportar sentirse capaz de atender a personas con discapacidad, luego de finalizar el curso, el 80% respondió que sí y en los casos de menor complejidad. Hubo diferencia estadística al comparar el tiempo transcurrido desde la graduación con si hubo o no una asignatura sobre pacientes con necesidades especiales durante la graduación ( $p=0,02$ ). Se concluye que los egresados del curso que participan en la investigación son capaces de resolver casos que requieren menor complejidad, asumiendo que la calificación recibida les permite responder con mayor resolución a la atención de pacientes con discapacidad.

**Descriptorios:** Personas con Discapacidad. Sistema Único de Salud. Educación Continua.

## Cuidados públicos em saúde bucal ofertado às pessoas com deficiência: a educação permanente no Sistema Único de Saúde

**Resumo** Objetivou-se avaliar a educação permanente em saúde voltada para cirurgiões-dentistas vinculados ao Sistema Único de Saúde (SUS) e suas habilidades e competências desenvolvidas durante o Curso de Atenção e Cuidado da Saúde Bucal da Pessoa com Deficiência. Foi um estudo transversal e qualitativo com uso de questionário semiestructurado, a amostra ocorreu por conveniência. Os participantes em sua maioria eram do sexo feminino (90%), com média de idade de 40 anos e tempo médio de formação de 16,9 anos. Após o término do curso, 90% continuaram atuando no SUS e, desses, 82,5% trabalhando na atenção primária. Ao relatarem sobre se sentirem aptos a atender pessoas com deficiência, após a finalização do curso, 80% responderam que sim e em casos de menor complexidade. Houve diferença estatística quando comparado o tempo de formado com se teve ou não a disciplina de pacientes com necessidades especiais durante a graduação ( $p=0,02$ ). Conclui-se que os egressos do curso

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participantes da pesquisa conseguem resolver casos que demandam menor complexidade, presumindo que a qualificação recebida permite responder com maior resolutividade os atendimentos dos pacientes com deficiência.

**Descritores:** Pessoas com Deficiência. Sistema Único de Saúde. Educação Continuada.

## INTRODUCTION

Access to public dental services by people with disabilities must occur through the gateway to the health care network (RAS) of the Unified Health System (SUS), that is, primary care (AB), except in cases of urgency and emergency<sup>1</sup>. However, people with disabilities still encounter barriers in accessing these services, which can often delay or make dental treatment unfeasible<sup>2-4</sup>.

In Brazil, in the last decade, there has been a clear tendency for the SUS to organize and offer care to people who, for some reason, need specific dental care. These patients are those who have systemic, physical, neurological problems, or both, and the complexity of treating them requires specific knowledge on the part of the dentist and the oral health team in interprofessional interactions<sup>5</sup>.

During the health work process of a team, permanent health education (EPS) causes reflection, evaluation and (re)construction of planned and actually carried out actions<sup>6,7</sup>. EPS arises from the diagnostic need for themes that are necessary and applicable in the work of the health team, helping professional practice through the educational process<sup>7,8</sup>. EPSs value the daily practices and experiences of professionals involved with their public, stimulating creativity and problematization of work routines and unusual situations and seeking to solve the problems encountered and thus exercise the new knowledge acquired<sup>9,10</sup>.

The National Policy for Permanent Education in Health (PNEPS) aims at learning as a daily, systematic, and programmed activity for working professionals and has among its objectives improving the training of professionals who work in the SUS. Thus, the interaction of professionals and their personal development, in addition to reinforcing the relationship between health service training actions and system management, can occur<sup>11</sup>. The need to promote solid knowledge, based on scientific evidence, added to the detected lack of trained professionals to care for people with disabilities, which means that there are initiatives for skills training courses for professionals linked to the SUS. The Ministry of Health, aware of the need for investment in the oral health team (dental surgeons and assistants/technicians) to provide qualified care to people with disabilities in the SUS in all states of Brazil, proposed offering the course "Training for Brazilian Dental Professionals Linked to the SUS for Attention and Oral Health Care for People with Disabilities"<sup>12</sup>.

The course was divided into 120 hours of studies and distance education (EaD) activities, carried out through a digital platform. In the last module, the student must participate in a 40-hour face-to-face module at the course's partner universities in each state of Brazil. There were two thematic axes of the distance modules, subdivided according to the subjects and training of the professional: dental surgeon (Axis 1: Introduction to the Study of People with Disabilities and Axis 2: Attention and Oral Health Care for People with Disabilities)<sup>12</sup>. Thus, a partnership was established through the initiative of the General Coordination of Oral Health of the Ministry of Health and the "Grupo Saber Tecnologias Educacionais e Sociais da Universidade Aberta do SUS, linked to the Universidade Federal de Pernambuco".

Given this context, the objective was to evaluate the ongoing education of oral health professionals linked to the SUS and their skills and competencies developed during the Oral Health Care and Attention Course for People with Disabilities in association with the Open University of the SUS – University Federal Government of Pernambuco – and the Saber Institute.

## METHODS

This was a cross-sectional and quantitative study carried out between August 2018 and July 2019. The study involved human beings as participants and, therefore, was submitted to the Research Ethics Committee of the Pontifical Catholic

University of Paraná (CEP-PUCPR) and approved under opinion no. 2,744,952. It was subsequently submitted to the CEP of the Municipal Health Department (SMS) of Curitiba, approved under opinion no. 2,796,640.

The research instrument was applied, in its version already tested in a pilot study, seeking to evaluate the training of oral health professionals linked to the SUS in the state of Paraná who were trained in the course. The variables included in the questionnaire were related to a) training and professional performance and b) course training and dental care for people with disabilities within the scope of the Unified Health System.

Initially, the desired proposal was a census of course participants, consisting of a total of 274 professionals, including 196 dental surgeons and 78 oral health assistants in the state. The online questionnaire via Google Forms® semistructured self-reports<sup>13</sup> was sent via email to graduates who took the course. Contact was made with all oral health coordinators of the twenty-two health regions in the state of Paraná, who publicized the research and asked for support to disseminate the questionnaire among the municipalities in its coverage area. In addition to contact via email, there was contact via social networks and messaging applications.

After persistent contact with professionals who graduated from the course and who were not successful in all the feedback, a convenience sample was chosen, aiming only at the inclusion of dental surgeons. Therefore, based on the number of 196 dental surgeons trained in the course in Paraná and duly contacted, the final number of respondents was 40 participants. This response rate allowed us to calculate, for 95% confidence, a margin of error of 13.80%. These graduates responded to the questionnaire on an electronic platform after agreeing to participate in the research through electronic confirmation of the Free and Informed Consent Form, which is available on the same platform.

To explore the data, descriptive statistics and bivariate analyses were performed with Student's t test and chi-square test for independent samples for the hypothesis that the course under analysis generated differences in skills before and after its completion. The analysis was performed using the Statistical Package for Social Science for Windows (SPSS) version 2.5 (IBM, Armonk, NY, USA).

## RESULTS

The sample consisted of 40 professionals who completed the questionnaire. For the questions about years of experience in the SUS and years of training, the sample consisted of 29 responses.

The frequency distribution for data on sex, age, years of training and time working in the SUS is described in Table 1, in which a greater number can be observed for females, with an average age of 40.08 years and an average time since graduation of 16.93 years. The dentist who has been working in the SUS for the longest time has been practicing the profession for 32 years, with the minimum time being three years.

As shown in Table 2, most research participants continued working in the SUS after finishing the course. The level of care in which they worked, for the most part, was basic care. When asked when they started serving people with disabilities in the SUS, 82.5% reported that it was before starting the course and that they applied disability inclusion policies in their care (85%). Eighty percent say they are able to care for people with disabilities, in cases with a lower level of complexity, in clinical situations with sufficient structure, equipment and materials. Sixty percent of professionals felt the desire to continue studying the subject but did not take any more courses. In cases that cannot be resolved, 32.5% refer to the Dental Specialties Center (CEO) in a neighboring city.

In Table 3, it is possible to observe the variables compared, and there was a significant difference only for one variable, the average number of years that the professional has been trained, when comparing whether he or she had a specific subject that dealt with the subject of people with disabilities during his or her graduation. In Dentistry. The longer the dental surgeon has been trained, the lower the chance of him having had discipline during his training; therefore, those who took the subject during graduation have less time since graduation ( $p=0.02$ ).

**Table 1.** Frequency distribution for gender, age, years of training and time working in the SUS for professionals who completed the training course for Oral Health Care for People with Disabilities.

Variables	n	%	Average	Median	Minimum	Maximum	Standard deviation
Sex							
Feminine	36	90	-	-	-	-	-
Masculine	4	10	-	-	-	-	-
Total	40	100	-	-	-	-	-
Age	40	100	40,08	38,50	27	64	± 8,22
Years of experience at SUS	29	72,5	13,55	10,00	3	32	± 8,79
Formative years	29	72,5	16,93	15,00	5	40	± 9,13

**Table 2.** Frequency distribution of questionnaire variables (n=40).

Questions	n	%
<i>After completing the course, did you continue working in the SUS?</i>		
Yes	36	90
No	4	10
<i>What level of SUS Care do you work at?</i>		
Basic Care	33	82,5
Dental Specialties Center – CEO	3	7,5
I no longer work for SUS	1	2,5
Other	3	7,5
<i>Do you apply inclusion policies for people with disabilities in your services?</i>		
Yes	34	85
No	2	5
I do not know the policies	4	10
<i>At what point did you start serving people with disabilities in the SUS?</i>		
Before starting the course	33	82,5
During the course	4	10
After completing the course	1	2,5
I do not respond even after completing the course	1	2,5
I no longer work for SUS	1	2,5
<i>After finishing the course, you felt like continuing to study the subject of care for people with disabilities.?</i>		
Yes, I took other courses as an update, improvement, or specialization on the subject	5	12,5
Yes, but I did not take any more courses on the subject	24	60
Yes, I stay informed about the subject through literature	9	22,5
No, I think what I learned on the course was enough	2	5
<i>After finishing the Attention and Oral Health Care for People with Disabilities course, did you feel able to care for people with disabilities?</i>		
Yes, in all cases	6	15
Yes, but only in cases without complexity, where I had structure and materials available	32	80
No	2	5
<i>Which of these materials do you have in the Unit where you work? (*could select more than one)</i>		
Containment for the care of special patients	6	15
Pillows, headrest, and everything that can bring comfort, etc.	4	10
Oxygen	6	15
Materials for first emergency care	6	15
Nitrous oxide	1	2,5
I do not have any of these materials.	23	57,5
I no longer work for SUS	3	7,5
<i>In cases where you cannot resolve the patient's treatment, where do you or your team refer?</i>		
For the Dental Specialties Center – CEO in the city itself	10	25
For the Dental Specialties Center – CEO in neighboring cities	13	32,5
I have nowhere to forward it	4	10
I no longer work for SUS	2	5
Other	11	27,5
<i>When the patient is referred, how is the appointment scheduled for the reference center?</i>		
You can now leave with your scheduled consultation from the unit itself.	8	20
The patient needs to go to an appointment center in the municipality	14	35
The patient schedules directly at the reference center	7	17,5
The patient can schedule an appointment by phone	2	5
I no longer work for SUS	2	5
Other	7	17,5
<i>During your graduation as a Dental Surgeon, did you have any specific classes about people with disabilities/patients with special needs?</i>		
Yes	13	32,5
No	27	67,5

**Table 3.** Comparação de variáveis.

Variables	Did you attend the discipline patients with special needs?			p value
	Yes (12)	No (17)		
<i>Average time since graduation</i>	12.9 (±5.6)	19.7 (±10.1)		0.02*
<i>At what point did you start serving people with disabilities in the SUS?</i>				
Before starting the course	12 <sup>a</sup>	21 <sup>a</sup>		0.12
During the course	0 <sup>a</sup>	4 <sup>a</sup>		
After completing the course	0 <sup>a</sup>	1 <sup>a</sup>		
I do not respond even after completing the course	1 <sup>a</sup>	0 <sup>a</sup>		
I no longer work for SUS	0 <sup>a</sup>	1 <sup>a</sup>		
<b>After completing the Attention and Oral Health Care for People with Disabilities course, you felt able to care for/help people with disabilities?</b>	<b>Yes, in all cases</b>	<b>Yes, but only in noncomplex cases</b>	<b>No</b>	
<i>When did you start serving people with a disability in the SUS?</i>				
Before starting the course	6 <sup>a</sup>	25 <sup>a</sup>	2 <sup>a</sup>	0.90
During the course	0 <sup>a</sup>	4 <sup>a</sup>	0 <sup>a</sup>	
After completing the course	0 <sup>a</sup>	1 <sup>a</sup>	0 <sup>a</sup>	
I do not respond even after completing the course	0 <sup>a</sup>	1 <sup>a</sup>	0 <sup>a</sup>	
I no longer work for SUS	0 <sup>a</sup>	1 <sup>a</sup>	0 <sup>a</sup>	
<i>After finishing the course, did you feel like continuing to study the subject of care for people with disabilities?</i>				
Yes, I took other courses as an update, improvement, or specialization on the subject	2 <sup>a</sup>	3 <sup>a</sup>	0 <sup>a</sup>	0.12
Yes, but I did not take any more courses on the subject	2 <sup>a</sup>	20 <sup>a</sup>	2 <sup>a</sup>	
Yes, I stay informed about the subject through literature	2 <sup>a</sup>	7 <sup>a</sup>	0 <sup>a</sup>	
No, I think what I learned on the course was enough	0 <sup>a</sup>	2 <sup>a</sup>	0 <sup>a</sup>	

\*Student's t test, p value <0.05. Chi-square test - Different letters indicate significant differences (p value <0.05)

## DISCUSSION

Graduates of the course (research participants) showed that the majority continue to work in the Unified Health System, mainly at the entrance to the system. Primary care and dental care for people with disabilities were already taking place before starting the training. The average time since graduation was 16 years, and the average time working in the SUS was 13 years, which presupposes an understanding of the functioning of the Health Care Network (RAS).

The course "Training Brazilian Dental Professionals Linked to the SUS for Attention and Oral Health Care for People with Disabilities" sought, through books arranged in three volumes, distance learning classes and related activities, to promote the training of professionals—members of the SUS oral health teams—with the necessary knowledge to care for people with disabilities. Thus, the right to access and care in oral health should be reaffirmed, ruling out any type of discrimination<sup>14-16</sup>.

Access for people with disabilities to the SUS should always occur through the entrance door – the health unit providing basic care. When this is not possible, due to the complexity of their condition, the person must be referred to the CEO. Ordinance No. 599/GM, dated March 23, 2006, presupposes the guarantee of specialized care for people with disabilities in public health<sup>17,18</sup>. The inclusion of CEOs in the Care Network for People with Disabilities aims to provide exclusive care of at least 40 hours per week dedicated to these people in the centers that opt for membership<sup>19,20</sup>.

However, before receiving specialized care, patients must be treated in basic care, according to the oral health guidelines of the state of Paraná. The management of patients' behaviors/reactions must be carried out by professionals during care. When this is not possible or unsuccessful, the patient must be referred to professionals who have completed the

training course referred to in this research and who are from the same city as the patient – especially if the city does not have a CEO<sup>21</sup>. This corroborates the findings of this research, in which the research subjects trained in the course are mostly able to assist people with disabilities in cases without great complexity, and when necessary, they make referrals to the CEO.

The National Curricular Guidelines for Dentistry courses contain the skills that undergraduate students must develop during their training. They include health care, decision-making, communication, leadership, health management and continuing education. In the area of curricular structure and essential curricular content for undergraduate courses in dentistry, attention to people with disabilities is described as theoretical and practical curricular content, and contact between the graduate and this population must occur<sup>22</sup>.

As reported in the results, professionals who graduated longer ago did not have a discipline that dealt with issues related to caring for people with special needs or people with disabilities. Bonatto et al. (2013)<sup>23</sup> evaluated higher education institutions that offered the subject of patients with special needs as a curricular component. Of the 221 institutions analyzed, only 56 offered this subject in mandatory and optional forms. Some only have theoretical classes, while others have practical classes and theoretical-practical classes. In some states in Brazil, dentistry courses involving patients with special needs (PNE), which should include care for people with disabilities, are not even offered. These are courses in states located in the North (Acre, Amapá, Roraima, Rondônia), Northeast (Alagoas and Sergipe) and Central-West (Goiás and Mato Grosso) Regions. These findings corroborate the results found in this research, in which 67.5% of professionals trained in the course did not have training during their graduation to provide PNE care. A similar result was found by Lawrence et al. (2014)<sup>24</sup>, in which 80% of the interviewed dentists did not have in their training a subject that addressed dental care for patients with special needs. Analyzing the profile of dentists who care for people with special needs, Barros et al. (2013)<sup>25</sup> reported that most professionals interviewed worked in a public institution and that only 32.5% had received training to provide care. The majority mentioned that the learning was not enough. Of those who had not received training, 88% would like to have received it, considering that 84% encounter difficulties when caring for these patients. The majority of interviewees stated that they would have liked to have had a specific subject dealing with people with special needs during their undergraduate studies and supported its inclusion in the new curricula.

Fonseca et al. (2010)<sup>26</sup> qualitatively analyzed the perceptions of dental surgeons regarding the care of children with special needs. The methodology proposed to approach this analysis in two stages: through field observation, they monitored the dental surgeons' care, and in a second stage, they carried out interviews using questionnaires with professionals. The data were analyzed using the content analysis technique, with transcription of the participants' comments. The authors concluded that public health services need to be effective in caring for people with special needs, with the need to receive training to change their perspective and see the patient.

According to the results, most dental surgeons participating in the research came from primary care, which is in line with the objectives of the course, which was to train 6,000 primary care professionals and 600 specialized care professionals throughout Brazil<sup>12</sup>. In turn, professionals can be adequately trained to provide care at the first level of care in health systems, aimed at promoting, preventing, rehabilitating and maintaining health. Additionally, clinicians must know how to diagnose, triage and refer patients to specialized care units when necessary<sup>14,15</sup>.

The National Health Policy for People with Disabilities, developed to consolidate protection standards for this population, is focused on inclusion, aiming to ensure the exercise of patients' individual and social rights. It involves the importance of the knowledge necessary to form oral health teams to ensure human rights and improve understanding and care for people with disabilities. Dental care is part of this National Policy, covering outpatient care when it is possible to provide it<sup>27</sup>. According to the findings of this research, 85% of respondents said that they followed the Health Policies for People with Disabilities, suggesting that the coordinated effort to care for these people in primary care is being carried out by professionals trained in the course.

The importance of meaningful learning, which considers students' prior knowledge and causes problematization focused on professionals' work realities, that is, focused on health services, is highlighted. The use of distance learning can make

it easier to break down barriers to permanent education, allowing training to reach a greater number of professionals. The relationship between the PNEPS and dentistry is highlighted in the study by Almeida et al. (2022)<sup>28</sup>, where dental surgeons participated in qualitative research. The categories addressed concern the need for continuing education activities, meaningful learning, teamwork and digital technologies. One of the challenges mentioned was the lack of activities in relation to dentistry in multiprofessional courses in which the respondents participated, with distance learning and in-person courses being an option.

Access to the internet can be a limitation when taking EaD courses. To evaluate the use of web-based educational technology by dental surgeons and oral health assistants registered in the training course for attention and care of the oral health of people with disabilities, a study questioned professionals who took the training course throughout Brazil regarding the use of the internet for studies, highlighting among the results that the majority accessed it at home and that they had a certain degree of difficulty with new technological resources. This type of training has the disadvantage of the need for collaboration and discipline on the part of the student; on the other hand, one of the advantages is that it makes the professional the protagonist of their own learning<sup>29</sup>.

One of the limitations of the study is the difficulty in contacting course graduates, which meant that the sample size was small due to the small number of professionals who completed the training; therefore, it is not possible to extrapolate the results to the studied population. One hypothesis for the low number of responses may be linked to the date on which the research was carried out (2018-2019) and the date on which the course was completed (2014). Therefore, new studies covering graduates from all over Brazil must be carried out, if possible.

## CONCLUSION

Most of the research participants continue to work in primary care, where they can work in cases that require less complexity and are therefore able, based on the qualifications received, to respond resolutely to the care of patients with disabilities. Most interviewees reported that they had not received, during their graduation, training to care for people with disabilities, highlighting the importance of developing permanent education actions in the service.

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