

Analysis of performance of specialized dental care in a care network for people with special needs

Análise de desempenho da atenção odontológica especializada em rede de cuidados à pessoa com necessidades especiais

Análisis del desempeño de la atención odontológica especializada en una red de cuidados a personas con necesidades especiales

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Abstract

The objective of the present study was to analyze the performance of a specialized dental care service for Patients with Special Needs (PSN) treated at the Dental Specialties Center (DSC) of the municipality Aracaju, Brazil. This is a cross-sectional observational and analytical study in which data were collected from medical records of PSN seen at the DSC from 2017 to 2019. Ambulatory actions performed in PSN during 2018 and 2019 were evaluated using information registered in the Informatics Department of the Unified Health System (DATASUS) through the public domain application TABNET and compared with the goal recommended by Ordinance 1,464 of June 24, 2011, of the Minister's Office (MO)/Ministry of Health (MOH). Two hundred and eighteen medical records were evaluated; 23.4% of the patients had been diagnosed with behavioral disorders. Oral health education activities were registered in 86 medical records, including supervised brushing in PSN, dental extractions in 10% of the consultations, and 62% of the patients seeking care did so through referrals. As for the productions registered in DATASUS, it was verified that the goal recommended by the MOH was not achieved in 3 months in 2018, and in 8 months during 2019. The results demonstrated an unsatisfactory performance of the global fulfillment of the goals with regard to the registration of the production carried out in PSN of the DSC of Aracaju. Therefore, it is necessary to regularize the monthly care for these patients in accordance to the parameter established by Ordinance 1,464 MO/MOH.

Keywords: People with disabilities; Dental specialties; Dentistry; Public health.

Resumo

O objetivo do presente estudo foi analisar o desempenho da atenção odontológica especializada nos Pacientes com Necessidades Especiais (PNE) atendidos no Centro de Especialidades Odontológicas (CEO) de Aracaju, Brasil. Trata-se de um estudo transversal, observacional e analítico em que a coleta dos dados foi feita a partir dos prontuários dos PNE atendidos no CEO nos anos de 2017 até 2019. Foram avaliadas as produções ambulatoriais realizadas nos PNE nos anos de 2018 e 2019 através de informações cadastradas no Departamento de Informática do Sistema Único de

Saúde (DATASUS) por meio do aplicativo de domínio público TABNET e comparadas com a meta preconizada pela Portaria nº 1.464 de 24 de junho de 2011 do Gabinete do Ministro (GM) / Ministério da Saúde (MS). Foram avaliados 218 prontuários, sendo encontrado o registro de 23,4% dos pacientes com o diagnóstico de distúrbios comportamentais, observando-se que em 86 prontuários houve o registro de atividade de educação em saúde bucal, incluindo escovação supervisionada nos PNE, 10% dos atendimentos foram exodontia e 62% dos que procuravam o serviço era via referenciamento. Quanto às produções registradas no DATASUS verificou-se no ano de 2018, que em 3 meses não conseguiram atingir a meta preconizadas pelo MS e para o ano de 2019, 8 meses ficaram abaixo do preconizado. Os resultados demonstram desempenho insatisfatório do cumprimento global das metas, no que concerne ao registro da produção realizada nos PNE do CEO Aracaju, sendo assim é necessário regularizar os atendimentos mensais desses pacientes, tendo como parâmetro a Portaria 1.464 GM/MS.

Palavras-chave: Pessoas com deficiência; Especialidades odontológicas; Odontologia; Saúde pública.

Resumen

El objetivo del presente estudio fue analizar el desempeño de la atención odontológica especializada en los Pacientes con Necesidades Especiales (PNE) atendidos en el Centro de Especialidades Odontológicas (CEO) de Aracaju, Brasil. Se trata de un estudio transversal, observacional y analítico en que la recolección de los datos fue hecha a partir de las historias clínicas de los PNE atendidos en el CEO de 2017 hasta 2019. Fueron evaluadas las producciones ambulatorias realizadas en los PNE en los años 2018 y 2019 a través de informaciones catastradas en el Departamento de Informática del Sistema Único de Salud (DATASUS) por medio de la aplicación de dominio público TABNET y comparadas con el objetivo recomendado por la Ordenanza nº 1.464 del 24 de junio de 2011 de la Oficina del Ministro (OM) / Ministerio de Salud (MS). Fueron evaluadas 218 historias clínicas donde se encontró el registro de 23.4% de pacientes con diagnóstico de disturbios de comportamiento. Fue observado el registro de actividades de educación en salud bucal, incluyendo uso de cepillo supervisado en los PNE, en 86 historias clínicas; 10% de los atendimientos fueron de extracción de dientes; y 62% de los que buscaban el servicio médico era vía encaminamiento. Referente a las producciones registradas en el DATASUS se verificó que en el año 2018, en tres meses no se lograron alcanzar las metas recomendadas por el MS, y durante el año 2019, 8 meses se quedaron por debajo de lo recomendado. Los resultados demostraron desempeño insatisfactorio del cumplimiento global de las metas en lo que se refiere a la producción realizada en los PNE del CEO de Aracaju, y por esa razón se hace necesario regularizar los atendimientos mensuales de esos pacientes, teniendo como parámetro la Ordenanza 1,464 OM/MS.

Palabras clave: Personas con discapacidades; Especialidades odontológicas; Odontología; Salud pública.

1. Introduction

The national health policy concerning patients with special needs (PSN) guided the creation of a network of specialized services to preserve the autonomy of these people and defend their physical and moral integrity, as well as guarantee universal access and comprehensive care. In this sense, a patient with special needs in dentistry is considered as any user with one or more temporary or permanent limitations of a mental, physical, sensory, emotional, developmental, or medical nature which prevent them to be submitted to conventional dental treatment, a condition that will determine whether or not the patient must be referred to another service unit in the care network. Reasons for special needs are numerous and range from hereditary diseases and congenital defects to changes that occur during life such as systemic diseases, behavioral changes, aging, etc. (Brazil, 2006, 2018, 2019).

According to the Brazilian Institute of Geography and Statistics (IBGE, 2010), 45,606,048 people in Brazil reported having at least one disability (of visual, auditory and motor - according to the degree of severity - and also mental or intellectual nature), corresponding to 23.9% of the Brazilian population. To guarantee access to health services, Ordinance nº 835 of 2012 (Brazil, 2012) of the Ministry of Health (MOH) established financial incentives for investment and funding of the Specialized Care Component of the Care Network for PSN within the scope of the Unified Health System. In the context of public dental care, the Care Network for PSN aims to guarantee qualified dental assistance at all levels of care for all people with disabilities, in which Primary Health Care (PHC) is the organizer (gateway) of the system, referring patients to the Dental Specialties Center (DSC) of secondary level or hospital care (high technological density), if necessary.

In Sergipe, about 25.09% of the population reported some type of disability, according to data from the last census conducted by IBGE in 2010. Thus, in order to provide oral health care for the population, the state has Basic Health Units

(BHUs) in 100% of the municipalities acting as the gateway to the system (one BHU per municipality); seven regional DSCs; five municipal DSCs; Unit of Oral Diagnosis and Dentistry for Patients with Special Needs (UODPSN) in the university hospital of the Federal University of Sergipe (UFS); the Urgency Hospital of Sergipe (SEUH); and the Doutor Pedro Garcia Moreno Filho Hospital based in Itabaiana-SE (André, Henriques, Andrade, & Cerqueira, 2013).

Ordinance 1,464 MO/MOH (Brazil, 2011) was published in June 24, 2011, to standardize the minimum list of dental procedures that must be performed on users. The ordinance establishes the goals that must be met by type of DSC and by each specialty. In the case of the DSC of Aracaju, which is a type 3 DSC, the recommended monthly goal for the specialty aimed at PSN is 190 basic procedures, for periodontics is 150 procedures, for endodontics, 95 procedures, and for minor oral surgery, 170 procedures. This ordinance also establishes that if this goal is not achieved in two consecutive months or three alternate months in the period of one year, the transfer of financial resources of monthly incentives to the DSC is to be suspended.

Therefore, in order to guarantee the constitutional right to health and the principle of universal access to dental services for PSN, it is necessary to know the factors limiting the functioning of the DSC and survey the procedures performed according to their classification, so as to ensure the provision of better services to the population.

Thus, the objective of the present study was to analyze the performance of dental care aimed at PSN assisted in the DSC of Aracaju, Brazil.

2. Methodology

Research design

This is a cross-sectional, observational and analytical study in which data collection was made from the medical records of the PNE attended by the CEO of the municipality of Aracaju in the years 2017 to 2019, as well as from the evaluation of outpatient productions registered in the DTASUS that were carried out in the PNE in the years 2018 and 2019. It is a cross-sectional study because it allowed to measure the prevalence of what is being analyzed at a given moment and observational by the fact that the researcher of the referred study observes the facts (Estrela, 2018). In addition, the analytical method was used to analyze the data that were collected in the research (Pereira, Shitsuka, Parreira & Shitsuka, 2018).

Ethical considerations

This study was approved by the Research Ethics Committee of the Federal University of Sergipe (CAAE: 91726818.8.0000.5546) according to Resolution 466/2012 (Brazil, 2013) of the National Health Council. All PSN with preserved cognitive function and their legal guardians signed the Informed Consent Form and received a copy of it.

Study scenario

The DSC of Aracaju is located in the Farolândia district, which is the second most populous in the municipality. Farolândia was also the second district with the highest number of people living on an income below the poverty line (City Hall of Aracaju, 2019).

Aracaju has 44 BHUs and one DSC under municipal management with adherence to the Care Network for People with Disabilities (CNPwD) - Living without limits (Brazil, 2012, 2013; City Hall of Aracaju, 2019). The municipal DSC of Aracaju was authorized in 2005 through ordinance 1.857/Minister's Office (MO) (Brazil, 2005) of that year, and offers the community the following specialties: oral diagnosis, periodontics, minor oral surgery, care for PSN, endodontics, and pediatric dentistry. To assist PSN, the service has two specialists in pediatric dentistry and two specialists in PSN.

Sampling plan

Two hundred and twenty-one medical records were evaluated, but 3 were excluded from the sample for lack of information on medical diagnosis, considered essential for this research, leaving 218 medical records of patients who received care from 2017 to 2019.

The production of the years 2018 and 2019 registered in the MOH's Informatics Department of the Unified Health System (DATASUS) referring to the procedures performed by the dental surgeons responsible for seeing PSN at the DSC of Aracaju was consulted.

Data collection

Medical records of PSN assisted from 2017 to 2019 were evaluated in the present study. The extracted data included age, sex, district of origin, medical diagnosis, and type of dental procedure performed. Medical records of patients with incomplete essential information on medical diagnosis, birth date, and dental procedures performed were excluded from the sample.

In relation to medical diagnosis, the present study took into account the following classification: physical disabilities, behavioral disorders, systemic conditions and diseases, mental disabilities, sensory disorders, psychiatric disorders, infectious diseases, craniofacial syndromes and deformities (Santos & Haddad, 2003; Haddad, 2007; Campos *et al.*, 2009).

To analyze the performance of the DSC, DATASUS was accessed through the public domain application TABNET and data registered in the monthly record of the Individualized Outpatient Production Bulletin (OPB-I) and the Consolidated Outpatient Production Bulletin (OPB-C) corresponding to the years 2018 and 2019 were extracted, taking into account the production linked to the Brazilian Occupation Classification (BOC) for dental surgeons who provide care for PSN (BOC 223288) at the DSC of Aracaju (Brazil, 2008). These data were compared with the minimum monthly production prerequisites established per type of DSC and specialty by Ordinance 1,464 of June 24, 2011 MO/MOH (Brazil, 2011). This decree establishes that in a DSC type 1, the specialty dentistry for PSN must perform 80 basic procedures, the specialty periodontics must perform 60 procedures, the specialty endodontics, 35 procedures, and the specialty minor oral surgery, 80 procedures; in a DSC type 2, these number must be 110, 90, 60, and 90, respectively; in a DSC type 3, these numbers must be 190, 150, 95, and 170, respectively.

Statistical analysis

A descriptive analysis of the data with a quantitative approach, associating the procedures performed and the patient's district of origin, was carried out using the Microsoft Office Excel version 2007.

In order to compare the productions registered by the CBO of the dental surgeon specialized in PNE and registered in DATASUS with the rules of Ordinance No. 1,464 GM / MS, the Microsoft Office Excel version 2007 program was used.

3. Results

Two hundred and eighteen medical records of PSN seen at the DSC of Aracaju were analyzed. Some of the patients started their treatment in 2006 and were still undergoing care during the time this study was conducted. Of this total, 138 were male and 80 female, with a mean age of 24.5 years (± 20 , with a minimum of 3 years and a maximum of 89 years). Patients came from several districts of Aracaju: 12.8% were from Santa Maria and 9.2% from Farolândia, both located in the southern zone of Aracaju, close to the DSC. Although the two districts are in the same zone, Santa Maria is considered to host a population mostly of people under high social vulnerability.

Regarding diagnoses, patients with behavioral disorders (23.4%) and physical disabilities (21.1%) were the ones who most sought dental care at the DSC. Table 1 shows the distribution of types of medical diagnosis that required dental care at the DSC in absolute frequencies and percentages.

Table 1: Distribution of medical diagnoses of patients with special needs assisted at the DSC of Aracaju, 2017 to 2019.

Medical diagnosis classification	n	%
Behavioral disorders	51	23.4
Physical disabilities	46	21.1
Craniofacial syndromes and deformities	39	17.9
Systemic conditions and diseases	34	15.6
Mental disabilities	25	11.5
Psychiatric disorders	21	9.6
Sensory disorders	2	0.9
Total	218	100

Source: Research data.

The aforementioned Table 1 is important because it details in decreasing order the percentage of the main types of medical diagnosis, which most sought service at the CEO of Aracaju, this data allows organizing the return schedules for scheduled appointments taking into account the complexity linked to each diagnosis.

In relation to the referral of PSN, in the period analyzed (2017 to 2019), 62% of the consultations in the DSC of Aracaju occurred through referrals from PHC dental surgeons and 38% without referral.

Table 2 provides details of the procedures performed in the PSN seen at the DSC of Aracaju. With respect to the procedures performed, first dental consultation in specialized care was registered in 218 records, topical fluoride application in 133, supragingival scraping, smoothing and polishing in 123, dental extractions in 101, and oral health education activities in 86.

Table 2: Dental procedures recorded in the medical records of patients with special needs, 2017 to 2019.

Dental procedures	n	%
First consultation	218	23.57
Topical application of fluoride	133	14.4
Supragingival scraping, smoothing and polishing (by sextant)	123	13.3
Dental extractions	101	10.91
Oral health education	86	9.3
Provisional sealing	79	8.54
Subgingival scraping and straightening (by sextant)	67	7.24
Resin restoration	54	5.83
Others	30	3.24
Amalgam restoration	22	2.37
Sealant application (per tooth)	12	1.3
Total	925	100

Source: Research data.

In Table 2, it is relevant to observe the amount in absolute value and percentage of dental procedures that were most performed in the PNE that are attended by the CEO of Aracaju.

It was also observed that, in the 218 medical records analyzed, 30 PSN were referred to the UODPSN, of tertiary level, located at the university hospital of the UFS, because the DSC does not provide care under sedation.

The analysis of records in DATASUS, specifically of the OPB-I and OPB-C, and information on the BOC registered for dental surgeons who see PSN, showed, as detailed in Table 3, that the goal recommended by the MOH was not achieved in 3 months during 2018, and in 8 months during 2019. Thus, although the registration of actions performed in PSN in the OPB-I is mandatory, such actions were below the recommendations of the MOH.

Table 3: Distribution of monthly production of dental procedures registered in DATASUS and BOC for dental surgeons who provided consultations to PSN at the DSC of Aracaju in the years 2018 and 2019.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Production2018	424	29	41	425	343	270	273	391	32	335	267	193
Production2019	3	89	124	202	142	215	134	39	253	48	382	105
OPB- I 2018		29	41	36	29	10	27	40	32	28	3	
OPB- I 2019				16	23	32	21	39	46	48	47	69

Source: MOH – DATASUS (Brazil, 2008).

The Table 3 represents the quantitative of the procedures that is registered with DATASUS in the years 2018 and 2019 for serving the PNE of the CEO of Aracaju.

4. Discussion

The analysis of the performance of the DSC and characterization of the service provided there requires analyzing several tools and aspects such as the production uploaded to the information system of the MOH, the procedures performed, the referrals informed in medical records, so as to check possible bottlenecks and optimize the system.

The DSC of the municipality of Aracaju started the computerization of its service and production system in 2019. Thus, in order to collect data and verify the number of consultations conducted and the profile of the patients who most sought care, printed charts had to be checked. Two hundred and eighteen medical records were analyzed, of which 63% were of male patients. Similar studies carried out in Feira de Santana (BA) (Santos, Falcão, Souza, Santos, & Coelho, 2014) and in the mountainous region of Rio de Janeiro (Gavina *et al.*, 2018) also had a larger proportion of male patients in their samples.

The probability of a higher frequency of males in the abovementioned study may be associated with the medical diagnosis of the patients, since 23% had behavioral disorders such as Autism Spectrum Disorder (ASD), followed by physical disability (21%) which includes patients with cerebral palsy (CP). According to the MOH, both ASD and CP affect more frequently males (Brazil, 2014, 2015).

Regarding medical diagnoses, patients with behavioral disorders and physical disabilities were the ones that most sought the DSC of Aracaju, which disagrees with the results found by Gavina and collaborators (2018) in which patients diagnosed with systemic conditions and diseases and with mental disabilities were the most seen in the DSCs in the mountainous region of Rio de Janeiro.

In the present study, there was a higher prevalence of care for PSN living in districts located near the DSC. In a study carried out in 2009, Souza states that some people with disabilities have mobility difficulties that complicate their travel to the

DSC, as they are in distant locations, and the proximity of the user's residence to the health service facilitates the access, making it more practical and economical.

In the present study, 38% of the PSN accessed care without referral from PHC dentists, thus characterizing access by spontaneous search. Similar results were found in the study carried out by Souza and collaborators in 2015, which portrayed four DSCs based in districts of Grande Natal, in which 13.8% of the users entered the DSC service through spontaneous search. Gavina conducted a study in 2016 in four DSCs located in the mountainous region of the state of Rio de Janeiro and also found that 82.5% of the patients accessed the service without referrals from primary oral health care. This goes against the recommendation of the MOH, that advice the access to the DSC through referrals from PHC dentists (Brazil, 2006, 2018, 2019).

In the analysis of the 218 medical records, 133 informed the realization of topical fluoride application and 86 of oral health education activities with PSN and their caregivers, which includes supervised brushing. This demonstrates the concern of dental surgeons working in the DSC of Aracaju in carrying out preventive and health promotion practices. Santos and collaborators stated in their research carried out in 2014 that PSN are at high risk of developing caries and periodontal disease due to poor brushing, hence the importance of carrying out preventive procedures with this clientele.

The DSC of Aracaju does not provide care under the effect of sedative medication or general anesthesia. For this reason, 13.7% of the patients were referred to the UODPSN, which is a dental service offered to special patients in partnership with the University Hospital of the municipality. The referral of PSN to a higher level of complexity happens where some disability or medical condition prevents care at the level of the DSC (Andrade & Eulet io, 2015).

Although the criteria used to evaluate the performance of the DSC in this research are different from those adopted in the study carried out by Galv o and Roncalli in 2021, who evaluated the performance of DSCs taking into account the Municipal Human Development Index (HDI-M), population size, health macro-regions, and time of service implementation, DSCs located in municipalities with larger population, greater social development, and lower HDI-M showed better performance. In this sense, the last IBGE census showed a HDI-M of 0.770 for the municipality of Aracaju, which is considered high. Thus, in the terms of the study carried out by Galv o and Roncalli (2021), the DSC based in Aracaju presents a lower performance, coinciding with the result obtained in the present study.

The results found here showed that the actions carried out in PSN have been informed through the registration instruments in the OBP-I and OBP-C, which compromises the achievement of the goal established by the MOH, bearing in mind that the DSC of Aracaju joined the CNPwD. Furthermore, Ordinance 911 of August 29, 2012 (Brazil, 2012), states that dental procedures performed in PSN must be uploaded exclusively through registration in the OBP-I. Therefore, records of these procedures communicated differently from what is established by the cited Ordinance can interfere with the performance of the DSC, as well as with the transfer of financial resources destined to monthly funding (Andrade, Pinto, & Antunes, 2020).

Results of this research revealed that the DSC of Aracaju had a poor performance in the production of the specialty aimed at PSN because the goal recommended by the MOH was not achieved in 11 of the 24 months analyzed. These results are different from those shown in the study by Possamai and collaborators (2015), in which the DSC located in the countryside of Paran  had a performance considered excellent, as it managed to reach the goal in most months in the four specialties offered, which may be related to the correct way of feeding the production database in DATASUS.

Thus, the results of the present analysis of performance, precisely the specialty aimed at PSN, can be related to the organization and management of work processes, specifically the way in which the production is uploaded to the information system, as well as the contextual characteristics of the work place where the DSC is based (Machado, Silva, & Ferreira, 2015).

5. Conclusion

The analysis of the data led to the conclusion that the goals established by the MOH are not regularly met in the specialty of dental care for PSN. Therefore, monthly consultations must be organized in accordance to the parameter established by Ordinance 1,464 MO/MOH (Brazil, 2011), as well as Ordinance 911 Health Care Secretariat (HCS)/MO (Brazil, 2012) so as to avoid financial cutbacks. In addition, strengthening programs aimed at specialized dental care for PNE is of paramount importance, as is also essential to guarantee access, quality dental care and comprehensive care for PNE and further studies are needed to address the theme dentistry for PNE due to the lack of research in this area.

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