

Oral health policy of the city of Porto Alegre, southern Brazil: Analysis of the database of the Outpatient Information System of the Brazilian Unified Health System

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ABSTRACT

Specifically for the dentistry field, the pact for health expresses the relevance of the process of evaluation and monitoring of primary care programs and services. The aim of the present study was to analyze the oral health policy of the city of Porto Alegre, Southern Brazil, in the context of the decentralization in health care implemented by the Brazilian Unified Health System (Sistema Único de Saúde, SUS), based on the database of the Outpatient Information System (Sistema de Informações Ambulatoriais, SIA). This descriptive, quantitative, normative/evaluative study analyzed secondary data from a historical series of dental procedures conducted in Porto Alegre and recorded by the SIA-SUS from 2008 to 2012. Data were collected directly from the SIA-SUS database. Data were also obtained from city's management reports from 2010 to 2013. Results show that the coverage of both Programmatic First Dental Consultation and Collective Supervised Toothbrushing Action was lower than that established in the pact.

Keywords: Health Promotion; Unified Health System; Oral Health.

Política de saúde bucal do Município de Porto Alegre: Análise do banco de dados do Sistema de Informações Ambulatoriais do SUS

RESUMO

Especificamente para o campo da odontologia, o pacto pela saúde expressa a relevância no processo de avaliação e monitoramento de programas e serviços da atenção básica. O objetivo do presente estudo foi analisar a política de saúde bucal do município de Porto Alegre no contexto da

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descentralização da saúde implementada pelo Sistema Único de Saúde (SUS), a partir do banco de dados do Sistema de Informações Ambulatoriais (SIA). Este estudo foi do tipo descritivo, quantitativo, de caráter avaliativo normativo, o qual utilizou dados secundários, a partir da série histórica da produção de procedimentos odontológicos realizados em Porto Alegre e registrados pelo SIA-SUS no período de 2008 a 2012. A coleta dos dados foi realizada diretamente no banco de dados do SIA-SUS. Dados também foram retirados dos relatórios de gestão do município nos anos de 2010 a 2013. Os resultados demonstram que tanto a cobertura da Primeira Consulta Odontológica Programática quanto a Ação Coletiva de Escovação Dental Supervisionada foram inferiores ao pactuado.

Palavras-chave: Promoção da Saúde; Sistema Único de Saúde; Saúde Bucal.

INTRODUCTION

In Brazil, one of the basic guidelines from the sanitary reform movement was the decentralization of the national health policy, embedded as one of the principles of what is known as Sistema Único de Saúde (SUS, which stands for Unified Health System) by both the 1988 Federal Constitution and the Law no. 8080 of 1990, which regulated SUS. The establishment of the Norma Operacional Básica do SUS (NOB SUS, SUS Basic Operational Norms) allowed for the consolidation of this policy, with the financing standardization and the process of decentralizing the management of services and actions in the scope of the system (1-3).

The NOB SUS is a set of ordinances from the Ministry of Health that aim to define guidelines and strategies for the decentralization of health policies and contribute to the standardization and operationalization of relations between spheres of government that are not covered by organic laws of health (4,5). It was also after the implementation of these ordinances that, in 1993, the states took on more complex functions on the management of information systems (among which was the Sistema de Informações Ambulatoriais do SUS (SIA-SUS, SUS Outpatient Information System) and on the development and supervision of the physical and budget schedule for outpatient services to be presented to the Ministry of Health for payment (6). The actions are monitored according to the information supplied by municipalities through the SIA-SUS, and resources are passed directly from the Ministry of Health to the municipalities.

Specifically for the dentistry field, the pact for health expresses the relevance of the process of assessment and monitoring of services and programs of primary health care (7). It includes oral health indicators, such as estimated population covered by the oral health teams of the Brazil's Family Health Strategy (Estratégia de Saúde da Família, ESF) and average reach of the Collective Supervised Toothbrushing Action (8). Efforts to reorganize oral health care have been made since 2004, when the Política Nacional de Saúde Bucal (National Oral Health Policy) was redesigned (9).

Regardless of the major changes that are suggested, primary oral health care services provided in Brazil have been little studied. One of the objectives of dentistry is to promote adequate levels of oral health for the entire population of a country, an area, or a place (5). Over the last few decades, the field of dentistry has achieved a high level of scientific and technological development, being able to solve oral health problems in

developed countries. However, Brazil still lacks a well-defined oral health policy, and significant parts of the population have no access to essential clinical and preventive care on a regular basis (10).

This study aimed to analyze the oral health policy of the Municipality of Porto Alegre in the context of the decentralization in health care implemented by the SUS, using the SIA-SUS database for this purpose.

METHODOLOGY

This descriptive, quantitative, evaluative-normative study used secondary data from the historic series of dental procedures (number of procedures) carried out in Porto Alegre and registered by the SIA-SUS from 2008 to 2012. The data were collected directly from the SIA-SUS database. Selection, survey, organization, and analysis of secondary data on oral health production were carried out. Data were also collected from Porto Alegre's management reports from 2010 to 2013.

The 2010 Management Report of the oral health technical area from the Municipal Department of Health of Porto Alegre was prepared based on the figures obtained from five indicators suggested by the Ministry of Health to evaluate municipalities. Such figures were analyzed and compared to the goals that were agreed with the State Department of Health of Rio Grande do Sul in previous years. They are as follows: 1) Coverage of Programmatic First Dental Consultation; 2) Coverage of Collective Supervised Toothbrushing Action; 3) Average of Individual Basic Dental Procedures; 4) Rate of Specialized Dental Procedures in Relation to Individual Dental Actions; and 5) Rate of Extractions in Relation to Individual Basic Dental Actions. This article covers indicators 1 and 2, which are defined in Table 1.

TABLE 1 - Indicators 1 and 2 and their concepts, as proposed by the Ministry of Health (11).

Indicator	Concept
1. Coverage of the Programmatic First Dental Consultation	Indicates the percentage of people who received a programmatic first dental consultation, provided by the municipality's Sistema Único de Saúde. The Programmatic First Dental Consultation foresees access to clinical diagnosis, so that a dental surgeon may describe an adequate treatment plan for each individual. Thus, this is considered an indicator of the population's access to clinical dental treatment, since after having a treatment plan made, the patient is guaranteed to have it performed.
2. Coverage of the Collective Supervised Toothbrushing Action	Indicates the percentage of people who participated in the Collective Supervised Toothbrushing Action. Such program is necessarily directed at a group of individuals, which means it is not the same as the individual program of clinical scope.

The management report is divided by district administrations (GD, *gerências distritais*), which cover the following regions and neighborhoods: GDC - Centro; GDLN - Leste Nordeste; GDSCS - Sul/Centro Sul; GDGCC - Glória, Cruzeiro e Cristal; GDNEB

- Norte Eixo Baltazar; GDPLP - Partenon Lomba do Pinheiro; GDNHNI - Noroeste Humaitá, Navegantes e Ilhas; and GDRES - Restinga.

Data concerning the coverage of the ESF and ESF com Saúde Bucal (SB, Oral Health) (ESF/SB) programs were also collected. Data are presented and computed as demonstrated in Table 2.

TABLE 2 - Data presented in the technical scores of the Indicadores de Transição Pacto pela Saúde (Pact for Health Transition Indicators).

Indicator	
Population covered by the ESF (number of ESF teams + number of corresponding ESF teams) * 3,000 Source: CNES and ESF (12)	Population at the same place and period of time. Source: ESF (12)
Population covered by the ESF SB (total of dental surgeons' workload/40) * 3,000 Source: CNES (12)	Population at the same place and period of time. Source: ESF (12)
Coverage of oral health teams – Estimated population coverage by oral health primary teams (total of dental surgeons' workload/40) * 3,000 Source: CNES (12)	Population at the same place and period of time. Source: ESF (12)
Population – Total resident population	All data about population (used as denominators in many indicators) were obtained through the resident population pages in the website of the Data Processing Department of SUS (Datasus). For the years 2008 and 2009, estimates were compiled by the Instituto Brasileiro de Geografia e Estatística (IBGE, Brazilian Institute of Geography and Statistics) as part of the Project UNFPA/IBGE (BRA/4/P31A) – Population and Development, made by the Coordenação de População e Indicadores Sociais (Administration of Population and Social Indicators). Like any estimate, there is as margin of error, which is higher for municipalities with smaller populations, especially once the data is stratified by age and sex. For 2010, data from Censo 2010 (2010 Census) were used. For 2011 and 2012, the population estimated by IBGE for establishing the allotment of the Fundo de Participação dos Municípios (Municipalities Participation Fund) by the Tribunal de Contas da União (Federal Court of Accounts) was used. This estimated population was stratified by sex and age according to the proportions found in Censo 2010.
Supervised Toothbrushing Action – Number of participants in the Collective Supervised Toothbrushing Action performed in a given location during 12 months/12 Source: SIA-SUS (13)	Population at the same place and period of time. Source: Demographic base from IBGE (14)
Average of supervised toothbrushing coverage – Number of participants in the Collective Supervised Toothbrushing Action performed in a given location during 12 months/12 Source: SIA-SUS (13)	Population at the same place and period of time. Source: Demographic base from IBGE (14)

ESF = Estratégia Saúde da Família (Family Health Strategy); CNES = *Cadastro Nacional de Estabelecimentos de Saúde* (National Registry for Health Establishments); SIA-SUS = Sistema Integrado de Informações do Sistema Único de Saúde (Outpatient Information System of the Unified Health System).

RESULTS

Table 3 shows results for the population of Porto Alegre, including population covered by the ESF, and the ESF/SB, and oral health teams from 2008 to 2012, according to data collected from SIA-SUS. Throughout the years, there was an increase in the population covered by the ESF and the ESF/SB.

TABLE 3 - Population in the municipality, population covered by the ESF, the ESF/SB, and oral health teams from 2008 to 2012.

Year	Total Municipality's population	Population covered by the ESF	Population covered by the ESF/SB	Coverage of oral health teams (%)
2008	1,430,220	636,000	363,000	25.19
2009	1,436,124	639,000	375,000	26.22
2010	1,409,351	642,000	375,000	26.11
2011	1,413,094	648,000	402,000	28.52
2012	1,416,714	690,000	465,000	32.69

Table 4 displays data related to the reach (in number of individuals) of the Collective Supervised Toothbrushing Action and average of supervised toothbrushing from 2008 to 2012 when divided by the number of actions. Collective actions in the year 2008 reached the highest number of individuals; conversely, 2012 had the lowest number, as well as a lower average of oral health collective procedures.

TABLE 4 - Average of Collective Supervised Toothbrushing Action and average of Supervised Toothbrushing through the years.

Year	Individuals reached by Supervised Toothbrushing Actions	Average of the supervised toothbrushing coverage
2008	4,566	0.32
2009	3,878	0.27
2010	4,049	0.29
2011	4,263	0.30
2012	3,447	0.24

Data concerning the coverage of Programmatic First Dental Consultation collected from the Porto Alegre 2010 management report are presented in Table 5. The goal agreed in 2008 suggested that municipalities offered a yearly programmatic dental consultation (and related treatment) for at least 12.5% of its population. It is noticeable that the values for the years 2008, 2009, and 2010 fall short of the intended goal.

TABLE 5 - Coverage of the Programmatic First Dental Consultation

GDs	Percentage of First Consultation Coverage			Goal Agreed in 2008 (%)
	2008 (%)	2009 (%)	2010 (%)	
GDC	2.16	1.74	1.17	12.5
GDLN	3.62	3.21	3.29	12.5
GDSCS	4.03	4.34	4.26	12.5
GDGCC	3.34	10.61	3.20	12.5
GDNEB	1.73	1.56	1.79	12.5
GDPLP	3.00	10.09	2.92	12.5
GDNHNI	4.29	3.42	3.96	12.5
GDRES	5.30	5.13	5.95	12.5
POA	3.15	4.68	3.00	12.5

Table 6 lists the coverage of the Collective Supervised Toothbrushing Action from 2008 to 2010, highlighting that none of the district administrations reached the goal determined in 2010 during all of the timeframes evaluated.

TABLE 6 - Coverage of the Collective Supervised Toothbrushing Action

GDs	Coverage of the Collective Supervised Toothbrushing Action			Goal Determined in 2010 (%)
	2008 (%)	2009 (%)	2010 (%)	
GDC	0.04	0.01	0.01	3
GDLN	0.46	0.43	0.37	3
GDSCS	0.38	0.41	0.39	3
GDGCC	0.76	0.58	0.64	3
GDNEB	0.28	0.20	0.13	3
GDPLP	0.88	0.57	0.65	3
GDNHNI	0.04	0.05	0.11	3
GDRES	0.51	0.73	0.60	3
POA	0.38	0.32	0.31	3

DISCUSSION

Although the population from Porto Alegre fluctuated from 2008 to 2012, it is noticeable that the population covered by the ESF increased significantly. Likewise,

the population covered by the ESF/SB increased. Nevertheless, coverage of oral health teams remains at 32%, which is considered low. Such limited coverage is also observed in the percentage of first consultations for the year studied.

Oral health teams are formed by dental assistants and dentists. The presence of an oral team within the ESF had better chances of creating a connection with the users, and consequently performing longitudinal care (8-10,12-15). Such connection may contribute to the increase in programmatic consultations and the accomplishment of the principle of integrality in care.

In 2009, there was an increase in programmatic consultations in Porto Alegre as a whole. However, the agreement over such consultations was based on a maximum number of three consultations per patient, regardless of the necessary number of procedures. In order to complete a given treatment, the same patient had to have another programmatic consultation, until all his/her needs had been met; this generated a repeated registry (16).

In addition to that, data from initial consultations might have been undercounted. The training of ESF teams aims at proper documentation of consultations, creating reliable data that may be compared to the reality faced by the local population (16).

The numbers regarding the coverage of the Collective Supervised Toothbrushing Action were way below the goal established for 2010. This may result largely from undercounted records, since the reading of the calculation method for this indicator usually raises many doubts among professionals. Nevertheless, the need for expanding both preventive actions and oral health promotion actions is clear (17).

This indicator also helps monitoring the population's level of access to collective actions to prevent oral diseases and estimates the proportion of people who had access to the topical fluoride in the toothpaste – assuming that most places that participate in the Collective Supervised Toothbrushing Action use fluoride toothpaste (11).

This action is extremely important because it focuses on maintaining health rather than treating diseases. Additionally, it targets people who do not have any diseases that require surgical intervention and should be performed at a collective level by any professional who works in primary health care (7). It is also a low cost action, requiring only toothbrush and toothpaste besides human resources.

Preventive actions of collective nature are key to promote oral health and educate people of different age groups. The relation between the number of dental surgeons and oral health technicians determines the service profile of a unit. When there is a greater presence of dental surgeons, the tendency is to have a higher number of restorative and surgical procedures. However, isolated procedures do not guarantee that the citizens are thoroughly included in oral health.

There are many challenges to overcome, especially regarding the integration of all parts involved in oral health care. It is imperative that a large group of stakeholders

with singular responsibilities cooperate. The oral health care system needs them to fulfill their responsibilities, cooperate, and articulate (18).

Difficulties may be related to a tendency to keep the biomedical model, which is centered on the disease, and attempts to address the suppressed demand of a population who did not have access to oral health services through programs and projects (19,20).

Further research would be essential especially on topics such as implementation and effectiveness of quality assessments for services and care performed both individually and collectively. Moreover, it would be interesting to investigate the satisfaction level of the users and the reasons why they utilize oral health services.

CONCLUSION

The ESF/SB coverage presented a slow and gradual improvement throughout the observed period. In contrast, there was a decrease in the average supervised toothbrushing coverage. The coverage of both the Programmatic First Dental Consultation and the Collective Supervised Toothbrushing Action fell short of the established goals. Such results should be carefully analyzed, considering the previously exposed limitations of the indicators.

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