

# Oral Health Policy in Brazil: transformations in the period 2015-2017

## *Política de Saúde Bucal no Brasil: as transformações no período 2015-2017*

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**ABSTRACT** This study analyzed the implementation of the Oral Health Policy in Brazil between 2015-2017 in four components: institutional actions, implementation, financing and results. The Ministry of Health (MS) websites were monitored and secondary data were collected regarding institutional actions of the MS, implementation of Primary Dental Care and Specialized Dental Care, results (coverage of the first dental consultation, average collective action of supervised brushing and specialized treatments), and financing. Between 2015 and 2017, there was a 5.8% increase in the number of Oral Health Teams and a 6.4% increase in the number of Dental Specialties Centers. Coverage for the dental consultation fell from 14.6% in 2015 to 10.5% in 2016 and 8.3% in 2017. There was a slight reduction in federal funding in 2017 compared to 2016. A restrictive political scenario for oral health was found in 2016 in the smaller implantation of new services, with successive changes in the oral health policy national coordination. It is necessary to deepen the study on the financing of the policy, since the financial contribution of 2016-2017 is not consistent with the little advance in the implantation and tendency of maintenance of results, with decrease of specific indicators such as the first programmatic dental consultation.

**KEYWORDS** Health policy. Health services. Monitoring. Oral health.

**RESUMO** Este estudo analisou a implementação da Política de Saúde Bucal no Brasil entre 2015 e 2017 em quatro componentes: ações institucionais, implantação, financiamento e resultados. Foram realizados acompanhamento dos sites do Ministério da Saúde (MS) e coleta de dados secundários sobre ações institucionais do MS, implantação dos serviços de Atenção Básica e Atenção Especializada, resultados alcançados (cobertura da primeira consulta odontológica, média de ação coletiva de escovação supervisionada e tratamentos especializados) e financiamento. Entre 2015 e 2017, houve aumento de 5,8% no número de Equipes de Saúde Bucal e de 6,4% no número de Centros de Especialidades Odontológicas. A cobertura de primeira consulta odontológica programática decresceu no período de 14,6% em 2015, para 10,5% em 2016 e 8,3% em 2017. Houve redução discreta do financiamento federal no ano de 2017, quando comparado a 2016. Verificou-se, em 2016, um cenário político restritivo para a saúde bucal na menor



*implantação de novos serviços, com mudanças sucessivas na coordenação nacional da política. É necessário aprofundar o estudo sobre o financiamento da política, visto que o aporte financeiro de 2016-2017 não está coerente com o pouco avanço na implantação e tendência de manutenção de resultados, com queda de indicadores específicos, como o de primeira consulta odontológica programática.*

**PALAVRAS-CHAVE** Política de saúde. Serviços de saúde. Monitoramento. Saúde bucal.

## Introduction

Oral health care in health services systems in the world is strongly influenced by the liberal model, with a predominance of private services, even in countries with a tradition in public health systems, such as Italy, Canada, and the United Kingdom<sup>1</sup>. In Switzerland, the public offering of oral health services occurs only in case of accidents and unavoidable conditions, presenting many accumulated demands and oral health problems in the adult population. Recent initiatives have proposed a mandatory insurance model for dental care in that country<sup>2</sup>, as well as in Israel, for odontopediatric dental care<sup>1</sup>. According to Benzian et al.<sup>3</sup>, the global political priority for the implementation of public actions and services of oral health is low, resulting from a complex set of issues, lacking adherence of dental professionals, as well as the lack of agreement on the problem and possible solutions.

In the Brazilian case, the configuration of a public subsystem of oral health care occurred in a long historical process with ruptures and continuities. Brasil Sorridente, a policy formalized in 2004, expressed a set of guidelines and articulation of oral health actions in the Unified Health System (SUS), with an expanded conception of health from the perspective of the Brazilian Sanitary Reform project, focusing on the qualification

and expansion of primary and specialized care<sup>4</sup>. That policy implemented in the Lula and Dilma governments, between 2003 and 2014, promoted growth in the supply and potential coverage of public dental services between 2003 and 2006 and a certain maintenance in the periods 2007-2010 and 2011-2014<sup>5</sup>.

There was an increase in funding, infrastructure and organization of the oral health services network<sup>6</sup>. Federal resources (nominal funding) for states and municipalities increased from R\$ 83.4 million in 2003 to R\$ 916 million in 2014, an increase of 10.9 times in the period, however, the use of public dental services remains around 30.7% versus 69.3% of private dental services<sup>5</sup>. Published studies have focused on this policy<sup>7,8</sup>, specifically on the Dental Specialties Centers (CEO)<sup>9-11</sup>, as well as on the results of that implementation<sup>12-14</sup>.

Thus, the present study analyzed the transformations of the Brazilian oral health policy between 2015 and 2017 in the components of institutional actions, implementation, results, and financing, in order to update the current state of implementation<sup>5</sup>.

## Methodology

This was a retrospective, descriptive study, with a quantitative and qualitative approach

to the monitoring of institutional actions, implementation of public dental services, results achieved, and public funding based on documentary analysis of archives and contents available at institutional websites of the Ministry of Health (MS) and available databases – DataSus, Strategic Management Support Room (Sage) and MS Primary Care Department (DAB/MS). The thematic analysis of content<sup>15</sup> was used to construct the synthesis of institutional actions in the analyzed period.

The thematic axis of Oral Health Policy Analysis linked to the Observatory of Political Analysis in Health (OAPS) of the Institute of Public Health has monitored its implementation since the formulation of the ground zero of such observatory (2003-2014)<sup>14</sup>. In that sense, this work analyzes the implementation, results, and financing components for the period from 2015 to 2017 (Dilma II Government 2015-2016 and Temer Government 2016-2017).

The monitoring was understood as the systematic collection of information, performed quarterly, to observe trends and evaluate its course<sup>16</sup>. The analysis of the data was based on the identification of four components of the National Oral Health Policy (PNSB):

1) institutional actions: initiatives at the federal level, especially those on the General Coordination of Oral Health (CGSB) of the Ministry of Health (MS), revealed in the publications of the federal government and the MS itself, as well as news and notes published on the websites of dental entities (Federal and Regional Councils, Associations, and Unions) related to oral health in the period studied.

2) deployment (supply of services): number of Oral Health Teams (eSB) in Primary Care (AB) and in the CEOs; follow-up of oral health coverage in AB, either in the Family Health Strategy (ESF) or in conventional health units through documentary analysis of publications and

data available at Sage<sup>17</sup> and DAB/MS<sup>18</sup>. That information is used to establish a correlation between coverage and procedures performed.

3) results: analysis of indicators of health services in AB (coverage of the first dental consultation and collective action of supervised dental brushing) and Specialized Care (AE) (completed endodontic and periodontal treatments). Those indicators were described in the historical series from 2003 to 2017. Endodontic and periodontal treatment indicators are only available at the SUS Ambulatory Information System (SIA-SUS)<sup>19</sup> from 2008 on.

The indicator of ‘coverage of first dental programmatic consultation’ was chosen because it represents the proportion of the Brazilian population that used the public dental service within AB. The ‘Collective Action of Supervised Dental Brushing’ represents the performance of collective-preventive actions in oral health and estimates the proportion of individuals who had access to dental brushing with guidance/supervision of a dental professional, and can point to changes in the care model<sup>20</sup>. The two groups of indicators for AE were: a) the ‘absolute number of endodontic treatment performed’ (unirradicular, birradicular permanent tooth filling of three or more roots and sealing of root perforation – codes in SIA-SUS 03.07.02.006-1, 03.07.02.004-5, 03.07.02.005-3, 03.07.02.011-8), since they constitute an ambulatory production carried out only in the CEOs; and b) the ‘absolute number of periodontal procedures’ (gingivectomy, gingivoplasty, periodontal surgical treatment – by sextant / codes in SIA-SUS 0414020081, 0414020154, 0414020162, 0414020375), considering that those would be the typical procedures of the specialized service that is reference for primary care in oral health.

The dental procedures monitored were

selected according to the historical series from 2008 to 2016, in the five regions of Brazil (South, Southeast, Midwest, North and Northeast), considering the number of procedures approved and the year of processing. Data from years prior to 2015 were presented to enable a better analysis of the recent period, in order to visualize trends in the historical series. The information was collected in January 2018 by a single researcher, using the Tab program for Windows® (TABWIN) and exported to the program Microsoft Excel® version 2007 (Microsoft Corp. United States of America).

In order to calculate the indicators of coverage of the first programmatic dental consultation and the average number of supervised dental brushing, the calculation methods established by the MS<sup>21</sup> were used, respectively: total number of first programmatic dental consultation (code in SIA-SUS 03.01.01.015-3) carried out in a certain place and period divided by the population in the same place and period x 100; number of people participating in the supervised dental brushing collective action (code in SIA-SUS 01.01.02.003-1) held in a certain place in 12 months divided by 12 and divided by the population in the same place and period x 100.

4) policy funding (federal fund-to-fund transfer): available at the National Health Fund website in March 2018, with analysis of the oral health headings on the Variable Floor of Primary Care, AE and investment. It should be noted that in the National Health Fund, at the time of

collection, financial transfers were designated by blocks<sup>22</sup>. Regarding the funding, AB's Federal funding block for states, Federal District, and municipalities is subdivided into: a) eSB – Mobile Dental Unit (UOM); b) Additional Oral Health Incentive; and c) Oral Health. The cost for contracted federal providers includes: a) additional incentive to UOM; and b) Oral Health. The financing block of medium and high complexity funding is composed of: a) Municipal CEO; b) State CEO; and c) Strategic Action Funds and Compensation (Faec). The investment block (capital) uses the specific headings of actions in oral health in the components 'Actions for the implementation of health actions and services' (Implementation of the CEO) and 'Variable Floor of Primary Care' (Acquisition of dental equipment).

All collected data were deflated by the National Consumer Price Index (IPCA) / Brazilian Institute of Geography and Statistics (IBGE) for the month of December 2017, in order to correct the values and make it possible to compare values in the different periods. The Procedure for the correction of IPCA/IBGE values was carried out in the Citizen Calculator of the Central Bank of Brazil<sup>23</sup>.

The analysis of the historical series of data was performed articulating the implementation of services by level (AB and AE) with the results achieved in the indicators of the oral health services selected in each of them (*tables 1 and 2*).

Table 1. Number of Oral Health Teams (eSB), population coverage of eSB (%), first dental consultation coverage (%) and supervised dental brushing collective action (%) in Brazil between 2003-2017 according to the Ambulatory Information System

Year	Oral Health Teams <sup>a</sup>	Population coverage of	Nº absoluto de primeira consulta odontológica	Cobertura primeira consulta odontológica (%)	Nº absoluto de ação coletiva de escovação dental supervisionada	Ação coletiva de escovação dental supervisionada (%)
2003	617	20.5	-	-	-	-
2004	8,951	26.6	-	-	-	-
2005	12,602	34.7	-	-	-	-
2006	15,086	39.8	-	-	-	-
2007	15,694	40.8	-	-	-	-
2008	17,801	39.2	26843628	14.0	57693648	2.5
2009	18,982	47.5	27156753	14.0	60304340	2.6
2010	20,424	34.0	26043708	13.3	63527864	2.8
2011	21,425	35.7	29449468	14.9	62504333	2.7
2012	22,203	36.7	26395480	13.2	54380251	2.3
2013	23,150	37.9	29526595	14.7	53246037	2.2
2014	24,279	37.9	27093617	13.4	57151878	2.3
2015	24,467	37.8	29925575	14.6	50543350	2.1
2016	24,384	37.4	21661874	10.5	37078584	1.5
2017	25,905	36.7	17263772	8.3	29535694	1.2

Source: Own elaboration, based on MS and IBGE data.

<sup>a</sup>Mod I + Mod II. Data referring to December of each year. - Change of indicator in the period 2003-2007.

Table 2. Number of CEOs (Dental Specialties Centers) implanted, number of endodontic treatments and specialized periodontal procedures performed between 2008 and 2017 from the Ambulatory Information System, SIA-SUS. Brazil

Year	Number of CEOs	Number of endodontic treatments	Number of periodontal procedures (by sextant - codes SIA/SUS: 0414020081, 0414020154, 0414020162, 0414020375)			Total
			Gingival graft	Gingivectomy and gingivoplasty	Periodontal surgical treatment	
2008	674	527,474	22,646	287,918	92,766	403,330
2009	808	612,621	12,484	194,802	82,684	289,970
2010	853	681,057	7,054	191,439	88,871	287,364
2011	882	684,800	7,365	191,642	95,901	294,908
2012	944	691,933	10,859	193,156	105,807	309,822
2013	988	687,296	8,956	177,605	99,196	285,757
2014	1,030	683,265	5,155	177,518	147,064	329,737
2015	1,034	682,181	5,230	203,788	168,631	377,649
2016	1,072	635,923	3,877	189,740	180,837	374,454
2017	1,100 <sup>a</sup>	582,040	4,405	251,335	190,528	446,268

Source: Own elaboration, based on MS/SAI/SUS data, 2017.

<sup>a</sup> Data up to September 2017.

## Results

The dental labor market annually receives large numbers of new professionals. In 2016, there were 278,394 Dental Surgeons (CD) in the country. In 2017, the number of CDs increased to 300 thousand, with 66,561 working in the SUS (about 22.2%). It is noted in the period analyzed a significant increase (7.3%) in the number of dental schools in

operation, from 204 in 2015 to 220 colleges in 2016. According to information from the Federal Council of Dentistry (CFO), about 75% of those units are private. Regarding the monthly income range, according to the National Federation of Dental Practitioners (FNO), the average salary of the CD for 2017 was set at R\$ 5,622.00. But there is also evidence of social unprotection with atypical wages (*chart 1*).

Chart 1. Labor market and professional training, supply of public dental services and institutional actions, results in indicators of health services in Brazil in the Dilma II (2015-2016) and Temer (2016-2018) governments

Categories analyzed	Periods of government	
	Dilma II (2015 to 04/2016)	Temer (05/2016-2017)
Number, average income of dental surgeons (CDs) and profile of educational institutions	In 2015, there were 266,665 CDs in the country, with 204 dental schools, about 70% of them being private. There is no information on CD number in the SUS and average CD income in this period.	In 2016, there were 278,394 CDs in the country, with 220 dental schools in operation, 75% of them being private. In 2017, there were 300,000 CDs in the country, with 66,561 CDs in SUS (about 24%). The average monthly income of the CD was R\$ 5,622.00 (FNO, 2017).
Supply (availability) of public dental care	In 2015, there were 24,467 eSB (Oral Health teams) deployed, 1,034 CEOs (Dental Specialties Centers) and 1,770 LRPDs (Regional Dental Prosthesis Laboratories). In December 2016, they were 24,384 (reduction of 83 teams) and 1,072 CEOs (increase of 3.6%) compared to 2015. There is no information on LRPD number in 2016.	In 2017, there were 25,905 eSB deployed, an increase of 5.8% in relation to 2015 and of 6.2% in relation to 2016. In September 2017, there were 1,100 CEOs and 1,840 LRPDs.
Institutional actions	October 2015: appointment of Marcelo Castro (PMDB) for Minister of Health. November 2015: Rosângela Camapum was exonerated from the position of coordinator of the General Oral Health Coordination (CGSB); and, in her place, Ademir Fratric Bacic was nominated.	May 2016: appointment of Ricardo Barros (PMDB) for Minister of Health. July 2016: exoneration of 73 commissioned posts from the Ministry of Health, including oral health coordinator (Ademir Fratric Bacic) August 2016: nomination of Patrícia Lima Ferraz for the CGSB. January 6, 2017: Appointment of Lívia Maria Almeida Coelho de Souza, for the position of coordinator of the CGSB. That same month, there was an event held in Brasilia to announce the release of R \$ 344.3 million for oral health. The event was attended by the CFO and the Regional Councils.

Source: Own elaboration, based on data from CFO, MS and FNO.

Regarding the institutional actions, in the period of the second mandate of Dilma (Dilma II), it should be highlighted, in the scenario of the MS, the nomination in October of 2015 of Marcelo Castro, doctor and federal congressman by the Brazilian Democratic Movement party (MDB) of Piauí – in the legislatures 1999-2003, 2003-2007, 2007-2011, 2011-2015 and 2015-2019 –, for Minister of Health. In November 2015, the then CGSB coordinator of the MS, Rozângela Camapum, former president of the Interstate Federation of Dentists (FIO) was dismissed from office. For her place, Ademir Fratric Bacic, dental surgeon and businessman connected to the dental health supplementary sector, was nominated.

In the Temer government period, one of his first actions was the nomination of Ricardo Barros, civil engineer, businessman and congressman by the MDB – in the legislatures 1995-1999, 1999-2003, 2003-2007, 2007-2011, 2015-2019 –, for Minister of Health. During that period, successive changes in the CGSB stand out. In July 2016, 73 commissioned positions of the MS were exonerated, including the then oral health coordinator. This new change in coordination has led to speculation about a possible extinction of the CGSB.

Those facts moved the odontological entities, which issued in their social networks notes and announcements of repudiation and concern (CFO, Regional Councils – BA, SP, SE, PR, RS, MT, Unions – Soergs, Soepar, Sinodonto-SE, SoDF; FIO and FNO)<sup>24,25</sup>. In August 2016, the new oral health coordinator, Patrícia Lima Ferraz, dental surgeon, affiliated to the Christian Social Party (PSC) – Amapá, was nominated. Her tenure in office lasted only five months; and her departure from office soon after a controversial situation, involving an international trip while she was on medical leave, as published in newspapers such as ‘O Estado de São Paulo’, ‘Estadão’<sup>26</sup>.

Other institutional actions of the Temer

period regarding health were the publication of Ordinance No. 1482, of August 4, 2016, of the MS, which instituted the Work Group (GT) to discuss the ‘Affordable Health Insurance’ project; of Constitutional Amendment 95, which instituted a new fiscal regime with progressive reduction of SUS resources for 20 years; and the new National Primary Care Policy (PNAB), through Ordinance No. 2,436, dated September 21, 2017.

In oral health, a new change in the CGSB stands out, with the nomination of Livia Maria Almeida Coelho de Souza, dental surgeon, dental prosthesis and family health specialist, with previous work in the MS on consulting and organizing publications, such as the ‘Oral Health Specialties Handbook’, in 2008. In July 2017, the Social Affairs Commission (CAS) approved Senate Bill 8/2017, authored by Senator Humberto Costa (Partido dos Trabalhadores – PT-PE), which includes the PNSB in the field of action of the SUS. The author justifies such project by pointing out that, currently, the PNSB is characterized as a government policy, and therefore with fragile guarantees of continuity and prioritization in the agendas. Finally, as an institutional action, in the same month, there was an event held in Brasilia, at the Planalto Palace, promoted by the Ministry of Health, to announce the release of R\$ 344.3 million for oral health. The event was attended by the CFO and the Regional Councils<sup>27</sup>.

Regarding the deployment, it was observed that 2015 closed with 24,467 eSB implanted, with 37.8% of population coverage. In 2016, there was a reduction of 83 eSB (0.3%), an unprecedented fact in the historical series since the implementation of the PNSB. In 2017, there was an increase of 5.8% (1,438 eSB) in relation to 2015 and of 6.23% (1,521 eSB) when compared to 2016. In some degree, coverage was maintained in this period, but did not result in expansion of supply of services in AB, considering that the population coverage decreased by 1% in relation to 2015 (table 1).



With regard to the specialized centers, there is an increase of 38 units in the country between 2015 and 2016. The data for 2017 for this service and the Regional Laboratories of Dental Prostheses (LRPD) were made available by CGSB with information only until the month of September. During this period, there was a slight increase in specialized centers. The public databases of Datasus and Sage are outdated in relation to the CEO and LRPD.

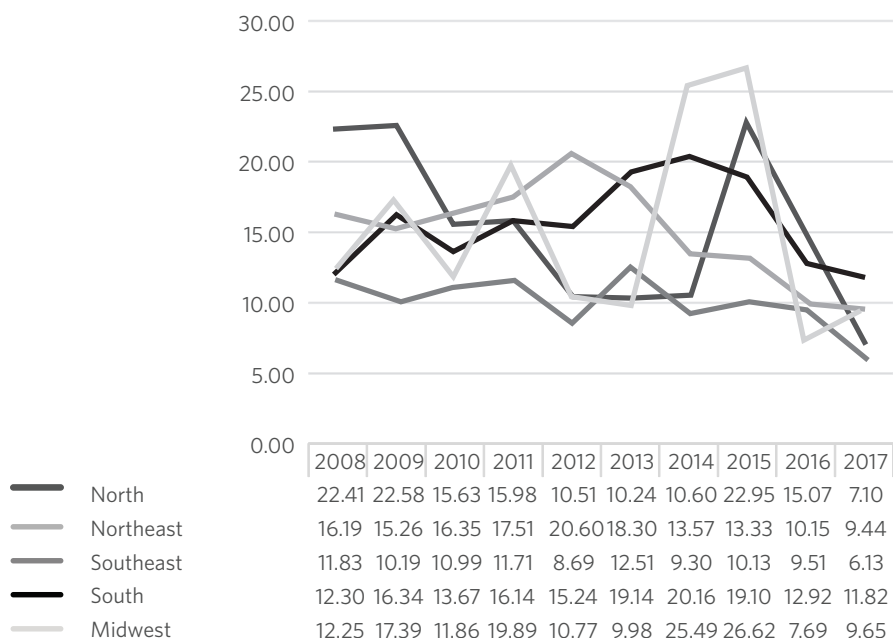
Results indicated a reduction of the indicators monitored for AB (table 1), population coverage of eSB, coverage of first dental programmatic consultation, and coverage of collective action of supervised dental brushing. The population coverage of eSB registered a slight reduction (2.9%) between 2015 and 2017, returning to the coverage of 2012 (table 1).

Ambulatory production of the first programmatic dental consultation showed a significant decrease of 42.3% in the number

of procedures between 2015 and 2017. First consultation coverage ranged from 14.6% to 8.3%, recording a reduction of 43.2% in the period. In 2017, 17,263,772 consultations were carried out, with a population coverage of only 8.3% (table 1).

The analysis of the historical series of the coverage indicator of first programmatic dental consultation according to macro-regions of Brazil shows that all regions had a decrease in the number of first consultations performed between 2008 and 2017, but this was not linear (graph 1). In the period, there were increasing peaks in the Midwest, North, South and Northeast regions. The Southeast region presented the lowest performance when compared to the other regions. In 2017, the largest decrease in coverage was in the Midwest, followed by the South and Northeast regions.

Graph 1. Coverage of the first dental programmatic consultation according to macro-regions of Brazil, from 2008 to 2017



Source: Own elaboration, based on data from Datasus, 2018.



For the supervised collective brushing procedure, a reduction in the number of procedures was observed in the analyzed period (41.5%), while the collective action of supervised brushing ranged from 2.1% in 2015 to 1.2% in 2017, a reduction of 42.9% (table 1). The average number of supervised dental brushing collective action remained constant until 2011, with a decrease during the following years. The year of 2017 was the one that presented the lowest result during the described period.

On specialized procedures, there was a reduction in endodontic procedures (codes in SIA-SUS 03.07.02.006-1, 03.07.02.004-5,

03.07.02.005-3, 03.07.02.011-8) and an increase of periodontal procedures (by sextant – codes SIA-SUS: 0414020081, 0414020154, 0414020162, 0414020375) when compared to the years of 2015 and 2017. Endodontic procedures decreased 14.6% in relation to 2015, while periodontal procedures showed an increase of 18.2% in the period (table 2). However, it should be noted that in April 2017 alone, there were 132,412 periodontal procedures, reflecting an increase in the total production for that year. That increase, which is incompatible with the downward tendency, may have occurred because Datasus did not review the data (table 2).

Table 3. Federal government transfers to states and municipalities for funding AB (Primary Care) and AE (Specialized Care) and investment related to oral health, 2003-2017\*

Year	AB Transfers	AE Transfers	Investment	Total of transfers
2003	R\$ 180,711,384.39	R\$ 4,199,199.41	-	R\$ 184,910,583.80
2004	R\$ 400,253,626.42	R\$ 13,190,710.44	R\$ 6,304,645.54	R\$ 419,748,982.40
2005	R\$ 546,418,744.21	R\$ 45,331,462.08	R\$ 31,877,452.15	R\$ 623,627,658.44
2006	R\$ 688,235,433.13	R\$ 92,765,111.83	R\$ 24,652,705.41	R\$ 805,653,250.37
2007	R\$ 782,892,493.59	R\$ 120,313,603.62	R\$ 8,195,508.96	R\$ 911,401,606.17
2008	R\$ 804,365,480.27	R\$ 120,555,494.77	R\$ 7,993,136.98	R\$ 932,914,112.02
2009	R\$ 831,562,396.24	R\$ 139,337,767.70	R\$ 6,868,294.44	R\$ 977,768,458.38
2010	R\$ 919,183,022.98	R\$ 125,605,721.28	R\$ 444,078.79	R\$ 1,045,232,823.05
2011	R\$ 938,858,309.03	R\$ 149,397,321.92	R\$ 10,661,188.67	R\$ 1,098,916,819.62
2012	R\$ 1,071,567,005.31	R\$ 166,756,711.15	R\$ 7,584,628.10	R\$ 1,245,908,344.56
2013	R\$ 881,541,675.52	R\$ 190,569,481.50	R\$ 10,302,606.98	R\$ 1,082,413,764.00
2014	R\$ 880,880,671.40	R\$ 233,202,804.46	R\$ 3,881,009.69	R\$ 1,117,964,485.55
2015	R\$ 887,097,152.31	R\$ 215,160,162.46	R\$ 1,739,921.08	R\$ 1,103,997,235.85
2016	R\$ 909,189,917.30	R\$ 217,513,800.79	R\$ 2,651,231.75	R\$ 1,129,354,949.84
2017	R\$ 829,995,247.00	R\$ 226,725,301.48	R\$ 2,835,000.00	R\$ 1,059,555,548.48

Source: Own elaboration, based on data from the National Health Fund, Brazil, 2017.

\*Values adjusted by IPCA - IBGE.

The analysis of the historical series of funding for oral health actions in the mentioned period shows a small increase in values between 2015 and 2016 and a decrease in values in 2017 (table 3). There was an increase in the percentage share of EC

financing. The funds allocated to AB represented the largest amount of transfers throughout the period studied. However, it should be noted that there was a reduction in the amounts transferred to that component in 2017. In the analysis of the percentage

share of AB, AE and investments, reduction of the AB component, increase of the specialized one, and increase in the investments were observed.

## Discussion

The PNSB completed 13 years in 2017, with some changes in the period, and its institutionalization may be considered as fragile. In 2003, they were only 617 eSB, with population coverage still incipient. In 2017, there were 25,905 eSB present in 5,029 municipalities, representing 36.7% of potential population coverage. In the AE, there was also an expansion of services. Such fact may be one of the factors pointed out by Pinell<sup>28</sup>, according to which the evolution of a policy is the product of the dynamics of a complex social game, having as a concrete effect of its implementation the creation of institutions, development of professional groups, and emergence of new associative structures. In the case of public dentistry, there is a potential for mobilization, in view of associations related to the health movement, such as the Brazilian Association of Collective Health (Abrasco) and the Oral Health GT, which are important vocalizers of such space. However, from the point of view of the odontological field, the hypothesis is that the movement of associations of class and specialists support the creation of new jobs and have not yet become real advocates of those dental services, with oral health also as a right to health. The private market is still dominant.

In that sense, the dental work and professional training market in the period showed a trend of increasing the number of private schools, and a lower proportion of CD in the SUS, which in 2014 was of 30%<sup>5</sup> and, in 2017, came to represent about 22.2% (66,561 CDs). This was probably due to the arrival of more CDs in a job market with the same vacancies in the public sector. A study by Cascaes et al.<sup>29</sup> showed that in Brazil there was an

increase in the number of CDs working as general practitioners and specialists in the period 2007 to 2014, with the expansion of the workforce of general practitioner (0.5%) and specialist (11.6%), lower in the public sector, compared to the private sector (24.5% and 30.3%, respectively). In Belo Horizonte, Minas Gerais, a study in three private institutions revealed a greater desire of the students to work in a private practice (60.9%), followed by the ESF (41.3%) and popular clinics (16.3%)<sup>30</sup>. Despite the high number of CDs, their unequal distribution among regions, and in the public and private sectors, can be an important barrier to access to oral health care in the country<sup>29</sup>. That dominance of training in private schools may constitute a future barrier to public policy itself, given the contradictions of training for the public health system in private colleges. Social agents formed by those institutions may have little capacity for mobilization and provisions for the public health field.

In the monitoring of institutional actions between 2015 and 2017, it was verified that the successive changes in the MS, especially in the national coordination, reveal the political instability in the Country, characterized by the departure of Dilma Rousseff, through a process of impeachment, and the entrance of the Vice-President Michel Temer. The oral health actions carried out during the period of the Temer government were strongly criticized by sanitarians and institutions of Public Health, because they represent a weakening of the universal and egalitarian character of the SUS, with emphasis on the policy of fiscal adjustment and progressive cuts in health resources and education, for the creation of a GT for the implementation of affordable health insurances and for the new PNAB<sup>31</sup>. Morosini and Fonseca<sup>32</sup> stress that those measures published under the justification of facing the fiscal imbalance limited social policies, promoting the reduction of the public dimension of the State and increasing the participation of the private

sector. The authors point out that the SUS has been under great pressure for the conversion of social rights to the market logic; and the new PNAB, besides promoting the relativization of universal coverage, fosters the segmentation of access, the recomposition of teams in an ambiguous way, the reorganization of the work process, and the weakening of the national coordination of politics.

In oral health policy, the transformations in the sense of its deepening and continuity were not yet perceived in this historical moment. Pinell<sup>28</sup> points out the influence of changes of government to the maintenance or abandonment of policies. The relation between a public policy and the emergence of groups of interested agents with new specialized competencies in these new institutions lead to the formation of a space of specialized symbolic production<sup>28</sup>, which can fight for the maintenance of those achievements. In the case of public care to oral health in Brazil, it is still necessary to investigate the constitution of this relatively new space, since the state offer of specialized dental services is relatively recent in Brazil, and suffers from legitimacy, given the great competition with the private market for dental services, which is hegemonic. A study by Pilloto and Celeste<sup>33</sup> showed a tendency to increase the use of exclusively dental insurance from 1.0% in 1998 to 6.3% in 2013. In addition, from 1998 to 2013, there was an increase in the use of private medical and dental services by people with and without a private insurance, regardless of sex, age group, and schooling<sup>33</sup>.

With regard to AB, the eSB implementation data show that, in the historical series, since the beginning of the policy, the year 2016 was the only one that closed with a reduction of teams. In addition, although the implementation was maintained between the years 2015 and 2017, the population coverage of eSB and the monitored results indicators (first dental programmatic consultation and collective action of supervised

brushing) presented a significant reduction. The analysis of the coverage of the first programmatic dental consultation according to Brazilian macro-regions shows that all regions showed a decrease in the number of first consultations at some point between 2008 and 2017. In 2017, the greatest drop in coverage was in the Midwest region, followed by the South and Northeast regions. Causes for this variation need to be better explained, such as the likely inclusion of the new e-SUS system, as well as the difficulties of cofinancing of the policy at the local level, due to the fall in the collection of municipal treasury and the overload of this federal entity in financing the Public Health System. A study in Fortaleza, Ceará, interviewed 137 eSF CDs about the performance and monitoring indicators of the MS for oral health, and although most of the interviewees considered them important, they stress their complexity in relation to issues faced in practice, such as lack of regular maintenance of dental equipment and inputs, low eSB coverage in the territories, and difficulties in labor relations and management planning for the organization of supply, and user adherence to programmed consultations<sup>34</sup>.

The analysis of the historical series of supervised dental brushing collective action in the period from 2008 to 2017 reveals that, in 2010, a greater number of those actions was carried out in Brazil (*table 1*). This fact may be related to the distribution, in 2009, of 40.6 million oral health kits by the Ministry of Health, which were sent to public schools that presented low Basic Education Development Index (Ideb) and delivered to the eSB in 4,597 municipalities in Brazil. In 2017, those procedures totaled only 25,674,964, which means a significant reduction compared to the previous eight years.

The follow-up of AE result indicators reveals a reduction in endodontic procedures, especially in 2017, and an increase in periodontal procedures when compared to the years 2015 and 2017. The change in

the information system for the e-SUS may explain some of these results, but, in fact, it is not enough. Studies on information systems, implementation analyses, and policy outcomes at the regional and municipal levels are necessary to highlight the various factors related to those findings.

Recent studies such as that of Celeste et al.<sup>12</sup> reiterate that the implantation of CEOs has a positive effect on the municipal production of specialized procedures, especially for endodontics. However, studies in Rio Grande do Sul<sup>35</sup> and Maranhão<sup>36</sup> showed that the majority of CEOs from those states do not meet the goals established by the national coordination. It is necessary to reflect on to what extent the investment in the implementation of these services produces greater supply and use. The lead role of local government in the successful implementation of policies with formulation and induction at the federal level has been valued<sup>37</sup>. However, there is a recent discussion in oral health about the need to strengthen regionalization for the success of specialized provision and good performance of health services, where regional management can play a central role.

Frazão and Narvai<sup>38</sup> emphasize that during the eight years prior to the Brasil Sorridente program (1994-2002), there were few actions in oral health, and the process of decentralization of the health system in that period was an important element to strengthen the capacity of municipalities to respond to demands of the population's oral health. There was a significant increase in federal funding of the policy, especially in the period from 2003 to 2006, when spending on oral health investments rose from 56.5 to 427 million per year<sup>38,39</sup>. In the period 2015-2017, there was some maintenance of federal funding, with a slight reduction in 2017 compared to 2016. However, although there has been a reduction, there is a certain inconsistency between the implementation of the policy, its results and the funding, insofar

as the funding and deployment remained relatively stable over the period; and there is a tendency of reduction of the results in the indicators of health services. It is necessary to deepen the study of the financing, to expand the result indicators, and to advance in the regional analysis of the policy to better understand this finding.

Despite the expansion, the PNSB still has difficulties in reducing health inequities, since there are few studies in this sense. Besides, many health actions are inaccessible to the most vulnerable populations<sup>40</sup>. Furthermore, it is necessary to question the relationship between the growth of investment, the supply of services, the use, and the results produced<sup>5,40</sup>. That issue of the confrontation of the social determinants of health is still little explored and needs to be rescued, constituting an amnesia of the genesis of the public oral health movement that influenced the formulation of the current PNSB<sup>41</sup>. The study pointed out that curative dental procedures, which, in theory, should occur in all Brazilian eSBs, are present in only 69.5% of the 11,374 eSB assessed in the first cycle of the National Program for Improving Access and Quality of Primary Care – PMAQ-AB – in 2011. Moreover, it revealed important differences between the macro-regions, being that the South and Southeast regions present better rates than the North and Northeast<sup>42</sup> regions. That is, the organization of the services is related to the human development of the region. Fernandes et al.<sup>43</sup> found an association between the coverage of the first programmatic dental consultation and the Human Development Index (IDH) in the pro-equity sense. The authors point out that this finding may be due to the increase in incentives for eSF and oral health for municipalities with lower IDH, as well as the additional incentives of the Brasil Sorridente program for dental inputs and equipment. However, although the Northern and Northeastern states have a greater opportunity for access,

the impact of public policies on the use of services is still a gap, since the proportion of specialized dental procedures in relation to individual dental actions is greater in states with higher IDH<sup>43</sup>.

The model of curative and mutilating care is still present in the public sector and in the ESF<sup>44,45</sup>, especially in remote regions, contributing to the removal of the legitimacy that this policy could achieve in the population; and thus, it remains susceptible to governmental conjunctures. Recent initiatives in the political arena, such as Senate Bill No. 8/2017, still under process, which aims to include the PNSB within the SUS' field of action, can contribute to addressing those fragilities.

## Conclusions

In conclusion, it should be noted that the present study pointed to a reduction in the implantation, expressed by the reduction of the population coverage of the eSB and the number of CEOs, limited results of the oral health policy in Brazil, revealed by the trend of decrease in the results of the dental services indicators, with a reduction in the funding of the policy between 2015 and 2017. In addition, a restrictive political scenario was observed for the PNSB, expressed in the successive changes in the national policy coordination and in the MS itself, which certainly influenced the loss of direction of the policy at the federal level.

The present study presents limitations for working with secondary data, such as indicators of the results of dental services, which, in turn, present limitations in the standardization of procedure registration,

typing, control, and updating of information systems, especially with the new e-SUS. There are still other issues that deserve to be discussed, such as the agreement of these AB indicators by the municipalities and the goals of AE established by the MS, which were not the object of this study. However, those limitations do not detract from the potential of using these data to monitor and analyze oral health policies in Brazil. There are also gaps in the use of public and private dental services in the monitored period (2015-2017), since the most recent data available are from the National Health Survey published by the IBGE in 2013.

It is necessary to deepen the study on policy funding, since the largest financial contribution in 2016 was not consistent with the lack of progress in the implementation and results for that year. The long-term viability of dentistry in the SUS is questioned in some studies, given the secondary nature of this policy, which competes with policies of greater severity of health<sup>3,41,46</sup>. This reinforces the need to discuss the directions of the Brasil Sorridente policy in the sense of strengthening its social legitimacy in the country, whose maintenance is threatened in the coming years, considering its current results.

## Collaborators

Chaves SCL coordinated the research formulation, participated in data analysis, and reviewed the final manuscript. Nascimento CR, Almeida AMFL, Rossi TRA, and Barros SG participated in the collection and analysis of data, writing and final revision of the manuscript. ■

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