

e-ISSN:1806-1230

DOI: 10.5020/18061230.2023.14007

# Temporal evolution of oral health in Brazil, North region and Rondônia Evolução temporal da saúde bucal no Brasil, Região Norte e Rondônia Evolución temporal de la salud bucal en Brasil, región Norte y Rondônia

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Revista Brasileira em Promoçã

da Saúde

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#### ABSTRACT

**Objective:** To analyze the temporal evolution of oral health in Brazil, North region, and Rondônia from 2010 to 2020. **Methods:** Time series study, based on data from the Primary Care Information System, where information was extracted on population, number of oral health teams, and oral health coverage collected in November 2021. For trend analysis, linear regression was performed by applying the Prais-Winsten technique after verifying serial autocorrelation using the Durbin and Watson test in STATA 16.0. **Results:** The oral health coverage rate in Brazil in the Family Health Strategy in 2020 was 43.90% with an increase of 1.72 (95%CI: 1.36; 2.08) in the period from 2010 to 2020, in the North the rate was 42.49% and growth of 2.38 (95%CI: 1.93; 2.84) and Rondônia the rate of 28.63% and stationary trend -2.17 (95%CI: -4.78; 0.51). In Primary Care for the year 2020 in Brazil it had a rate of 55.36% in 2020 with annual growth in the period studied of 0.70 (95%CI: 0.05; 1.35), in the North rate 52.06 % and annual growth of 1.77 (95%CI: 0.93; 2.62) and Rondônia rate of 36.08% and stationary annual trend -1.32 (95%CI: -3.83; 1.25). **Conclusion:** The study reveals that oral health coverage in Brazil and the North Region is above the Ministry of Health> target; however, Rondônia presents a coverage below the target and without growth in the studied period. Therefore, strategic actions are needed to promote equitable and quality access to dental services, besides health promotion actions.

**Descriptors:** Health Information System; Public Health Dentistry; Health Indicators; Health Information Management; Health Management.

#### RESUMO

**Objetivo:** Analisar a evolução temporal da saúde bucal no Brasil, Região Norte e Rondônia de 2010 a 2020. **Métodos:** Estudo de série temporal a partir dos dados do Sistema de Informação da Atenção Básica com informações sobre população, quantidade de equipes de saúde bucal e da cobertura em saúde bucal coletados em novembro de 2021. Para a análise de tendência, realizou-se regressão linear aplicando a técnica de Prais-Winsten, após verificação de autocorrelação serial por meio do teste de Durbin e Watson no STATA 16.0. **Resultados:** A taxa de cobertura da saúde bucal do Brasil na Estratégia de Saúde da Família em 2020 foi 43,90% com um crescimento de 1,72 (IC95%: 1,36; 2,08) no período de 2010 a 2020, no Norte a taxa foi 42,49% e crescimento de 2,38 (IC95%: 1,93; 2,84) e Rondônia a taxa de 28,63% e tendência estacionária -2,17 (IC95%: -4,78; 0,51). Na Atenção Básica para o ano de 2020 no Brasil houve uma taxa de 55,36% em 2020 e com crescimento anual no período estudado de 0,70 (IC95%: 0,05; 1,35), no Norte taxa 52,06% e crescimento anual de 1,77 (IC95%: 0,93; 2,62) e Rondônia taxa de 36,08% e tendência anual estacionária -1,32 (IC95%: -3,83; 1,25). **Conclusão:** O estudo revela que a cobertura de saúde bucal no Brasil e na Região Norte está acima da meta do Ministério da Saúde, no entanto, Rondônia apresenta uma cobertura



This Open Access article is published under the a Creative Commons license which permits use, distribution and reproduction in any medium without restrictions, provided the work is correctly cited Received on: 10/14/2022 Accepted on: 08/18/2023 abaixo da meta e sem crescimento no período estudado. Sendo assim, são necessárias ações estratégicas que promovam acesso equitativo e de qualidade aos serviços odontológicos, além de ações de promoção à saúde.

**Descritores:** Sistema de Informação em Saúde; Odontologia em Saúde Pública; Indicador de Saúde; Gestão da Informação em Saúde; Gestão em Saúde.

#### RESUMEN

**Objetivo:** Analizar la evolución temporal de la salud bucal en Brasil, región Norte y Rondônia de 2010 a 2020. **Métodos:** Estudio de serie temporal a partir de los datos del Sistema de Información de la Atención Primaria con informaciones sobre población, cantidad de equipos de salud bucal y de cobertura en salud bucal recogidos en noviembre de 2021. Para el análisis de tendencia, fue realizada regresión linear aplicando la técnica de Prais-Winsten, después de hacer verificación de auto-correlación serial por medio del test de Durbin y Watson en STATA 16.0. **Resultados:** La tasa de cobertura de la salud bucal de Brasil en la Estrategia de Salud de la Familia en 2020 fue 43,90% con un crecimiento de 1,72 (IC95%: 1,36; 2,08) en el período de 2010 a 2020, en el Norte la tasa fue 42,49% y crecimiento de 2,38 (IC95%: 1,93; 2,84) y Rondônia la tasa de 28,63% y tendencia estacionaria -2,17 (IC95%: -4,78; 0,51). En la Atención Primaria para el año de 2020 en Brasil tuvo una tasa de 55,36% en 2020 y con crecimiento anual en el periodo estudiado de 0,70 (IC95%: 0,05; 1,35), en Norte tasa 52,06% y crecimiento anual de 1,77 (IC95%: 0,93; 2,62) y Rondônia tasa de 36,08% y tendencia anual estacionaria -1,32 (IC95%: -3,83; 1,25). **Conclusión:** El estudio revela que la cobertura de salud bucal en Brasil y en la Región Norte está arriba de la meta del Ministerio de la Salud, sin embargo, Rondônia presenta una cobertura debajo de la meta y sin crecimiento en el periodo estudiado. Así, son necesarias acciones estratégicas que fomenten acceso equitativo y de calidad a los servicios odontológicos, además de acciones de promoción de la salud.

**Descriptores**: Sistema de Información en Salud; Odontología en Salud Pública; Indicador de Salud; Gestión de la Información en Salud; Gestión en Salud.

#### INTRODUCTION

The Family Health Program, today structured as the Family Health Strategy (ESF), was institutionalized in 1994 as a way of reorganizing the care model and strengthening Primary Care. Oral health, however, was only included in this care model in 2000<sup>(1)</sup>. However, the implementation of oral health teams was more successful through the National Oral Health Policy (PNSB) created in 2004 and the National Primary Care Policy (PNAB) in 2006<sup>(2)</sup>.

One of the PNSB's guidelines is *Brasil Sorridente*, considered the largest public oral health program in the world and aims to guarantee actions to promote, prevent, and recover the oral health of Brazilians, understanding that this is fundamental to the health and quality of life of the population<sup>(3)</sup>.

Thus, *Brasil Sorridente* was established and linked to other health policies and other public policies following the principles and guidelines of the Unified Health System (SUS). This program presents as its main lines of action the reorganization of Basic Care (AB) through the Oral Health Teams (ESB) of the Family Health Strategy (ESF), outpatient Specialized Care, and oral health surveillance<sup>(4)</sup>.

Oral health plays a fundamental role in health promotion context that seeks to treat diseases, prevent them, and comprehensively promote well-being. To prevent oral diseases and maintain oral health, promoting oral health, healthy oral hygiene habits, a balanced diet, and regular visits to the dentist are encouraged. Furthermore, promoting oral health also involves raising awareness about the importance of self-care and adopting appropriate self-care practices, aiming to strengthen oral health as an integral part of general health. By including oral health in health promotion, the aim is to treat existing problems and also to empower people to be active agents in maintaining their oral health and, consequently, improving their quality of life<sup>(5)</sup>.

Primary Care in Brazil has two nationwide operational mechanisms for monitoring and evaluation: 1) primary care indicator pact and 2) primary care information system<sup>(6)</sup>. Regarding oral health, the Ministry of Health proposed three indicators for 2013-2015 that demonstrate a portrait of the execution of actions by professionals in oral health teams. They are a) average collective action for supervised tooth brushing, b) population coverage estimated by oral health teams, and c) proportion of extraction<sup>(7)</sup>. In the guidelines, objectives, goals, and indicators for 2017-2021 list, the only oral health indicator to be evaluated is the population coverage estimated by the Oral Health Teams<sup>(8)</sup>.

Oral health coverage is an indicator of a federal agreement that measures the expansion of access to oral health by the population in primary care, with the guideline ensuring the population's access to quality services, with equity and prompt to meet their health needs, through the improvement of the Primary Care Policy and specialized care. The greater the coverage of Oral Health Teams, the greater the potential for service provision<sup>(9)</sup>.

A trend study on the use of medical and dental services describes that from 2003 to 2013, dental services use showed a decline; 53% of the population reported not having used dental services in 2013<sup>(10)</sup>. In Brazil, data from the 2019 National Health Survey (PNS) showed that oral care occurred predominantly in a private office, totaling 75% of care<sup>(11)</sup>.

Considering the five Brazilian regions, from 1980 to 2010, there was a reduction in the caries rate in four regions. In the Northeast Region, the index fell from 3.1 to 2.7; in the Central-West Region, from 3.1 to 2.6; in the Southeast, the index went from 2.3 to 1.7; and in the South, from 2.3 to 2. In the North Region, however, there was no reduction<sup>(12)</sup>.

The Northern Region of Brazil has striking regional and social characteristics that often denote disparities compared to the oral health index. According to a 2015 ecological study, where information was collected on oral health, public oral health policy, and socioeconomic conditions, less than half of Brazilian capital cities obtained values for the number of Decayed, Missing, and Filled Teeth (CPO-D/DMFT) at 12 years higher than the Brazilian average, which was 2.6. However, the capital of the State of Rondônia, Porto Velho, had the worst index among Brazilian capitals, being 4.15<sup>(13)</sup>.

Considering the lack of studies regarding oral health indicators in Brazil, the unfavorable scenario in some Brazilian regions, and the authors' experience in the state of Rondônia, the present study aimed to analyze the temporal evolution of oral health in Brazil, North Region, and Rondônia from 2010 to 2020.

#### METHODS

A time series study was carried out on the oral health indicator of the Basic Care Pact of the SUS in Brazil, the North Region, and the State of Rondônia. The information was obtained in November 2021 through the Ministry of Health E-gestor database (https://egestorab.saude.gov.br/), from which public domain reports were generated.

Information about the population, number of Oral Health Teams implemented, and amount of oral health coverage for Brazil, the North Region, and the State of Rondônia were extracted from the database (Chart 1).

Chart 1 – Variables collected in E-manager used to enable the analysis of the temporal evolution of the oral health coverage indicator in Brazil, the North Region and the State of Rondônia in the period 2010-2020

Variables	Description
Population	Population estimate, with reference to July 1st of the previous year.
EFSB Cob No. – Number of ESF Oral Health Teams	Number of ESF Oral Health teams, made up of dental surgeons, dental assistants and technicians em higiene dental, vinculadas a uma equipe da ESF.
Estim. Pop. Cob. ESFSB – Estimate of the population covered by Oral Health Teams linked to Family Health Teams	Estimate of the population covered by Oral Health Teams linked to Family Health Teams. The parameter of 3,450 individuals covered per team is considered.
ESFSB Coverage (%) – Percentage of population coverage estimated by Oral Health Teams linked to Family Health Teams	Estimated population coverage by Oral Health Teams linked to Family Health Teams, given by the percentage of the population covered by these teams in relation to the population estimate.
Pop. Estim. Cob. SB AB – Estimate of the population covered by Oral Health Teams in Primary Care	Estimate of the population covered by Oral Health Teams in Primary Care.
SB AB Coverage (%) – Percentage of population coverage estimated by Oral Health in Primary Care	Estimated population coverage by Oral Health in Primary Care, given by the percentage of the population covered by Oral Health Teams linked to Family Health Teams and by equivalent Oral Health Teams parameterized in traditional Primary Care in relation to the population estimate.

Source: Ministry of Health, 2016 (8).

The data made available by E-gestor provide oral health coverage values converted into a pre-existing formula originating from the Ministry of Health, which shows the final result<sup>(7)</sup>.

Calculation method:

(eSFSB no.\*3450) + (param. eABSB no.+ equivalent ESFSB no.)\*3000 X 100

## Population Estimate

All information acquired was compiled in a Microsoft Office Excel database and analyzed through the construction of the health indicator, rates, and coverage for each year of the historical series for Brazil, the North Region, and the State of Rondônia. The average annual coverage rates of population oral health coverage indicators were calculated.

For trend analysis, defined as stationary, decreasing, or increasing, linear regression was performed using the Prais-Winsten technique and after checking serial autocorrelation using the Durbin and Watson test. The annual trend was presented with a 95% confidence interval (95%CI). The analyses were carried out using the statistical package Stata®16. Under Resolution number 510/2016 of the National Health Council, this study dismissed the need to register in the CEP/CONEP system (Research Ethics Committee and National Research Ethics Commission), as it used database data whose information is aggregated without the possibility of individual identification.

#### RESULTS

The data collected demonstrate that the Brazilian population increased by approximately 18,640,396 people in the period studied, and the percentages of oral health coverage also increased, going from 35.61% coverage to the Oral Health Family Health Team (ESFSB) in 2010 to 43.80% in 2020, increasing the estimated coverage of more than 23 million people (Table 1).

Year	Population	ESFSB Cov. No.	Pop. Estim. Cov. ESFSB	ESFSB Cov. (%)	Pop. Estim. Cov. SB AB	SB AB Cov. (%)
2010	191,506,729	21,241	68,200,633	35.61%	96,344,198	50.30%
2011	190,755,799	22,575	71,633,869	37.55%	98,742,670	51.76%
2012	192,376,496	23,348	74,066,939	38.50%	101.329.020	52.67%
2013	193.979.108	23,930	75,869,988	39.11%	102,607,546	52.89%
2014	201,062,789	24,807	78,805,584	39.19%	104.630.222	52.03%
2015	202,799,518	25,614	80,976,392	39.93%	105,513,061	52.02%
2016	204,482,459	26,027	82,244,687	40.22%	106,298,790	51.98%
2017	206.114.067	26,380	83,094,932	40.31%	106,178,267	51.51%
2018	207.660.929	27.889	87.138.608	41,96%	109.049.471	52,51%
2019	208.494.900	28.344	88.061.278	42,23%	110.161.744	52,83%
2020	210.147.125	29.767	92.064.298	43,80%	116.348.983	55,36%

Table 1 – Percentage distribution of ESF/EAB oral health coverage, Brazil, 2010 to 2020

Source: Ministry of Health, Information and Primary Care Management. Available at: https://egestorab.saude.gov.br /. Legend: ESFSB (Oral Health Family Health Team); Cov. (coverage); Pop. Estim. (Estimate of the population); SB AB (Oral health in Primary Care).

Growth is observed in Primary Care oral health coverage (SB AB), which had coverage 50.30% of the population in 2010 and increased to 55.36% in 2020, reaching approximately 20 million more people. In both cases, coverage growth exceeded population growth in the same period.

Data from the study in Brazil showed a percentage increase in the coverage of family health teams (ESF) and oral health coverage in Primary Care (SB AB). However, SB AB proved to be superior to ESF SB, with a difference of 14.69% in 2010. In 2020, SB AB remained superior to ESF SB, with 11.56% more coverage. Coverage at Brazil level was the one with the biggest difference between the two coverages.

Table 2 presents data on oral health coverage in the North Region. It is noted that the estimated population covered by the Family Health Teams grew by 9.57% between 2010 and 2020, which means 2,766,357 more people. When it comes to Primary Care coverage, the increase in the covered population was 2,981,369 people, which means an increase of 9.07%. However, it is observed that the growth in ESF SB was lower than that of SB AB, with a difference in coverage of 10.07% between both in 2010 and a difference in coverage of 9.57% in 2020.

Year	Population	ESFSB Cov. No.	Pop. Estim. Cov. ESFSB	ESFSB Cov. (%)	Pop. Estim. Cov. SB AB	SB AB Cov. (%)
2010	15,385,707	1,553	5,065,706	32.92%	6,615,212	42.99%
2011	15,864,454	1,655	5,424,293	34.19%	6,910,375	43.55%
2012	16,094,959	1,730	5,674,926	35.25%	7,257,096	45.08%
2013	16,347,807	1,806	5,936,054	36.31%	7,550,877	46.18%
2014	17,013,559	1,888	6,183,788	36.34%	7,848,208	46.12%
2015	17,261,983	1,967	6,425,811	37.22%	7,985,726	46.26%
2016	17,504,446	2,008	6,579,335	37.58%	8,129,390	46.44%
2017	17,740,418	2,047	6,689,778	37.71%	8,194,081	46.18%
2018	17,936,201	2,234	7,236,004	40.34%	8,660,940	48.28%
2019	18,182,253	2,323	7,490,000	41.19%	9,002,608	49.51%
2020	18,430,980	2,442	7,832,063	42.49%	9,596,581	52.06%

Table 2 – Percentage distribution of ESF/EAB oral health coverage, Northern Region, 2010 to 2020.

Source: Ministry of Health, Information and Primary Care Management. Available at: https://egestorab.saude.gov.br /. Legend: ESFSB (Oral Health Family Health Team); Cov. (Coverage); Pop. Estim. (Estimate of the population); SB AB (Oral health in Primary Care).

The results of the study in Rondônia demonstrate that the State's population grew by around 273,297 people in the period, while the number of people covered by the ESF SB increased by 24,199 people, and in SB AB, there was an increase of 60,039 people covered (Table 3). In Rondônia, coverage rates have remained very close over the years; however, SB AB continues to have higher coverage than ESF SB. In 2010, the difference between the two was 6.42%; in 2020, the difference reached 7.45%. Although the number of people covered increased in 2020, this growth is lower than in 2010 due to population growth being higher than coverage growth.

Year	Population	ESFSB Cov. No.	Pop. Estim. Cov. ESFSB	ESFSB Cov. (%)	Pop. Estim. Cov. SB AB	SB AB Cov. (%)
2010	1,503,928	144	484,678	32.22%	581,203	38.64%
2011	1,562,409	158.5	534,398	34.20%	614,022	39.30%
2012	1,576,423	173	577,728	36.65%	681,841	43.25%
2013	1,590,011	179.67	600,252	37.75%	707,456	44.49%
2014	1,728,214	175	594,989	34.43%	731,432	42.32%
2015	1,748,531	169	577,102	33.00%	694,850	39.73%
2016	1,768,204	162.33	556,045	31.44%	672,661	38.04%
2017	1,787,279	151.33	518,026	28.98%	621,790	34.78%
2018	1,805,788	146.75	499,598	27.66%	590,216	32.68%
2019	1,757,589	148.17	500,592	28.48%	594,719	33.83%
2020	1,777,225	151.08	508,877	28.63%	641,242	36.08%

Table 3 – Percentage distribution of ESF/EAB oral health coverage, Rondônia, 2010 to 2020.

Source: Ministry of Health, Information and Primary Care Management. Available from: https://egestorab.saude.gov.br /. Legend: ESFSB (Oral Health Family Health Team); Cov. (coverage); Pop. Estim. (Estimate of the population); SB AB (Oral health in Primary Care).

In the 11-year time series, the annual trend in oral health coverage in ESF and AB was different between the variables. While in Brazil and the North Region, there was an increase in team coverage, the State of Rondônia remained with stationary rates (Table 4).

Types of Teams	Trend Annual (CI 95%)	Trend
Family Health Strategy – Brazil	1.72 (1.36; 2.08)	Growing
Basic care – Brazil	0.70 (0.05; 1.35)	Growing
Family Health Strategy – North	2.38 (1.93; 2.84)	Growing
Basic care – North	1.77 (0.93; 2.62)	Growing
Family Health Strategy – Rondônia	-2.17 (-4.78; 0.51)	Stationary
Basic care – Rondônia	-1.32 (-3.83; 1.25)	Stationary

Table 4 – Trends in oral health coverage in the Family Health Strategy and primary care, Brazil, North Region and Rondônia, 2010 to 2020.

Caption: 95%Cl – 95% Confidence Interval. Source: The authors.

#### DISCUSSION

The study demonstrates that the coverage rate found in Brazil and the North Region is above the rate recommended by the Ministry of Health, which is 46%. Rondônia, however, is below the coverage target proposed by the Ministry of Health<sup>(14)</sup>.

In Brazil, throughout the period studied, coverage remained above the recommended level and a higher coverage growth compared to population growth. In the North Region, this coverage was achieved in 2013. In the state of Rondônia during the period studied, the minimum coverage was not reached.

The provision of health services is related to geographic, organizational, sociocultural, and economic aspects, with the study of accessibility being essential to allow the identification of the aspects that can become obstacles, as well as those that facilitate the search for health care<sup>(15)</sup>. An integrative review of the literature found that the North and Northeast regions have the worst indicators of oral hygiene and the worst self-perception of oral health, more frequently among the elderly, black, mixed race, those with low education, and residents in rural areas. This review indicates that, despite the increase in the use of dental services, there are still relevant regional inequalities in addition to inequities, such as those related to skin color<sup>(16)</sup>.

Another study carried out in the state of Acre, comparing the evolution of oral health coverage and the Family Health Strategy from 2009 to 2018, demonstrated evolution during the study period, with coverage expanding in Acre and Brazil. But despite the growth over the years, oral health coverage was not enough to keep up with the growth in coverage of the Family Health Strategy, with a ratio below 1:1, that is, one oral health team for one family health<sup>(17)</sup>.

Regarding the equality of ESF and AB teams, in municipalities where there is a relationship between two ESF teams and one AB team, a lower rate of the tooth extraction indicator is observed, mainly due to greater access to the first dental appointment, supervised brushing and highest average number of individual dental procedures. In this way, the importance of oral health promotion actions is reinforced, considering that where these actions occur, there are better oral health indicators<sup>(18)</sup>. However, it is not enough to have the oral health team available to the user; their actions must be resolute.

A study conducted in Paraíba found that the performance of oral health teams was insufficient, as the services offered access to the first consultation but did not present conditions for continuity of care, which reinforces a reflection on the need to expand oral health indicators beyond the coverage number, but also the use of resolvability indicators <sup>(19)</sup>.

The lack of human resources, service capacity, financing, and material resources are factors that hinder the implementation and expansion of oral health teams. The purchase of materials, instruments, and equipment essential for dental care produces high costs, which are some of the obstacles to implementing new teams<sup>(20)</sup>. These financial resources require political and managerial administration, where federal, state, and municipal levels are committed. The reduction in investments due to reforms, fiscal adjustment, and progressive healthcare cuts demonstrates the vulnerability experienced in Brazil<sup>(3,20)</sup>.

A study on federal financing of oral health policy between 2003 and 2017 shows a reduction in federal transfers. The historical series showed increasing federal spending until 2012, with a drop in early 2013 and a further reduction in 2017. The tendency towards a fall and stabilization of transfers, according to the authors, may be related to the change in financing blocks, which makes it hard to prioritize and monitor resources for oral health, demonstrating a loss of space

compared to other government actions and programs federal government, as well as indicating a possibility of nonobligatory maintenance of financing, with a reduction in funding transfers, causing scrapping of the care networks<sup>(21)</sup>.

In management reports and municipal health plans in the state of Rondônia, no specific resources and budgets for oral health were found, with resources always linked to health in general, which reveals a lack of priority and commitment on the part of managers in reformulating actions in oral health<sup>(22)</sup>, a fact that does not entirely justify the scenario found in this research but validates the lack of commitment to strengthening oral health in the state of Rondônia.

It is relevant to highlight that the inclusion of oral health in the ESF provides a reorientation of attention and adds financial incentives to municipalities, besides improving the population's oral health and restructuring oral health actions based on health promotion, prevention, and recovery<sup>(23)</sup>.

Despite the increase in the number of implementations of oral health teams in Brazil and the North, it is highlighted that the oral team alone is not enough to improve access to health services. Although human resources are fundamental components of oral health services, it is necessary to understand that they are not the only or most important element to qualify access to the population. Health actions and Primary Health Care services must be guided by all essential attributes: access, longitudinality, integrality, and coordination of care and based on health promotion, in addition to involving the active participation of the population through social control (9,15). Despite progress in oral health promotion actions, the resoluteness and impact of these actions among SUS users must be evaluated.

The lack of studies on the oral health coverage indicator makes its discussion difficult, while this study also responds to the importance of looking at oral health and its indicators. Some limitations and questions can be raised regarding the quality of the database, such as updating the SUS information system and data reliability. It is relevant to highlight that the consistency and quality of data reported by municipalities in the national database are essential for good monitoring and follow-up of information. Limitations related to the systems' power flow quality and underreporting may present gaps in the analysis of indicators, obstructing the effectiveness of monitoring and evaluation of services<sup>(24)</sup>.

#### CONCLUSION

The oral health indicator at the national level and in the North Region showed growth in the period studied. However, in the state of Rondônia, the trend remained stationary, requiring strategic actions to contribute to the oral health coverage advancement in the state.

A higher commitment from decision-makers to the indicators collection, analysis, and evaluation is recommended, as they are fundamental in health actions and services planning. Furthermore, it is also relevant that the results of the indicators are presented to users so that they can participate in the entire process, from planning and evaluating public oral health policies as well as other policies.

The results of these indicators do not only depend on the performance of federal management but on the commitment between the three spheres, with efforts between management and SUS managers. The indicator usage should also be extended to professionals who are members of the team so that the actual quality of the service is known and contributes to achieving oral health coverage goals.

Therefore, more studies are needed to monitor and evaluate the conditions of services provided, assessing whether they comply with the SUS guidelines and principles and based on the National Oral Health Policy.

## ACKNOWLEDGEMENTS AND CONFLICTS OF INTERESTT

The authors declare that there were no conflicts of interest in carrying out this study.

### CONTRIBUTIONS

Priscila Oliveira Santos and Priscilla Perez da Silva Pereira contributed to the preparation and design of the study; acquisition, analysis, and interpretation of data, and writing of the manuscript. Daniela Oliveira Pontes contributed acquisition, analysis, and interpretation of data, writing, and review of the manuscript. Rosa Maria Ferreira de Almeida and Ana Giselle Aguiar Dias contributed to the acquisition, analysis, and interpretation of data drive to the acquisition. Analysis, and interpretation of data, writing, and review of the manuscript. Rosa Maria Ferreira de Almeida and Ana Giselle Aguiar Dias contributed to the acquisition, analysis, and interpretation of data. Andriely Alayne Carvalho Sabini contributed to writing and reviewing the manuscript.

#### **FINANCING SOURCE**

There is no financing.

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How to cite: Santos PO, Pereira PPS, Pontes DO, Almeida RMF, Sabini AAC, Dias AGA. Temporal evolution of oral health in Brazil, North region and Rondônia. Rev Bras Promoç Saúde. 2023;36:14007.