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REFACS

Evaluation of the accomplishment of goals of secondary care in oral health in the state of Sergipe

Avaliação do cumprimento de metas da atenção secundária em saúde bucal no estado de Sergipe

Evaluación del logro de las metas de atención secundaria de la salud bucal en el estado de Sergipe

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This study aims to evaluate the fulfillment of secondary care goals and the performance of Dental Specialty Centers in the state of Sergipe, Brazil. This is a quantitative and exploratory study, in which secondary data on the productivity of the year 2015 were collected from 11 CEOs, and compliance with secondary care was calculated and performance was obtained. The findings were associated with: type of dental specialty center, length of accreditation, population size, Municipal Human Development Index, population coverage of the Oral Health Team in the Family Health Strategy, type of management. Analysis was performed using the distribution of absolute and relative frequencies and Fisher's exact test. It was observed that the goals of primary care were observed in 81.9%, and the subgroup of specialty in 54.5% in Periodontics and 45.5% in Surgery. No municipality has met the goal in Endodontics. The results suggest the need to reorganize practices and qualify monitoring actions of oral health services, with a view to expanding specialized service offer.
Descriptors: Secondary care; Oral health; Health services.

O objetivo do estudo foi avaliar o cumprimento das metas de atenção secundária e o desempenho dos Centros de Especialidades Odontológicas do estado de Sergipe. Este é um estudo quantitativo e exploratório, em que foram coletados dados secundários da produtividade do ano 2015 dos 11 CEO e, calculou-se o cumprimento da atenção secundária e obteve-se o desempenho. Os achados foram associados com: tipo do Centro de especialidade odontológica, tempo de credenciamento, porte populacional, Índice de Desenvolvimento Humano Municipal, cobertura populacional de Equipe Saúde bucal na Estratégia de Saúde da Família, tipo de gestão. Foi realizada análise por meio de distribuição de frequências absolutas e relativas e do teste Exato de Fisher. Observou-se o cumprimento das metas da atenção básica em 81,9% e do subgrupo de especialidade em 54,5% na Periodontia e 45,5% na Cirurgia. Nenhum município cumpriu a meta na Endodontia. Os resultados sugerem a necessidade de reorganizar as práticas e qualificar as ações de monitoramento dos serviços em saúde bucal, com vistas à ampliação da oferta de serviço especializado.
Descritores: Atenção secundária á saúde; Saúde bucal; Serviços de saúde.

El objetivo del estudio fue evaluar el logro de las metas de atención secundaria y el desempeño de los Centros de Especialidades Odontológicas del Estado de Sergipe, Brasil. Este es un estudio cuantitativo y exploratorio, en el que se recogieron los datos secundarios de productividad del año 2015 de los 11 CEO's, y se calculó el logro de la atención secundaria y se obtuvo el desempeño. Los hallazgos se asociaron con: tipo de Centro de especialidad odontológica, tiempo de acreditación, tamaño de la población, Índice de Desarrollo Humano Municipal, cobertura de la población del Equipo de Salud Bucal en la Estrategia de Salud de la Familia, tipo de Gestión. El análisis se realizó por medio de la distribución de frecuencias absolutas y relativas y la prueba Exacta de Fisher. Se observó el logro de los objetivos de atención básica en el 81,9% y el subgrupo de especialidad en el 54,5% en Periodoncia y el 45,5% en Cirugía. Ningún municipio logró la meta en Endodoncia. Los resultados sugieren la necesidad de reorganizar las prácticas y calificar las acciones de seguimiento de los servicios de salud bucal, con miras a ampliar la oferta de servicios especializados.
Descriptores: Atención secundaria de salud; Salud bucal; Servicios de salud.

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INTRODUCTION

The *Política Nacional de Saúde Bucal (PNSB) – Brasil Sorridente* (National Oral Health Policy) is characterized as a set of actions that seek to ensure integrality in dental care[1]. Its guidelines have the purpose of offering advances in oral health, guaranteeing the effectiveness of the integrality between primary and specialized care with the implantation of *Centros de Especialidades Odontológicas – CEOs* (Dental Specialization Centers) and *Laboratórios Regionais de Próteses Dentárias – LRPD* (Regional Dental Prostheses Laboratories)[1].

The oral health actions must be inserted in the strategy planned by the health team in a permanent interrelation with the other actions of the health unit, as well as the promotion of oral health is inserted in a broad concept that transcends the merely technical dimension of the sector dentistry, integrating with other collective health practices[2].

Redes de Atenção à Saúde – RAS (Health Care Networks) are health service actions, composed of different technological densities and integrated through technical and management support systems that seek to guarantee integral care of the citizens[3]. Offering continuous and comprehensive care to the targeted population, coordinated by primary care, provided at the right time, in the right place, at no cost, with the right quality and in a humane and welcoming way[4].

The CEOs are examples of services that integrate the *Rede de Atenção à Saúde Bucal – RASB* (Oral Health Care Network) and promote secondary and tertiary prevention of health care, through actions of early diagnosis and immediate treatment, in addition to limitation damage and rehabilitation of cases, generating better health conditions for the population[5].

The implementation of the PNSB is considered one of the greatest advances in the country in terms of expanding and improving the population's access to dental care in the public service and which underlies actions for oral health in the health care network[6].

CEOs are classified according to their physical structure: Type I CEO (with 3 dental engines), Type II CEO (with 4 to 6 dental engines) and Type III CEO (above 7 dental engines) and according to compliance of minimum monthly productivity goals according to the area of operation: primary care (80, 110 and 190), periodontics (60, 90 and 150), endodontics (35, 60 and 95) and surgery (80, 90 and 170) for CEO type I, II, and III[1] , respectively.

Dental care offered by the CEO to the population must include the following minimum mandatory specialties: oral diagnosis, with an emphasis on diagnosis and prevention of mouth cancer, specialized periodontics, minor soft and hard oral surgery, endodontics and care for patients with special needs[7].

Primary oral health care demonstrates the importance of structuring the secondary and tertiary care network to consolidate a comprehensive oral health care model. The use of dental services is related to factors such as their offer associated with the needs of the population, geographic and organizational accessibility. In addition, the presence of a health professional who directs the case, primarily in specialized services. Thus, the attribution of the patient's responsibility to a PHC professional enhances the patient's access to secondary health care, becoming a reference in the path through the flow of care[8].

The evaluation and monitoring of health actions are the main pillars to ensure the integrality and quality of health care to SUS users. Ensuring comprehensiveness requires that the care provided to the population at different levels has the capacity to adequately recognize the variety of needs and demands related to the health of communities and to offer adequate resources to undertake them[9]. The Ministry of Health has prioritized the execution of public management, making efforts to implement initiatives that recognize the quality of health services offered to Brazilian society, encouraging the expansion of access in various contexts in the country[10].

For the oral health area, in addition to health assessment for decision making and reorganization of health policies, programs and services, another challenge is the constant

monitoring of dental services to ensure quality improvement, through the Programa de Melhoria do Acesso e da Qualidade dos Centros de Especialidades Odontológicas - PMAQ- CEO (*Program to Improve Access and Quality of Dental Specialization Centers*), as well as oral health surveillance[1].

The assessment of how secondary care actions are being offered in oral health is essential to provide an overview of the possible advances and difficulties that arise from dental practices[11]. Thus, this study aims to assess the achievement of secondary care goals and performance in the CEOs of the state of Sergipe.

METHOD

This is a cross-sectional, quantitative, analytical study of an exploratory nature, developed in the state of Sergipe and submitted to the Research Ethics Committee of Faculdade São Leopoldo Mandic, through Protocol: 2016/0667.

The population and sample of the study was composed of all municipalities in the state of Sergipe. CEOs were considered deployed and enabled until December 31, 2015.

Secondary data were collected in the year 2016, referring to the outpatient productivity of the year 2015 by the DATASUS/TABWIN Program, considering the indicator of Global Compliance with the Primary Care Goals (which includes individual preventive procedures, dentistry and basic surgical dentistry) and from each subgroup of dental specialties (periodontics, surgery and endodontics), as proposed by Figueiredo[12]. For a goal to be considered "achieved", the service must comply with a percentage equal to or greater than 100% of the standardized goal for each subgroup and type of CEO, according to Ministerial Ordinance No. 1464 of June 24, 2011[13], as shown in Table 1.

Table 1. Minimum monthly targets required for the types of Dental Specialty Centers (CEO). Ministry of Health, 2011.

Type of CEO	Procedure/Month			
	Primary Care	Peridonthics	Endodontics	Surgery
CEO I	80	60	35	80
CEO II	110	90	60	90
CEO III	190	150	95	170

Source: Brasil, 2011[13].

Based on the Global Compliance indicator of primary care goals and each subgroup of dental specialties, the CEOs were classified according to the performance of the services[12]: poor performance (CEO who met only 1 goal); average performance (CEO who met 2 goals); good performance (CEO who met 3 goals); and great performance (CEO who met all goals).

Next, the Compliance with Secondary Care - CSC was evaluated, operationalized by the indicator of Compliance with Secondary Care - CSC, which is the transformation of the indicator from the previous step (Global Compliance with Goals) into a binary variable. The services that fulfilled it were those that reached at least one goal of the Specialties Subgroup (Periodontics, Endodontics or Minor Oral Surgery); the services that did not comply were those that achieved no goal or only the Goal of the Primary Care Subgroup, according to Figueiredo and Goes[12]. The association between the performance of CEOs and compliance with Secondary Care - CSC with the evaluative characteristics was analyzed: type of CEO, length of accreditation, type of management, municipal HDI (MHDI), population size of the municipalities, population coverage of the Oral Health Teams (OHT) in the Family Health Strategy (FHS).

The data were analyzed through the distribution of absolute and relative frequencies. The associations between the fulfillment of primary care goals and the specialty subgroup and the performance according to the evaluative characteristics were analyzed by Fisher's exact test, considering the significance level of 5%. All analyzes were performed using the SAS* program (*SAS Institute Inc., Cary, NC, USA, Release 9.2, 2010).

RESULTS

The state of Sergipe has 75 cities, which have 11 CEOs considered here. Of these, nine (81.8%) were type II and two (18.2%) were type III. As for the type of management, five (45.5%) CEOs have municipal management, and six (54.5%) have state management. Of the total of the CEOs studied, nine (81.8%) have more than 50% coverage of OHT in FHS. As for the MHDI, five CEOs (45.5%) have an index lower than 0.63; five (45.5%) have it between 0.63 and 0.70 and one CEO (9.1%) has an index greater than 0.70. Of the total, four (36.4%) CEO have less than 30,000 inhabitants, two (18.2%) have between 30,000 and 50,000, three CEOs (27.3%) have between 50,000 and 100,000 and two CEOs (18.2%) have more than 100,000 inhabitants. Of the 11 CEO surveyed, one (9.1%) has been accredited for less than six months, five (45.5%) for between six and 11 months and five (45.5%) for more than 12 months.

Table 1 presents data regarding the global fulfillment of primary care goals and of each subgroup of dental specialties. It can be seen that the percentage of goals met for primary care and specialties (Periodontics, Endodontics and Surgery) in the municipalities ranged from 25% to 75%.

Most CEOs met the primary care goal (81.8%), with the exception of the municipalities of Propriá and São Cristovão. Regarding the specialties group, it was found that 54.5% (6) of municipalities met the goals of periodontics and 45.5% (5) met the goals of surgery, but none of the CEOs met the goal of the specialty of endodontics. It was observed that the capital of Sergipe, the municipality of Aracaju, did not reach any of the goals of the group of specialties; the city only fulfilled the goal of Primary Care (Table 1).

Table 1. Global compliance with the goals of primary care and each subgroup of dental specialties depending on the municipality and state, Sergipe, Brazil, 2015.

City	Primary Care and subgroups of dental specialties				Global compliance with Goals N (%)
	Primary Care	Periodonthics	Endodontics	Surgery	
Aracaju	Yes	No	No	No	1 (25)
Boquim	Yes	Yes	No	No	2 (50)
Canindé de São Francisco	Yes	No	No	No	1 (25)
Estância	Yes	Yes	No	Yes	3 (75)
Lagarto	Yes	Yes	No	No	2 (50)
Laranjeiras	Yes	No	No	Yes	2 (50)
Nossa Senhora da Glória	Yes	Yes	No	Yes	3 (75)
Nossa Senhora do Socorro	Yes	No	No	No	1 (25)
Propriá	No	Yes	No	Yes	2 (50)
São Cristovão	No	No	No	Yes	1 (25)
Tobias Barreto	Yes	Yes	No	No	2 (50)
Cumprimento Global das Metas por especialidades	9 (81,8%)	6 (54,5%)	0 (0%)	5 (45,5%)	

Table 2 shows the assessment of the distribution of CEOs in relation to the service performance indicator with its evaluation characteristics according to municipality and state. At the state level, the results presented ranged from good to poor performance, noting that the majority of CEOs achieved an average performance of 45.5% (5), that is, they met two of the four established goals. And 36.4% (4) of Sergipe's CEOs performed poorly, fulfilling only one goal. There was no CEO with an excellent and terrible performance. The evaluation of the performance of the services according to municipalities, it is observed that three of the four CEOs that presented poor performance have municipal management. And that the only two municipalities that obtained a good performance, Estância and Nossa Senhora da Glória, have type II CEOs.

Table 2. CEO performance with their respective evaluation characteristics by municipality and frequency distribution according to the state, Sergipe, Brazil, 2015.

City	Type of CEO	Type of Management*	OHT/FHS Coverage	MHDI	Population (thousand inhab.)	Accreditation Time (months)	Performance
Aracaju	III	M	> 50%	> 0,70	> 100	> 12	Poor
Boquim	II	E	> 50%	< 0,63	< 30	6 a 11	Average
Canindé de São Francisco	II	M	> 50%	< 0,63	< 30	> 12	Poor
Estância	II	M	> 50%	0,63 – 0,70	50 – 100	> 12	Good
Lagarto	II	M	< 50%	< 0,63	50 – 100	> 12	Average
Laranjeiras	II	E	> 50%	0,63 – 0,70	< 30	6 a 11	Average
Nossa Senhora da Glória	II	E	> 50%	< 0,63	30 – 50	< 6	Good
Nossa Senhora do Socorro	II	M	> 50%	0,63 – 0,70	> 100	> 12	Poor
Propriá	II	E	> 50%	0,63 – 0,70	< 30	6 a 11	Average
São Cristóvão	III	E	> 50%	0,63 – 0,70	50 – 100	6 a 11	Poor
Tobias Barreto	II	E	< 50%	< 0,63	30 – 50	6 a 11	Average

Performance in Sergipe	**Frequency N (%)**
Good	2 (18,2%)
Average	5 (45,5%)
Poor	4 (36,4%)

Note: *M: Municipal;*S: State.

Tables 3 and 4 show the results of the association of performance and Compliance with Secondary Care, respectively, according to the evaluative characteristics and it is observed that there was no significance in the tested associations (p> 0.05), with a tendency being noted that type II CEO, with state management, with ESB coverage in ESF <50%, with smaller population size, with less MHDI and with shorter accreditation time, have fulfilled more secondary care goals. It is noted that there is a tendency for municipalities with type II CEO and state management to perform regularly and for municipalities with higher MHDI (> 0.70), larger population size (> 100 thousand inhabitants), longer accreditation time (> 12 months), with ESB coverage in the FHS <50.0% have performed poorly.

Table 3. Relationship between the evaluative characteristics of the services according to the Performance of the Dental Specialties Centers, Sergipe, Brazil, 2015.

Evaluated characteristics	Category	Performance		
		Good	Average	Poor
Type of CEO	II	2 (22,2%)	5 (55,6%)	2 (22,2%)
	III	0 (0%)	0 (0%)	2 (100%)
	p-value		0,1273	
Type of management	Municipal	1 (20%)	1 (20%)	3 (60%)
	State	1 (16,7%)	4 (66,7%)	1 (16,7%)
	p-value		0,4372	
OHT Coverage in FHS	< 50%	0 (0%)	2 (100%)	0 (0%)
	> 50%	2 (22,2%)	3 (33,3%)	4 (44,4%)
	p-value		0,6364	
MHDI	< 0,63	1 (20%)	3 (60%)	1 (20%)
	0,63 – 0,70	1 (20%)	2 (40%)	2 (40%)
	> 0,70	0 (0%)	0 (0%)	1 (100%)
	p-value		0,8701	
Population (by thousand inhabitants	< 30	0 (0%)	3 (75%)	1 (25%)
	30 – 50	1 (50%)	1 (50%)	0 (0%)
	50 – 100	1 (33,3%)	1 (33,3%)	1 (33,3%)
	> 100	0 (0%)	0 (0%)	1 (100%)
	p-value		0,4216	
Accreditation time (months)	< 6	1 (100%)	0 (0%)	0 (0%)
	6 a 11	0 (0%)	4 (80%)	1 (20%)
	> 12	1 (20%)	1 (20%)	3 (60%)
	p-value		0,1342	

Table 4. Relationship between the evaluative characteristics of the services according to Compliance with Secondary Care of the Dental Specialties Centers, Sergipe, Brazil, 2015.

Evaluated characteristics	Category	Total of CEOs (%)	Compliance with Secondary Care (%)	
			Yes	No
Type CEO	II	9 (81,8%)	7 (77,7%)	2 (22,3%)
	III	2 (18,2%)	1 (50%)	1 (50%)
p-valoue			0,4909	
Type of management	Municipal	5 (45,5%)	2 (40,0%)	3 (60,0%)
	State	6 (54,5%)	6 (100%)	0 (0,0%)
p-value			0,2424	
OHT Coverage in FHS	< 50%	2 (18,2%)	2 (100%)	0 (0%)
	> 50%	9 (81,8%)	6 (66,6%)	3 (33,4%)
p-value			1,000	
MHDI	< 0,63	5 (45,5%)	4 (80%)	1 (20%)
	0,63 – 0,70	5 (45,5%)	4 (80%)	1 (20%)
	> 0,70	1 (9,1%)	0 (0%)	1 (100%)
p-value			0,3939	
Population (by thousand inhabitants)	< 30	4 (36,4%)	3 (75,0%)	1 (25,0%)
	30 – 50	2 (18,2%)	2 (100%)	0 (0%)
	50 – 100	3 (27,3%)	3 (100,0%)	0 (0%)
	> 100	2 (18,2%)	0 (0%)	2 (100%)
p-value			0,1394	
Accreditation time (months)	< 6	1 (9,1%)	1 (100%)	0 (0%)
	6 a 11	5 (45,5%)	5 (100%)	0 (0%)
	> 12	5 (45,5%)	2 (40%)	3 (60%)
p-valor			0,2424	

DISCUSSION

The Sergipe state, one of the 27 Federative Units in Brazil, located in the Northeastern region, is one of the smallest states in territorial extension. No previous study aimed at evaluating secondary care services has been conducted in the state. In view of the results collected, an initial process of evaluation and monitoring of the referred centers is possible, suggesting the tendency for evaluative characteristics to influence performance and compliance with secondary oral health care[12,14].

There is a gradual growth in the number of CEOs deployed in the country, from 890 in 2013, 352 in the Northeasterns region and 5 in Sergipe, to 1034 in 2015, 11 in Sergipe. The Northeastern region concentrates great deficiencies in oral health and unfavorable social indicators, thus, the highest concentration of CEOs in this region contemplates the principle of equity[14].

The increase in the number of establishments is considered a positive advance in the National Oral Health Policy, however, it is necessary to know if the services offered to the population are resolvable and if this offer represents an improvement in the assistance and in the integrality of oral health actions, and a greater organization of the RAS, and should therefore be monitored and evaluated frequently[15].

In 2015, the enabling ordinance was published, which implemented the last CEO in Sergipe, and it was the first year with complete production of the 11 qualified CEOs. Data collection started in August 2016, considering characteristics of the SIA/SUS, which complete data on the production of a service is up to five months after it has been informed.

According to the 11 evaluated CEOs, there was a higher frequency of Type II CEOs (81.8%), a similar case can be seen in studies carried out in the state of Pernambuco[12], in the state of Amazonas[16] and throughout Brazil[17]. The higher frequency of Type II CEOs may be related to the choice of management, based on the structural physical characteristics of the service, as recommended by ordinance No. 1464 of 2011[13], considering that the addition of just one more dental team and one dentist in relation to the Type I CEO increases the monthly financial incentive for funding in the same proportion and the possibility of greater population coverage of the specialized service. It is worth mentioning that the achievement of goals for the procedure subgroups also increases proportionally, especially for the endodontics subgroup.

The assessment of the global fulfillment of primary care goals and the specialty subgroup (endodontics, periodontics and surgery) found that most CEOs met the goal of primary care (81.9%), the subgroups of Periodontics and Surgery achieved the percentage of compliance of 54.5% and 45.5%, respectively. It is noteworthy that, for the Endodontics subgroup, none of the surveyed CEOs met the goal, a result that differs from the study carried out in the other CEOs in the country, in which endodontics achieved a compliance rate of 50.9% [5].

Once the global fulfillment of primary care goals and the specialty subgroup goals were measured, the CEOs were classified according to the performance of services, and it was verified at the state level that, of the 11 CEOs surveyed in Sergipe, 18.2% of the CEOs achieved a good performance, 45.5% had an average performance, while 36.4% had poor performance.

Regarding the results of the evaluation of the performance of services in relation to municipalities, it was observed that the municipalities of Aracaju, Nossa Senhora do Socorro and Canindé de São Francisco performed poorly and have in common the type of municipal management and the OHT/FHS coverage> 50%.

The CEOs of the municipalities of Estância and Nossa Senhora da Glória were the only ones in the state of Sergipe that obtained good performance and have type II CEOs, although one is managed by the city and the other by the state, respectively. And the municipalities Boquim, Lagarto, Laranjeiras, Propriá, Tobias Barreto obtained average performance and have in common the type of CEO, both being type II.

In the analysis of the association of the performance of the 11 CEOs in Sergipe due to the evaluation characteristics, there was no significant association. However, it can be said that there is a trend that municipalities with type III CEOs have poor performance, and among types II, the majority (55.6%) have an average performance. Regarding type of management, there is a tendency for CEOs with state management to have am average performance (66.7%), and those for municipal management to have poor performance (60.0%). There was a tendency that CEOs with OHT coverage in the FHS<50.0% to achieve an average performance (100.0%), in contrast, most CEOs with OHT coverage in the FHS> 50% have performed poorly (44.4%)

In an assessment of accessibility to the CEO of macro-regional scope, it was found that the service is adequately prepared to meet the demand, however there are geographical, financial and organizational barriers that hinder accessibility and better use of the specialized care services offered[18].

In the analysis of outpatient production in municipalities with and without dental specialty centers in Brazil, it was suggested that CEOs appear to have a positive effect on municipal production of specialized procedures[19].

In view of the CEOs' proposals to reduce inequities in access to specialized dental services and, thus, provide reductions in oral health-related morbidity, these services must be evaluated in order to continuously improve their performance. Due to the need for a CEO assessment policy, the Federal Government, through a policy of assessment of secondary care for oral health, implemented the *Programa de Melhoria do Acesso e Qualidade - PMAQ* (Access and Quality Improvement Program) to the CEOs (PMAQ-CEO), as a policy of qualification strategy for specialized services in oral health, initially, with an assessment focused on the productivity of these Centers[10].

In relation to the coverage of the OHT in the FHS, the implementation of Primary Care in a structured way, access to secondary health care, the counter reference to Primary Care, the HDI of the municipalities and the inequalities in the distribution of the CEOs by the regions of the country are factors that influence the integrality of oral health care within the scope of SUS[20].

Research shows the importance of establishing evaluative characteristics for the management of health services so that one can conduct decision-making that guarantees efficiency, effectiveness and implementation, as a permanent action in the practice of services[21].

In view of the results of meeting the goals presented in specialty groups, the difference found in endodontics and periodontics stands out, with a view to the failure of none of the studied CEOs to meet the endodontics goals, in contrast, the monthly goal of the specialty periodontics was the most accomplished.

Differently from endodontics, the specialty of periodontics has a greater scope of quantitative procedures that are counted towards the fulfillment of the mentioned goal, thus, covering a much larger universe, such as, for example, subgingival scraping, supragingival scraping, prophylaxis/ulotomy, frenectomy and in addition, the possibility of performing more than one procedure in the same clinical session, are factors that suggest the ease in meeting the goals established for periodontics.

Although some CEOs did not comply with the minimum production in any of the specialties, in particular, the non-compliance with the endodontics specialty, there was no suspension of the transfer of resources referring to the monthly incentives of the respective CEOs that did not meet the targets, the suspension of which should be maintained until the referred production is regularized, as recommended by Ordinance No. 1,464, of June 24, 2011[13].

CONCLUSION

The results suggest that there is a need to reorganize practices and qualify the monitoring actions of the services, with a view to expanding the specialized oral health offer in Sergipe and resolving the implanted services, since none of the CEOs met the endodontic goal. and most of them performed poorly or averagely. There was no significant association between performance and achievement of goals with evaluative characteristics.

The outcome of this study should be analyzed for its limitations, considering the use of secondary data, from SUS information systems, capable of resulting in skewed estimates, resulting from notification and registration errors. Still, the information available on TABWIN/DATASUS is important for planning and decision making, especially when associated with other documentary sources.

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CONTRIBUTIONS
Leônidas Marinho dos Santos Júnior contributed to conception, collection and analysis of data, writing and revision. **Flávia Martão Flório** and **Luciane Zanin** participated in the design, writing and revision.

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