

Dental procedure evaluation in the municipality of Florianópolis, State of Santa Catarina, Brazil

Avaliação da produção de procedimentos odontológicos no município de Florianópolis/SC

Madson Hermenegildo **RODRIGUES**¹  0000-0002-5827-4421

Sylvio da **COSTA JUNIOR**¹  0000-0003-0218-5515

Mateus Cardoso **PEREIRA**²  0000-0002-9877-9408

Caren Serra **BAVARESCO**³  0000-0002-0730-3632

ABSTRACT

Objective: The aim of the present study is to evaluate oral health procedures carried out by primary care in the municipality of Florianópolis as well as its impairments and potentialities during 2014 and 2015. **Methods:** An observational epidemiological study was carried out based on secondary data obtained from the patient standardized and digital information - Electronic Patient Record- in a health care network of the municipality. The data was obtained through the average of the ratio: each dental procedure performed to the number of patients who had accessed the oral health service in the period studied. The results were presented in their absolute and percentage forms. **Results:** it was shown that Florianópolis followed the national trend of dental procedure diversification and a decrease in the amount of tooth extractions performed in the municipality was observed. **Conclusion:** The findings of this study may impact the implementation of Oral Health Teams in the Family Health Program. Nonetheless studies on the functioning and activities of Oral Health Teams are necessary in order to qualify the dental care provided in the municipality.

Indexing terms: Community dentistry. Family health. Public health.

RESUMO

Objetivo: Neste contexto, o objetivo do presente estudo é avaliar os procedimentos de saúde bucal realizados pela atenção básica no município de Florianópolis nos anos de 2014 e 2015 a fim de avaliar entraves e potencialidades do processo de atenção à saúde bucal no município. **Métodos:** Foi realizado um estudo epidemiológico observacional do tipo ecológico a partir de dados secundários obtidos do Prontuário Eletrônico de Paciente que integra todas as informações do paciente de forma padronizada e digital em toda rede de atenção à saúde do município. Os dados relativos à produção serão obtidos através da média da razão de cada procedimento odontológico realizado pelo número de pacientes que acessaram o serviço de saúde bucal no período estudado e expressos em suas formas absolutas e percentuais. **Resultado:** Florianópolis acompanhou a tendência nacional de diversificação dos procedimentos odontológicos ao longo do tempo, observando-se queda na quantidade de exodontias realizadas no município. **Conclusão:** É possível

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¹ Universidade Federal Rio Grande do Sul, Faculdade de Odontologia. Rua Ramiro Barcelos, 2492, Santa Cecília, 90035-004, Porto Alegre, RS, Brasil. Correspondência para / Correspondence to: S COSTA JUNIOR. E-mail: <HYPERLINK <sylviocosta13@gmail.com>.

² Prefeitura Municipal de Florianópolis, Secretaria Municipal de Saúde. Florianópolis, SC, Brasil.

³ Universidade Luterana do Brasil, Programa de Pós-Graduação em Odontologia. Canoas, RS, Brasil.

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que os achados no presente estudo sejam impacto da implantação das Equipes de Saúde Bucal no Programa Saúde da Família. Entretanto, mais estudos sobre o funcionamento e atividades das Equipes de Saúde Bucal implantadas são necessários para qualificar a atenção odontológica prestada no município.

Termos de indexação: Odontologia comunitária; Saúde da família; Saúde pública.

INTRODUCTION

The Brazilian health system, instituted since 1988 with the promulgation of the Federal Constitution, is guided by leading principles such as the decentralization of care and the organization of health services, integral care to the patient and community participation [1].

The decentralization of health services has led each municipality to organize health care networks which have been offering users with comprehensive care to patients. Thus, the provision of health care went from the federal level to the municipal level, reaching the health system in 5,570 municipalities of the country [2,3].

The large legal framework which orients the formation of the Brazilian health system is clear as to the duties and responsibilities of the federated entities in the organization of the system, at the same time it is obscure as to the costing operations of an integral health care model [3]. Such complex features triggers each municipality in the direction of developing actions according to their local realities and organizational contradictions [4,5].

The Family Health Strategy (FHS), instituted by the Ministry of Health in 1994, included Dentistry - in the year 2000, under protocol 1. 444, in the scope of its actions, providing resource fundings for the dentist and auxiliary staff within the family health teams [6]. However, it was the implementation of the National Oral Health Policy in 2003, under the name of Brazil Smiling Program which has provided greater insertion of dentistry in the SUS (UHS - Universal Health System). with increased contribution to the cost of oral health teams, Center of Dental Specialties (CDS), Regional Dental Prosthesis Laboratories (RDPL), among others [6].

Oral health within the SUS/UHS presents similar challenges to other public health policies and programs, such as the fragile mechanisms for evaluating the quality of services offered, despite the recent implementation of the Basic Care Quality Improvement Program (BCQIP) [7]. The main objectives of the program are to increase access as well as improve the national, regional and local primary care quality in order to to allow greater transparency and effectiveness of government Primary Care (PC) actions [7].

Regarding PC, the municipality of Florianópolis has coverage of 100.00%, and Family Health Strategy (FHS) is considered as a model for access to health services. In January 2014, the Health Care Network (HCN) in Florianópolis had 116 Oral Health Teams and, in December 2015, 133- an increase of only 12.7%. Concerning the implementation of OHT in the Family Health Strategy, the variation of teams in the same period studied were 62 Oral Health teams (OHT) modality I for 64 and 3 OHT modality - II for only 1 OHT, which showed little variation in the period under study.

The municipality of Florianópolis in the second phase of the program (2013) obtained the following classification, according to the Ministry of Health: Performance well above average, 2 FHT (Family Health team) / OHT / FH / OH (2.2%); Performance above average, 56 FHT / OHT (61.5%); Slightly below average performance, 32 FHT / OHT (35.2%); Unsatisfactory 0 FHT / OHT (0%); and Excluding 1 FHT / OHT (1.1%)

The objective of the present study is to evaluate the oral health procedures performed by primary care in the municipality of Florianópolis in the years 2014 and 2015 in order to assess the barriers and potentialities of the oral health care process in the municipality.

METHODS

Study design: observational epidemiological study from secondary data

Study site

The municipality of Florianópolis is the capital of the state of Santa Catarina. According to the 2010 census of the Brazilian Institute of Geography and Statistics (IBGE) Florianópolis has 342,315 inhabitants, with 0.85% of the population living in great poverty and 40.08% have private health plans. According to data from the Department of Primary Care of the Ministry of Health Florianópolis has 137 Family Health Teams, 60 -Oral Health Teams, 420

Community Health Agents (CHC), 11 Family Health Support Centers (FHSC) and 1 itinerant dental office. Coverage by family health teams is 100% and by oral health teams 43.32%. The municipality offers two medium-complexity dental speciality services (DSC) to the primary health care teams. The Basic Health Care Network was divided into 5 Health Districts by Health Centers: North, South, Central, Eastern and South. The distribution followed geographic and population criteria. All the basic care teams present electronic medical records and made available in the municipal information system.

Data collection

The data was taken from the Electronic Patient Record (INFOSAÚDE - Electronic Health Record System of the Florianópolis Health Department), which integrates all patient standardized and digital information in a health care network of the municipal), with the prior authorization of the local authority of the Municipal Health Department of Florianópolis, as well as the data of the Family Registry in primary care (CADFam Online System/FRPC).

Data analysis

Production data was obtained through the average ratio of each dental procedure performed by the number of patients who accessed the oral health service in the period studied. The variables related to the procedures performed were as follows: Access to dental pulp and medication; topical application of fluoride; tooth extraction; permanent tooth extraction; scraping, smoothing and supragingival polishing (by sextant); subgingival scaling, smoothing and polishing (by sextant); tooth restoration; restoration of anterior permanent tooth; total of procedures. The data were tabulated in spreadsheet of the Statistical Package for the Social Sciences (SPSS) version 20.0 and presented in their absolute and relative frequencies.

Ethical aspects

Since only secondary data were used, this study has not required the approval of the Research Ethics Committee (REC).

RESULTS

The data was presented according to the health areas / regions of the city of Florianópolis in relation to their absolute and relative frequency by dental procedure performed.

South district

According to table 1 the Southern District, the "pulp access" procedure shows the highest percentage of achievements in the South ECU (Emergency Care Unit) corresponding to 66.7% (3,462) of total pulp accesses in the district, followed by the Health Centers (HC) of Tapera, with 10.2% of the total (532), and Coast of Piranjubaé (390), with 7.52%. It is noteworthy that in the period evaluated, in the years 2014 and 2015, this procedure was not registered in the HC of Carios. On the other hand, the procedure 'topical application of fluoride' showed a higher prevalence in the Southern District in Pântano do Sul Health Center.

The highest prevalence in deciduous teeth procedure is the Coast of Piranjubaé Health Center corresponding to 25.66% (173) of the total performed in the District in the years 2014 and 2015, followed by the Health Center of Armação with 94 tooth extractions (13.94%) and Tapera (93.7%). The low record of this procedure was observed in the HC of Barra do Sul, with only 1.79% of the total 'primary tooth exodonts' when compared to the other Health Centers of the Southern District in the years of 2014 and 2015. The highest prevalence in the Southern District is found in the HC of the Piranjubaé Coast with 32.08% (625) of the total, followed by HC Fazenda do Rio Tavares and HC Tapera with 10.18% (194) and 9.97% (190) respectively. On the other hand, the HC of Caieira da Barra do Sul recorded only 16 permanent tooth extractions in the period of data collection, corresponding to 0.83% of the total number of permanent tooth extractions performed in the Southern District.

Regarding the supra-gingival scraping procedure, the highest prevalence was found in the Piranjubaé Coast Health Center, followed by the Health Center of Pântano do Sul, Rio Tavares, Tapera, Campeche and Carios Health Centers with absolute and proportional numbers respectively, thus distributed: 2839 (20.08%), 2232 (15.78%), 2163 (15.3%), 1676 (10.97%) and 1551

(10.9%). It is noted that the South Health Center, characterized as a care unit for clinical urgency patients, was also included in the supra-gingival scraping procedure.

As to the subgingival scaling procedure, the prevalence in descending order was observed, distributed as follows: HC of Costeira Pirajubaé (57.95%), Tapera HC (22.23%), Caieira da Barra do Sul HC (14.54%), Ribeirão da Ilha HC (1.8%) and finally Campeche HC (1.5%). No record for this procedure was found in the Pântano do Sul C during the period studied.

With reference to restorative procedures in deciduous teeth and permanent and anterior teeth, the Pirajubaé Coastal HC was the one to perform the most of these procedures representing, respectively, 30.7%, 20.93% and 21.83% of the total, followed by the HC of Tapera as the second Health Center, with proportional numbers presented, respectively: 18.8%, 13.18% and 14.17%.

North district

The 'access to pulp' procedure carried out in the North District in the years 2014 and 2015 showed that North Health Center recorded 84.55% (5961) of all accesses performed in the Sanitary District. At the same time, the HC of Vargem Grande recorded only 2 (0.02%) accesses of dental pulp in the period. The 'topical application of fluoride' was reported more frequently in the HC of Rio Vermelho, 1092 (33.44%), HC of Ingleses, 1027 (31,45%) and Santo Antonio Lisboa and CS Health Centers 365 (11,17 %). There is no record of this procedure in the HC of Vargem Grande.

The deciduous exodontics was more frequently registered in the Health Centers of Canavieiras, 175 (22,12%), Ingleses neighborhood, 160 (20,22%) and North Health Center, 137 (17,31%). It should be highlighted that the HCs, both from the North and the South, according to the municipal protocol, did not present any exodontics

Table 1. Distribution of dental procedures performed in the Southern District of Florianópolis in the years 2014 and 2015.

	Dental pulp access and medication (by tooth)	Topical application of fluoride (per session)	Exodontics of deciduous tooth	Exodontics of permanent tooth	Scraping, smoothing and supragingival polishing (by sextant)	Subgingival scaling and smoothing (by sextant)	Deciduous tooth restoration	Permanent anterior tooth restoration	Permanent posterior tooth restoration	TOTAL
HC ALTO RIBEIRÃO	2	5	44	117	132	1	127	199	583	1210
HC ARMAÇÃO	216	87	94	188	1156	5	181	333	543	2803
HC CAIEIRA BARRA DO SUL	96	61	12	16	27	193	34	97	244	780
HC CAMPECHE	135	65	55	142	1551	20	171	486	677	3302
HC CARIANOS			14	162	1375	2	8	150	433	2144
HC COSTEIRA DO PIRAJUBAÉ	390	188	173	625	2839	769	640	705	1382	7711
HC FAZENDA DO RIO TAVARES	162	11	43	194	2163	2	134	380	750	3839
HC PANTANO DO SUL	93	422	34	105	2232		246	197	331	3660
HC RIBEIRÃO DA ILHA	95	240	34	72	963	24	74	208	402	2112
HC TAPERA	532	180	93	190	1676	295	392	444	897	4699
SOUTH ECU	3462	31	78	94	23	16	77	169	86	4036
Total	5183	1290	674	1905	14137	1327	2084	3368	6328	36296

in their elective procedures. Exodontics performed on permanent teeth showed higher records in HC of Rio Vermelho, 506 (25.01%), Canavieiras HC, 476 (23.52%) and the HC of Santinho, 335 (16.55%). The lowest registration in the District was found in CS Jurerê (0.69%). However, regarding the subgingival root smoothing and scaling procedure, HC Jurerê was shown to have performed the most in the Northern District, 456 (55.27%). The Health Centers of Bom Jesus and Santinho Cachoeira did not register this procedure in the years 2014 and 2015.

Regarding restoration in deciduous and permanent posterior teeth, the highest records were given at Rio Vermelho Health Centers, 684 (25.11%), 1997 (27.90%); Ingleses, 648 (23.78%), 1561 (21.79%); and Canavieiras 490 (17.99%), 1117 (15.60%) (table 2).

Continent district

The highest prevalence of access to dental pulp in the Continent District is found in HC Monte Cristo

with a total of 1560 (38.19%), followed by the HC Novo Continente with 496 (12.14%) accesses performed. The Health Centers of Coqueiros and Estreito showed 379 (9.28%) and 344 (8.42%) accesses to the dental pulp, respectively. On the other hand, HC of Continente did not register this procedure and in the years 2014 and 2015 the Health Centers of Vila Aparecida and Abraão performed only 47 (1.15%) and 27 (0.66%) accesses to the dental pulp. Concerning the topical application of fluoride, three Health Centers, Coqueiros, Abraão and Estreito, performed more than half of this procedure (53.46%) in the Continent District.

With regard to data on the 'deciduous tooth extraction' procedure, the Monte Cristo Health Center performed almost one third (31.61%) of all extractions in deciduous teeth throughout the Continente, followed by HC of Novo Continente, with 17.54% of extractions in deciduous teeth. Concerning the extractions in permanent teeth it was observed that the records were maintained, where Monte Cristo HC performing 34.36% of the total in

Table 2. Distribution of dental procedures performed in the Northern District of Florianópolis in the years 2014 and 2015.

	Dental pulp access and medication (by tooth)	Topical application of fluoride (per session)	Exodontics of deciduous tooth	Exodontics of permanent tooth	Scraping, smoothing and supragingival polishing (by sextant)	Subgingival scaling and smoothing (by sextant)	Deciduous tooth restoration	Permanent anterior tooth restoration	Permanent posterior tooth restoration	TOTAL
HC CACHOEIRA BOM JESUS	95	272	70	100	2108		212	152	429	3438
HC CANASVIEIRAS	190	105	175	476	4381	20	490	664	1117	7618
HC INGLESSES	207	1027	160	285	5264	99	648	840	1561	10091
HC JURERE	26	365	16	14	1236	456	114	80	195	2502
HC RIO VERMELHO	366	1092	107	506	6146	61	684	837	1997	11796
HC SANTINHO	123	30	94	335	2429		238	354	855	4458
HC SANTO ANTONIO LISBOA	80	365	18	36	2178	170	171	316	610	3944
HC VARGEM GRANDE	2		14	47	19	5	41	47	190	365
NORTH ECU	5961	9	137	224	19	14	125	484	202	7175
Total	7050	3265	791	2023	23780	825	2723	3774	7156	51387

the District and Novo Continente HC performing 15.55% of the total. As Health Centers with the lowest number of primary and permanent teeth in the Continent Health District in the period studied, it was found that the HC Continente (1.41% and 0.66%) and Abraão health units (1.8% and 0%, 68%) and Vila Aparecida (1.8% and 2.73%), respectively.

Regarding the supra-gingival scraping procedure in the Continente District, it was observed that this procedure was performed 9269 times at Monte Cristo HC corresponding to 22.63% of the total and the Coqueiros HC performed the same procedure 8038 times, corresponding to 19, 63% of the total. In contrast, the HC of Vila Aparecida and HC Continente registered this procedure 517 (1.26%) and 246 (0.6%).

In relation to deciduous and permanent anterior and posterior teeth restorations, the Monte Cristo HC recorded 34.85%, 24.07% and 28.31% of the total of these procedures in the Southern District (table 3).

Central district

As shown in table 3, the 'pulp access' procedure in the Central District presents a higher record percentage in the municipal information system at the Agrônômica Health Center, with 732 (31.08%) pulp accesses made in the period from 2014 to 2015, followed by Trindade and Prainha HCs, respectively, with 613 (26.02%) and 452 (19.19%) procedures performed. On the other hand, during the evaluated years, in the HC of Saco dos Limões, this procedure was carried out only 47 times, corresponding to 1.99% of total accesses in the Center District. On the other hand, the 'topical application of fluoride' procedure presented a higher prevalence in the Trindade HC and was performed 938 times, corresponding to 42.1% of the total, compared to the other Health Centers of the Central District. It was also observed that the Health Centers which carried out this procedure were the Health Centers of the Center and Agronomics, with respectively 428 (19.21%) and 290 (13.01%) fluoride applications. It

Table 3. Distribution of dental procedures performed in the Continent District of Florianópolis in the years 2014 and 2015.

	Dental pulp access and medication (by tooth)	Topical application of fluoride (per session)	Exodontics of deciduous tooth	Exodontics of permanent tooth	Scraping, smoothing and supragingival polishing (by sextant)	Subgingival scaling and smoothing (by sextant)	Deciduous tooth restoration	Permanent anterior tooth restoration	Permanent posterior tooth restoration	TOTAL
HC ABRAÃO	27	435	14	25	2580	8	99	130	285	3603
HC BALNEÁRIO	116	132	21	145	2480	1	48	149	272	3364
HC CAPOEIRAS	76	12	27	95	1122	5	51	167	333	1888
HC COLONINHA	325	184	47	388	3705	773	260	362	893	6937
HC CONTINENTE		5	11	24	246		4	15	38	343
HC COQUEIROS	379	682	75	170	8038	106	113	646	1050	11259
HC ESTREITO	344	419	71	209	5848	28	253	702	1141	9015
HC JARDIM ATLÂNTICO	60	59	31	176	1663		71	218	540	2818
HC MONTE CRISTO	1560	265	245	1246	9269	439	1029	1073	2695	17821
HC NOVO CONTINENTE	496	268	136	564	2448	26	480	427	817	5662
HC SAPE	157	37	33	288	2267	202	162	268	540	3954
HC VILA APARECIDA	47	323	14	99	517	429	185	205	816	2635
CONTINENT MUNICIPAL POLYCLINIC	497	51	50	197	758	4	197	95	98	1947
Total	4084	2872	775	3626	40941	2021	2952	4457	9518	71246

should be pointed out that this procedure, unlike the other procedures studied, was recorded by person and not by the dental unit

As to the deciduous teeth extraction the record distribution in decreasing order was as follows: Agronômica HC, 203 (27.88%); Prainha HC, 139 (19.09%); and Center of Dental Specialties (CDS), 126 (17.3%). In the evaluated period, Center HC performed only 15 exodonties in deciduous teeth, corresponding to 2.06% of all the extractions carried out in the Central District. Analysis of the same period showed that 'permanent tooth extraction' to have higher prevalence in the HC of Agronômica com 427 (21.39%) extractions performed on permanent teeth in the period, followed by Prainha (18.33%) and Saco dos Lemons HCs (17.63%). Regarding the supra-gingival scaling procedure, the Agronomica, Trindade and Central HCs performed the majority of this procedure with 5965 (31.10%), 4271 (22.26%) and 3214 (16.75%) scraping. It must be emphasized that the record of this procedure is performed by sextant in the individualized odontogram of the municipal information system, thus, in the same appointment, which can show 6 registrations per patient leading to high values when compared with the other procedures. Even though the supra-gingival scraping is

a clinical primacy care characteristic, it was performed in the medium complexity (CDS-Center) 985 times, corresponding to 5.13% of the total performed in the Central District. On the other hand, subclinical scaling was more prevalent in the Center District in Trindade (63.88%), Prainha (26.90%) and Monte Serrat HCs (6.36%). Due to its surgical characteristic this procedure is considered of medium complexity (the open field), therefore, it is worth noting that the Center for Dental Specialties of recorded 6 times of this clinical practice, equivalent to 0.32% of the total subgingival scaling, over the two years analyzed in the Sanitary Center District. In contrast, the CDS center is the health unit in the District which performed most restorations on deciduous teeth, 619 (24.23%), followed by the primary care units of Prainha, 555 (21.73%), Agronômica, 511 (20%) and Trindade, 428 (16.78%). Low recording of this procedure was found in the Central HC, with only 62 restorations in primary teeth, representing 2.42% of the total.

Regarding anterior and posterior permanent teeth similar records were found: Prainha, 643 (25.03%); 1659 (30.19%), and Trindade HCs, 603 (23.48%) and 1215 (22.11%), respectively (table 4).

Table 4. Distribution of dental procedures performed in the Center District of Florianópolis in the years 2014 and 2015.

	Dental pulp access and medication (by tooth)	Topical application of fluoride (per session)	Exodontics of deciduous tooth	Exodontics of permanent tooth	Scraping, smoothing and supragingival polishing (by sextant)	Subgingival scaling and smoothing (by sextant)	Deciduous tooth restoration	Permanent anterior tooth restoration	Permanent posterior tooth restoration	TOTAL
HC AGRONÔMICA	732	290	203	427	5965	22	511	358	749	9257
HC CENTRO	149	428	15	105	3214	12	62	249	485	4719
HC MONTE SERRAT	208	168	58	266	750	118	207	287	712	2774
HC PRAINHA	452	137	139	366	2913	499	555	643	1659	7363
HC SACO DOS LIMÕES	47	156	73	352	1081	11	172	228	337	2457
HC TRINDADE	613	938	114	186	4271	1187	428	603	1215	9555
CENTER MUNICIPAL POLYCLINIC	154	111	126	294	985	6	619	200	338	2833
Total	2355	2228	728	1996	19179	1855	2554	2568	5495	38958

Eastern district

As for the pulp access procedure, the highest prevalence of records in the municipal information system during the analyzed period was found in the HC of Barra da Lagoa, 700 (30.67%), followed by the HC of Saco Grande, 650 (28.48%), João Paulo HC, 229 (10.03%). Regarding this procedure, the HC Pantanal reported that at least 4 (0.17%) reported this procedure in the Eastern District during the analyzed period.

In relation to 'topical application of fluoride', Saco Grande HC presented a higher prevalence, 605 (28.19%), followed by Barra da Lagoa, 631 (29.40%) and Itacorubi HCs, 361 (16.82%). On the other hand, this procedure characterized as preventive was not registered by the Pantanal HC.

As far as deciduous and permanent exodontia is concerned the records in the Eastern District present similarities: Saco Grande 182 (28.43%), 452 (28.19%); Barra da Lagoa HC 129 (20.15%), 262 (16.34%); Itacorubi HC, 88 (13.75%), 257 (16.03%), respectively. Again, the Pantanal HC has not

presented a record of the permanent tooth extraction procedure in the period of 2014 and 2015 and only 1 (0.15%) record of the primary tooth extraction procedure in the period. The HC of the Costa da Lagoa did not show extraction in deciduous record in the studied period.

Regarding the subgingival smoothing and scaling procedure, by sextant, the highest records were found in Canto da Lagoa HC, 822 (37.84%), followed by the Barra da Lagoa HC, 641 (29.51%). In the Eastern District, this procedure was not registered in the Pantanal HC during the years 2014 and 2015. Regarding to scaling and supragingival root planing, by sextant, Pantanal HC presented only 12 records, corresponding to 0.05% of the total registered in the Eastern District.

Restoration procedures in deciduous, anterior and posterior permanent teeth presented the same prevalence of records, respectively: Saco Grande HC, 860 (39.21%), 808 (25.67%), 1682 (22.83%), Itacorubi HC, 375 (17.05%), 546 (17.34%), 1266 (17.18%). As a low register of this procedure, the Pantanal HC presented low records: 5 (0.22%), 3 (0.09%) and 7 (0.09%), respectively (table 5).

Table 5. Distribution of dental procedures performed in the Eastern District in the years 2014 and 2015.

	Dental pulp access and medication (by tooth)	Topical application of fluoride (per session)	Exodontics of deciduous tooth	Exodontics of permanent tooth	Scraping, smoothing and supragingival polishing (by sextant)	Subgingival scaling and smoothing (by sextant)	Deciduous tooth restoration	Permanent anterior tooth restoration	Permanent posterior tooth restoration	TOTAL
HC BARRA DA LAGOA	700	631	129	262	4426	641	357	464	1108	8718
HC CANTO DA LAGOA	51	52	34	118	653	822	67	173	352	2322
HC CÓRREGO GRANDE	217	215	64	100	3729		161	340	818	5644
HC COSTA DA LAGOA	14	24		5	116	8	23	53	48	291
HC ITACORUBI	195	361	88	257	4092	1	375	546	1266	7181
HC JOÃO PAULO	229	239	80	186	1704	351	178	440	1147	4554
HC LAGOA DA CONCEIÇÃO	222	19	62	223	3476	2	167	320	938	5429
HC PANTANAL	4		1		12		5	3	7	32
HC SACO GRANDE	650	605	182	452	5293	347	860	808	1682	10879
Total	2282	2146	640	1603	23501	2172	2193	3147	7366	45050

DISCUSSION

For comparison purposes, the data collected in the present study in Florianópolis were assembled into four groups:

1. Restorative procedures (includes restorative procedures in deciduous teeth, anterior permanent teeth and posterior permanent teeth);
2. Preventive procedures (topical application of fluoride);
3. Surgical procedures (includes extractions of deciduous teeth and permanent teeth);
4. Periodontal procedures (includes scraping and supragingival smoothing by sextant and scaling and subgingival smoothing by sextant).

In a similar study, Barros [8], Viana and Chaves have analyzed the profile of dental procedures performed in 11 municipalities in the State of Bahia. In four municipalities in Bahia, there was an increase in the percentage of preventive procedures from 1999 (0.2%) to 2006 (14.3%), concomitantly with the implementation of FHS. Other cities presented a small increase in their percentage of preventive procedures performed, such as the city of Salvador, capital of Bahia: 31.6% in 1999 to 32.1% in 2006. In Florianópolis, where FHS implantation dates back to 1996, the percentage of preventive procedures in the present study was 5.32%, suggesting that the implementation of the model of care recommended in the FHP encourages the adoption of preventive measures in oral health, despite the percentage amount of activities is still small. In Florianópolis, 29.63% of all procedures performed were restorative. In Bahia, until 2006, all municipalities started to perform restorative procedures, accounting for 66.7% of dental procedures, showing a wide difference between the percentages in the two States. This fact can be justified by the late expansion of FHS coverage in the municipality of Florianópolis or in the disease burden of the different populations. It is important to highlight the need to implement epidemiological surveys in the region in order to identify whether the needs of the population and the procedures performed are aligned.

Surgical procedures in Florianópolis have accounted for 6.66% of the total number of procedures performed. In the municipalities of Bahia, the exodontia accounted for 21.4% of the total number of procedures. In municipalities in the interior, this index was even higher: in Muquém de

São Francisco (BA), 62.5% of the procedures performed in 2006 were exodontia. FHS implementation and the consequent increase of the preventive and restorative procedures, may improve the Dentistry of the municipalities of Bahia, similar to the Dentistry of Florianópolis.

The periodontal procedures represented 58.37% of the dental procedures performed in Florianópolis, analyzed in the present study. Of the 11 municipalities in Bahia, 5 did not offer periodontal procedures in 1999, prior to the implementation of the FHS. At the end of the analysis, in 2006, 10 of the 11 municipalities were performing periodontal procedures.

Barros and Chaves [9] have also observed diversification of dental procedures over time (an increase of restorative and periodontal procedures) and the emergence of preventive and collective procedures in other municipalities, which was related to health municipalization and therefore consequent increase in the primary health care.

Celeste et al. [10] studied the amount of primary care dental procedures from 1994 to 2007 throughout the country, according to data available in the Outpatient Information System (SIA-SUS). There was a decrease in the number of restorations and extractions performed over time (1994-2007), with special emphasis on the period from 1998 to 2001, when health municipalization occurred. During the same period analyzed (1994-2007), there was an increase in the number of preventive procedures and collective procedures carried out throughout the country, especially the period from 1998 to 2001.

When the total number of dental procedures performed per thousand inhabitants is expressed, a significant increase at the national level from 60 procedures per thousand inhabitants in 1994 to approximately 100 procedures per thousand inhabitants in 2007 can be observed. The Brazilian Southern Region itself, where Florianópolis is located, presents an increase in the same proportion: from 70 procedures per thousand inhabitants in 1994 to approximately 110 procedures per thousand inhabitants in 2007.

Other studies have suggested that the presence of oral health technicians and dental assistants (OHT and DA, respectively) in health teams increases the access of the population and the productivity of professional dental surgeons [11]. In this context, Florianópolis presents 46.99% coverage of OHT with the presence of OHT and

DA, leading to understand that the expansion of the oral health care network, with complete OHT teams, will positively impact the curative and preventive measures in the municipality.

CONCLUSION

It is observed that Florianópolis has followed the national trend of diversification of dental procedures over time, since in the present study the preventive procedures were responsible for 5.32% of the procedures performed. It is also verified that Florianópolis followed the national drop in the number of exodontics performed, since the present study showed that the exodontics represented only 6.66% of the dental procedures performed in the city. The present study may show the impact of OHT implantation in FHS. However, further studies on the functioning and activities of OHT implanted can help managers to optimize oral health actions in order to improve the dental care provided in the municipality.

Collaborators

MH RODRIGUES, conceptualization, investigation, methodology, writing-original draft. S COSTA JUNIOR, data curation, formal analysis, supervision, writing-review & editing. CS BAVARESCO, data curation, formal analysis, project administration, methodology. MC PEREIRA, writing-review & editing, formal analysis, software, investigation.

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