Pesquisa Brasileira em Odontopediatria e Clínica Integrada 2021; 21:e0261
https://doi.org/10.1590/pboci.2021.140
ISSN 1519-0501 / eISSN 1983-4632

ORIGINAL ARTICLE

Access to Primary Dental Care and the Work Process of Oral Health Teams: An Analysis of the 3rd Phase of the *PMAQ-AB* Program

Moângela Alves de Sousa Alencar[1], Ane Polline Lacerda Protasio[1], Ana Flávia Uzêda dos Santos Macambira[2], Ana Maria Gondim Valença[2]

[1]Postgraduate Program in Decision Models and Health, Federal University of Paraíba, João Pessoa, PB, Brazil.
[2]Department of Statistics, Federal University of Paraíba, João Pessoa, PB, Brazil.

Correspondence: Ana Maria Gondim Valença, Rua Miguel Satyro, 350, apt. 2301, Cabo Branco, João Pessoa, PB, Brazil. 58045-110. **E-mail:** anamvalenca@gmail.com

Academic Editor: Wilton Wilney Nascimento Padilha

Received: 18 December 2020 / **Review:** 08 April 2021 / **Accepted:** 10 June 2021

How to cite: Alencar MAS, Protasio APL, Macambira AFUS, Valença AMG. Access to primary dental care and the work process of oral health teams: an analysis of the 3rd phase of the *PMAQ-AB* program. Pesqui Bras Odontopediatria Clín Integr. 2021; 21:e0261. https://doi.org/10.1590/pboci.2021.140

ABSTRACT

Objective: To characterize the access to primary dental care and the work process of Oral Health Teams (OHTs), nationwide and by geographic region, based on data from the 3rd phase of the *PMAQ-AB* (the Program for Improving Access and Quality of Primary Care). **Material and Methods:** This was a cross-sectional study using data from the external assessments of the PMAQ-AB regarding the variables access to dental care and the work process of OHTs. The data were analyzed descriptively. **Results:** A significant number of healthcare users (41.2%) reported an average waiting time of 10 days to schedule dental appointments at the primary care facility (PCF). In the Northeast region, a greater number of users (48.4%) had access to dental care, with a waiting time of 7 days, whereas a smaller number of users in the Southeast region could schedule an appointment with the dentist (33.9%) and experienced a longer waiting time (17 days). Most OHTs worked in Primary Care Teams (PCTs) (85.1%), received support from Specialized Dental Care Centers (70.9%), worked with scheduled appointments and/or spontaneous demands (98.0%), listened to the users' complaints during user embracement sessions (99.0%), and scheduled the first appointment at the dental office (51.9%). **Conclusion:** In Brazil, 41.2% of the healthcare users had access to dental care and experienced a waiting time ranging from 7 to 17 days, depending on the geographic region. While the OHTs developed primary oral care actions, further initiatives to ensure the expansion of access to dental care are needed.

Keywords: Primary Health Care; Oral Health; Dental Care.

Introduction

To strengthen the quality of primary care delivery, healthcare actions and services should be adequately assessed and monitored [1]. In Brazil, several oral care initiatives and assessment strategies were implemented to improve national healthcare policies [2,3]. For instance, the Program for Improving Access and Quality of Primary Care (*PMAQ-AB*, in Portuguese) was created by Ordinance No. 1,654 GM/MS, on July 19, 2011. The main objective of the program was to provide better access to, and improve the quality of, primary care at national, regional, and local levels while allowing for greater transparency and effectiveness of government actions in this sector [4].

The three assessment phases of the *PMAQ-AB* have contributed to improving the quality of Primary Care Services by consolidating aspects such as infrastructure and material resources, planning, self-assessment, organization of health action records, and organization of the work process, with increments in professional valuation through performance-based financial incentives [5,6].

The assessment of the health work process via the *PMAQ-AB*, particularly that of Oral Health Teams (OHTs), aims to examine the effectiveness of health policies nationwide and thereby characterize the quality of primary care actions and the workflow. As a result, the assessment of the *PMAQ-AB* provides relevant information for decision-making to reorganize the work process of teams working at the primary care level and to further optimize the resolvability of health actions and services.

Based on the data obtained from the 3rd phase of external assessments of the *PMAQ-AB*, this study characterized the access of healthcare users to dental care services and the work process of OHTs in primary care nationwide and by geographic region.

Material and Methods

Study Design

This was a cross-sectional study using secondary data provided by Brazil's Ministry of Health from the 3rd phase of external assessments of the *PMAQ-AB* between 2017 and 2018. The data contained the OHTs' responses to the "External Assessment Instrument: Health closer to you" applied by researchers and/or professors working in Brazilian Universities/Teaching and Research institutions.

Data Collection

The 3rd phase of external assessments was organized into six modules according to the data collection method. In this study, Module III - User Interview at the Primary Care Facility (PCF) and Module VI - Interview with the Oral Health Team and verification of documents at the PCF, were used [4].

The questionnaire of Module III was applied to 4 users present in each PCF on the day of the external assessment, following the *PMAQ-AB*'s recommendation. The questionnaire of Module VI was applied to the dentist (preferably) or another OHT member. Based on the criteria of accessibility to dental care and the waiting time for having an appointment with the dentist at the PCF, the following variables were considered: Question III.18.1- "Can you schedule appointments with the dentist at this healthcare unit?" and III.18.2 – "What is the waiting time for an appointment?". The variables related to Module VI were selected to examine the work process of OHTs, as shown in Chart 1.

Chart 1. Study variables related to the work process of oral health teams in the Brazilian healthcare system: Module VI.

Variables - Module VI	
	Territorialization of the Oral Health Teams and Covered Population
Code	Analyzed variable
1. (VI-3.1)	During the work routine, how many primary care teams does the oral health team work with?
	Matrix Support to the Oral Health Team
Code	Analyzed variable
2. (VI-5.1)	Does the oral health team receive support from other professional centers in cases that are considered complex?
3. (VI-5.2.1)	From Specialized Dental Care Centers (SDCCs)
	Organization of the Team's Agenda and Delivery of Health Actions
Code	Analyzed variable
4. (VI-7.1)	Does the oral health team carry out actions coordinated with other social facilities in the territory?
6. (VI-7.3)	The clinical care provided by the Oral Health Team guarantees:
8. (VI-7.6)	In user embracement, the Oral Health Team:
9. (VI-7.7)	Do oral health team members participate in user embracement together with the primary care team?
10. (VI-7.8)	Does the oral health team use protocols/criteria for user embracement?
11. (VI-7.9)	What is the main flow of care during user embracement?
12. (VI-7.10)	Was the oral health team in charge of user embracement previously trained to assess and classify users' risk and vulnerability?
13. (VI-7.11)	What is the main way of scheduling the first dental appointment?
14. (VI-7.12)	What is the main way of scheduling a follow-up appointment for the continuity of dental care?

Data Analysis

The data related to access to dental care, waiting time, and the work process of OHTs at the PCF in Brazil and by geographic region were analyzed descriptively using absolute and percentage frequencies in the SPSS program, version 25.0.

Ethical Clearance

This study was previously approved by the Research Ethics Committee at the UFRGS (Protocol No. 21,904) and complies with the ethical principles of the National Health Council's Resolution No. 466/12.

Results

The descriptive analysis of the selected variables (nationwide and by geographic region) is shown in Tables 1 to 3. Table 1 shows the results of the questions addressing access to dental care and waiting time (Module III) in Brazil and by geographic region (n=139,375). Tables 2 and 3 show the data on the work process of OHTs in primary care (n=22,993) from the 3rd phase of external assessment of the *PMAQ-AB* (Module VI).

A total of 139,375 healthcare users responded to Module III questions in Brazil, of which 10,711 were from the North, 51,778 from the Northeast, 10,107 from the Midwest, 46,731 from the Southeast, and 20,048 from the South. As for Module VI, a total of 22,993 professionals were interviewed, of which 1,736 were from the North, 10,210 from the Northeast, 1,933 from the Midwest, 6,113 from the Southeast, and 3,001 were from the South.

As shown in Table 1, 41.2% (n = 57,403) of the healthcare users managed to schedule an appointment with the dentist at the PCF. When analyzed by region, the Northeast had the largest number of users that managed to schedule appointments with the dentist (48.7%; n = 25,226), followed by the South region (41.5%;

n=8,328), with percentages higher than the national average. The Southeast (34.2%; n=16,004) was the region with the lowest number of users that could schedule an appointment with the dentist at the PCF.

Our data further revealed that 3.4% of the healthcare users in Brazil were unable to schedule appointments with the dentist and 39.8% of them had never sought dental care at the PCF. The South region registered the lowest number of users unable to make a dental care appointment (2.0%), followed by the Northeast (2.8%).

The mean waiting time for having access to a dental consultation in Brazil was 10 days. The Northeast and the North regions had the lowest mean number of waiting days (7 days). The Midwest (10 days) and South (10 days) regions had a percent waiting time similar to the national average. In contrast, the Southeast region showed the highest percentage of waiting days for dental care appointments (17 days).

The variables related to matrix support and the delivery of health actions indicated that most OHTs participated in primary care teams during their work routine (85.1%; n=19,574); and 93.0% (n=21,378) of them received support from other centers in more complex cases, such as Specialized Dental Care Centers (SDCCs) (70.9%; n=15,152). The Midwest region showed the highest frequency of OHTs working in a primary care team (91.7%; n=1,772) while the lowest frequency was found in the Southeast region (75.3%; n=4,605) (Table 2).

In terms of organization of the OHTs' agenda, most professionals in Brazil (98.0%; n=22,540) responded that OHTs guaranteed the care of scheduled users and those from spontaneous demands (98.0%; n=22.542). This similarity in the flow of care was also observed individually for each geographical region, in that most professionals responded that they guarantee the assistance of scheduled users in the Southeast (99.2%; n=6,066) and Northeast (98.1%; n=10,013) and users from spontaneous demands in the South (97.9%; n=2,938), Midwest (97.3%; n=1,881), and North regions (96.4%; n=1,673) (Table 3).

The data showed that most OHT members listened to the users' complaints (99.0%; n=22,764) and assessed their health needs (98.9%; n=22,750). In the Northeast region, most professionals proceeded with user embracement together with the primary care team (89.2%; n=9,069). The North region, however, showed the lowest frequency of OHT members that used protocols/criteria for user embracement (70.6%; n=1,218) (Table 3).

Table 3 shows that most OHT members in Brazil organized the main flow of care during user embracement through the identification of risk and vulnerability (89.3%; n=20,461). This trend was repeated in all regions, with the highest frequency observed in the Northeast (93.2%; n=9.472). As for the ability of OHT professionals to assess and classify users' risk and vulnerability, 83.5% (n=19,129) of the respondents in Brazil had undertaken appropriate training. The highest and lowest frequency of professional training was observed in the Southeast (86.7%; n= 5,286) and North regions (71.7%; n=1,237), respectively.

Most OHT professionals in Brazil reported that the main way of scheduling the first dental appointment was visiting the dental office at the PCF (51.9%; n=11,937). This result was similar in all regions, with a higher frequency of in-office scheduling in the South region (61.9%; n=1,857). When inquired about the follow-up of dental care, most respondents nationwide reported that dental appointments were scheduled at the end of the previous visit (81.0%; n=18,616). This was consistently observed across all regions of Brazil, particularly in the Southeast (93.2%; n=5,697) (Table 3).

Table 1. Absolute and relative frequency distribution of user responses to questions addressing access to dental care in Brazil and by geographic regions, 2017-2018.

Questions	Brazil		North		Northeast		Midwest		Southeast		South	
	N	%	N	%	N	%	N	%	N	%	N	%
III-18.1 Can you schedule appointments with the dentist at this healthcare facility?												
Yes	57403	41.2	4085	38.1	25226	48.7	3760	37.2	16004	34.2	8328	41.5
No	4718	3.4	518	4.8	1467	2.8	407	4.0	1928	4.1	398	2.0
Never sought dental care.	55449	39.8	3917	36.6	16983	32.9	4395	43.5	20972	44.9	9182	45.8
This facility does not have an oral health team.	21805	15.6	2191	20.5	8102	15.6	1545	15.3	7827	16.7	2140	10.7
III-18.2 What is the waiting time for an appointment?	10 days		7 days		7 days		10 days		17 days		10 days	

Table 2. Absolute and relative frequency distribution of characteristics of the work process of OHTs nationwide and by geographic region, 2017-2018, according to their performance and received matrix support.

Variables	Responses	Brazil		North		Northeast		Midwest		Southeast		South	
		N	%	N	%	N	%	N	%	N	%	N	%
VI_3_1 During the work routine, how many primary care teams	1	19574	85.1	1486	85.6	9405	92.1	1772	91.7	4605	75.3	2306	76.8
does the oral health team work with? (quantify)	2	2401	10.4	182	10.5	645	6.3	128	6.6	948	15.5	498	16.6
	3	666	2.9	40	2.3	105	1.0	21	1.1	347	5.7	153	5.1
	4	183	0.8	13	0.7	30	0.3	9	0.5	102	1.7	29	1.0
	5	81	0.4	10	0.6	13	0.1	1	0.1	50	0.8	7	0.2
	6	31	0.1	1	0.1	4	0.0	1	0.1	23	0.4	2	0.1
	7	32	0.1	3	0.2	4	0.0	1	0.1	19	0.3	5	0.2
	8	10	0.0	0	0.0	0	0.0	0	0.0	10	0.2	0	0.0
	9	15	0.1	1	0.1	4	0.0	0	0.0	9	0.1	1	0.0
VI_5_1 Does the Oral Health Team receive support from other	Yes	21378	93.0	1483	85.4	9537	93.4	1714	88.7	5837	95.5	2807	93.5
professional centers for cases that are considered complex?	No	1615	7.0	253	14.6	673	6.6	219	11.3	276	4.5	194	6.5
VI_5_2_1 From SDCCs	Yes	15152	70.9	959	64.7	6665	69.9	1099	64.1	4389	75.2	2040	72.7
	No	6226	29.1	524	35.3	2872	30.1	615	35.9	1448	24.8	767	27.3

Table 3. Absolute and relative frequency distribution of characteristics of the work process of OHTs nationwide and by geographic region, 2017-2018, according to the organization of their agenda and delivery of health actions.

Variables	Brazil		North		Northeast		Midwest		Southeast		South	
	N	%	N	%	N	%	N	%	N	%	N	%
VI_7_1 Does the Oral Health Team carry out actions coordinated with other social facilities in the territory?												
Yes	21007	91.4	1527	88.0	9424	92.3	1704	88.2	5614	91.8	2738	91.2
No	1986	8.6	209	12.0	786	7.7	229	11.8	499	8.2	263	8.8
VI_7_3 - The clinical care of the Oral Health Team guarantees:*												
VI_7_3_1 The care of scheduled users												
Yes	22540	98.0	1668	96.1	10013	98.1	1861	96.3	6066	99.2	2932	97.7
No	453	2.0	68	3.9	197	1.9	72	3.7	47	0.8	69	2.3
VI_7_3_2 The care of users from spontaneous demand												
Yes	22542	98.0	1673	96.4	9987	97.8	1881	97.3	6063	99.2	2938	97.9
No	451	2.0	63	3.6	223	2.2	52	2.7	50	0.8	63	2.1
VI_7_6 During user embracement sessions, the Oral Health Team:*												
VI_7_6_1 Listens to user's complaints												
Yes	22764	99.0	1698	97.8	10103	99.0	1921	99.4	6072	99.3	2970	99.0
No	229	1.0	38	2.2	107	1.0	12	0.6	41	0.7	31	1.0
VI_7_6_2 Assesses user's health needs												
Yes	22750	98.9	1702	98.0	10102	98.9	1919	99.3	6064	99.2	2963	98.7
No	243	1.1	34	2.0	108	1.1	14	0.7	49	0.8	38	1.3
VI_7_6_3 Schedules the dental appointment for another day/shift												
VI_7_6_4 Provides clinical care												
Yes	21829	94.9	1584	91.2	9705	95.1	1819	94.1	5896	96.5	2825	94.1
No	1164	5.1	152	8.8	505	4.9	114	5.9	217	3.5	176	5.9
VI_7_6_4 Provides clinical care												
Yes	22588	98.2	1688	97.2	10009	98.0	1915	99.1	6032	98.7	2944	98.1
No	405	1.8	48	2.8	201	2.0	18	0.9	81	1.3	57	1.9
VI_7_6_5 Refers the user to another service												
Yes	22101	96.1	1601	92.2	9862	96.6	1838	95.1	5919	96.8	2881	96.0
No	892	3.9	135	7.8	348	3.4	95	4.9	194	3.2	120	4.0
VI_7_6_6 Does not perform user embracement												
Yes	89	0.4	11	0.6	42	0.4	3	0.2	16	0.3	17	0.6
No	22904	99.6	1725	99.4	10268	99.6	1930	99.8	6097	99.7	2984	99.4
VI_7_7 Do oral health team members participate in user embracement together with the primary care team?												
Yes	19092	83.4	1462	84.8	9069	89.2	1613	83.6	4716	77.3	2232	74,8
No	3812	16.6	263	15.2	1099	108	317	16.4	1381	22.7	752	25.2
VI_7_8 Does the oral health team use protocols/criteria for user embracement?												
Yes	18952	82.7	1218	70.6	8590	84.5	1558	80.7	5126	84.1	2460	82.4

No	3952	17.3	507	29.4	1578	15.5	372	19.3	971	15.9	524	17.6
Vl_7_9 What is the main flow of care during user embracement?*												
VI_7_9_1 The user arrives early and stands in line to get a ticket number												
Yes	5740	25.1	699	40.5	2988	29.4	335	17.4	878	14.4	840	28.2
No	17164	74.9	1026	59.5	7180	70.6	1595	82.6	5219	85.6	2144	71.8
VI_7_9_2 The user is assisted on a first-come-first-served basis												
Yes	18034	78.7	1456	84.4	8652	85.1	1525	79.0	4341	71.2	2060	69.0
No	4870	21.3	269	15.6	1516	14.9	405	21.0	1756	28.8	924	31.0
VI_7_9_3 The team identifies users with greater risk and/or vulnerability												
Yes	20461	89.3	1489	86.3	9472	93.2	1662	86.1	5256	86.2	2582	86.5
No	2443	10.7	236	13.7	696	6.8	268	13.9	841	13.8	402	13.5
VI_7_9_4 Others												
Yes	3120	13.6	295	17.1	1276	12.5	303	15.7	735	12.1	511	17.1
No	19784	86.4	1430	82.9	8892	87.5	1627	84.3	5362	87.9	2473	82.9
VI_7_10 Were the oral health team members in charge of user embracement previously trained to assess and classify users' risk and vulnerability?												
Yes	19129	83.5	1237	71.7	8640	85.0	1569	81.3	5286	86.7	2397	80.3
No	3775	16.5	488	28.3	1528	15.0	361	18.7	811	13.3	587	19.7
VI_7_11 What is the main way of scheduling the first dental appointment?												
At the reception desk of the PCF, where appointments for other specialties can also be scheduled	6722	29.2	488	28.1	3113	30.5	642	33.2	1481	24.2	998	33.3
In the dental office, by the oral health team.	11937	51.9	845	48.7	4600	45.1	1135	58.7	3500	57.3	1857	61.9
Via the community health agent	3963	17.2	369	21.3	2363	23.1	116	6.0	1038	17.3	77	2.6
Others	371	1.6	34	2.0	134	1.3	40	2.1	94	1.5	69	2.3
VI_7_12 What is the main way of scheduling a follow-up appointment for the continuity of dental care?												
The following appointment is scheduled at the end of the previous one	18616	81.0	1267	73.0	7425	72.7	1718	88.9	5697	93.2	2509	83.6
The following appointment is scheduled by the oral health team and then communicated to the user	668	2.9	47	2.7	494	4.8	19	1.0	79	1.3	29	1.0
The following appointment is scheduled by the user at the PCF (scheduled for later)	1751	7.6	172	9.9	1074	10.5	99	5.1	193	3.2	213	7.1
The user is instructed to come to the PCF on a specific appointment scheduling day (without a prior appointment)	1177	5.1	121	7.0	771	7.6	47	2.4	76	1.2	162	5.4
On the day of the consultation, the user stands in line and gets a ticket number for dental care	360	1.6	82	4.7	149	1.5	35	1.8	31	0.5	63	2.1
Other	421	1.8	47	2.7	297	2.9	15	0.8	37	0.6	25	0.8

*In this question, the professional could answer more than one option.

Discussion

This study describes the population's access to dental care in Brazil (nationwide and by geographic region) using data from the 3rd phase of external assessments of the *PMAQ-AB*. Our findings indicate that 41.2% (n = 57,403) of the healthcare users in Brazil had access to oral health care, with a slightly higher percentage in the Northeast region (48.7%, n = 25,226). The National Oral Health Policy (PNSB, in Portuguese) contributed to the expansion of access, with an increase in population coverage in Brazil of more than 378% (from 9% in 2002 to 43% in 2016), particularly in the Northeast Region – which showed the highest population coverage (70%) [7].

The data presented in our study reveal that only 3.4% of the healthcare users were unable to schedule an appointment with the dentist at the PCF. This is indicative of an increase in population coverage as compared to the results of the 1st phase of external assessments of the *PMAQ-AB*, in which 34.5% of the users had failed to schedule an appointment with the dentist [8]. In line with these findings, a recent study showed that actions developed by the NOHP increased access to oral health services in the period from 2002 to 2016 [9]. The authors reasoned that such an expansion in access to dental care may be due to the increasing number of OHTs in Brazil, significant funding of health policies, technological advances that optimize oral care delivery, and the increase in population coverage nationwide.

The assessment of primary health care services is critical for further planning and follow-up of actions, and it has been a common practice in several countries. A study carried out by the EUprimecare in 8 European countries discussed health professionals' and users' opinions and perceptions about the quality of primary care services. The level of access, equity of care, and user satisfaction were found to be similar among the countries examined by the authors [10]. Collectively, these results demonstrated that there has been an effort across the globe to expand the population's access to primary health care.

In Brazil, users had to wait on average 10 days for a dental care appointment at the PCF, even though in the Northeast and North regions the waiting time was 7 days. Previous studies showed that the waiting time for specialized dental care at SDCCs ranges from 50 to 95 days [11-13]. These findings suggest that the work process of OHTs in primary care is more structured as to appointment scheduling and guarantee of care delivery, thereby meeting the user's health needs. The waiting time for dental care can be considered an indicator of user satisfaction and the quality of OHTs' work [14]. Users who experience long waiting times tend to reach out to other services or discontinue treatment [11].

The work process of OHTs and work-related aspects can impact the access of users to dental care, namely: being part of only one primary care team, receive support from SDCCs, conduct user embracement, identify users with greater risk and/or vulnerability, train professionals involved in user embracement, and guarantee the care of both scheduled users and those from spontaneous demand. The reorganization of the work process, more specifically between OHTs and their territory needs, in addition to the creation of participatory and integrated forms of embracement, tend to expand access and comprehensiveness of dental care [7].

Our findings showed that a significant number of OHTs worked in collaboration with a primary care team and received support from SDCCs in more complex cases. These results are consistent with those of previous studies based on the 2nd phase of the *PMAQ-AB*, which reported a high number of OHTs in the State of Paraná that referred users to specialized consultations in the healthcare network, mainly SDCCs [15]. Our data are also in line with a study that revealed regional differences regarding the oral health services offered in

the primary care network in Brazil and, particularly, in the Southeast and South regions [16,17]. The findings of the 2nd and 3rd phases of the *PMAQ-AB* indicate that OHTs work in an interconnected way with specialized care centers, ensuring the continuity of care within the healthcare network.

One of the main difficulties experienced by oral health services is the organization of user demand [7,14]. In our study, a significant number of professionals who participated in the 3rd phase of the *PMAQ-AB* responded that OHTs guaranteed the care of both scheduled users and those from spontaneous demand. A similar finding was observed in a study carried out in the State of Paraíba using data from the 2nd phase of the *PMAQ-AB* [18]. Other studies also analyzed the organization of the OHT's agenda in different Brazilian regions and concluded that most OHTs set up dental appointments for scheduled users and those from spontaneous demand [7,15,19].

User embracement refers to a relational process between subjects and technologies and acts as a recognition of the user's health needs for their therapeutic support [20]. The results of this study demonstrate that most OHT members listened to the user's complaints and assessed their health needs, with the identification of risk and/or vulnerabilities as the main flow of care. These conclusions reinforce the reasoning that when health professionals are open to establish a dialogue with the users about any questions, concerns, and oral health issues, their intervention is better rated [21].

A study using data from the 1st phase of the *PMAQ-AB* showed that user embracement sessions performed by OHTs increased by 24% the frequency of curative dental procedures [16]. On the other hand, a study carried out in the city of Porto Alegre identified that OHTs experienced difficulty in developing innovative actions for the embracement and access to dental care due to a large, unmet demand for care [20]. The challenges for the implementation and development of embracement practices in the primary care network reflect the work process of each team and reveal a continuous need for its reorganization.

Our study showed that the main way of scheduling the first dental appointment and follow-up was doing so directly at the dental office with the OHT. A comparative study between the 1st and 2nd phases of the *PMAQ-AB* pointed out difficulties experienced by users in scheduling appointments in the primary care network; the main ways of scheduling appointments were first-come, first-served basis or by attending the PCF on a specific time [22]. These measures could create organizational barriers to access of users and disorderly affect Brazilian primary care services. Therefore, the traditional organizational model of access to health care at the PCF should be revisited and incremented with the adoption of modern tools, such as telephone and internet platforms, to facilitate appointment scheduling and enhance service-user communication [22,23].

This study has important limitations to consider, namely: (i) the information gathered herein proceeds from secondary data and no direct observation techniques were used by the authors; (ii) study participants may have rated the healthcare service positively because they were in their workspaces, which could mask the reality experienced by them in the PCF. Even with these limitations, the results of this study allow us to characterize the access to dental care, waiting time, and the work process of OHTs. Our data provided insights into the strengths and/or weaknesses of oral health care in Brazil and its geographic regions.

Taken altogether, our data may support further studies testing the association between the work process of OHTs and users' access to dental care. Thus far, no studies are analyzing these factors using data from the 3rd phase of the *PMAQ-AB*.

Conclusion

In Brazil, 41.2% of the healthcare users had access to dental care at a primary care facility and experienced a waiting time ranging from 7 to 17 days, depending on their geographic region. Oral health teams developed actions that were compatible with the primary care level, such as first contact, comprehensiveness and coordination of care, user embracement, organization of the agenda, and support from specialized dental care centers. Yet, strategic measures to reorganize their work process and ensure the expansion of access to dental care are needed.

Authors' Contributions

MASA	https://orcid.org/0000-0003-0215-7418	Conceptualization, Formal Analysis, Investigation, Data Curation and Writing - Original Draft.
APLP	https://orcid.org/0000-0003-2895-436X	Conceptualization, Formal Analysis, Data Curation and Writing - Review and Editing.
AFUM	https://orcid.org/0000-0002-1590-8113	Conceptualization, Formal Analysis, Data Curation and Writing - Review and Editing.
AMGV	https://orcid.org/0000-0001-8460-3981	Conceptualization, Formal Analysis, Data Curation and Writing - Review and Editing.

All authors declare that they contributed to critical review of intellectual content and approval of the final version to be published.

Financial Support

None.

Conflict of Interest

The authors declare no conflicts of interest.

Data Availability

The data used to support the findings of this study can be made available upon request to the corresponding author.

References

[1] Almeida PF, Giovanella L. Assessment of Primary Health care in Brazil: mapping and analysis of research conducted and/or financed by the Ministry of Health from 2000 to 2006. Cad Saúde Pública 2008; 24(8):1727-42. https://doi.org/10.1590/S0102-311X2008000800002

[2] Hartz ZMA, Felisberto E, Silva LMV. Meta-Avaliação da Atenção Básica em Saúde: Teoria e Prática. Rio De Janeiro: Fiocruz; 2008. 410p. [In Portuguese].

[3] Pinto-Júnior EP, Cavalcante JLM, Sousa RA, Morais APP, Silva MGC. Analysis of scientific production on evaluation, in the context of family health, in Brazilian journals. Saúde Debate 2015; 39(104):268-78. https://doi.org/10.1590/0103-1104201510402226

[4] Brasil. Ministério da Saúde. Secretaria de Atenção à Saúde. Departamento de Atenção Básica. Programa Nacional de Melhoria do Acesso e da Qualidade da Atenção Básica (PMAQ) – Manual Instrutivo para as Equipes de Atenção Básica e NASF - 3º Ciclo (2015 - 2017). Brasília, DF, 2017. [In Portuguese].

[5] Feitosa RMM, Paulino AA, Lima Jr JOS, Oliveira KKD, Freitas RJM, Silva WF, et al. Changes offered by the National Program for Improving Access and Quality of Primary Care. Saude Soc 2016; 25(3):821-9. https://doi.org/10.1590/s0104-12902016151514

[6] Bertusso FR, Rizzotto MLF. PMAQ in the view of workers who participated in the program in Region of Health of Paraná. Saúde Debate 2018; 42(117):408-19. https://doi.org/10.1590/0103-1104201811705

[7] Júnior OLA, Fagundes MLB, Menegazzo GR, Torres LHN, Giordani JMA. Evaluation of oral health services in primary health care: regional perspectives based on PMAQ. Tempus, Actas de Saúde Colet 2020; 14(1):143-59. https://doi.org/10.18569/tempus.v14i1.2618

[8] Casotti E, Contarato PC, Fonseca ABM, Borges PKO, Baldani MH. Dental care in Brazil: an analysis based on PMAQ-AB external evaluation. Saúde Debate 2014; 38(esp):140-57. https://doi.org/10.5935/0103-1104.2014S011

[9] Pucca Junior GA, Gabriel M, Carrer FC, Paludetto Junior M, Lucena EHG, Melo NS. Access and oral health population coverage after implementation of the National Oral Health Policy "Smiling Brazil". Tempus, Actas de Saúde Colet 2020; 14(1):29-43. https://doi.org/10.18569/tempus.v14i1.2629

[10] Papp R, Borbas I, Dobos E, Bredehorst M, Jaruseviciene L, Vehko T, et al. Perceptions of quality in primary health care: perspectives of patients and professionals based on focus group discussions. BMC Fam Pract 2014; 15:128. https://doi.org/10.1186/1471-2296-15-12

[11] Laroque MB, Fassa ACG, Castilhos ED. Evaluation of Secondary Dental Health Care at the Dental Specialties Centre, Pelotas, Rio Grande do Sul, Brazil, 2012-2013. Epidemiol. Serv Saúde 2015; 24(3):421-30. https://doi.org/10.5123/S1679-49742015000300008

[12] Souza LF, Chaves SCL. The Brazilian Dental Health Policy: accessibility, offering and utilization of public specialized dental care in a city at Bahia, Brazil. Rev Baiana Saúde Pública 2010; 34(2):371-87. https://doi.org/10.22278/2318-2660.2010.v34.n2.a442

[13] Pontes ALB. Avaliação da satisfação do usuário e da qualidade dos tratamentos endodônticos em Centros de Especialidades Odontológicas da grande Natal - RN [Dissertation]. Natal (RN): Universidade Federal do Rio Grande do Norte; 2011. [In Portuguese].

[14] Silva LÁN, Harayama RM, Fernandes FP, Lima JG. Access and embracement in the Primary Care of the Western region of Pará. Saúde Debate 2019; 43(122):742-54. https://doi.org/10.1590/0103-1104201912220

[15] Neves M, Giordani JMA, Hugo FN. Primary dental healthcare in Brazil: the work process of oral health teams. Ciênc Saúde Coletiv 2019; 24(5):1809-20. https://doi.org/10.1590/1413-81232018245.08892017

[16] Baldani MH, Ribeiro AE, Gonçalves JRSN, Ditterich RG. Oral health work process in Primary Health Care: intermunicipal inequalities highlighted by the PMAQ-AB. Saúde Debate 2018; 42(1):145-62. https://doi.org/10.1590/0103-11042018s110

[17] Gonçalves KF, Giordani JMA, Bidinottto AB, Ferla AA, Martins AB, Hilgert JB. Oral healthcare utilization during prenatal care in primary healthcare: data from PMAQ-AB. Ciênc Saúde Coletiv 2020; 25(2):519-32. https://doi.org/10.1590/1413-81232020252.05342018

[18] Pinto RNM, Pires HF, Protasio APL, Valença AMG. User Satisfaction and Care Offered in Oral Health in João Pessoa: 2nd Cycle of the National Program for Improving Access and Quality in Primary Care (PMAQ- AB). R Bras Ci Saúde 2020; 24(3):405-16. https://doi.org/10.22478/ufpb.2317-6032.2020v24n3.52419

[19] Pires HF, Limão NP, Protasio APL, Valença AMG. Factors associated with users' satisfaction with oral health care in Paraíba, 2014. Saúde Debate 2020; 44(125):451-64. https://doi.org/10.1590/0103-1104202012513

[20] Warmling CM, Baldisserotto J, Rocha ET. User embracement & access to oral health needs and professional practice in Primary Health Care. Interface 2019; 23:e180398. https://doi.org/10.1590/interface.180398

[21] Moimaz SAS, Bordin D, Fedel CB, Santos CB, Garbin CAS, Saliba NA. Qualification of care in oral health services. Cad Saúde Colet 2017; 25(1):1-6. https://doi.org/10.1590/1414-462x201700010239

[22] Lima JG, Giovanella L, Fausto MCR, Bousquat A, Silva EV. Essential attributes of primary health care: national results of PMAQ-AB. Saúde debate 2018; 42(spe 1):52-66. https://doi.org/10.1590/0103-11042018s104

[23] Fagundes DM, Thomaz EBAF, Queiroz RCS, Rocha TAH, Silva NC, Vissoci JRN, et al. Dialogues on the work process in oral health in Brazil: an analysis based on the PMAQ-AB survey. Cad Saúde Pública 2018; 34(9):e00049817. https://doi.org/10.1590/0102-311x00049817