



Comparison of health unit structure indicators between the 2013-2018 cycles of the PMAQ.

Comparison of health facilities structure indicators between the 2013-2018 PMAQ cycles

Vanessa Franchin Galhardo^{1}, Marcelo de Castro Meneghin², Pedro Augusto Thiene Leme³*

¹Department of Health Sciences and Child Dentistry, Professional Master's Program in Management and Collective Health, State University of Campinas (UNICAMP), Piracicaba (SP), Brazil, ²Department of Health Sciences and Child Dentistry, Professional Master's Program in Management and Collective Health, State University of Campinas (UNICAMP), Piracicaba (SP), Brazil, ³Department of Health Sciences and Child Dentistry, Professional Master's Program in Management and Collective Health, State University of Campinas (UNICAMP), Piracicaba (SP), Brazil

*Corresponding author:: Vanessa Franchin Galhardo – *E-mail*: coord_saude@corumbatai.sp.gov.br

ABSTRACT

The National Program for Access and Quality Improvement in Primary Care was an important part of the negotiation and agreement process of the three levels of management of the Brazilian Unified Health System and aimed to evaluate the results of Primary Care. This study aimed to evaluate how the structure indicators behaved in Brazilian health units that participated in the second and third cycles of the PMAQ, for comparisons. This cross-sectional, ecological study analyzed publicly available databases of Brazilian municipalities. The outcomes considered were the number of structural indicators for each team and the variation in the number of structural indicators. The Northeast region had the highest adherence of health teams. Among the structure indicators, there was a significant improvement in the construction of vaccination rooms and medication dispensing rooms.

Keywords: Performance Appraisal; Primary Care; Primary Health Care.

RESUMO

O Programa Nacional de Melhoria do Acesso e da Qualidade da Atenção Básica foi parte importante do processo de negociação e pactuação das três esferas de gestão do Sistema Único de Saúde e objetiva avaliar os resultados da Atenção Básica. O objetivo deste estudo foi avaliar como se comportaram os indicadores de estrutura nas Unidades de Saúde brasileiras que participaram do segundo e terceiro ciclo do PMAQ-AB, a fim de compará-los. Trata-se de estudo ecológico transversal, com análise de banco de dados de acesso público dos municípios brasileiros. Os desfechos considerados foram o número de indicadores de estrutura para cada equipe e a variação na quantidade de indicadores de estrutura. O nordeste foi a região com maior adesão de equipes de saúde foi a Nordeste. Entre os indicadores de estrutura, houve melhora significativa na construção de salas de vacina e salas para dispensação de medicamentos.

Palavras-chave: Atenção básica; Atenção primária; Avaliação de desempenho.

*Received in October 07, 2022
Accepted on March 19, 2023*

INTRODUCTION

Management has an auxiliary role in the organization of processes and decision-making, aiming to guarantee autonomy to healthcare facilities and sufficient resources to operate efficient and effective work processes with users^{1,2}. To fulfill this role, management incorporates knowledge, techniques, and procedures typical of the field to support services in decision-making. Evaluation processes are an important tool for management, as they identify problems, reorient actions and services, and analyze new health practices and their impacts on the health status of the population³.

Primary Care (PC), duly monitored and evaluated, is essential for the largest health systems in the world. It is a priority access point for users and a key element for integrating and coordinating lines of care and is demonstrably resolute for most health problems⁴. The assessment processes on PC have contributed to the development of the Unified Health System (SUS) and the Family Health Strategy^{5,6}.

Concomitantly with the implementation of the family health model in 1994 and the institutionalization of the assessment of Primary Care (PC) in 2003, theoretical contributions to assessment in PC began in Brazil.⁷ In 2003, the National Policy for Monitoring and Evaluating Primary Care was created, which institutionalized evaluation within the scope of PC in the SUS. Later, in 2011, the Program for Improvement in Primary Care (PMAQ AB) was created to expand access and improve the quality of PC, with regional standards, allowing for greater transparency and effectiveness of government actions^{8,9}.

In the context of the period in which this study was carried out, cuts in public resources for the Health area have to be highlighted, derived from fiscal austerity, particularly those that impaired the PMAQ-AB and the right to health. So, despite the limitations imposed on the management of the system, efficiency is required

in the allocation of resources, which increases the demand for monitoring and evaluation of services and actions offered to the population¹⁰.

The proper maintenance of care activities in PC depends, among other factors, on the structural conditions of the health units, such as equipment, ambience, and infrastructure^{11,12}. For Donabedian, the structure is material, human or financial resources, while the process comprises the activities and procedures related to the management of such resources. The results, in turn, are products related to changes in health status, knowledge, behavior, and user satisfaction¹³.

A dimension of the PMAQ AB is related to the organization of the structure of the Health Units, taking into account their equipment, ambience, infrastructure, medicines, inputs, and working conditions, among others, focusing on the lines of care prioritized by the National Primary Care Policy^{11,14}. At the beginning of each cycle, PMAQ AB made financial resources available to municipalities and Health Units, after homologation of adherence to the program and the certification phase. In this sense, it is pertinent to question whether, at the national level, the PMAQ AB was capable of improving the indicators. The focus of the present study was the structure indicators.

Therefore, this study aimed to evaluate the structure indicators in the Brazilian Health Units that participated in the second and third cycles of the PMAQ - AB, for comparisons.

METHODOLOGY

This was a cross-sectional, ecological study that used secondary data from two cycles of the PMAQ-AB, per Federation Unit (UF), namely, 2014 and 2017, regulated by ordinances 635, of April 17, 2013, and 2777, of September 4, 2018, respectively. PMAQ-AB data come from multicenter sources and were made available

through an agreement coordinated by research centers and universities across the country. In addition, for the study, the 21,656 health teams were considered throughout the national territory, which was necessarily present in the second and third cycles of the PMAQ-AB.

The study obtained approval for evaluation by the Research Ethics Committee (Protocol 022/2021) of the School of Dentistry of Piracicaba since it dealt with secondary data of public access.

Participating municipalities were classified according to population size, considered small those with less than 25,000 inhabitants,

medium between 25,000 and 100,000 inhabitants, and large with more than 100,000 inhabitants. The teams were categorized according to their certification in the second and third cycles of the PMAQ-AB, classified as “disqualified”, average or below average, above average, and much above average.

The evaluated outcome variables related to the infrastructure/ambiente in the health units, described in Box 1, extracted from the external assessment of the PMAQ-AB, with outcomes of the type “YES” or “NO”. The boxlists the theoretical model built to analyze the structure of the BHU.

Chart 1. Theoretical model for analyzing the structure of BHUs, Brazil

(Continued)

COMPONENT	CATEGORY / INDICATORS
ACCESS AND ACCESSIBILITY AT THE BHU	<p>External signaling</p> <p>1 - The health unit has an external totem; 2 - suitable facade plate with the specifications; 3 - none of the above; 4 - banner on the entrance wall of the health unit; 5 - painting with identification on the wall at the entrance to the health unit.</p> <p>Internal accessibility</p> <p>6 - All hallways adapted for wheelchairs; 7 - Entrances and doors adapted for wheelchairs; 8 - Wheelchair available for the user to move around.</p>
THE TEAMS MAKE AVAILABLE IN THE UNIT STRUCTURE	<p>Internal Signaling</p> <p>9 - Hours of operation of the health unit; 10 - Listing (scope) of actions/offers and services; 11 - Roster of professionals with name and working hours; 12 - Telephone of the ombudsman of the ministry of health and of the state or municipal department of health;</p> <p>Of human resources</p> <p>13 - Identification of all professionals with a badge</p>
HEALTH UNIT OPENING HOURS	<p>Internal Signaling</p> <p>14 - Fixed hours of operation</p>
UNIT RENOVATION AND EXPANSION	<p>Infrastructure</p> <p>15 - Health unit is in process of reform; 16 - In process of expansion?; 17 - Does the team work in a provisional unit?</p>

(Conclusion)

<p>STRUCTURAL CHARACTERISTICS AND AMBIENCE OF THE HEALTH UNIT</p>	<p>Structural Conditions 18 - Toilets for users; 19 - Toilet for people with disabilities; 20 – Toilets for employees; 21 - Changing room for employees; 22 - Exclusive room for reception; 23 – Exclusive vaccination room.</p>
<p>STRUCTURAL CHARACTERISTICS AND AMBIENCE OF THE HEALTH UNIT</p>	<p>Pharmacy environments 24 - Area for dispensing medicines; 25 – Fractionation area; 26 - Room for pharmacotherapeutic follow-up; 27 – Room for storing medications; 28 - Medicines are stored and packaged properly; 29 – Number of computers.</p>

The 52 structure indicators, which included infrastructure conditions, materials, inputs, and medicines of the Basic Health Unit in the External Assessment Instrument, evaluated in both evaluated editions of the PMAQ-AB^{11,15,16}, are shown in Table 1.

Descriptive analyses were performed using the SAS¹⁷ and R¹⁸ programs. For categorical variables, absolute and relative frequencies and quartiles were used for the number of structure indicators in the second and third cycles of the PMAQ-AB.

The number of structure indicators of each Health Unit was calculated by the number of “yes” answers in the 52 items evaluated in each cycle. This variable could range from zero to 52.

Negative binomial regression analysis was applied to compare the number of structure indicators between the two cycles. In addition, simple and multiple multilevel Poisson regression models were fit for the outcomes of variation in the number of structure indicators in Health Units from the second to the third cycle. In all models, the independent variables considered were: the region of the country, the size of the municipality, and the certification of the Unit in the second cycle of the PMAQ-AB (resource input).

In the multilevel structure, Health Units (level 1) were nested in municipalities (level 2),

and municipalities were nested in regions (level 3). The goodness-of-fit of the models was measured by the Quasi-likelihood under the Independence model Criterion (QIC). Based on the models, crude and adjusted relative risks were estimated with respective 95% confidence intervals. In all analyses, a significance level of 5% was adopted.

RESULTS

All Brazilian health teams that participated in the last two PMAQ-AB cycles and which had information on structure indicators (n = 21,656) were evaluated. Among these, 41.2% are from the Northeast region; 29.2% from the Southeast; 14.5% from the South; 8.2% from the Central-West, and 7% from the South. With regard to population size, 40.8% were classified as small; 32.2% as medium-sized; 24.3% as large, and 2.6% as without information.

The most frequent indicator in the units was the presence of fixed opening hours, found in 98.4% and 98.2% of the Units in the second and third cycles, respectively. The least frequent was the strip on the entrance wall, found in 2.2% of the Units in the second cycle, but which increased to 22.9% in the third cycle.

The descriptive analysis of the certification of health units in the cycles is presented in Table 1. The proportion of disqualified units increased from 1.2% in the second cycle to 15.2% in the

third. The percentage of units considered to be far above average increased from 15.6% to 4.9%.

Table 1. Descriptive analysis of Health Units analyzed according to the Certification in the second and third cycles of the PMAQ-AB (n=21,656).

Certification	Ciclo 2	Ciclo3
	Frequency (%)	
Disqualified	252 (1.2%)	3.289 (15.2%)
average or below average	10.704 (49.4%)	6.726 (31.1%)
Above average	7.311 (33.8%)	10.573 (48.8%)
Far above average	3.389 (15.6%)	1.068 (4.9%)

The analyses showed that, of the 252 units that received a disqualified score in the second cycle, 172 (68.3%) improved and 80 (31.7%) continued as disqualified in the third cycle. However, 2,323 (10.7%) units were

downgraded from average to disqualified, 697 (3.2%) were downgraded from above average to disqualified, and 189 (0.9%) from far above average to disqualified, as listed in Table 2.

Table 2. Descriptive analysis of changes in Certification from the second to the third PMAQ-AB cycle in Health Units (n=21,656).

Second cycle	Third cycle	Frequency (%)
Disqualified	Disqualified	80 (0.4%)
	Average or below average	86 (0.4%)
	Above average	85 (0.4%)
	Far above average	1 (0.0%)
Average or below average	Disqualified	2.323 (10.7%)
	Average or below average	4.000 (18.5%)
	Above average	4.171 (19.3%)
	Far above average	210 (1.0%)
Above average	Disqualified	697 (3.2%)
	Average or below average	2.028 (9.4%)
	Above average	4.174 (19.3%)
	Far above average	412 (1.9%)

(Conclusion)

Second cycle	Third cycle	Frequency (%)
Far above average	Disqualified	189 (0.9%)
	Average or below average	612 (2.8%)
	Above average	2.143 (9.9%)
	Far above average	445 (2.1%)

Chart 2 shows the structure indicators that improved (were more frequent) in the third compared to the second cycle.

Chart 2. Variables that improved from the second to the third cycle, and respective proportions of increase in Health Units (n=21,565).

COMPONENT	VARIABLE
ACCESS AND ACCESSIBILITY AT THE UBS(external signaling, internal accessibility)	External totem (16.6%); Facade Plate (26.8%); None of the above (1.7%); Banner on the entrance wall (8.3%); Painting with identification at the entrance (3.5%); Hallways adapted for wheelchairs (24.3%); Entrances and doors adapted for wheelchairs (28.7%); Wheelchair available (28.0%).
THE TEAMS MAKE AVAILABLE IN THE UNIT STRUCTURE (Internal signaling and human resources)	Opening hours (22.8%); Listing of shares/offered (20.3%); Schedule of professionals/Names and hours (29.7%); Telephone of the Ombudsman of the Ministry, of the State and Municipal Department (26.3%); Professionals with a badge (41.3%).
HEALTH UNIT OPENING HOURS	There are fixed hours of operation (1.5%).
RENOVATION AND EXPANSION OF THE UNIT	In process of renovation (5.1%); In process of expansion (3.5%); The team works in a provisional unit (5.8%).
STRUCTURAL CHARACTERISTICS AND AMBIENCE OF THE HEALTH UNIT	Toilets for users (3.0%); Toilets for people with disabilities (25.2%); Toilets for employees (9.9%); Changing room for employees (9.9%); Exclusive reception room (2.7%); Exclusive room for vaccination (7.0%). Medical offices with computer connected to the internet (44.2%); Offices with attached toilets (16.2%); Inhalation and nebulization room (9.0%); Procedure room (7.9%); Exclusive room for observation (6.9%); Toilet in the observation room (5.4%); Exclusive room for sterilization/storage of sterilized material (8.4%); Administration and management room (3.5%); Room for collective activities (14.6%); Room for agents (11.1%); Exclusive place for warehouse (16.8%); Exclusive place for employees to dine (12.4%); Exclusive place for cleaning material (21.1%); Exclusive place for external shelter (7.1%); Environments with good ventilation or climate control (17.0%); Well-lit environments (16.9%); Floors, walls are washable surfaces (25.7%); Acoustics that avoid external and internal noise (17.3%); Offices allow privacy to the user (25.7%); Toilets in good conditions of use and cleanliness (28.9%); Waiting room in good cleaning conditions, enough seats (8.6%); Toilets in good conditions of use and cleanliness (20%); Waiting room in good cleaning conditions, enough seats (35.3%).

According to the negative binomial regression model, the number of indicators in the Health Units had a significant increase from the second to the third cycle ($p < 0.05$).

In Tables 3 and 4, for the general sample, 40.0% health units had a decrease and 54.1%

had an increase in the number of structure indicators in the third cycle compared to the previous one. The Northeast region had the lowest percentage of units with a decrease in indicators (33.3% units), significantly differing from the Central-West (RR=1.03; 95%CI:

1.01-1.06), North (RR=1.04; 95%CI: 1.02-1.07), South (RR=1.10; 95%CI: 1.08-1.12) and Southeast (RR=1.09; 95%CI: 1.07-1.11), $p < 0.05$, regions.

Small-sized municipalities presented the lowest percentage of units with a decrease in indicators (37.6% units), significantly differing from medium-sized (RR=1.02; 95%CI: 1.01-

1.04) and large size (RR=1.02; 95%CI: 1.01-1.04), $p < 0.05$, municipalities.

There was also a smaller percentage of units with a decrease in the number of indicators among those disqualified in the second cycle (44.4% of those disqualified) than among those far above the average (51.0% of those far above the average) (RR= 1.07; 95%CI: 1.03-1.11).

Table 3. Results of simple and multiple Poisson regression analysis for the outcome increase in the number of structure indicators from the second to the third cycle of the PMAQ-AB in the Health Units (n=21,565).

Variable	Category	Frequency (%)	¹ Crude RR (² 95CI%)	p-value	Adjusted RR (95%CI)	p-value
Total sample		11,709 (54.1%)				
Region	Central West	1,048 (59.3%)	1.10 (1.07-1.13)	<0.0001	1.08 (1.06-1.11)	<0.0001
	West	855 (56.3%)	1.08 (1.05-1.11)	<0.0001	1.06 (1.04-1.09)	<0.0001
	Northeast	5,503 (61.7%)	1.12 (1.10-1.14)	<0.0001	1.12 (1.10-1.13)	<0.0001
	South	1,374 (43.9%)	Ref		Ref	
	Southeast	2,929 (46.4%)	1.01 (0.99-1.03)	0.1587	1.01 (0.99-1.03)	0.2359
Size of the municipality	Small	5,013 (58.7%)	1.04 (1.01-1.07)	0.0008	1.02 (1.01-1.04)	0.0143
	Medium	3,727 (53.4%)	1.01 (0.99-1.04)	0.2596	1.00 (0.98-1.02)	0.6958
	Large	2,679 (50.8%)	Ref		Ref	
	No information	290 (51.1%)	-		-	
Certification in the second cycle	Disqualified	123 (48.8%)	1.05 (1.01-1.10)	0.0223	1.07 (1.02-1.12)	0.0035
	Average or below average	6,414 (59.9%)	1.11 (1.09-1.12)	<0.0001	1.11 (1.10-1.12)	<0.0001
	Above average	3,723 (50.9%)	1.05 (1.04-1.06)	<0.0001	1.05 (1.03-1.06)	<0.0001
	Far above average	1,449 (42.8%)	Ref		Ref	

¹Relative risk. ²Confidence interval. QIC (empty model) = 235,911.30 and QIC (final model) = 233,399.09. [RBA1]. The % are in relation to the total Units in each category

The units with an increase in the number of indicators in the third cycle compared to the second (Table 4) were also studied. The South region had the lowest percentage of units with an increase in the number of indicators (43.9% of the units in this region), significantly differing from the Central-West (RR= 1.08; 95%CI: 1.06-

1.11), North (RR= 1.06; 95%CI: 1.04-1.09) and Northeast (RR= 1.12; 95%CI: 1.10-1.13) regions.

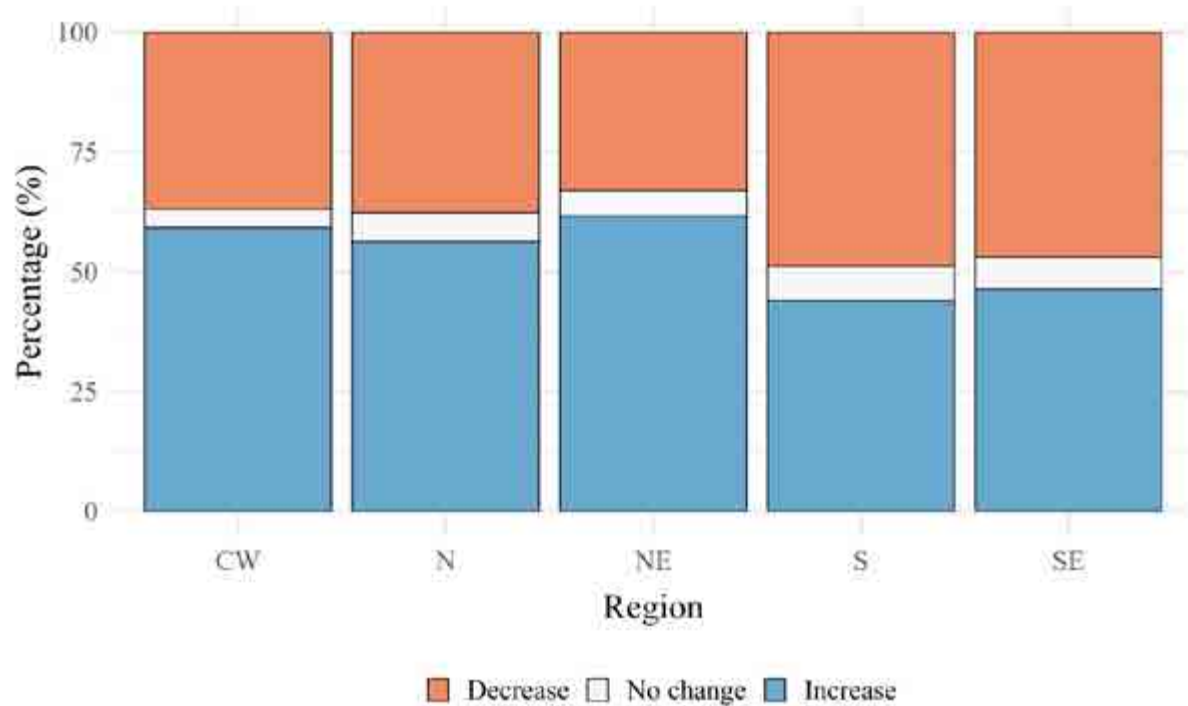
In addition, there was a higher percentage of units with an increase in the number of indicators among small-sized municipalities than among large-sized (RR= 1.02; 95%CI: 1.01-1.04), $p < 0.05$. Among the

units classified as far above the average in the second cycle, a smaller percentage of increase in the indicators was observed (42.8% of the units with this classification), significantly differing from the disqualified units (RR= 1.07; 95%CI: 1.02-1.12), units with a median or below average

rating (RR= 1.11; 95%CI: 1.10-1.12) and units with an above average classification (RR = 1.05; 95%CI: 1.03-1.06), $p < 0.05$.

In the figure 1 illustrates the proportions of increase, decrease, or stagnation of the structure indicators according to the region

Figure 1. Variation in the number of structural indicators from the second to the third cycle of the PMAQ-AB in the Health Units according to the region of the country (n=21,565).



DISCUSSION

The National Primary Care Policy (PNAB) emphasizes the need for infrastructure compliance in health units, which must offer adequate and sufficient conditions for their full functioning. This includes furniture, space, and equipment, which must be in good condition, in addition to ensuring accessibility for people with disabilities¹¹. In addition, the PNAB lists the environments, materials, and equipment that must be available to multidisciplinary teams to guarantee the flow of care. The suggested

spaces need to be adequate to the reality of the territory, the number of teams, the number of the population served, and the expected number of users¹⁹. The physical structure of Basic Health Units (BHUs) must comply with the Resolution of the Collegiate Board 50 of the National Health Surveillance Agency (ANVISA), of February 2002, which regulates the requirements for the physical projects of Health Care Facilities. Other guidelines are indicated in ABNT NBR 9050 and RDC 508/ANVISA/2002.

In the study, the analysis of structure indicators showed that, in general, there were

improvements in health units between the 2014 and 2018 PMAQ-AB cycles. A positive variation was found in the number of structure indicators in health units between the second and third cycles of the PMAQ-AB, which indicates a significant improvement ($p < 0.05$). In the second cycle, half of the units had up to 27 indicators (median = 27), ranging from zero to 47 indicators, in a total of 52 evaluated. In the third cycle, in turn, half of the units had up to 29 indicators (median = 29), ranging from two to 49 indicators, in a total of 52 indicators evaluated.

We hypothesized that performance was positively influenced by assessment and monitoring policies, with increased investments and adequate use of resources to meet the demands of Primary Care, such as the program to requalify the infrastructure of health units in the country. However, this study did not intend to establish such an association, since it did not deal with variables related to financial resources.

Our findings are in line with the existing evidence on the evaluation of health services involving the structure. A cross-sectional study carried out in the state of Ceará, which evaluated the first and second cycles of the PMAQ-AB, reported improvements in the quality of infrastructure during the program implementation period, associated with population size and region, which demonstrates equitable aspects of the program^{20,21}.

Small municipalities adhered more to the PMAQ than the others, even in the face of difficulties such as very large rural areas, higher staff turnover, and financial difficulties to cover expenses^{22,23}.

The Northeast region had the most participating teams, with 8,925 (41.2%), and had the lowest percentage of health units with worsening indicators ($p < 0.05$). It is hypothesized that the positive results in the region are influenced by investments in primary care, in

addition to the fact that the region has historically favored the family health care model^{24,25}.

The South region had the lowest percentage of units with improvement (increase in the number of indicators, 43.9% units), $p < 0.05$, which did not differ significantly from the Southeast region, which had an increase in 46.4% units. This is similar to that found by Bousquat et al.²⁵, who analyzed health teams from the first cycle of the PMAQ throughout the national territory.

The most frequent indicator in the units was the presence of fixed opening hours, found in 98.4% and 98.2% in the second and third cycles, respectively. There was an increase of 41.3% in units with professionals using a badge in the third cycle and 44.2% in units with a medical office equipped with a computer connected to the Internet.

Thus, it is important to emphasize that, during the PMAQ period, the Federal Government implemented programs that improved the results in some deficiencies, such as internet access. In 2016, the National Plan for the installation of broadband internet was implemented in 12 thousand BHUs²⁶.

Studies on the Family Health Strategy coverage report that the greater the coverage, the better the improvements in health conditions of the population, such as the drop in infant mortality^{27,28}. The new PNAB has the Family Health Strategy as a priority strategy for expanding and consolidating Primary Care but allows the manager to work with their team according to the specificities and needs¹¹.

The Family Health Strategy plays a role in coordinating care, enabling the integration of the work process, and seeking to positively impact the health situation. Among the team's responsibilities are: holding meetings to discuss the planning and evaluation of actions, systematically monitoring and evaluating the

implemented actions, aiming at readjusting the work process, and guaranteeing the quality of the record¹¹.

A study carried out by Facchini et al.²⁴ analyzed 41 municipalities with more than 100,000 inhabitants in the South and Northeast regions of the country, to check the differences between the BHU models in both regions and their effects on the distribution of inputs, performance, and care of the population. There was a relative growth in the Family Health Strategy coverage from 1999 to 2004 in the Northeast. Between 2003 and 2004, the Family Health Strategy growth was twice as high in the South than in the Northeast.

Another important item analyzed was the existence of an exclusive vaccination room in the health units. According to the Vaccination Norms and Procedures Manual, the vaccination room needs to have an area of at least 6m², in addition to movement flow in ideal conditions for carrying out the activities, aiming to prevent contamination^{29, 30}. The results showed that, in the second cycle, 17.7% health units did not have such a room. In the third cycle, the indicator increased to 23.7%.

Studies point out that, even if the Health Unit has an exclusive room for vaccination, there are other worrying structural problems, such as color, permeability, and the difficulty of cleaning the walls, in addition to the difficulty of maintaining the conservation of the rooms^{24,31}.

Concerning the results obtained on the area for dispensing medicines, the data indicate that only 45.7% health units in Brazil have this infrastructure. In a study carried out by Ribeiro³¹, this percentage was 83.5% in the second cycle of the PMAQ-AB, but with a smaller sample. Oliveira, Assis and Barboni³³ investigated Pharmaceutical Assistance in primary care in northeastern municipalities and concluded that only 15.4% and 20.0% of the BHUs surveyed had a medication dispensing room. In a study carried out by

Naves and Silver³⁴ in basic units in the Central-West region, 14 out of the 15 investigated units had an area for dispensing medicines. In a more recent study in primary care in the Northeast, 100% of the evaluated units had a dispensing area, however, shared with the medicine storage area³³. In another study in the South region, none of the health units had this infrastructure and the drugs were dispensed in medical and nursing offices³⁵. In Pernambuco, another study found a percentage of 66.1% units with a dispensing area.

According to the Ministry of Health, the dispensing area is where the medicine is delivered to the patient and has all the information inherent to this process so that the user can have excellent adherence to the therapy. For that, it is necessary that the place be thought of both in the physical aspects and the logistics of care and should allow the exchange of information in a private or semi-private way between the user and the pharmaceutical professional³⁶. According to Marin et al.³⁷, dispensing is an extremely relevant moment, as it is the last contact the user makes with a member of the health team before initiating therapy. In addition, it is the moment when the pharmacist makes direct contact with the patient, enabling the consolidation of the Pharmaceutical Care cycle.

In the study, some important findings were the proportions of units with no fractionation area (73% or 15,805) and pharmacotherapy rooms (81.5% or 17,655), indicating the lack of pharmacists in primary care since these rooms depend on these professionals to function. These findings are consistent with other studies that also point to this lack^{32,33}.

Previous studies claim that the PMAQ has brought advances between its cycles, although the phases require efforts from management, health teams, and the population to achieve the established goals. However, the short time between cycles made it difficult to adopt measures

to address the problems identified³⁸.

At the end of the third cycle, the program was gradually replaced with another federal program called Previne Brasil, instituted through Ordinance 2979 of November 12, 2019, which established a new financing model for the cost of Primary Health Care³⁹.

Updates were implemented, such as weighted training, payment for performance, and incentives for strategic actions. The municipalities started to carry out fund-raising through registers and the insertion of families. The performance and evaluation of indicators will no longer be treated in the PMAQ but by the individual results of the teams.

In 2021, the Ministry of Health published Consolidation Ordinance 1, of June 2, 2021⁴⁰, which regulates policies, programs, and plans managed by Primary Health Care. The new funding model incorporates the perspective of the PC assessment, management, work organization, and funding process, opposing some of the PMAQ ideals. It replaces the financial transfer criteria of the fixed and variable PAB type, which considered the number of people registered in the Family Health and Primary Care team.

The payment-for-performance criteria will take into account the results achieved in indicators and goals defined by the Ministry of Health and by priority incentives, such as the Saúde na Hora Program, Saúde na Escola Program, Academia da Saúde Program, programs to support the computerization of PHC, Oral Health team, Street Office team, Community Agents Strategy, among others³⁹.

The health assessment system is hampered by the extinction of the PMAQ since important quantitative and qualitative indicators were abandoned, while the Previne Brasil program proposes a mostly quantitative assessment^{41,42}.

CONCLUSION

The National Program for Access and Quality Improvement in Primary Care (PMAQ-AB) achieved the objective of improving the structural conditions (equipment, ambience, and physical structure) of Health Units at the national level. The improvement is associated with the region of the country, the size of the municipality, and certification in the previous cycle. The Health Units in the Northeast region, in small municipalities and with the worst classification in the second cycle had the most increase in the number of important infrastructure items for the maintenance of assistance activities in Primary Care, indicating the importance of this National Program for the improvement of the Quality in Primary Care in the Units that most need to improve the conditions for their full functioning.

REFERENCES

1. Tanaka OY, Tamaki EM, Felisberto E. O papel da avaliação para a tomada de decisão na gestão de serviços de saúde [Internet]. *Ciênc Saúde Colet.* 2012; 17(4): 821-828. [acesso em 12 Set 2022]. Disponível em: <http://dx.doi.org/10.1590/S1413-81232012000400002>.
2. Portela MC. Avaliação da qualidade em saúde. In: Rozenfeld S, organizador. *Fundamentos da vigilância sanitária*. Rio de Janeiro: Editora Fiocruz; 2000. p. 259-69.
3. Contandriopoulos AP. Avaliando a institucionalização da avaliação [Internet]. *Ciênc Saúde Colet.* 2006; 11(3): 705–11. [acesso em 12 Set 2022]. Disponível em: <https://doi.org/10.1590/S1413-81232006000300017>.

4. World Health Organization. Primary Health Care: now more than ever. Geneva (Switzerland): World Health Organization; 2008.
5. Starfield B. Atenção primária: equilíbrio entre necessidades de saúde, serviços e tecnologia. Brasília: Brasil. UNESCO, Ministério da Saúde; 2002.
6. Tomasi E, Fernandes PAA, Fischer T, Siqueira FCV, Silveira DS, Thumé E, et al. Qualidade da atenção pré-natal na rede básica de saúde do Brasil: indicadores e desigualdades sociais. *Cad. Saúde Pública*. 2017; 33(3). Disponível em: <http://dx.doi.org/10.1590/0102-311X001958ce15>.
7. Brasil. Ministério da Saúde. Portaria n. 2.488, de 21 de outubro de 2011. Aprova a Política Nacional de Atenção Básica, estabelecendo a revisão de diretrizes e normas para a organização da Atenção Básica, para a Estratégia Saúde da Família - ESF e o Programa de Agentes Comunitários de Saúde - PACS. *Diário Oficial da União, Brasília, 24 out. 2011*.
8. Brasil. Departamento de Atenção Básica. Documento final da comissão de avaliação e atenção básica. Produto do trabalho da comissão instituída pela portaria GM/MS nº 676, de 03 de junho de 2003. *Diário Oficial da União, Brasília, 2003*.
9. Brasil. Ministério da Saúde. Portaria nº. 1.654 de julho de 2011. Institui, no âmbito do Sistema Único de Saúde, o Programa Nacional de Melhoria do Acesso e da Qualidade da Atenção Básica (PMAQ-AB) e o Incentivo Financeiro do PMAQ-AB, denominado Componente de Qualidade do Piso de Atenção Básica Variável-PAB Variável. *Diário Oficial da União, Brasília, jul. 2011. Seção 1, p.79-80*.
10. Santos IS, Vieira FS. Direito à saúde e austeridade fiscal: o caso brasileiro em perspectiva internacional. *Cien SaudeColet* 2018; 23(7):2303-2314. [acesso em 12 Set 2022]. Disponível em: <https://www.scielo.br/j/csc/a/ZgbMjYykCWRkccrSPQrqWjx/?lang=pt>
11. Brasil. Ministério da Saúde. Portaria nº 2.436, de 21 de setembro de 2017. Aprova a Política Nacional de Atenção Básica, estabelecendo a revisão de diretrizes para a organização da Atenção Básica, no âmbito do Sistema Único de Saúde (SUS). *Diário Oficial da União, Brasília, 22 set 2017*.
12. Donabedian A. Explorations in quality assessment and monitoring: The definition of quality and approaches to its assessment. Ann Arbor, Michigan: Health Administration Press; 1980.
13. Schäfer WL, Boerma WG, Kringos DS, De Maeseneer J, Gress S, Heinemann S, et al. QUALICOPC, a multi-country study evaluating quality, costs and equity in primary care. *BMC FamPract* 2011; 12:115
14. Pineault R, Denis LJ, Champagne F, Contandriopoulos PA. A Avaliação na área da Saúde: conceitos e métodos. Rio de Janeiro: Editora Fiocruz; 2002. p. 29-47.
15. Brasil. Ministério da Saúde.. Portaria nº 340, de 04 de março de 2013. Redefine o Componente Construção do Programa de Requalificação de Unidades Básicas de Saúde (UBS). *Diário Oficial da União, Brasília, v. 5, 2013*.
16. Brasil. Ministério da Saúde. Portaria nº 2.665 de 6 de novembro de 2013. Habilita propostas a receberem recursos referentes ao Programa de Requalificação de Unidades

- Básicas de Saúde (UBS) componentes Construção, Ampliação e Reforma; incentivo para construção dos Polos da Academia da Saúde e Aquisição de Equipamento e Material Permanente para estabelecimentos de saúde. Diário Oficial da União, Brasília, 2013.
17. Institute S. SAS® Studio 3.8: User's Guide. Cary, NC: SAS Institute Inc; 2021.
18. R Core Team. R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria; 2021.
19. Brasil. Ministério da Saúde; Secretaria de Atenção à Saúde; Departamento de Atenção Básica. Manual de estrutura física das unidades básicas de saúde: saúde da família. 2. ed. Brasília: Ministério da Saúde, 2008. (Série A. Normas e Manuais Técnicos)
20. Facchini LA, Tomasi E, Dilélio AS. Qualidade da Atenção Primária à Saúde no Brasil: avanços, desafios e perspectivas. Saúde Debate. 2018 Sep;42(1):208–23.
21. Vieira-Meyer APGF, Morais APP, Guimarães JMX, Campelo ILB, Vieira NFC, Machado MDFAS et al. Infraestrutura e processo de trabalho na atenção primária à saúde: PMAQ no Ceará. Revista de Saúde Pública. 2020; 54, 62.
22. Henrique F, Calvo MCM. Grau de implantação do Programa Saúde da Família e indicadores sociais. Ciênc Saúde Colet. 2009 Oct;14(Suppl 1):1359–65.
23. Miclos PV, Calvo MCM, Colussi CF. Avaliação do desempenho das ações e resultados em saúde da atenção básica [Internet]. Revista de Saúde Pública. 2017; 21; v. 51. [citado 2022 set. 12] Disponível em: <https://doi.org/10.11606/S1518-8787.2017051006831>
24. Facchini LA, Piccini RX, Tomasi E, Thumé E, Silveira DS, Siqueira FV, et al. Desempenho do PSF no Sul e no Nordeste do Brasil: avaliação institucional e epidemiológica da Atenção Básica à Saúde [Internet]. Ciênc Saúde Colet. 2006; 11(3): 669–81. [citado 2022 set. 12] Disponível em: <https://doi.org/10.1590/S1413-81232006000300015>
25. Bousquat A, Giovanella L, Fausto MCR, Fusaro ER, Mendonça MHM de, Gagno J, et al. Tipologia da estrutura das unidades básicas de saúde brasileiras: os 5 R [Internet]. Cad Saúde Pública. 2017;34(1): e00037316. [citado 2022 set. 12] Disponível em: <https://doi.org/10.1590/0102-311X00037316>
26. Brasil, Ministério da Saúde. Departamento de Atenção Básica; Secretaria de Atenção à Saúde. Plano Nacional Banda Larga. [citado 2022 set. 12] Disponível em: http://dab.saude.gov.br/portaldab/esus.php?conteudo=banda_larga
27. Macinko J, Guanais FC, de Fátima M, de Souza M. Evaluation of the impact of the Family Health Program Infant Mortality in Brazil, 1990-2002 [Internet]. J Epidemiol Community Health. 2006 ;60(1):13-9. [citado 2022 set. 12] Disponível em: <https://doi.org/10.1136/jech.2005.038323>
28. Macinko J, de Oliveira VB, Turci MA, Guanais FC, Bonolo PF, Lima-Costa MF. The Influence of Primary Care and Hospital Supply on Ambulatory Care – Sensitive Hospitalizations Among Adults in Brazil, 1999–2007 [Internet]. Am j public health. 2011;101(10):1963–70. [citado 2022 set 12]. Disponível em: <https://doi.org/10.2105/AJPH.2010.198887>

29. Brasil. Secretaria de Vigilância em Saúde. Departamento de Vigilância das Doenças Transmissíveis. Manual de Normas e Procedimentos para Vacinação. Brasília: Ministério da Saúde, 2014b.
30. Ballalai I, Bravo F, organizadores. Imunização: tudo o que você sempre quis saber. Rio de Janeiro: RMCOM; 2016.
31. Vasconcelos KCE, Rocha SA, Ayres JA. Avaliação normativa das salas de vacinas na rede pública de saúde do Município de Marília, Estado de São Paulo, Brasil, 2008-2009 [Internet]. *Epidemiol Serv Saúde*. 2012 Mar 1;21(1):167–76. [citado 22 set 12]. Disponível em: <http://dx.doi.org/10.5123/S1679-49742012000100017>
32. Ribeiro Junior OC. Avaliação da Assistência Farmacêutica na Atenção Básica da Saúde no Brasil com base no Programa Nacional de Melhoria do Acesso da Qualidade da Atenção Básica (PMAQ-AB) [tese]. Manaus: Instituto Leônidas e Maria Deane, Fundação Oswaldo Cruz; 2017.
33. Oliveira LCF, Assis MMA, Barboni AR. Assistência Farmacêutica no Sistema Único de Saúde: da Política Nacional de Medicamentos à Atenção Básica à Saúde [Internet]. *Ciênc Saúde Colet*. 2010;15(3):3561–7. [citado 22 set 12]. Disponível em: <https://doi.org/10.1590/S1413-81232010000900031>
34. Naves JDOS, Silver LD. Avaliação da assistência farmacêutica na atenção primária no Distrito Federal [Internet]. *Revista de Saúde Pública*. 2005; 39(2), 223-230. [citado 22 set 12]. Disponível em: <https://doi.org/10.1590/S0034-89102005000200013>
35. Canabarro IM, Hahn S. Panorama da assistência farmacêutica na saúde da família em município do interior do estado do Rio Grande do Sul [Internet]. *Epidemiol Serv Saúde*. 2009;18(4). [citado 22 set 12]. Disponível em: <http://dx.doi.org/10.5123/S1679-49742009000400004>
36. Brasil. Agência Nacional de Vigilância Sanitária. Resolução da Diretoria Colegiada (RDC) n.º 44, de 17 de agosto de 2009. Dispõe sobre Boas Práticas Farmacêuticas para o controle sanitário do funcionamento, da dispensação e da comercialização de produtos e da prestação de serviços farmacêuticos em farmácias e drogarias e dá outras providências. ANVISA, 2009.
37. Marin N, Luiza VL, Osorio-de-Castro CG & Machado-dos-Santos, S. Assistência farmacêutica para gerentes municipais. [monografia] Rio de Janeiro; Opas/OMS; 2003.
38. Lima JG, Giovanella L, Fausto MCR, Bousquat A, Silva EV. Atributos essenciais da Atenção Primária à Saúde: resultados nacionais do PMAQ-AB [Internet]. *Saúde Debate*. 2018 [citado 22 set 12]. Disponível em: <https://doi.org/10.1590/0103-11042018S104>
39. Brasil. Ministério da Saúde Projeto de Decreto Legislativo nº 701, de 19 de novembro de 2019. Sustenta a Portaria nº 2.979/GAB-MS, de 12 de novembro de 2019, que estabelece novo modelo de financiamento de custeio da Atenção Primária à Saúde no âmbito do Sistema Único de Saúde, por meio da alteração da Portaria de Consolidação nº 6/GM/MS, de 28 de setembro de 2017. *Diário Oficial da União*, Brasília, 2019.

40. Brasil. Ministério da Saúde. Portaria de consolidação nº 1, de 2 de junho de 2021. Consolidação das normas sobre Atenção Primária à Saúde. Brasília: Ministério da Saúde. 2021.
41. Tesser CD, Poli Neto P. Atenção especializada ambulatorial no Sistema Único de Saúde: para superar um vazio [Internet]. *CienSaudeColet* 2017; 22(3):941-951. [citado 22 set 12]. Disponível em: <https://doi.org/10.1590/1413-81232017223.18842016>
42. Mendes Á, Carnut L. Crise do capital, Estado e neofascismo: Bolsonaro, saúde pública e atenção primária [Internet]. *Revista da Sociedade Brasileira de Economia Política* 2020; 57:174-210. [citado 22 set 12]. Disponível em: <https://revistasep.org.br/index.php/SEP/article/view/636>