

# Architectural and communications barriers to access to primary health care in Brazil: an analysis based on the first national census of primary health care centers, 2012

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## Abstract

**Objective:** to analyze the results of the National Census of Primary Health Care Centers with regard to architectural and communication barriers in Primary Health Care throughout Brazil. **Methods:** this was a cross-sectional study based on data from the first National Census of Primary Health Care Centers conducted between May and October 2012. **Results:** the Northern region had the lowest rates of adequacy; although the Southeast region had the best rates when compared to the country's other regions, they were nevertheless unsatisfactory, since for many items adequacy was still below 50%; the items relating to accessibility by people with disabilities (5.7 to 34.2%) and/or the illiterate (0.1 to 27.4%) had very low scores. **Conclusion:** the majority of services evaluated had architectural and communication barriers, hindering access to health services by disabled, illiterate or elderly people; the importance of allocating resources to reduce inequities and improve access is stressed.

**Keywords:** Architectural Accessibility; Unified Health System; Primary Health Care; Barriers to Access of Health Services.

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## Introduction

The term "architectural barriers" refers to any type of impediment to people's locomotion, mobility or movement in urban and social spaces, thus affecting accessibility.<sup>1</sup> According to Brazilian Standard 9050 (ABNT-NBR 9050/2015), accessibility is defined as facility of movement, including physical and structural autonomy and safety of such spaces so as to enable access and use of urban infrastructure by all citizens, including those who have locomotion difficulties.<sup>1</sup> In turn, the term 'disability' is the sum of anatomical limitations (intrinsic to individuals) and social and environmental factors (external to individuals), the result of which is either limitation or accessibility.<sup>2</sup>

*In 2011 the Ministry of Health included service accessibility monitoring within this Program, by means of an assessment process to evaluate Primary Health Care management, access, social participation and health care.*

In Brazil, regulations derived from Law No. 10.048 and Law No. 10.098 were aimed at giving priority to people with special needs, whereby rules and norms for promoting accessibility were agreed to.<sup>3</sup> The 2010 Demographic Census sought to identify mental or intellectual, visual, hearing and motor disabilities as perceived by the population, whereby the results pointed to more than 45 million Brazilians reporting having at least one of the disabilities in question.<sup>4</sup> As such, considering the high number of people who need adaptations in order to fully enjoy the right to come and go, it is important to understand that social and physical environments create obstacles – physical, communication, social and/or attitude barriers – that hinder the access of this population to social life and public services, for example.<sup>5</sup>

With regard to health services, it is even more imperative that they comply with prevailing legislation about structural adequacy, in order to enable access with autonomy and resolute capacity by all citizens. In view of these demands, and given that the objective of the Program for Improving Primary Care Access and Quality (PMAQ-AB) is to improve Primary Health Care services

and care provided to the population, in 2011 the Ministry of Health included service accessibility monitoring<sup>6</sup> within this Program, by means of an assessment process to evaluate Primary Health Care management, access, social participation and health care.<sup>7</sup>

Alongside the PMAQ-AB evaluation, the first National Census of Primary Health Care Centers was also carried out. It assessed the physical structure of Primary Health Care Centers, as well as their adequacy for enabling the autonomous access of service users with reduced mobility, people with disabilities and the elderly.<sup>8</sup>

Studies on the physical structure of the country's Primary Health Care Centers are scarce. At the time this article was written, no national-scale studies had been identified in the literature. With the aim of providing information that assists the Brazilian National Health System (SUS) in planning and implementing actions to guarantee universal access to services, the objective of this study was to analyze the results of the National Census of Primary Health Care Centers with regard to architectural and communication barriers in Primary Health Care in Brazil.

## Methods

A cross-sectional study was conducted based on data from the first National Census of Primary Health Care Centers, which took place during the third stage of PMAQ-AB Cycle-1, between May and October 2012.

PMAQ-AB has evaluative stages that occurred continually and included: an adherence and agreement setting process; the development stage; external evaluation; and agreement resetting. With regard to the external evaluation, through a partnership between the Ministry of Health and teaching and research institutions, evaluators were selected, hired and worked in the field applying the evaluation instrument in Primary Health Care Centers (PHCC).

At that stage, information was collected by means of the instrument in order to analyze access and quality conditions relating to the health teams which had adhered to PMAQ. The evaluation instrument was created based on quality standards set beforehand with the participation of technical staff and based on scientific evidence.<sup>7</sup>

The National Census of Primary Health Care Centers was conducted with the aim of informing the preparation of the Primary Health Care Center Requalification Program (*Requalifica UBS*) which came into being in

2011. This program offered budget incentives so that health centers could build and renovate their facilities.<sup>8</sup>

This study analyzed questions from Module I – infrastructure of all PHCC in 2012<sup>7</sup> – of the evaluation instrument in relation to accessibility (item 1.5), measuring the variables relating to the following topics:

- PHCC entrance accessibility (external area) – variables: ‘pavement conditions and presence of doormat’, ‘non-slip paving’, ‘even paving’, ‘smooth paving’, ‘access ramp’, ‘handrail’, ‘entrance door and corridor adapted for wheelchairs’ –;
- accessibility for people with disabilities and the elderly – variables: ‘adapted WCs’, ‘grab bars’, ‘handrail’, ‘corridors and doors adapted for wheelchairs’, ‘space for wheelchairs in waiting room and reception area’, ‘adapted drinking fountains’ and ‘wheelchair available for service users’; and
- accessibility for service users who cannot read, have reduced vision and/or hearing, visual and/or hearing disability – variables: ‘use of international symbols for people with physical, visual and hearing disability’, ‘signs with words, drawings, colors or figures (visual) indicating health center areas rooms and services offered’, ‘raised lettering, Braille or raised figures (tactile)’, ‘hearing resources (audio)’, ‘staff available to assist’ and ‘other’.

The results of the study have been presented in the form of relative and absolute frequencies of the answers to the questionnaire items, by Brazilian macro-region and also showing the total for Brazil. Pearson’s chi-square test was used for association between the

country’s regions and the variables analyzed, as well as for comparing regions, taking into consideration the Bonferroni correction. The remaining results are shown in the form of descriptive statistics or tables. Statistical Package for the Social Sciences (SPSS) version 22 was used to perform statistical analysis, taking a 5% significance level.

The study was conducted in accordance with research ethics principles in force in Brazil. The study project was approved by the National Research Ethics Committee (CONEP) which is linked to the National Health Council (CNS): CONEP/CNS Opinion No. 21,904, dated March 1<sup>st</sup> 2012.

## Results

The First PHCC Census included 5,511 municipalities and assessed the infrastructure of 38,812 PHCCs.

PHCCs in the Southern and Southeastern regions achieved just over 50% adequacy in terms of accessibility for service users with regard to some architectural barriers in the external areas. In general, although its adequacy percentages were insufficient, the Southern region had the best results, while the Northern region had the worst (Table 1).

With regard to specific accessibility for people with disabilities and the elderly, few PHCCs were found to have structural adequacy, according to the items assessed (between 5.7 and 34.2%). With regard to differences between the regions, the North had the worst results, while the Southeast had the best. The item that achieved

**Table 1 – Relative frequency (%) and absolute frequency (N) of PHCC (N=38,812) having items to guarantee accessibility in the physical area outside their entrances, PMAQ-AB – first cycle –, National Territory and macro-regions, 2012**

PHCC entrance (external)	Midwest (N=2,706)	Northeast (N=14,638)	North (N=3,210)	Southeast (N=11,943)	South (N=6,315)	Brazil (N=38,812)
Pavement at the PHCC entrance is in good conditions, i.e. even level surface with no holes, easy for wheelchair users and people with special needs to move along (p<0.001)	32.4% (876) c	24.4% (3,569) d	22.0% (707) e	41.3% (4,927) a	36.0% (2,271) b	<b>31.8% (12,350)</b>
Has a doormat (p<0.001)	14.6% (394) b	13.9% (2,037) b	8.1% (260) c	13.4% (1,597) b	32.8% (2,074) a	<b>16.4% (6,362)</b>
Has non-slip paving (p<0.001)	23.4% (632) c	23.2% (3,390) c	16.2% (520) d	32.8% (3,919) b	40.6% (2,567) a	<b>28.4% (11,028)</b>
Has even paving (p<0.001)	48.1% (1,302) b	44.5% (6,513) b	41.2% (1,324) c	54.9% (6,553) a	54.6% (3,451) a	<b>49.3% (19,143)</b>
Has smooth paving (p<0.001)	40.4% (1,094) a	32.6% (4,770) c	37.1% (1,190) a.b	39.5% (4,719) a	34.7% (2,194) b	<b>36.0% (13,967)</b>
Has access ramp (p<0.001)	42.6% (1,154) b	39.1% (5,723) c	34.5% (1,109) d	49.1% (5,862) a	48.3% (3,051) a	<b>43.5% (16,899)</b>
Has handrail (p<0.001)	4.8% (129) b	5.1% (752) b	2.7% (86) c	10.6% (1,262) a	11.5% (727) a	<b>7.6% (2,956)</b>
Has entrance door and corridor adapted for wheelchairs (p<0.001)	32.8% (888) c	26.3% (3,844) d	19.6% (628) e	43.5% (5,199) b	46.3% (2,924) a	<b>34.7% (13,483)</b>

Note:

The use of the same letters on the rows of the tables shows that there is no statistically significant difference between the results, when comparing the regions. Different letters represent significant difference when comparing results between the regions. To take an example: in the ‘has a doormat’ category, there was no significant difference between the Midwest, Northeast and Southeast regions and their results were similar; however the Southern region had significant difference in relation to all other regions, with a significantly higher rating for this item.

the highest rate of adequacy was a wheelchair being available for service users, accounting for 34.2% of PHCCs. The presence of handrails, both inside and outside the PHCCs was the poorest rated item in the assessment, being present in 5.7% of the country's PHCCs (Table 2).

When comparing items by region, the results relating to accessibility for people who cannot read, people who have reduced vision and/or hearing or visual and/or hearing disabilities were of concern, varying between 0.1 and 27.4% depending on the item/region. Once again, overall, the Northern region had the worst results for these items, while the Southeast had the best. Staff available to assist was the item most present in all regions. Raised letters and figures and Braille for people with visual disability, as well as hearing resources (audio) for users with hearing disability, were practically inexistent in the country's PHCCs (Table 3).

## Discussion

In short, the Northern region had the worst rates of structural adequacy for accessibility, while the Southeast had the best rates in comparison with the country's other macro-regions. Nevertheless the results were unsatisfactory: the vast majority of the variables obtained ratings below 50%. Items relating to accessibility for people with disabilities and illiterate people also had very low ratings.

The data taken from the National Census of Primary Health Care Centers were analyzed based on three blocks of questions which provided results on accessibility at PHCCs, taking into consideration: (i) PHCC external entrance area, whereby even paving achieved the best result, although this applied to only half the services assessed; (ii) accessibility for people with disabilities

**Table 2 – Relative frequency (%) and absolute frequency (N) of PHCC (N=38,812) having items to guarantee accessibility to people with disabilities and the elderly, PMAQ-AB – first cycle –, National Territory and macro-regions, 2012**

Does the PHCC guarantee access to people with disabilities and the elderly?	Midwest (N=2,706)	Northeast (N=14,638)	North (N=3,210)	Southeast (N=11,943)	South (N=6,315)	Brazil (N=38,812)
WCs adapted, with lower toilet, accessories with a washbasin, soap and paper dispenser at a lower level, grab bars, doors that open outwards and area enabling wheelchair to maneuver (p<0.001)	12.4% (335) b	7.3% (1,073) c	6.5% (209) c	17.8% (2,130) a	13.2% (836) b	11.8% (4,583)
Presence of support bars (p<0.001)	15.9% (430) b	8.5% (1,251) c	7.2% (231) c	20.5% (2,445) a	18.2% (1,150) b	14.2% (5,507)
Presence of handrail (p<0.001)	5.2% (142) c	2.9% (422) d	2.8% (91) d	9.0% (1,057) a	7.7% (489) b	5.7% (2,219)
Corridors and internal doors adapted for wheelchairs (p<0.001)	24.1% (653) b	15.8% (2,306) c	10.7% (344) d	32.0% (3,821) a	32.1% (2,027) a	23.6% (9,151)
Internal doors adapted for wheelchairs (p<0.001)	23.9% (648) b	15.9% (2,326) c	10.5% (338) d	31.4% (3,750) a	32.0% (2,023) a	23.4% (9,085)
Space for wheelchairs in waiting room and reception area (p<0.001)	26.6% (720) c	23.3% (3,410) d	13.6% (435) e	36.3% (4,330) b	39.2% (2,476) a	29.3% (11,371)
Drinking fountains adapted (p<0.001)	10.6% (287) b	5.8% (850) d	6.6% (212) d	13.3% (1,592) a	8.4% (531) c	8.9% (3,472)
Wheelchair available for service users (p<0.001)	35.3% (954) b	17.3% (2,526) c	17.9% (576) c	50.5% (6,031) a	50.4% (3,181) a	34.2% (13,268)

Note:  
The use of the same letters on the rows of the tables shows that there is no statistically significant difference between the results. Different letters represent significant difference when comparing results between the regions.

**Table 3 – Relative frequency (%) and absolute frequency (N) of PHCC (N=38,812) having items to guarantee accessibility to service users who cannot read, have reduced vision and/or hearing, visual and/or hearing disability, PMAQ-AB – first cycle –, National Territory and macro-regions, 2012**

Does the PHCC guarantee accessibility to service users who cannot read, have reduced vision and/or hearing, visual and/or hearing disability?	Midwest (N=2,706)	Northeast (N=14,638)	North (N=3,210)	Southeast (N=11,943)	South (N=6,315)	Brazil (N=38,812)
Are international symbols for people with physical, visual and hearing disability used (p<0.001)	0.4% (11) c	0.7% (107) c	0.6% (19) c	2.4% (287) a	1.7% (109) b	1.4% (533)
Signs with words, drawings, colors or figures (visual) indicating health center areas and rooms and services offered (p<0.001)	5.5% (149) c	8.4% (1,228) b	6.8% (219) c	8.8% (1,056) b	10.8% (684) a	8.6% (3,336)
Raised lettering, Braille or raised figures (tactile) (p=155)	0.1% (4) a	0.2% (31) a	0.1% (4) a	0.3% (35) a	0.1% (9) a	0.2% (83)
Hearing resources (audio) (p<0.001)	0.2% (5) b	0.2% (34) b	0.2% (5) b	0.7% (84) a	0.3% (20) b	0.4% (148)
Staff available to assist (p<0.001)	18.6% (502) b	16.6% (2,433) b	12.0% (385) c	27.4% (3,268) a	25.4% (1,607) a	21.1% (8,195)
Other (p<0.001)	0.4% (11) b	0.4% (64) b	0.3% (9) b	1.1% (126) a	1.1% (68) a	0.7% (278)

Note:  
The use of the same letters on the rows of the tables shows that there is no statistically significant difference between the results, when comparing the regions. Different letters represent significant difference when comparing results between the regions.

and the elderly, the main finding of which is cause for concern, since only approximately one third of the country's PHCCs provide a wheelchair for service users; and (iii) accessibility for people who cannot read, people who have reduced vision and/or hearing or visual and/or hearing disabilities, which had the worst inadequacy rating out of all the items assessed.

The data presented are alarming as they unveil the lack of accessibility identified through a national survey, even more so when Primary Health Care is recognized as being responsible for organizing care and being the main entry point to SUS services. If first-time and continuing access (as proposed for SUS) has barriers, then care and resolute capacity are compromised.

Publications about architectural and communication barriers in the country's health services are considerably limited. They provide data from studies conducted in a limited number of Brazilian PHCCs, municipalities and regions. This is therefore the first study to present the reality of PHCCs all over the country with regard to architectural and communication barriers, which are faced not only by people with physical disabilities and the elderly, but rather by all Primary Health Care users. The discussion of the findings has been supported by the few studies identified in the literature and by Legislation on the subject.

With regard to architectural barriers in the external areas of the PHCCs, the results demonstrate that the item with the highest adequacy rating, in all regions, was even paving; notwithstanding, it was only identified in approximately half the services assessed.

Similarly, the literature provides results of equal concern. In an assessment of 120 PHCCs in the Southern region, 40% of them were considered to be adequate from the point of view of access by people with some form of disability. At the majority of the health centers, existing pavement conditions did not ensure the safety of people with disabilities and the elderly when crossing them.<sup>9</sup> In the state of Paraíba, in the Northeast region, 90% of the pavements of 20 health centers assessed were inadequate for people with disabilities.<sup>10</sup> In the Southeast region, service users described the external areas of PHCCs as having steps, holes in pavements and presence of other barriers to access.<sup>11</sup>

Inadequacy in relation to the different types of pavement in external areas of health centers, such as uneven surfaces, can cause risk situations for service users.<sup>1</sup> These situations are potentialized in service users

who have some degree of functional incapacity or visual disability. Not only the areas near to health centers but also public thoroughfares require urbanization projects that ensure that elderly people with reduced mobility and people with disabilities can move around in safety.<sup>12</sup>

Another aspect to be considered is that the areas surrounding PHCCs are often part of urban contexts that are unfavorable to access. The 2010 Demographic Census<sup>4</sup> revealed that a wheelchair curb ramp per urban block was available for only 5.8% of Brazilian households, whereby yet again the North and Northeast regions had the lowest percentages for this item: only 1.6% for each region. Also according to the 2010 Census, proportionally the Northeast and the North had a greater population of individuals with some form of disability. This data calls for reflection on the need for the health system to respect the principle of equity when allocating resources, public policies and investments throughout the national territory.<sup>4</sup>

This study also found the presence of doormats in 16.4% of the country's PHCCs. Doormats should be avoided on access routes and, if they are present, those responsible should ensure that they are fixed to the floor (any unevenness must not exceed 5mm), avoiding mat wrinkling and folding which could be prejudicial to people's movements.<sup>1</sup> However, the external evaluation instrument of the first National Census of Primary Health Care Centers does not provide this information, so that it is impossible to identify whether this item is adequate or inadequate.

Access ramps were identified in the external areas of 43.5% of PHCCs. However, only 7.6% of them had a handrail, providing evidence of incoherence in compliance with Brazilian Standard ABNT-NBR 9050/2015. The existence of an access ramp without a handrail having been duly installed, the absence of which is a serious problem, can lead to situations that compromise the safety of service users with physical disabilities or reduced mobility.<sup>1</sup>

The findings also demonstrate that at more than 70% of PHCCs entrance corridors and doors had not been adapted for wheelchairs. This data corroborates the findings of Facchini et al. (2006) in their study conducted in the Southern region.<sup>9</sup>

Although the South and Southeast regions had the best accessibility results, people with disabilities and their families reported the existence of architectural barriers at health centers in these regions, such as absence of adapted WCs, steep ramps and narrow corridors.<sup>11</sup> WCs

were seen as the places with the most inadequate access, with no grab bars and irregular toilet seat height.<sup>13</sup>

The results relating to the elderly and people with disabilities, in particular, demonstrate just how precarious access is. On average, only one third of the country's PHCCs, approximately, had a wheelchair available for service users. Guaranteeing elderly people's access to health services is a necessary condition, given that according to the 2010 IBGE Census they were estimated to account for 7.4% of the population.<sup>4</sup> The elderly are more vulnerable to the effects of chronic and degenerative diseases and to the development of some kind of disability arising from the process of senescence, jeopardizing even more their access to public health facilities.<sup>14,15</sup>

Falling, for instance, is one of the main events capable of causing an elderly person to have permanent or temporary functional incapacity. Extrinsic factors responsible for falls are associated with the environment, which, depending on how easy it is to move around in it, may or may not pose risks of the elderly falling.<sup>16</sup>

Reduced mobility and physical disability, along with architectural barriers, are important factors for predisposition to falling among PHCC service users.<sup>17</sup> Failure to provide service users with an environment that truly promotes their safety and autonomy is prejudicial to their health, preventing them from making use of the services offered in health centers.

Among the findings related to PHCC physical structure providing accessibility for the elderly and people with disabilities, the presence of a handrail in internal areas of health centers was the item with the worst rating as it was found to exist in only 5.7% of the entire country's health centers. Among the Brazilian micro-regions, this item was most precarious in the Northeast, scoring just 2.9%.

Furthermore, it is not just Primary Health Care that has difficulties in relation to accessibility. A study of general hospitals in Sobral, CE, found that few of them had WCs adequately equipped to meet the needs of the physically disabled nor with space to enable people using wheelchairs to get out of their wheelchairs and use the toilet. For example, none of them had horizontal grab bars to help people get out of a wheelchair and onto the toilet.<sup>18</sup> In João Pessoa, PB, household interviews were conducted with health service users who had some form of disability or permanent reduction in mobility. More than half of them stated that architectural barriers existed on the route between their homes and their usual health service, such as absence of ramps, paved roads,

handrails and pedestrian signs.<sup>19</sup> It is therefore essential to invest in the physical structure of these health centers.

Similarly, another factor to be taken into consideration as a possible architectural barrier are rented or improvised buildings with inadequate layout or precarious facilities for providing services to the population.<sup>20</sup>

Accessibility, however, does not just relate to architectural conditions. It also includes issues such as communication and information aimed at service users.<sup>21</sup>

The specific findings of this study regarding accessibility for people with some kind of visual or hearing disability or the illiterate are however of greater concern, given that it was found to be inadequate for all items assessed. Moreover, few publications about communication and assistance to people with these characteristics were found in the literature. Of the 38,812 PHCCs assessed, only 83 (0.2%) had letters in Braille or raised figures, demonstrating health service inadequacy in its approach and provision of information to service users with visual disabilities.

Access by people with any kind of sensory disability should be promoted by implementing actions in PHCCs that ensure communication and internal layout that is adequate to their needs.<sup>22</sup> At a PHCC studied in the state of Goiás, for example, no international access symbol was found.<sup>13</sup> These symbols should be used in order to indicate what accessible means are available to people with disabilities or reduced mobility.<sup>1</sup>

With regard to direct and personal communication with service users, it is fundamental for health workers to be trained to be receptive to all SUS service users, including people with hearing and/or visual disability. In this sense, providing or enabling specialized training for health workers would lead to service provision being more equalitarian, universal and comprehensive.<sup>23</sup>

The results of this study demonstrated the inadequacy of consideration of the needs of people with disabilities. This form of assistance is an indispensable tool for health care humanization and when it is absent it represents one of the weaknesses of health services.<sup>24</sup> Health system universality should be guaranteed, redirecting the core pivot of activities in health centers from the performance of doctors, promoting reorganization of the work process, heightening the relationship of all health workers involved with service users, in order to achieve humanization and value citizenship in Public Health.<sup>25</sup>

Indeed, despite the efforts and actions undertaken by the State to eliminate architectural and other barriers

and thus promote the access of people with disabilities or with reduced mobility or locomotion difficulties, the dimension of lack of structural compliance with Brazilian Standards (ABNT) is cause for concern. Complexity in the diversity of disabilities is recognizable and represents a big challenge in meeting all the needs these demands require. Actions to interfere in this reality are urgently needed, in order to achieve service provision in accordance with Brazilian Standard ABNT-NBR 9050/2015, the main aim of which is to enable, in an autonomous, independent and safe manner, use of buildings, furniture and fittings and urban facilities by the largest possible number of people regardless of whether they have limitations.<sup>1</sup> Putting these standards into place promotes the autonomy of disabled and elderly service users, especially the latter who are increasing in numbers proportionally to the rest of society owing to increased life expectancy of the general population.<sup>15</sup>

It is important to take a more comprehensive view of people with disabilities and/or locomotion difficulties, whereby health facilities should obey the criteria established by law.<sup>22</sup> Law No. 10,098/2000 makes such accessibility criteria explicit, showing which obstacles should be removed in order to ensure the access of all citizens to urban facilities.<sup>26</sup>

The Brazilian National Health System (SUS) was founded on the principles of comprehensiveness, universality and equity and provides for real possibilities for the inclusion of service users with disabilities, from the point of view of accessibility.<sup>23</sup> Nevertheless, as demonstrated, the majority of the country's PHCCs do not have physical structure and communication structure that provides accessibility for service users who have locomotion difficulties, thus hindering the social life of these service users/citizens, jeopardizing their independence and autonomy, their right to full access to Health as guaranteed by the Constitution. Public building accessibility, whether these are in the process of being built, enlarged or refurbished, should be considered in such a way as to offer minimum conditions for exercising this right.<sup>27</sup>

In order to reaffirm with even more emphasis the difficulties faced by public health services in guaranteeing this right, the historical and political context of the SUS and how its current crisis has been built need to be understood based on two issues: (i) health service underfunding right from the start; and (ii) the public/private relationship.<sup>28</sup>

As the SUS is universal, it faces several challenges to its subsistence and efficacy, principally with regard to low per capita investment in it when compared to international recommendations.<sup>28</sup>

The SUS is increasingly facing underfunding. In 2015, Constitutional Amendment (CA) No. 86/2015 reduced the percentage investment of the federal government's current net income, resulting in the loss of billions in public health investments.<sup>29</sup> This was followed by the effects of another constitutional amendment, CA-95, approved in December 2016. Although health service reality demonstrates a concrete need for more investment, efforts to achieve the most accessible, resolute, humanitarian and fair health service possible – especially with regard to access to it – are thwarted by CA-95, which is yet another impediment to achieving these goals: it establishes a 20-year limit for Federal Government primary expenditure (including expenditure on Health),<sup>30</sup> resulting in a setback for investment in a sector that is so important for the Brazilian population.

Furthermore, Provisional Measure No. 727 increases economic privatization and puts the assets of state-owned companies at the service of the interests of private capital.<sup>28</sup> In addition to these legal initiatives, other proposals and bills of law aim to minimize the State's governability and autonomy in managing public systems and policies, taking away the achievements of democratic society – as is the case of public, universal and free of charge Health services –, leading to a minimum State and commercialization of social rights, claiming that public policies for all are unfeasible and even blaming them for the economic crisis, without allowing the legitimacy of this justification to be challenged.<sup>28</sup>

While tools such as PMAQ-AB were created in order to guarantee the transfer of funds for Health, especially Primary Care within the SUS, a scenario is now faced of deconstruction or even dismantling of constitutional guarantees and rights, reflected in the measures to freeze public expenditure and allow greater penetration of foreign capital in the area of Health. Current epidemiological reality, together with forecasts for the future based on population aging, increased occurrence of chronic diseases in society and – particularly in the case of this study – greater use of health services by the elderly and people with mobility, hearing and/or visual disabilities, imposes the need to ensure health center structure adequacy that does indeed allow their equitable access to services, with the greatest possible autonomy. Unfortunately, this goal has become far-removed from the reality of the Brazilian population. Fighting for equity and democratic access is fundamental in order to improve access to health services in Brazil and change current reality.

## Authors' contributions

Santos MLM, Fernandes JM and Sanches VS contributed to the conception and design of the study, analysis and interpretation of the results, writing and critically reviewing the manuscript. Souza AS and Christofolletti G contributed to data analysis and interpretation, writing and critically reviewing the manuscript. Vicente DP, Simionatto J and Merey LF contributed to the conception and design of the study, writing and critically reviewing the manuscript. All the authors have approved the final version of the manuscript and are responsible for all aspects thereof, including guaranteeing its accuracy and integrity.

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