








## Access to primary healthcare services by people with disabilities\*

### Acesso aos serviços de Atenção Primária à Saúde por pessoas com deficiência

#### How to cite this article:

Oliveira PMP, Silva GM, Silva NO, Aquino SMC, Viana DA, Costa EC, et al. Access to primary healthcare services by people with disabilities. Rev Rene. 2023;24:e91538. DOI: <https://doi.org/10.15253/2175-6783.20232491538>

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\*Extracted from the dissertation "Situação de saúde e distribuição espacial de pessoas com deficiência por Unidade Básica de Saúde no município de Redenção/CE," Universidade da Integração Internacional da Lusofonia Afro-Brasileira, 2021.

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**Conflict of interest:** the authors have declared that there is no conflict of interest.

EDITOR IN CHIEF: Ana Fatima Carvalho Fernandes  
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#### ABSTRACT

**Objective:** to analyze the access of people with hearing, physical, and visual disabilities to primary healthcare services. **Methods:** a cross-sectional study was conducted with 250 participants, and data collection was implemented in three stages: contact with the health department, locating the residences of persons with disabilities within the coverage area of the primary healthcare unit, and analysis of integrated data. **Results:** there was a predominance of older individuals, individuals of non-white race/ethnicity, males, and those who were either married or in a consensual union. Self-transportation, including cars, motorcycles, or bicycles, was the primary means of access to services, followed by walking. Most individuals sought health services within six months, followed by those who sought care between six months and one year, mainly because of chronic or worsening conditions. **Conclusions:** impaired access was identified, as evidenced by multiple barriers, including transportation, architectural, and communication barriers. **Contributions to practice:** it is important to consider the disparities, vulnerabilities, and health status of the disabled population in health care.

**Descriptors:** Health Services Accessibility; Disabled Persons; Primary Health Care; Health Vulnerability.

#### RESUMO

**Objetivo:** analisar o acesso de pessoas com deficiência auditiva, física e visual às Unidades Básicas de Saúde da Atenção Primária de Saúde. **Métodos:** estudo transversal, realizado com 250 participantes e com coleta de dados implementada em três etapas: contato com a secretaria de saúde; busca das moradias das pessoas com deficiências dentro da cobertura da Atenção Primária e análise dos dados integrados. **Resultados:** houve predominância de idosos, com cor/etnia não branca, do sexo masculino e casados/em união consensual. Com relação ao acesso aos serviços, o principal meio de transporte utilizado foi o próprio, seja carro, moto ou bicicleta, seguido da deambulação. A maioria das pessoas procurou serviços de saúde dentro do prazo de seis meses, seguida daqueles que buscaram atendimento no período entre seis meses e um ano, principalmente devido a doenças crônicas ou condições agravadas. **Conclusão:** verificou-se acesso prejudicado, evidenciado por algumas barreiras, como de transporte, arquitetônicas e comunicacionais. **Contribuições para a prática:** importante observar as iniquidades, vulnerabilidades e condições de saúde do público com deficiência, intrínsecas à assistência de saúde.

**Descritores:** Acesso aos Serviços de Saúde; Pessoas com Deficiência; Atenção Primária à Saúde; Vulnerabilidade em Saúde.

## Introduction

Social and health barriers exist and can contribute to access difficulties for people with special needs, including people with disabilities. Because of their vulnerability, people with disabilities are more susceptible to health problems and face more barriers when seeking health care. These barriers include transportation, architectural, attitudinal, communication, and socioeconomic barriers, all of which impede access to health care<sup>(1)</sup>.

Social and health barriers, discrimination, and social exclusion pose significant challenges to the accessibility of health services, especially in the context of primary healthcare (PHC) for persons with disabilities<sup>(2)</sup>. In this context, health systems should provide comprehensive health services to all users, whether or not they need specific services<sup>(3)</sup>.

It is estimated that approximately 1 billion people worldwide have and live with some form of disability, representing 15% of the population<sup>(1)</sup>. In addition, the number of people with disabilities is expected to increase due to their association with an aging population, increased risk of chronic non-communicable diseases (NCDs), and accidents<sup>(4)</sup>. Therefore, the quantitative increase is expected to be progressive, with implications for quality of life.

Given the increase in the aforementioned public health problems, health services must monitor these individuals as the prevalence of NCDs increases. Among the most prevalent in the public health landscape are hypertension and diabetes mellitus (DM), which require frequent and continuous monitoring<sup>(4)</sup>. This, in turn, serves as a fundamental indicator for policy evaluation and planning and supports the development of health interventions and programs that improve the perception of disease and the quality of life of patients<sup>(5)</sup>.

Thus, PHC continues to serve as the main gateway to the Unified Health System (SUS in Portuguese), which is widely distributed in health regions and is the primary level of care for the management of these diseases. In addition, PHC ensures continui-

ty of care, considering all health determinants and conditions, and guarantees access to health care, the expansion of individual autonomy, and the capacity to build individual and collective care<sup>(6)</sup>. Understanding the profile of the population served by PHC allows for an understanding of the determinants and conditions to provide adequate care to meet health needs.

Regarding the access of persons with disabilities to PHC through primary healthcare units (PHCUs), continuous assessments should be carried out to ensure that this clientele has access to services comprehensively and equitably. In addition, there is a need for health assessments to ensure appropriate assistance to this population since understanding the reality of the population and their needs in terms of service utilization is essential for the comprehensiveness of care. Therefore, the objective was to analyze the access of people with hearing, physical, and visual disabilities to primary healthcare services.

## Methods

Cross-sectional research was conducted in a municipality in the State of Ceará, located in the Maciço de Baturité region, about 75 km from the capital of Ceará, Fortaleza. The research was carried out from December 2020 to April 2021 and involved 14 PHCUs in the municipality. All of them were constituted by a Family Health Team.

Out of the 393 individuals with disabilities registered in the PHCUs within the municipality, we selected a study sample comprising 250 people. This sample included individuals with visual, auditory, and physical (motor) disabilities. The snowball sampling technique was used because of its specificity for studies involving populations that are difficult to reach or have special characteristics<sup>(7)</sup>. The strategy was used until saturation was reached, i.e., no more referrals were received.

The exclusion criterion considered individuals with multiple disabilities, i.e., two or more disabilities. In addition, there were seven refusals to participate (three individuals with auditory disabilities, three

with motor disabilities, and one with visual disabilities). There were no dropouts in the study.

Data collection was done in three stages. In the first stage, telephone contact was made, and the project was sent to the Municipal Health Department and the Coordination of Primary healthcare in the municipalities as an intermediary contact with the PHCUs to request the support of Community Health Agents (CHAs). The CHAs played an essential role in the study by acting as intermediaries between the researchers and the users, facilitating the identification of these participants, and assisting with the registration forms.

The second stage involved locating the homes of people with disabilities within the Family Health Teams coverage areas. Many of the visits were accompanied by the CHAs from the relevant PHCU and were scheduled in advance to avoid unnecessary visits, fatigue, and potential absenteeism, totaling approximately 400 visits. After introducing the researchers and the project, a duplicate printed consent form and/or assent form was provided. Forms developed by the researchers themselves, based on validated health situation analysis materials from the Ministry of Health, were used to collect socio-demographic profiles and access/utilization of PHC health services by people with disabilities<sup>(8)</sup>.

It is worth emphasizing that in a previous study, training was provided to the CHAs in the region through an educational activity on visual impairment, inclusion, assistive technology, and accessibility (Extension Project). The training lasted 40 hours, with four hours of theory covering concepts related to people with disabilities, accessibility, inclusion, and assistive technology, followed by 36 hours of practice involving home visits to people with visual impairments within the CHA area of operation<sup>(9)</sup>. This action was of great importance in this phase of the study, as it facilitated more effective identification of persons with disabilities by the CHAs.

The third stage involved the analysis of integrated data for situational diagnosis and knowledge of the profile and health status of people with disabilities, linking the PHCU and the Ministry of Health.

Data were collected through forms with items on the profile, resulting in the following variables: age, race/ethnicity, sex, marital status, education, type, cause and duration of disability, and diagnosed diseases. Items related to access resulted in variables such as mode of transportation used to reach the PHCU, home visits, frequency and reasons for seeking care, participation in health programs, and care provided by nursing professionals, the Family Health Support Center, and primary care.

Descriptive data collected through the forms were transcribed into Microsoft Excel spreadsheets. Quantitative data were processed using Epi Info version 7 with appropriate descriptive statistical analysis. Pearson's chi-squared test and likelihood ratios were used to analyze the association between access and use of PHCU services and the type of disability among participants.

The ethical aspects of research were respected following Resolution No. 466/2012. The study was approved by the Research Ethics Committee of the Universidade da Integração Internacional da Lusofonia Afro-Brasileira, with opinion No. 4,384,493/2020 and Certificate of Ethical Appreciation No. 39270220.0.0000.5576.

## Results

The study included 250 individuals with disabilities. Of these, 127 (50.8%) were aged 60 years or older, 194 (77.6%) were of non-white race/ethnicity, 147 (58.8%) were male, and 112 (44.8%) were married or in a consensual union. In terms of education, those who had completed elementary school predominated (116; 46.4%); however, there were a significant number of illiterate individuals (102; 40.8%).

Regarding the type of disability, 149 (59.6%) individuals had physical/motor disabilities, 69 (27.6%) had visual disabilities, and 32 (12.8%) had hearing disabilities. No intellectual/mental disabilities were identified. The most common cause of disability was acquired in 203 (81.2%) cases, followed by congenital in 47 (18.8%) cases. Of those with acquired disabili-

ties, 152 (60.8%) were due to complications of illness, 39 (15.6%) to accidents and 12 (4.8%) to other causes. Regarding the time since the acquisition of the disability, 33 individuals (13.2%) had been disabled for more than five years, and 111 individuals (44.4%) had been disabled for more than ten years.

Of the participants, 197 (78.8%) reported having some form of disease. The most prevalent disease among people with disabilities in the community was

hypertension in 125 (50%) cases, followed by musculoskeletal disorders in 88 (35%) cases, diabetes mellitus (DM) in 63 (25%) cases, and mental disorders in 50 (20%) cases.

Table 1 shows the variables related to the assessment of access to and use of PHCU services by people with disabilities in the community. It is noteworthy that both Family Health Strategy (FHS) and Primary healthcare (PHC) had 100% coverage.

**Table 1** – Access and use of services at Primary healthcare Units by people with disabilities (n=250). Redenção, CE, Brazil, 2022

Variables	n (%)	Confidence Interval (95%)	Type of disability			p-value
			Visual (n=69) n(%)	Auditory (n=32) n(%)	Physical (n=149) n(%)	
Which are the primary means of transport you use to access the Primary healthcare Unit?						0.000*
On foot	72 (28.8)	23.27 - 34.84	33 (47.8)	16 (50.0)	23 (15.4)	
Public transportation	9 (3.6)	1.66 - 6.72	3 (4.3)	-	6 (4.0)	
Municipality-provided transportation	27 (10.8)	7.24 - 15.32	2 (2.9)	1 (3.1)	24 (16.1)	
Private transportation (car/motorcycle/bike)	83 (33.2)	27.39 - 39.41	19 (27.5)	8 (25.0)	56 (37.6)	
Chartered transportation (car/motorcycle)	59 (23.6)	18.48 - 29.36	12 (17.4)	7 (21.9)	40 (26.8)	
Do you receive home visits from community health agents?						0.011†
No	24 (9.6)	6.25 - 13.95	13 (18.8)	1 (3.1)	10 (6.7)	
Yes	226 (90.4)	86.05 - 93.75	56 (81.2)	31 (96.9)	139 (93.3)	
Do you receive home visits from other family health strategy team members?						0.015†
No	122 (48.8)	42.45 - 55.18	39 (56.5)	21 (65.6)	62 (41.6)	
Yes	128 (51.2)	44.82 - 57.55	30 (43.5)	11 (34.4)	87 (58.4)	
Frequency of visiting the Primary healthcare Unit						0.989*
Within the last six months	173 (69.2)	63.07 - 74.86	48 (69.6)	21 (65.6)	104 (69.8)	
More than six months to a year	35 (14.0)	9.95 - 18.93	9 (13.0)	5 (15.6)	21 (14.1)	
More than a year ago	30 (12.0)	8.24 - 16.69	8 (11.6)	5 (15.6)	17 (11.4)	
Never	12 (4.8)	2.50 - 8.23	4 (5.8)	1 (3.1)	7 (4.7)	
Reasons for visiting the Primary healthcare Unit						0.191*
Due to illness or worsening health	203 (81.2)	75.80 - 85.85	53 (76.8)	23 (71.9)	127 (85.2)	
Participating in health education programs	35 (14.0)	9.95 - 18.93	12 (17.4)	8 (25.0)	15 (10.1)	
Never	12 (4.8)	2.50 - 8.23	4 (5.8)	1 (3.1)	7 (4.7)	
Do you participate in any primary care program?						0.985†
No	29 (11.6)	7.91 - 16.23	8 (11.6)	4 (12.5)	17 (11.4)	
Yes	221 (88.4)	83.77 - 92.09	61 (88.4)	28 (87.5)	132 (88.6)	
Do you participate in the Hiperdia program?						0.383†
No	117 (46.8)	40.49 - 53.19	34 (49.3)	18 (56.3)	65 (43.6)	
Yes	133 (53.2)	46.81 - 59.51	35 (50.7)	14 (43.8)	84 (56.4)	
Do you participate in the basic care program for women's or men's health?						0.714†
No	225 (90.0)	85.59 - 93.42	61 (88.4)	28 (87.5)	136 (91.3)	
Yes	25 (10.0)	6.58 - 14.41	8 (11.6)	4 (12.5)	13 (8.7)	
Do you have access to Nursing Care at the Primary healthcare Unit?						0.654†
No	39 (15.6)	11.33 - 20.70	13 (18.8)	4 (12.5)	22 (14.8)	
Yes	211 (84.4)	79.30 - 88.67	56 (81.2)	28 (87.5)	127 (85.2)	
Do you have access to care by NASF-AB professionals?‡						0.000†
No	178 (71.2)	65.16 - 76.73	59 (85.5)	27 (84.4)	92 (61.7)	
Yes	72 (28.8)	23.27 - 34.84	10 (14.5)	5 (15.6)	57 (38.3)	

\*Pearson chi-square; †Likelihood ratio; ‡NASF-AB: Expanded Center for Family Health and Primary Care

The results in Table 1 show that most individuals used their own transportation to the PHCU (83; 33.2%), whether by car, motorcycle, or bicycle, followed by those who walked to the PHCU (72; 28.8%). In addition, 173 people with disabilities (69.2%) sought care at PHCU within the past 6 months. Of the situations that led to seeking care at the PHCU, 203 were related to illness or health problems (81.2%). Regarding home visits by community health workers (CHWs), 226 (90.4%) participants reported receiving them. Regarding home visits by other members of the Family Health Team (FHT), 128 (51.2%) denied receiving this type of visit.

Among the programs offered at the PHC, 221 (88.4%) persons with disabilities participated in some programs offered by the community PHC. The program for controlling hypertension and diabetes mellitus had 133 (53.2%) participants with disabilities. It is important to note that almost all respondents (225; 90.0%) reported not participating in any health programs for women or men. The majority of participants confirmed having access to care from nursing professionals (211; 84.4%), although 178 (71.2%) individuals denied having access to professionals from the Expanded Center for Family Health and Primary Care (NASF-AB in Portuguese).

Statistically significant differences were found between the type of disability and the mode of transportation used to reach the PHCU ( $p=0.000$ ), receiving home visits from CHAs ( $p=0.011$ ), receiving home visits from other members of the Family Health Team ( $p=0.015$ ), and receiving care from NASF-AB professionals ( $p=0.000$ ).

## Discussion

Evaluating the accessibility of services to people with disabilities becomes relevant because the lack of accessibility violates the right to comprehensive and equitable health care in the Brazilian Unified Health System. Therefore, it is necessary to understand the population with greater health needs and to offer services capable of addressing these specificities<sup>(10)</sup>.

In the results, it was observed that slightly more than half of the participants were elderly. In clinical practice, there is an association between older age and disability. This relationship may be related to the increasing rates of disease and the aging of the world's population, as the vulnerability of this group becomes apparent and poses a higher health risk. Studies suggest that the functional impairments contributing to disability may extend to other aspects related to age, gender, chronic disease, rural residence, and discrimination<sup>(11-14)</sup>.

Race/ethnicity should be another aspect analyzed, especially in the Brazilian context, characterized by intense miscegenation. The results show a preponderance of non-whites, consistent with the most recent data from the Brazilian Institute of Geography and Statistics. According to these data, 73.4% of the inhabitants of the state of Ceará identified themselves as black, while 71.6% identified themselves as mixed race concerning the total population<sup>(15)</sup>.

Race/ethnicity continues to be associated with the social determinants of racism, creating conditions of disadvantage in health, education, income, and intersectoral opportunities. When race/ethnicity is correlated with disability, social inequalities are exacerbated. This is because ethnicity and disability share vulnerability factors that make these social groups less accessible within society, particularly in the context of health care<sup>(16)</sup>.

This vulnerability is reflected in the difficulty of accessing health services, as these individuals are reluctant to seek help for fear of not receiving health care that meets their needs. They also feel vulnerable to discriminatory actions based on stereotypes, which can affect the quality of care provided by health services<sup>(17)</sup>.

The higher the level of education of the Brazilian population, the lower the representation of people with disabilities<sup>(18)</sup>. This confirms the results of this study, which showed a significant number of people with limited education beyond primary school or who were illiterate. These individuals face limited

access to education, often placing them in the realm of “ableism”. This derogatory term has been associated with people with disabilities over the years and is responsible for perpetuating exclusion, prejudice, and discrimination through judgments directed at this population<sup>(19)</sup>.

Clearly, most people with disabilities travel to the municipal PHCU. However, they face difficulties. As the results show, the main modes of transportation are by private vehicle or on foot. Transportation was identified as a barrier to accessing services at all levels of care, whether due to a lack of available vehicles or the cost of transportation, a reason similar to that of study participants<sup>(20)</sup>. In addition, many of these individuals live in rural areas, making it difficult for them to travel to PHCU due to long distances, inadequate transportation infrastructure, or the need for family or private accompaniment.

The Brazilian Inclusion Law, which defines the Statute of Persons with Disabilities, identifies six types of barriers that can impede access to health services for persons with disabilities, including those related to transportation and those of an urban and architectural nature, which are interrelated<sup>(19)</sup>. Architectural and transportation barriers affect access to health services.

Distance to PHCU hinders access due to expensive transportation costs and inadequate infrastructure, which includes issues related to the construction and quality of facilities for inclusion<sup>(21-22)</sup>. Therefore, for these individuals, both transportation and adequate infrastructure are rights guaranteed by law and constitute the constitutional right to mobility, a starting point for realizing other rights guaranteed by affirmative action.

These individuals are more likely to develop non-communicable chronic diseases, particularly hypertension and diabetes mellitus. Such diseases remain a global public health challenge and, if not properly controlled, can lead to serious complications, especially in vulnerable groups, which may contribute to the onset of disability or aggravate existing disabilities, making daily living difficult<sup>(23)</sup>. People with di-

sabilities are more susceptible to comorbidities and consequently have a higher likelihood of developing acquired disabilities, which explains the high number of causes of disease complications<sup>(24-25)</sup>.

The study findings showed that most participants attended the Hiperdia program, designed to organize, provide medication, and monitor people with hypertension and diabetes. This is evidenced by the large number of participants who visited Hiperdia within the last six months, which is the recommended maximum time interval for these users to visit the unit<sup>(26)</sup>. Hypertension and diabetes control programs contribute to the health care of people affected by these diseases. They are essential indicators for evaluating strategies, planning, gaining better insight into diseases, and identifying vulnerabilities, especially among people with disabilities<sup>(5)</sup>.

In light of these findings, PHC is the main ally in controlling these diseases by providing care based on targeted programs. It is responsible for addressing various health issues and ensuring continuity of care through follow-up consultations, routine examinations, distribution of medicines, health counseling, and other needs<sup>(6)</sup>.

There was clear underperformance in other areas of PHC programs, such as women’s and men’s health (sexual and reproductive health). It is worth emphasizing the need to communicate the importance of these programs for health and to encourage people with disabilities to become advocates for their own health, as these programs are designed to screen and prevent diseases that affect women and men<sup>(27)</sup>.

Regarding the use of the PHC program by men, this study identified a deficit that impacts their health promotion. This finding corroborates the identification of difficulties in adherence to the men’s health program, with the pandemic period exacerbating this disparity<sup>(28)</sup>. It also underscores the importance of better training of professionals and implementation of health education.

The link with nursing professionals was evident in the study, demonstrating the pursuit of effective health care. According to the National Primary

Care Policy, the role of the nursing team in primary care is essential and includes health promotion, disease prevention, treatment, and health rehabilitation<sup>(6)</sup>. Consequently, the nurse becomes closer to the user and the family, which emphasizes the importance of being involved in health care and in partnership with the NASF-AB, enhancing the provision of care.

Given the context of people with disabilities in this study, it is crucial that nursing care is integrated, demonstrating a commitment to the inclusion of these individuals in access to health care. Home care visits should be made more effective. This will ensure the full exercise of the right to access health care for this population, involving the entire health care team and strengthening the multidisciplinary approach during home visits. Furthermore, this approach must consider the specific needs of the population and reduce the costly expenses associated with transportation.

### Study limitations

The data analysis noted that other variables may have influenced the access results found, not necessarily the socio-demographic characteristics of the participants with disabilities. However, as this was a descriptive study, causal relationships could not be established. Therefore, the results should be interpreted in light of the possible influence of other factors, such as the structure of the healthcare system and territorial differences, which affect the performance of family healthcare teams.

### Contributions to practice

Observing the inequalities, vulnerabilities, and health conditions of the population with disabilities is an integral part of health care. Considering the findings, it can be observed that these individuals still have limited access to PHC, evidenced by barriers that should be minimized through the practice of public policies, programs, and principles of the Brazilian Unified Health System.

Based on the study, it is relevant to expand the assessment of access to health care for these individuals in other municipalities, states, and the country to collaborate to improve the quality of care.

### Conclusion

It was found that people with disabilities have access to primary healthcare services, but this access is still limited, as evidenced by some barriers such as transportation, architectural, and communication barriers. In addition, there is a need to increase the dissemination of information about various healthcare programs to enable people to monitor their health status and promote self-care. There is a need to increase the frequency of home visits by other health professionals to provide comprehensive health monitoring.

### Authors' contributions

Conception and design or analysis and interpretation of data: Oliveira PMP, Silva GM.

Writing of the manuscript or critical revision of the relevant intellectual content: Oliveira PMP, Silva GM, Silva NO.

Final approval of the version to be published: Oliveira PMP.

Agreement to be responsible for all aspects of the manuscript related to the accuracy or integrity of any part to be investigated and resolved: Aquino SMC, Viana DA, Costa EC, Oliveira ASS.

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