

ACCESSIBILITY FOR THE DIAGNOSIS OF HYPERTENSION IN PRIMARY HEALTH CARE

Acessibilidade ao diagnóstico de hipertensão arterial na atenção primária à saúde

Accesibilidad al diagnóstico de la hipertensión en la atención primaria a la salud

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ABSTRACT

Objective: To analyze the accessibility to the diagnosis of hypertension in Primary Health Care. **Method:** cross-sectional study with 417 people living in a municipality located in the northwest of Paraná state. Data collection took place between February and June 2016, through an adapted and validated instrument to evaluate the services offered to people with hypertension in Primary Health Care. In the data analysis, descriptive and inferential statistics were applied. **Results:** we found dissatisfaction with the time spent traveling to health services, the need to seek care more than three times to receive the diagnosis, the waiting time over 60 minutes to be attended by and the delay or loss of work day. **Conclusion:** these findings reflect the importance of reorganizing the management and planning of health actions, with a view to making public health services more equitable, resolute and longitudinal.

Descriptors: Hypertension, Health services accessibility, Diagnostic, Primary health care, Nursing.

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RESUMO

Objetivo: Analisar a acessibilidade ao diagnóstico da hipertensão arterial na Atenção Primária à Saúde. **Método:** estudo transversal, realizado com 417 pessoas, residentes em um município localizado no noroeste do estado do Paraná. A coleta de dados ocorreu entre fevereiro a junho de 2016, por meio de um instrumento adaptado e validado para avaliação dos serviços ofertados a pessoas com hipertensão arterial na Atenção Primária à Saúde. Na análise dos dados, aplicou-se estatística descritiva e inferencial. **Resultados:** constatou-se insatisfação quanto tempo gasto para deslocar-se até os serviços de saúde, necessidade de procurar atendimento por mais de três vezes para receber o diagnóstico, tempo de espera superior a 60 minutos para ser atendido e atraso ou perda de dia de trabalho. **Conclusão:** tais achados refletem a importância de reorganizar a gestão e o planejamento de ações de saúde, com vistas a tornar os serviços de saúde pública mais equânime, resolutivo e longitudinal.

Descritores: Hipertensão, Acesso aos serviços de saúde, Diagnóstico, Atenção primária à saúde, Enfermagem.

RESUMEN

Objetivo: Analizar la accesibilidad al diagnóstico de hipertensión en Atención Primaria de Salud **Método:** estudio transversal con 417 personas que viven en un municipio ubicado en el noroeste del estado de Paraná. La recolección de datos se realizó entre febrero y junio de 2016, a través de un instrumento adaptado y validado para evaluar los servicios ofrecidos a las personas con hipertensión en Atención Primaria de Salud. En el análisis de datos, se aplicaron estadísticas descriptivas e inferenciales. **Resultados:** encontramos insatisfacción con el tiempo dedicado a viajar a los servicios de salud, necesitamos buscar atención más de tres veces para recibir el diagnóstico, tiempo de espera de más de 60 minutos para ser atendido y retraso o pérdida del día. Yo trabajo **Conclusión:** estos hallazgos reflejan la importancia de reorganizar la gestión y planificación de las acciones de salud, con miras a hacer que los servicios de salud pública sean más equitativas, resueltos y longitudinales.

Descriptores: Hipertensión, Accesibilidad a los servicios de salud, Diagnóstico, Atención primaria de salud, Enfermería.

INTRODUCTION

Arterial hypertension (AH) is a chronic disease of multifactorial origin, whose main characteristics are high and sustained blood pressure levels. Morbidity is associated with functional and, in some cases, structural changes in target organs such as the heart, kidneys, blood vessels and brain, causing metabolic effects that increase the risk of people acquiring cardiovascular dysfunction resulting in hospitalizations, disabilities and death.¹⁻²

The Brazilian Society of Hypertension (BSH) assumes AH from 140 X 90 mmHg or higher.¹ However, the American College of Cardiology and the American Heart Association launched in 2018 new guidelines for clinical practice, which define hypertension as systolic blood pressure (SBP) of 130-139 mmHg and diastolic blood pressure (DBP) of 80-89 mmHg.² This change was based on observational studies and meta-analyzes that associated pressure inadequacy at higher risk of developing coronary

heart diseases and a stroke.²

In Brazil, it is estimated that the prevalence of hypertension is 24% in adults, and represents one of the main demands of Primary Health Care (PHC), a model of organization of the Unified Health System (SUS), which has achieved positive results in many ways, such as: organization; effectiveness in coping with chronic conditions; cost-effective procedures, combined with quality and equitable care to prevent health problems and promote health.³⁻⁴

Although AH is one of the most commonly encountered health problems in PHC services, health teams face obstacles to early diagnosis and follow-up treatment.⁵ Difficulties are due to deficiencies in care, such as inadequate use of technologies, the need for management models and methods that emphasize continued education for the improvement of health practices.^{1,6} Nevertheless, there are obstacles that are characterized as barriers to public health, as they make it difficult for users to seek PHC services such as: geographical barriers, commuting time, need for public transport and low purchasing power.⁷⁻⁸

In this sense, early access to the diagnosis of hypertension is a fundamental factor to minimize complications and contribute to the maintenance of people's health and to reduce expenses with hospital services.⁸ This fact tends to provide adequate care to detect and minimize health demands, reducing morbidity complications, health effects and, consequently, generating better quality of life.⁷⁻⁸

Based on the above, considering issues surrounding the process of diagnosing AH and client access to PHC, this study is based on the following question: considering PHC services in a Brazilian municipality, whose population coverage is close to 70%, what is the satisfaction regarding accessibility to the diagnosis of AH? To answer this question, the objective was to analyze the accessibility to the diagnosis of arterial hypertension in Primary Health Care.

METHODS

Cross-sectional study, taken from a larger project, carried out in a municipality in southern Brazil. The population of the study site is estimated at 403,063 inhabitants and has a decentralized organized primary health system, with 34 Basic Health Units (BHU) and 74 Family Health Strategy (FHS) teams. These allied services represent population coverage of 68.01%.⁹

The study population consisted of FHS users undergoing therapy for hypertension, duly registered in the follow-up program of people with hypertension and/or diabetes *Mellitus* (DM) of the SUSHIPERDIA outpatient network. Inclusion criteria were: being over 18 years old, living in the urban area and, at the time of data collection, they had received care by health professionals from the BHU, in the last six months, prior to data collection. Pregnant

women were excluded because they were followed by another program, disconnecting from HIPERDIA and due to the need for data collection regarding anthropometric variables.

For sample calculation, stratified random sampling was applied. A total of 27,741 users with hypertension were considered, regarding an estimation error of 5% and a confidence interval of 95%, plus an error of 15% for eventual losses. The sample size corresponded to 437 people, which were stratified according to the number of calls registered in each BHU. In the end, a sample of 417 users with AH was obtained for this study.

Data were collected from February to June 2016, during the opening hours of the BHU and HIPERDIA meetings, through individual interviews, in a comfortable and privacy-friendly place, and application of two instruments. The interviews were conducted by a research team composed of equally trained master's and doctoral nurses. The first instrument obtained data on the purchasing power of participants, as indicated by the Brazilian Association of Research Companies (ABEP), which classifies the economic strata in AB, C, DE.¹⁰

The second one consisted of a questionnaire of "Primary care assessment for people with arterial hypertension", adapted and validated for Brazil, guided by the Primary Health Care Assessment (PCATool) instrument, which allows to investigate the quality of the services provided to the user who has AH, in PHC.¹¹ This instrument brings together seven primary dimensions/domains of PHC, namely: accessibility to diagnosis; accessibility to treatment; adhesion/bond; cast of services; coordination; family focus and; community orientation¹¹, and in this study, the domain accessibility to diagnosis was addressed, consisting of seven indicators (**Table 1**).

Table 1: Accessibility indicators to the diagnosis of hypertension in Primary Health Care. *Paraná*, Brazil, 2016.

Indicators	Diagnostic Accessibility
11	Number of times patient / user went to health facility to diagnose AH
12	Waiting time for appointment with health professionals at the BHU
13	Waiting time of over 60 minutes to be attended at the BHU
14	Difficulties getting to the BHU
15	Time spent commuting from home to the BHU
16	Financial expenses for transportation to the BHU
17	Loss and/or delay to start work shift or appointment, to consult at the BHU

Source: (Paes, 2014).¹¹

The variables were the indicators of accessibility to the diagnosis, shown in table 1 and; a, the demand for PHC services for diagnosis of the disease. For such categorization, the results were attributed in two strata: PHC services (Basic Health Unit, Family Health Unit) and; Services without PHC characteristics and / or other services (hospitals, private offices).

The instrument referring to this domain is of the Likert type, with a single answer, on a scale with values ranging from (1) to five (5) to "never", "almost never", "sometimes",

"almost always" and "always", in addition to the options "does not apply" and "does not know / did not answer". For the purposes of this study, the responses attributed to the indicator related to the number of user returns to the BHU for confirmation of the diagnosis were dichotomized, considering the cut-off point above three returns to the health service as "inappropriate".¹⁻² For the others indicators, the interleaved values were classified from the cutoff point of the averages obtained through the analysis of variance, dividing into "yes" (≥ 4), "no" (<4 and ≥ 3) and "sometimes" (<3).⁸ For the time indicators: I2 - waiting time, I5 - time spent traveling, dichotomized into adequate and inadequate.

Data were double-tabulated in the Microsoft Office Excel 2013 spreadsheet and statistical analysis procedures were performed using IBM SPSS software version 19.0. Initially, analysis of variance was applied and then univided logistic regression, with the Forward method, in which variables with a p-value <0.20 were considered and subsequently inserted in ascending order in the multivariate model. Associations were estimated by calculating Odds Ratio (OR), with a 95% confidence interval as a measure of precision, establishing a p-value <0.05 as statistical significance.

This study followed in line with Resolution 466/2012 and was approved by the Standing Committee on Ethics in Research with Human Beings, under the opinion of number 1,407,687/2016. All participants read and signed the Free and Informed Consent Term (ICF), in two copies of equal content.

RESULTS

Among the 417 people interviewed, 260 (62.4%) were older than 60 years, 283 (67.9%) were female, 337 (80.8%) reported having less than eight years of study, 260 (62.4%) were white, 91 (21.8%) were unemployed, 243 (58.2%) lived with a partner and 183 (43.9%) belonged to economic classes C extracts (**Table 1**).

Table 1: Sociodemographic profile according to the demand for services for accessibility to the diagnosis of arterial hypertension. *Paraná*, Brazil, 2016.

	PHC n (%)	Another Service n (%)
Age		
≤ 59 years old	129 (30,9)	28 (6,7)
≥ 60 years old	198 (47,5)	62 (14,9)
Sex		
Male	107 (25,6)	27 (6,5)
Female	220 (52,8)	63 (15,1)
Education		
≤ 8 years	258 (61,9)	79 (18,9)
> 8 years	69 (16,5)	11 (2,7)
Race/Color		
White	199 (47,7)	61 (14,6)
Not White	128 (30,7)	29 (7,0)
Occupation		
Employee/Retired	251 (60,2)	75 (18,0)
Unemployed	76 (18,2)	15 (3,6)

Marital Situation		
With companion	192 (46,0)	51 (12,2)
No companion	135 (32,4)	39 (9,4)
ABEP		
AB	119 (28,5)	29 (6,9)
C	141 (33,8)	42 (10,1)
DE	67 (16,1)	19 (4,6)

ABEP: Brazilian Association of Research Companies; **PHC:** Primary Health Care.

Among the interviewees, 184 (44.2%) went to PHC more than three times to confirm the diagnosis of AH; 190 (45.6%) considered the waiting time for the scheduled appointment to be inadequate. As for the waiting time, 207 (49.6%) reported that they wait more than 60 minutes for assistance at the PHC and 220 (52.8%) have difficulties to reach the UBS. The time to reach the UBS was considered adequate by 204 (48.9%) respondents and 209 (50.1%) reported having spent money on traveling to the unit and 237 (56.8%) claimed to have lost / delay to start work activities.

Table 2: Univariate and multiple analysis of indicators of accessibility to diagnosis by users with arterial hypertension in Primary Health Care. Paraná, Brazil, 2016.

	PHC n (%)	Another Service n (%)	Univariate Analysis			Multivariate Analysis		
			OR	IC 95%	P	OR	IC 95%	P
N° of visits to the Unit (11)								
Adequate	143 (34,2)	59 (14,1)	1			1		
Inappropriate	184 (44,2)	31 (7,5)	1,77	1,07-2,94	0,026	1,82	1,06-3,10	0,028
Time to schedule an appointment (12)								
Adequate	137 (32,8)	26 (6,2)	1					
Inappropriate	190 (45,6)	64 (15,4)	0,88	0,50-1,56	0,680			
Waiting time >60 min (13)								
Yes	207 (49,6)	47 (11,3)	1			1		
No	80 (19,2)	29 (6,9)	1,59	0,94-2,71	0,084	1,66	0,79-3,59	0,199
Sometimes	40 (9,6)	14 (3,4)	1,54	1,07-3,06	0,021	1,96	1,05-3,65	0,032
Difficulties getting to the BHU (14)								
Yes	220 (52,8)	59 (14,1)	1					
No	48 (11,6)	15 (3,6)	1,16	0,61-2,22	0,643			
Sometimes	59 (14,1)	16 (3,8)	1,01	0,54-1,88	0,972			
Time spent commuting to the BHU (15)								
Adequate	204 (48,9)	43 (10,3)	1			1		
Inappropriate	123 (29,5)	47 (11,3)	1,81	1,13-2,90	0,013	1,85	1,15-2,97	0,011
Financial expenses (16)								
Yes	209 (50,1)	53 (12,7)	1					
No	50 (12,0)	15 (3,6)	1,18	0,61-2,26	0,613			
Sometimes	68 (16,3)	22 (5,3)	1,27	0,72-2,25	0,4			
Loss/delay to start work shift (17)								
Yes	237 (56,8)	66 (15,8)	1			1		
No	39 (9,4)	16 (3,8)	1,47	0,77-2,80	0,237	1,21	0,58-2,51	0,599
Sometimes	51 (12,2)	8 (2,0)	1,56	1,25-2,24	0,015	1,30	1,02-2,78	0,014

OR: Odds Ratio; **95% CI:** Confidence Interval; **UBS:** Basic Health Unit; **PHC:** Primary Health Care.

In the multiple analysis, the results showed that people who had to return to health facilities more than three times to receive the diagnosis of AH have 1.82 (95% CI: 1.06-3.10) more chances of seeking services without PHC characteristic. The time spent traveling from home to a PHC service was responsible for 1.85 (95% CI: 1.15-2.97) chances of ever looking for other services without PHC characteristics to obtain the diagnosis of AH (Table 2).

The waiting time for professional assistance greater than 60 minutes increases the chances (95% CI: 1.05-3.65) by 1.96 to seek services other than PHC. As for the variable loss of the working day (17), it was responsible for 1.30 (95% CI: 1.02-2.78) higher chances of searching for services without PHC characteristics.

DISCUSSION

The findings of this study show that although PHC is characterized by a set of actions that involve the promotion, prevention, protection, diagnosis and treatment of diseases,¹² there are still some flawed aspects that compromise the resolution of the diagnosis of AH, and provide the demand for other types of services. Such as the distance from the units, the need to seek care more than three times to receive the diagnosis of the disease, waiting time of more than 60 minutes to be seen by a professional and the lack of flexibility in the opening hours, which makes the user get in late or miss the workday.¹²⁻¹³

AH, when not controlled, is the main risk factor for cardiovascular diseases and is associated with the development of Stroke, Acute Myocardial Infarction (AMI), dementia, heart and kidney failure.² Such conditions require attention by health professionals to reduce negligence in the diagnosis of the disease, investments to finance PHC assistance services, continuous monitoring of confirmed cases to minimize tension symptoms and complications, as they cause suffering and damages, in addition to high financial expenses for health services.^{2-3,8}

As for the sociodemographic characteristics of the participants (age equal to or above 60 years old, being female, having less than eight years of study and; belonging to the lower classes of economic classes), the findings of this study corroborate other studies carried out with similar populations.¹⁴⁻¹⁵ This fact may be related to the increase in the senile Brazilian population and the higher life expectancy, especially among women, whose factors have been pointed out in the literature, such as those that frequently lead to greater demand for health services.¹⁵⁻¹⁷

With regard to low education level, the results were more frequent as regards the search for other health services without PHC characteristics, for the diagnosis of AH. It can be inferred that the understanding of these people about public health services and policies is insufficient or erroneous, similar to the results of another research, conducted with elderly people undergoing treatment for AH, which 73.5% of the sample had less than four years of study.¹⁵

Through this information, it is necessary that nurses pay attention to the way they dispense with the guidelines, so that it is sufficiently clear and objective, compatible with the level of knowledge of the population addressed, as this is a factor that positively affects the success of the treatment.¹⁷ In a study carried out in the state of Paraná, authors point out, as reasons that led the clientele with low education to look for other services - without PHC characteristics - the inflexibility of service hours, due to insufficient and / or erroneous knowledge about the disease, confirming the need to guide the entire population on the activities and objectives of these establishments.¹⁵

Regarding the distance between the residence and health facilities, they reiterate the importance of the proximity of

the service to the user as a component that facilitates both accessibility and early diagnosis of AH. Some factors, such as violence, presence of criminal factions, difficulty or lack of public transport, or physical barriers, interfere in the population's choice to adhere to PHC services or not. However, although it is fundamental, accessibility is not limited only to the geographical aspect, as according to a study conducted in Pernambuco,¹⁸ it was observed that, although 73.2% of users consider that the UBS was located close to their homes, not all used it, often due to difficulties related to organizational accessibility.¹³

Regarding the suspicion of AH, although the results of the multivariate analysis point to an association between people seeking other health services and a higher frequency of returning to the institution to have the diagnosis of AH confirmed, the importance of adopting measures that lead to the diagnosis are emphasized. PHC professionals can initiate the diagnostic process through the following steps: initial investigation of symptoms, confirmation of diagnosis, identification of secondary causes, cardiovascular assessment and associated risk factors.¹⁵⁻¹⁷

This process requires the involvement of a multidisciplinary team and more specific tests that determine the diagnosis and then the appropriate therapy for the clinical condition of each individual, in an equitable and resolving way.^{5,19-20} Given the fact that the procedures are revealed expensive and even time-consuming, as the patient needs to return to health services several times, it is suggested that it is of utmost importance that the user be guided about the flow of the diagnosis and fully comply with all stages.

In the previous perspective, the literature and the Brazilian Society of Cardiology emphasize the accuracy of the Ambulatory Blood Pressure Monitoring method (MAP 24 hours), as an alternative and strategic PHC intervention in evaluating and confirming the diagnosis of AH.²¹⁻²² The MAP contributes to the assertive decision making by the team, reduces the need for excessive returns to the unit, optimizes the coordination of customer care in the Health Care Network of the municipalities and reduces the occurrence of events related to cardiovascular risks.²⁰⁻²¹

As for the accessibility indicator related to "waiting for the medical appointment", despite not having a significant association as a factor that influences the demand for other services without PHC characteristics, it is conjectured that this is one of the difficulties of the healthcare system, due to low resolution, formation of waiting lines, among others of organizational origin, which contribute to the evasion of users of the services offered by PHC.²²

In this regard, a study carried out in Belo Horizonte, with the objective of evaluating the indicators of use and quality of the services offered by the PHC, pointed out better evaluations for those who regularly use the services, but anchored with supplementary health plans, as they had access to exams faster, differentiating themselves from

those who used only SUS and who evaluated negatively. In order to minimize the mentioned access barriers, the authors propose the expansion of health policies with greater management responsibility, in the sense that the services function entirely allied with the community and fulfill their role to reduce problems.²²

As limitations of this study, the advanced age of the studied population stands out, since most of them were over 60 years old; living with the disease for several years and; also, many did not remember the period in which they received confirmation of the diagnosis of AH. In this light, it is encouraged to carry out studies, mainly of an evaluative nature of the services, in order to identify the changes that occur in the work organization process, related to the diagnosis of chronic diseases, and from that, new strategies and management of health actions can be proposed, aimed at the early diagnosis of these diseases. Regardless of the limitations, it appears that PHC is an effective service for the diagnosis of AH.

CONCLUSION

The results showed that from the user's perspective, accessibility to the diagnosis of AH in PHC can be compromised due to the time spent traveling from their homes to health services, the need to seek care more than three times to receive the diagnosis of illness, waiting time greater than 60 minutes to be seen by a professional and the delay or loss of working days to be able to have a medical appointment.

Such findings reflect the importance of reorganizing health policies, management and planning of actions, in order to make public health services more equitable, resolute and longitudinal, and thus increase the expectation and quality of life of people who suffer with chronic diseases.

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