Coordination of care from the perspective of people with hypertension in primary health care

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ABSTRACT

Objective: to analyze the satisfaction of people with hypertension about the coordination of care in Primary Health Care.

Method: this is a cross-sectional study conducted with 417 people in a medium-sized municipality located in the southern region of Brazil. Data were collected in the first half of 2016, using an evaluation instrument adapted and validated on structural domains of Primary Health Care and used questions regarding the coordination of care. Descriptive and inferential analysis was performed to treat the variables.

Results: it was evidenced that the interviewees satisfactorily evaluated the use of medical records during consultation by health professionals and discussion of results from the consultation in the specialized service. People with inadequate blood pressure control unsatisfactorily evaluated the recording of complaints and health needs verbalized during consultations, scheduling of return visits, and written referrals from the Basic Health Units, as well as guaranteed care and clarifying information about the results of the consultation in the referral service.

Conclusion: People with hypertension showed satisfaction with the coordination of care in Primary Health Care.

Keywords: Hypertension, Health evaluation, Patient care, Referral and consultation, Primary health care.

INTRODUCTION

Care coordination, in the context of Primary Health Care (PHC), emerges as one of the fundamental elements in the regionalization of services offered, as an organizational component and in the constitution of Health Care Networks (HCN). The vertical and horizontal integration of actions and services, centered in PHC, has the purpose of expanding access, strengthening it as a continuous and quality gateway, able to coordinate the therapeutic path of the user, with accurate information, clinical management and administrative and organizational actions¹-³.

Regarding chronic diseases, the coordination of care needs to be integral and linked to other services, mainly due to the high prevalence of morbidities, which culminates in the need for changes in its systemic organization, with improvements in supply and reorientation of demand³-⁴. Hypertension is a chronic morbidity that affects 24.5% of the Brazilian population, representing about 31 million people⁵. Its treatment provides continuous monitoring for the adequacy of blood pressure control and reduction of complications resulting from its chronicity, with actions and services offered by the PHC⁴.

It is understood that the monitoring of people with hypertension goes beyond the barriers of Basic Health Units (BHU), in which there is need for simultaneous use of several other services, with multiplicity of health professionals involved in the planning and implementation of care. Thus, the social and cultural particularities of the population group, the subject of this study, and the fragmentation of the services that make up the HCN, can interfere with the proper monitoring and timely referral when necessary³,⁶.

The integration and the way of transition of users in the services responsible for providing care become fundamental indicators for the coordination model, according to their organizational capacity and different competencies. This circulation in the services of the system requires information sharing that encompasses the current health status of the user, drug therapy, and fac-
tors that influence the success of the treatment, as well as the summarization of clues that can help determine the clinical diagnosis\textsuperscript{1-2,4}.

In the literature, fragilities in the organizational accessibility to the treatment of hypertension in PHC are evidenced\textsuperscript{7}, with consequences on adhesion/bonding\textsuperscript{8}, that can lead to non-use of routine consultations, with a negative impact on adherence to pharmacotherapy, resulting in inadequate blood pressure\textsuperscript{6}. This reality raises the following question: what is the level of satisfaction of people with hypertension about the coordinating action of PHC in their treatment and follow-up?

It is important to assume that the coordination of care for people with chronic non-communicable diseases, especially hypertension, involves other indicators for its execution. Evaluating the performance and coordinating function of PHC among other levels of care, mediated by the regulatory system of the territory from the point of view of people undergoing treatment, we can understand that pressure control is more resolute in PHC services than in others with different characteristics\textsuperscript{5}.

In view of the above, considering the importance of the theme for public health and in helping to develop more accurate and resolute interventions, as well as support for the organization of the work process of health professionals, the aim of this study is to analyze the satisfaction of people with hypertension about the coordination of care in PHC.

**METHOD**

This research is derived from a larger study, entitled Avaliação da satisfação de pessoas com hipertensão com os serviços prestados pela Primary Health Care. This is a quantitative, cross-sectional study, carried out with people in treatment for hypertension, registered in 34 BHUs and monitored by 74 teams of the Family Health Strategy (FHS), with population coverage of 68.01\textsuperscript{9}, in a medium-sized municipality, located in the South of Brazil.

The inclusion criterion used was people aged 18 years or older, residents in the urban area of the city, and who were assisted by health professionals of the BHU in the last 12 months before the beginning of data collection. The exclusion criterion was being pregnant at the time of the interviews, since pregnant women are fully attended by the women's care network and not by SISHIPERDIA at the PHC level.

To define the sample size, the total number of 27,741 individuals enrolled in the SISHIPERDIA program until 2014 was considered, with an estimation error of 5% and 95% confidence interval, plus 15% for possible losses, resulting in 437 individuals. For the selection of participants, we used the random sampling process and then stratified according to the number of people served in each BHU of the city. Considering the losses and refusals, the final sample of the study was 417 people.

The data collection stage was conducted between February and June 2016, in a reserved room, during the operating hours of the BHU and SISHIPERDIA meetings, through individual interview. Two instruments were used for data collection. The first instrument refers to the evaluation of economic class, grouping the head of household and their family, according to their purchasing power\textsuperscript{10} and further categorized into AB, C and DE.

The second instrument evaluated satisfaction with the services provided by PHC, adapted and validated by Paes\textsuperscript{11}, which includes questions related to identification, sociodemographic profile, anthropometric data, presence of concomitant diseases and associated complications related to hypertension and attributes related to PHC, with seven domains, namely: access to diagnosis, accessibility to treatment, adherence/connection, list of services, care coordination, family focus and community orientation.

In this study, the domain of care coordination for people undergoing treatment for hypertension was assessed, consisting of seven variables, with questions related to the assistance offered by the BHU teams and other institutions that integrate the HCN in the control of morbidity. These variables assess the continuity of care and recognition of health needs, with appropriate referral and monitoring of care in other specialized services, when necessary.

Each variable was composed of questions with answers corresponding to a Likert scale,
assigning values between one and five for the answers never, almost never, sometimes, almost always and always, in addition to the options not applicable and don’t know/ did not answer to enable all possibilities of answers\textsuperscript{11}. The index composed of each indicator was calculated by summing the scores of the values of each question. Consequently, a cluster analysis was performed to classify the evaluated elements and, from the average considered the gold standard, the ROC curve analysis was performed (Receiver Operating Characteristic), defining the value of 3.71 as the cutoff point to determine and classify the results of the indicators as satisfactory (≥ 3.72) and unsatisfactory (≤ 3.71).

The pressure values measured at the SISHIPERDIA meetings were used and coded as “Inadequate Pressure Control” when the results of systolic blood pressure (SBP) ≥ 140 mmHg and diastolic blood pressure (DBP) ≥ 90 mmHg, considering the criteria of the VII Brazilian Guidelines on Hypertension\textsuperscript{12}. It is reiterated that all devices used for blood pressure data collection were calibrated according to the recommendations of the Brazilian Society of Cardiology\textsuperscript{12}.

Data was double tabulated in Microsoft Office Excel 2016 spreadsheet, inconsistencies were corrected, and statistical analysis procedures were performed using the Statistical Package for Social Sciences (SPSS) software, version 20.0. Initially, data normality was identified by the Kolmogorov-Smirnov test, with Lilliefors correction and, after the result, the Kruskall-Wallis test was used for analysis of variance, obtaining the mean and standard deviation. Later, the same test was used to identify whether there was a difference in the responses between the groups of people with adequate and inadequate blood pressure control. For all tests, a p value < 0.05 was considered significant.

As a guide for ethical parameters, this research followed the guidelines of Resolution 466 of December 12, 2012 of the National Health Council\textsuperscript{13}. The project received a favorable opinion from the Standing Committee on Ethics in Research with Human Beings, with opinion number 1.407.687/2016 and authorization from the Municipal Health Secretariat of the municipality of reference. The Informed Consent Form (FICT) was signed in two copies by all research participants.

**RESULTS**

A total of 417 people in treatment for AH, accompanied by the FHS, participated in the study, of which 53.7% presented with adequate blood pressure control.

**Table 1**

Socio-demographic profile of people with hypertension followed by Primary Health Care, according to pressure control. Paraná, Brazil, 2016.

<table>
<thead>
<tr>
<th>Age</th>
<th>Total n (%)</th>
<th>Pressure Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Adequate n (%)</td>
</tr>
<tr>
<td>20 – 29</td>
<td>15 (3.6)</td>
<td>9 (2.2)</td>
</tr>
<tr>
<td>30 - 39</td>
<td>25 (6.0)</td>
<td>11 (2.6)</td>
</tr>
<tr>
<td>40 – 49</td>
<td>37 (8.9)</td>
<td>24 (5.8)</td>
</tr>
<tr>
<td>50 – 59</td>
<td>80 (19.2)</td>
<td>51 (12.2)</td>
</tr>
<tr>
<td>60 – 69</td>
<td>127 (30.4)</td>
<td>64 (15.3)</td>
</tr>
<tr>
<td>≥ 70</td>
<td>133 (31.9)</td>
<td>65 (15.6)</td>
</tr>
</tbody>
</table>

(Continuação)
Table 2 showed that most participants evaluated the use of medical records by health professionals as satisfactory (3.88±1.22). The indicator that evaluated the discussion with health professionals about the results of care provided in the referred services, in which there was a statistically significant difference when estimating the difference between the groups of blood pressure control, with users with inadequate blood pressure being those who negatively evaluated the indicator.

Table 2
Evaluation of the satisfaction of care coordination indicators from the perspective of people with hypertension followed by Primary Health Care. Paraná, Brazil, 2016.

<table>
<thead>
<tr>
<th></th>
<th>Total n (%)</th>
<th>Pressure Control n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adequate</td>
<td>Inadequate</td>
</tr>
<tr>
<td></td>
<td>M±SD</td>
<td>M±SD* Classification</td>
</tr>
<tr>
<td>Do health care professionals take your chart/medical record during the consultation?</td>
<td>3.88±1.22</td>
<td>3.93±1.21 Satisfactory</td>
</tr>
<tr>
<td>During your care, does the health care professional write down your complaints in your chart?</td>
<td>3.80±1.24</td>
<td>3.91±1.25 Satisfactory</td>
</tr>
</tbody>
</table>

(Continuação)
Most indicators of the care coordination attribute were rated as satisfactory according to users with adequate blood pressure control and unsatisfactory from the perspective of users with inadequate blood pressure control. According to the questions that assessed the coordination of care for people with hypertension in PHC, the indicator regarding the use of medical records by health professionals during regular consultations in BHU was rated as satisfactory by both groups of pressure control. This result reinforces the usual practice of information systems as a tool for identification and monitoring of users.

A study conducted in a large city in southern Brazil showed benefits in the use of medical records as a working tool, by providing communication between various professionals, constituting support for the management and handling of health actions and basis for decision making. The study also proposes, as an alternative to accuracy and precision, that the professionals involved receive continuing education for the correct filling of the records, aiming at qualifying the monitoring of users.

The indicator that measures satisfaction with the annotation of health complaints in medical records was evaluated as unsatisfactory by the group with inadequate blood pressure control. Many users evaluated the indicator negatively for not observing annotation by health professionals. It is noteworthy that routine consultations are held periodically, through SISHIPERDIA groups, in which the number of people seen in a single period is comprehensive, which may lead to unavailability of time to fill out medical records at the time of consultation.

Communication is integrated as a care device, with a holistic approach to the user, understanding and interfering in other health problems that can cause difficulties in adherence to treatment, leading to inadequate pressure control. The development of communication, as a tool to help in the work performed, is a process of relationship that shows interest and concern with the health complaints verbalized by people with hypertension, being essential to use in the care practice of health professionals.

The follow-up of people with hypertension needs to break the biomedical model, inserting the user in the therapeutic decision process, in which only the renewal of prescriptions disintegrates the bond that could be created by the actors responsible for care. The mechanized consul-
Coordination of care in primary health care

tation discourages user autonomy, which can lead to the need for secondary care, in which some do not belong to the services that integrate the municipality’s health care networks, making communication between PHC and the specialties deficient by not recording all the important information for the elaboration of an effective and resolute therapeutic plan16.

Respondents rated the discussion of the results of the consultation carried out in another referral service as satisfactory. This data differs from an Australian study, which aimed to describe how institutional forces, ideas and health professionals, inherent to care, shaped the care planning, focused on care management, and revealed that the low participation of patients in decision-making about the therapeutic conduct was an obstacle to consummate the planned practices18.

The return of the patient to the BHU with written information about the results from the consultation in the specialized service was evaluated as unsatisfactory. A research developed in the state of São Paulo on care coordination identified multiple weaknesses in PHC, such as the lack of recognition of the existence of integration between services, and the absence of guidance to users about the need to return to the BHU to monitor their health status2.

The indicator that analyzes the satisfaction regarding information about the return appointment at the BHU was evaluated as unsatisfactory by both groups, with a statistical difference in the group with inadequate blood pressure. A scoping review study conducted in Pakistan identified that the possible barriers to adherence to antihypertensive medications were associated with the participants’ lack of knowledge about regular routine appointments and motivation by health professionals to participate in the scheduling dates19. Parallel to this result, a study from Minas Gerais concluded that there was no systematic follow-up of people with hypertension, with consultations only to renew prescriptions16.

As a model of PHC in the country, the FHS is still incipient as a tool for integration between levels of care, with weaknesses in its vertical and horizontal dimension, and difficulties in logistics and meeting the demand for flows and management processes of care production, especially in the context of reference and counter-reference. These weaknesses are challenges to health professionals, with the need for commitment in the work process in a participatory manner that benefits the flexibility and focus on care20.

Receiving written referral was an indicator evaluated as unsatisfactory by the group of people with inadequate blood pressure control. This item is an important tool that allows the integration between professionals in the network that coordinates care for people with chronic conditions21. Despite having been conducted with another population group, this study differs from the research conducted in the city of Sobral, in the state of Ceará, in which health professionals themselves claimed that they provide written referral, however, patients are referred without detailed information about their health status to specialized services22.

A study developed in the Province of Ontario, Canada, showed weaknesses in the process of patient referral due to the lack of standardization among health professionals. The lack of standardization led to reduced ability to understand the therapeutic conduct of the various services that make up the network of care in the region. In this regard, it is considered the need for improvement of the service, through the use of a standardized referral process, with a view to accurate monitoring and shared management of cases23.

A national study estimated that about 72% of the family health teams were classified as having a medium level of integration between PHC and the healthcare network of the Unified Health System (UHS). The authors reinforce the importance of matrix support strategies to achieve comprehensive care, being used as a tool to enhance the expansion of access, reinforcing PHC as the priority door of the system and coordinator of long-term care, with integration and coordination capacity among the actors responsible for care24. In addition, PHC needs criteria to become the coordinator of comprehensive care for people with chronic conditions, mainly due to the high prevalence in the Brazilian population, contributing to the planning of individual assistance, standardization of consultations, referral, communication and monitoring of users25.

The security of consultations from the referral was evaluated as unsatisfactory by both groups.
of pressure adequacy. An evaluative study carried out in a macro-region of the Northeast showed that there was no specific reference and defined flows for chronic diseases, such as diabetes mellitus and hypertension, as well as insufficient supply and distribution of consultation quotas for specialized care, considering the high demand for services25.

Timely attention to specialty services is essential to reduce the impact of chronicity of diseases and their complications, besides avoiding expenses in the system. The organization of PHC is an essential tool for the effectiveness of health actions that require strategic support for management stability, reducing the fragmentation of health service networks1.

The study revealed that urgent consultations for treatment of hypertension complications exceeded the non-urgent ones, with a distortion of priorities related to PHC services. The allocation of human resources to meet health needs and increase the capacity to meet the demand can enhance satisfaction with access, integrating the specialties with the FHS and intensifying the ability to coordinate care to this specific population. We emphasize the need for improvement in the computerized appointment regulation system for better logistical management, in order to reduce queues, waiting times, and to refer patients in a timely manner1,4,25.

The network of specialized service still presents difficulties in the health care system, mainly because it is responsible for the fragmentation of PHC, organized in silos and limited to the care characterization. Thus, health professionals working in specialty services need to perform activities that enhance the maintenance of values and norms of organizational nature, overcoming normative and regulatory obstacles, with a view to accurate interventions and guided by the principle of sufficiency, coordination and complementarity1,25-26.

This research is limited to the impossibility of attributing causality to its results, considering the nature of cross-sectional studies, which reduces its potential for generalization. The results show weaknesses of PHC in coordinating care for people with hypertension.

The contributions of the findings for public health policies are inherent to the need to expand the scope of PHC, presenting itself more effective with resolute interventions, coordinated and continuous care, governance capacity, partnership and integration with specialized services.

**CONCLUSION**

The results of this study showed that people with hypertension, in general, are satisfied with the coordination of care offered by PHC. The results presented indicated dissatisfaction regarding the lack of security of specialized care, with the need to wait in lines to be scheduled and for not receiving written information about the results of the consultation performed in services outside the BHU.

The study showed weaknesses in the integration between PHC and specialties, which compromise the coordination of care and timely monitoring of people in chronic conditions, with poor communication, especially among people with inadequate blood pressure control. The demands of the organization of the health care network system in the municipality are incipient as to the norms and interfaces related to the work process between the services responsible for monitoring people with hypertension.

**REFERENCES**


Authors’ Contributions:
According to the criteria of the International Committee of Medical Journal Editors (ICMJE):
a) Conception and/or design of the study: ASR, CATR.
b) Data collection, analysis, and interpretation: ASR, FGTS, CATR.
c) Writing and/or critical revision of the manuscript: ASR, FGTS, JGSA, MAM, MS, MAS, CATR.
d) Approval of the final version to be published: ASR, FGTS, JGSA, MAM, MS, MAS, CATR.

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Conflicts of Interest:
No conflicts of interest.
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