

# Elaboration of care plan as a differential in care practice for hypertensive patients

Elaboração de plano de cuidados como diferencial na prática assistencial ao hipertenso

Regina Lúcia Dalla Torre Silva<sup>1</sup>

Guilherme Oliveira de Arruda<sup>1</sup>

Mayckel da Silva Barreto<sup>1,2</sup>

Magda Lúcia Felix de Oliveira<sup>1</sup>

Laura Misue Matsuda<sup>1</sup>

Sonia Silva Marcon<sup>1</sup>

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Hypertension/therapy; Arterial pressure/therapy; Patient care planning; Advance care planning; Practice patterns, nursing; Health promotion; Health services evaluation;

## Descritores

Hipertensão/terapia; Pressão arterial/terapia; Planejamento de assistência ao paciente; Planejamento antecipado de cuidados; Padrões de prática em enfermagem; Promoção a saúde; Avaliação de serviços de saúde;

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## Corresponding author

Sonia Silva Marcon  
Colombo Avenue, 5790, 87020-900,  
Maringá, PR, Brazil.  
soniasilva.marcon@gmail.com

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## Abstract

**Objective:** To compare care for hypertension among teams that elaborate and do not elaborate care plans to hypertensive individuals and their families.

**Methods:** This evaluative and cross-sectional study included 63 nurses from the Family Health Strategy. Data were collected using a structured instrument recommended by the Brazilian Ministry of Health, which was designed and validated by researchers. Mean and median scores from evaluated sub-dimensions were compared according to elaboration of care plan by using the Student t test and Mann-Whitney test.

**Results:** Scores obtained for the sub-dimensions of health promotion and individualized care were significantly higher among teams that elaborated care plans for individuals with hypertension and their families.

**Conclusion:** Family Health Strategy teams that elaborate care plans to individuals with hypertension and their families had better performance in care practices of health promotion and individualized care.

## Resumo

**Objetivo:** Comparar a assistência em hipertensão arterial entre equipes que elaboram e que não elaboram planos de cuidado, à pessoa com hipertensão arterial e sua família.

**Métodos:** Estudo avaliativo e transversal, realizado com 63 enfermeiros da Estratégia Saúde da Família. Coletaram-se os dados mediante instrumento estruturado preconizado pelo Ministério da Saúde, elaborado e validado pelos pesquisadores. Compararam-se médias/medianas de pontuações obtidas nas subdimensões avaliadas, segundo elaboração do plano de cuidados, por meio dos testes t de Student e Mann-Whitney.

**Resultados:** As pontuações obtidas nas subdimensões promoção da saúde e atendimento individual foram significativamente maiores entre equipes que elaboravam plano de cuidados para os indivíduos com hipertensão arterial e suas famílias.

**Conclusão:** As equipes da Estratégia Saúde da Família que elaboravam planos de cuidados às pessoas com hipertensão arterial e suas famílias apresentaram melhor desempenho nas práticas assistenciais de promoção da saúde e atendimento individual.

<sup>1</sup>Universidade Estadual de Maringá, Maringá, PR, Brazil.

<sup>2</sup>Fundação Faculdade de Filosofia, Ciências e Letras de Mandaguari, Mandaguari, PR, Brazil.

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## Introduction

Systemic hypertension constitutes a public health problem worldwide. It is characterized by a multifactorial etiology, maintenance of high tension levels and persistent metabolic changes, which may lead to severe cardiovascular complications.<sup>(1)</sup> Annually, about 9.4 million deaths in the world result from blood hypertension and its complications.<sup>(2)</sup> The prevalence of this chronic condition in the population is growing, along with a low level of patient knowledge about the disease and difficulties in controlling tension levels.<sup>(3)</sup>

Therefore, systemic elaboration and written care plans for individuals with chronic conditions is strongly recommended because planning concrete actions may lead to favorable clinical results, in addition to increasing individuals' knowledge about the disease and treatment.<sup>(4)</sup> A study carried out in Pakistan with hypertensive individuals reported that satisfactory knowledge is associated with maintenance of tension levels within normal ranges.<sup>(5)</sup>

A randomized clinical study that included African-American individuals observed that systematization of centered care plans and active participation of the patient improve communication between health care professionals and patients, increase the perception of the patient's involvement in care, and improve levels of systolic blood pressure, particularly among individuals of low socioeconomic status in urban settings and non-controlled tension levels.<sup>(6)</sup>

Despite the importance of individualized care plans, we also highlight the need, even more common, for care planning for families of individuals with chronic conditions at different spheres of health care. Considering that family experience is directly related to confrontation of chronic conditions by the individual, we emphasize that insertion of family in care planning and its implementation can contribute to improve control from the perspective of a sick individual, and also how the disease and management of treatment are significant and experienced in terms of the family dynamics.<sup>(7)</sup>

Therefore, we highlight, on the basis of the literature, that motivation linked to individuals changing can work better when it is based on a plan of goals for self-care, especially when health professionals act as partners for elaboration, accompanying and supporting a plan to solve or reduce barriers experienced by individuals with chronic conditions.<sup>(8)</sup>

In addition, we presuppose that elaboration of care plans can result in differences in care for those with hypertension. Nurses are important professionals in the process for the collective construction of care plans, especially in the sphere of primary health care (PHC). This study compares care delivered for hypertensive individuals among teams that design care plans and teams that do not design care plans for hypertensive individuals and their families.

## Methods

This cross-sectional and evaluative study was carried out in the sphere of PHC in a medium size municipality in the South region of Brazil. At the time of the study, there were 27 health basic units, 65 family health strategy teams, a team of community health agent program and 7 teams of family health support centers. The study population consisted of nurses who work for the Family Health Strategy of the municipality. We interviewed nurses from the municipality; they had less turnover and were more involved in the management of the teams and implementation of specific programs for care of individuals with chronic conditions.

Of 65 nurses working in family health strategy at the time, 63 participated in the study; the other 2 were on sick leave. Interviews were scheduled over the phone and were carried out in a private room at the Health Basic Unit. Data were collected from April to June 2014 through interviews conducted with a structured questionnaire.

The instrument used for data collection was composed according to indication by the Ministry of Health for primary care to individuals with

hypertension<sup>(9)</sup> and validated by using the Delphi technique. A total of 12 specialists participated in the process. Of these, 4 were health care workers, 3 were managers, 2 were cardiologists and 3 were researchers from assessment area. Validated criteria were used to elaborate an instrument composed of 121 questions distributed in 3 dimensions: structural, care practices, and organization of health care. The structural dimension is composed of 79 questions in the subdimensions of physical area, materials and equipment, materials for health education, inputs, complementary exams, and medications and human resources the care practice dimension consists of 25 questions in subdimensions of health promotion and individualized care; and the dimension on organization of health care is composed of 17 questions (Appendix 1).

Each dimension, along with its respective subdimensions, presents a sum of points in agreement with the evaluated items and attributed score for each one. The final sum of this score indicates the level of implementation of the care program to the individual with hypertension in the respective unit, classified as initial, intermediate, or advanced.<sup>(10)</sup> The higher the score, the greater the degree of implementation of the program. Four teams were evaluated as advances and 59 as intermediate.<sup>(11)</sup>

Data were entered into Excel for Windows<sup>®</sup> and then exported to Statistical Package for the Social Science (SPSS), version 20. The variable “elaboration of a care plan,” originally categorized as “always,” “almost always,” “sometimes,” “almost never” and “never,” was categorized for analysis as “elaborated” (“always” and “almost always” and “do not elaborate” (“always,” “almost never” and “never”), making up the variable “care plan.” Continuous covariables of the study were sub-dimensions of the assessment instrument, measured in scores. Data were submitted to the Kolmogorov-Smirnov test; for those with normal distribution, we used the Student *t* test for comparison, with presentation of means and standard deviations. For data that were not normally distributed, we applied the non-parametric

Mann-Whitney test, with presentation of means and interquartile range (25% and 75%). We adopted a 5% level of significance in all tests.

This research project approval was registered in the statement no. 168.220, issued by the Permanent Committee of Ethical and Research involving human subjects of the Universidad Estadual de Maringá.

## Results

Most of the 63 interviewed nurses were women (93.6%). Time working as nurse ranged from 9 months to 13 years (mean, 6.3 years). Most professionals had been on the same Family Health Strategy team for more than 3 years (82.50%). Concerning care plans, we verified that 30.2% (n=19) of teams elaborated care plans for individuals with hypertension and 14.3% (n=9) of teams elaborated care plans for families.

In the care plans for individuals with hypertension, we observed that in sub-dimensions of health promotion and individualized care, the score obtained among teams that elaborated written plans and in a systematized form were significantly higher than those in teams that did not elaborate them (Table 1).

Significant differences in the score for the sub-dimensions of “health promotion” and “individualized care” among teams that elaborated and did not elaborate care plans for families of individ-

**Table 1.** Comparison of sub-dimensions of health care programs for hypertension among teams that elaborated and did not elaborate care plan for individuals with hypertension

Evaluated sub-dimensions	Elaborated	Did not elaborate	p-value
	Mean/Median ± SD/IQR	Mean/Median ± SD/IQR	
Structure			
Physical area	19.47±4.56	20.82±4.57	0.288*
Materials and equipment	34.66±6.44	34.20±5.31	0.772*
Equipment for emergencies	17.00±3.00	17.00±3.00	0.980**
Materials for health education	6.42±2.67	5.84±2.79	0.447*
Tests and medications	3.00±0.37	3.00±0.37	0.392**
Human resources	24.00±11.00	23.00±3.00	0.341**
Reference professionals	12.00±11.00	12.00±2.88	0.564**
Care practices			
Health promotion	12.72±3.58	10.27±3.09	0.008*
Individualized care	19.47±5.75	14.4±4.17	<0.001*
Organization of health care	26.87±5.10	25.01±4.67	0.164*

\*Student *t* test; \*\*Mann-Whitney test; SD - standard deviation; IQR - interquartile range

uals with hypertension were also verified; however, the scores were higher than those obtained for individualized care plans (Table 2).

**Table 2.** Comparison of sub-dimensions of care program for hypertension among teams that elaborated and did not elaborate care plan to families of individuals with hypertension

Evaluated sub-dimensions	Elaborated	Did not elaborate	p-value
	Mean/Median ± SD/IQR	Mean/Median ± SD/IQR	
Structure			
Physical area	21.33±4.36	20.26±4.63	0.519 <sup>*</sup>
Materials and equipment	31.94±6.26	34.74±5.47	0.169 <sup>*</sup>
Equipment for emergencies	17.00±3.00	17.00±3.00	0.754 <sup>**</sup>
Materials for health education	5.66±2.91	6.07±2.74	0.684 <sup>*</sup>
Exams and medications	3.00±0.00	3.00±0.37	0.197 <sup>**</sup>
Human resources	22.00±3.50	24.00±5.63	0.106 <sup>**</sup>
Reference professionals	10.00±3.50	12.00±5.00	0.055 <sup>**</sup>
Care practices			
Health promotion	13.42±4.37	10.61±3.10	0.021 <sup>*</sup>
Individualized care	22.05±5.68	14.95±4.41	<0.001 <sup>*</sup>
Organization of health care	26.06±6.41	25.49±4.60	0.749 <sup>*</sup>

<sup>\*</sup>Student *t* test; <sup>\*\*</sup>Mann-Whitney test; SD - standard deviation; IQR - interquartile range

## Discussion

This study had some limitations. It not consider participation of health workers in the construction and validation of the data collection instrument. In addition, the overall team did not evaluate the elaborated care plans; rather a nurse perspective was used. The study was also cross-sectional, which does not permit longitudinal assessment of care program of individuals with hypertension. Finally, its findings do not cover the dimension of results from elaboration of care plans; rather, it considered only the structure and work process.

The results suggest that existing items in a care program for individual with hypertension can be more present among teams of Family Health Strategy that always elaborated or almost always elaborated care plans, especially regarding care practices, as well as in individualized care and health promotion activities. We emphasize that the sub-dimension of health promotion involves actions since it entails actively seeking new cases and strategies to stimulate healthy habits, up to the establishment of goals for the follow-up of individuals with hypertension.

<sup>(11)</sup> However, the sub-dimension of individualized care involves such actions as medical consultations

and nursing consultations according to protocols, cardiovascular risk classification, and home visits to users who do not adhere.<sup>(11)</sup>

However, even with the proposition of reorganizing care to individuals with chronic conditions, from the national literature, we verified that implementation of innovations in care are still occurring in an incipient form. In an evaluative study among 13 health units in the South region of Brazil, at two different times among teams and users of the services, we observed that incorporation of self-care plans for individuals with chronic conditions is weak - many professionals did not monitor the plans. However, the approximation of pertinent pedagogic approaches and knowledge of concrete tools to elaborate plans were considered positive elements.<sup>(12)</sup>

Researchers point out that to efficiently and equitably address the high global load of chronic conditions, the public health systems should implement approaches that include the community, address multiple factors and risk conditions concomitantly, support changes in lifestyle of the entire population, and help population subgroups that are more affected and vulnerable, mainly by educational and health promotion activities, in the sphere of PHC; this depends on the involvement of different sectors, including public-private partnerships.<sup>(13,14)</sup> In this context, health promotion is the main strategy for reducing risk factors for chronic conditions. Therefore, elaboration of care plans directed to patients and their families have a lot to contribute for control of chronic conditions.

To help to overcome the burden imposed by chronic conditions on the health systems, the United States, through the Centers for Disease Control and Prevention, suggests the use of cross-sectional strategies to stimulate environmental approaches that promote health, support healthy behaviors, and facilitate the development of interventions that make the use of health system by preventive clinical services more efficient and soluble.<sup>(14)</sup> Therefore, we perceived that the contemporary highlighting of international policies is directed to health promotion, reinforced in our study by the evidence that the Family Health Strategy teams that elaborate more care plans were also the ones practicing health promotion more.



Still, in our study, we perceived that choosing nurses to be the respondents was adequate because data showed that mean time of service on the staff of the Family Health Strategy of the municipality was greater than 6 years, which lends higher credibility to the information collected and allows interferences of same nature in professional practices. In addition, in the last decade, nurses have had an important role in highlighting care practice and in counseling for medications and lifestyle modifications in specific groups of patients, such as those with hypertension. Therefore, nurses must act in the perspective of health promotion, assuring that conditions for health service users are empowering and allow users to identify and choose an individual approach to the health-disease process.<sup>(13,15)</sup>

In this sense, this study pointed out that, according to the perspective of nurses, the teams that elaborated care plans for patients and their families achieved a higher proportion of individual care and higher levels of implementation of this type of care. Evidence shows that strategies for self-management are central to the management of chronic conditions.<sup>(16)</sup>

An interventional study among 1,170 individuals from a U.S. community with at least one chronic condition revealed that after 12 months of follow-up, participants' health improved significantly. The risk for emergency care resulting from deterioration of chronic conditions was reduced significantly at 12 months, and hospitalizations were significantly decreased at 6 months of follow-up.<sup>(16)</sup>

Similarly, a study carried out in Pakistan among 650 individuals with hypertension found that pressure control was significantly associated with greater knowledge about the disease; this was also shown by the higher participation in health promotion activities.<sup>(5)</sup> This finding is similar to that in a study carried out in Brazil among 422 hypertensive individuals, which showed that the lower the level of knowledge of the disease, the greater the chance of unsatisfactory adherence to medication treatment.<sup>(17)</sup>

However, it is important to highlight that the problem of nonadherence to treatment of chronic conditions is complex; access to information

about systemic hypertension does not necessarily imply higher adherence to therapeutic measures. A randomized study in Spain among 966 hypertensive individuals showed that educational interventions did not significantly affect patients' adherence to medication.<sup>(18)</sup> Therefore, we verified an essential distance between knowledge and practice: Although patients know what should be done, they often did not act in concordance with such knowledge because they also need to feel part of the therapeutic project and, by consequence, motivated and confident to participate. Still, they need to recognize and believe in possible benefits that this treatment can provide them.

The literature suggests that care planning in chronic conditions, in addition to systematization, must be personalized according to the values and demands of individual patients and their families.<sup>(19)</sup> Therefore, instead of concentrating on care standards established by health professionals, individualized planned care must be encouraged in order to define objectives for treatment and to determine specific and coherent goals to meet the clinical needs,<sup>(19)</sup> with space left for considering other possibilities and limitations to following/performing the established plan. It is, therefore, a collaborative and proactive approach that considers clinical results and treatments, self-management, and educational support for self-care and strategies to change behavior and solve problems.<sup>(19)</sup>

Health professionals from PHC, when elaborating personalized care plans to individuals with hypertension, must consider aspects pointed out and discussed in the present study. They also must elaborate care plans directed to families of patients, who are a source of support and help for those with a chronic conditions.<sup>(7,20)</sup> In this perspective, a study carried out in Nigeria among 2,000 individuals with hypertension showed that the most common source of medical information for approximately 60.0% of interviewees were members of the family, friends and social group of trust; physicians, nurses and other health workers were mentioned as the main providers of information and knowledge about the disease and its treatment for only about 9.0% of individuals.<sup>(21)</sup>

A meta-analysis including controlled studies from China showed that health education with family support - the most commonly used intervention - were, in general, an indispensable component of patient self-management and a trigger for better control of hypertension and, in turn, better quality of life with the disease and its treatment.<sup>(22)</sup> In Brazil, an intervention study carried out among 28 women with hypertension reported that a health education workshop combined with family guidance on non-pharmacologic treatment led to an increase in adherence to diet recommendations and improvement in clinical results.<sup>(23)</sup> These findings reinforce the importance of elaborating care plans and considering families as the main source of information for patients with chronic conditions and as influential for adherence to pharmacological and non-pharmacological treatment; this adherence depends mostly on how health professionals act in collaboration with families.<sup>(24)</sup>

## Conclusion

Family Health Strategy teams that elaborated care plans for patients with hypertension and their families had better performance in care practice for health promotion and individualized care.

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## Collaborations

Silva RLDT, Arruda GO, Barreto MS, Oliveira MLF, Matsuda LM and Marcon SS contributed with conception of the Project, analysis and interpretation of data, drafting the manuscript, critical relevant review of intellectual content and approval of final version to be published.

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**Appendix 1.** Instrument for assessment of implementation of care for hypertensive individuals in basic health care

<b>1-GENERAL DATA</b>
<p><b>Identification data</b></p> <p>1.1- Number of questionnaire:</p> <p>1.2- Date of the interview: ___/___/___</p> <p>1.3- Interviewer:</p> <p>1.4- How long have you worked on the Family Health Team (FHT):</p> <p><b>Characterization of Family Health Unit</b></p> <p>1.5- Name of the unit:</p> <p>1.6- Number of the team:</p> <p>1.7- Regional Health Unit of the municipality:</p> <p><b>Record of clients</b></p> <p>1.8- Population of the covered area:</p> <p>1.9- Number of families registered by FHT:</p> <p>1.10- Number of registered hypertensive individuals:</p> <p>1.11- Number of hypertensive individuals followed-up:</p>
<b>2- STRUCTURAL DIMENSION (score 200-weight 1)</b>
<p><b>2.1- Physical area (score 27)</b></p> <p>Check with an X the existence of the following structures in the health unit:</p> <p><input type="checkbox"/> 2.1a- Covered and protected area with seats outside of the Health Unit (1.0)</p> <p><input type="checkbox"/> 2.1b- Male and female restroom for users, with toilet paper, liquid soap and paper towel (1.0)</p> <p><input type="checkbox"/> 2.1c- Male and female restroom for employees, with toilet paper, liquid soap and paper towel (1.0)</p> <p><input type="checkbox"/> 2.1d- Construction with principles of accessibility (ramps, accessible toilets, door compatible for wheelchairs...) (2.0)</p> <p><input type="checkbox"/> 2.1e- Water dispensers and filters with water available for users and employees (1.0)</p> <p><input type="checkbox"/> 2.1f- Waiting room with number of seats compatible with number of users (1.0)</p> <p><input type="checkbox"/> 2.1g- Reception and archive size compatible with number of medical records (1.0)</p> <p><input type="checkbox"/> 2.1h- Medical office for intake that guarantees auditory and visual privacy of patient (2.0)</p> <p><input type="checkbox"/> 2.1i- Medical office for nurse consultation that guarantees auditory and visual privacy of patient (3.0)</p> <p><input type="checkbox"/> 2.1j- Medical office for medical consultation that guarantees auditory and visual privacy of patient</p> <p><input type="checkbox"/> 2.1k- Laboratory test collecting room within safety norms (3.0)</p> <p><input type="checkbox"/> 2.1l- Room for collective activities (team meeting, health education) (2.0)</p> <p><input type="checkbox"/> 2.1m- Room for community agents of health family compatible with number of agents and developed activities (3.0)</p> <p><input type="checkbox"/> 2.1n- Room for cleaning of materials, sterilization and storage of materials (1.0)</p> <p><input type="checkbox"/> 2.1o- Safety and adequate local for storage of medications for hypertension (2.0)</p> <p><b>Sum of points 2.1: _____ Classification: 0-9: Incipient; 9.1-18: Intermediary; 18.1-27: Advanced</b></p> <p>2.2- Materials and equipment (score 49)</p> <p><b>Check with an X the existence of the following materials and equipment in health unit:</b></p> <p><input type="checkbox"/> 2.2a- Table for clinical examination (2.0)</p> <p><input type="checkbox"/> 2.2b- Desk (2.0)</p> <p><input type="checkbox"/> 2.2c- Anthropometric balance (3.0)</p> <p><input type="checkbox"/> 2.2d- Two regular chairs (2.0)</p> <p><input type="checkbox"/> 2.2e- Sphygmomanometer (adults) available in the medical office (3.0)</p> <p><input type="checkbox"/> 2.2f- Sphygmomanometer (adults) available during nursing consultation (3.0)</p> <p><input type="checkbox"/> 2.2g- Sphygmomanometer (obese) available in the medical office (3.0)</p> <p><input type="checkbox"/> 2.2h- Sphygmomanometer (obese) available during nursing consultation (3.0)</p> <p><input type="checkbox"/> 2.2i- Sphygmomanometer (pediatrics) available in the medical office (2.0)</p> <p><input type="checkbox"/> 2.2j- Sphygmomanometer (pediatrics) available during nursing consultation (2.0)</p> <p><input type="checkbox"/> 2.2k- Sphygmomanometer available in the medical office (3.0)</p> <p><input type="checkbox"/> 2.2l- Sphygmomanometer available during nursing consultation (3.0)</p> <p><input type="checkbox"/> 2.2m- Chair for exam collection (2.0)</p> <p><input type="checkbox"/> 2.2n- Measuring tape available in the medical and nursing office (3.0)</p> <p><input type="checkbox"/> 2.2o- Computer available to team for registrations and reports (3.0)</p> <p><input type="checkbox"/> 2.2p- Phone (3.0)</p> <p><input type="checkbox"/> 2.2q- Car for external activities, always available when the team needs it</p> <p><input type="checkbox"/> 2.2r- Printer (2.0)</p> <p style="padding-left: 20px;"><input type="checkbox"/> once a week (0.5)</p> <p style="padding-left: 20px;"><input type="checkbox"/> twice a week (1.0)</p> <p style="padding-left: 20px;"><input type="checkbox"/> three times a week (2.0)</p> <p style="padding-left: 20px;"><input type="checkbox"/> five times a week (3.0)</p> <p><input type="checkbox"/> 2.2s- Printed protocol of care program to hypertensive individuals accessible to teams (2.0)</p> <p><b>Sum of points 2.2: _____ Classification: 0-16: Incipient; 16.1-33: Intermediate; 33.1-49: Advanced</b></p>



**2.3- Equipment for urgencies (score 20)**

Check with an X the existence of the following equipment in the health unit

- 2.3a- Ambu bag (2.0)
- 2.3b- Oxygen mask (3.0)
- 2.3c- Guedel cannula (3.0)
- 2.3d- Cylinder and oxygen within expiration date or oxygen ducts (3.0)
- 2.3e- Basic medications for use in cardiac arrest (3.0)
- 2.3f- Known and facilitated localization of emergency materials (3.0)
- 2.3g- Professionals receive training for care in urgencies (3.0)

**Sum of points 2.3: \_\_\_\_\_ Classification: 0-7: Incipient; 7.1-13: Intermediary; 13.1-20: Advanced**

**2.4- Materials for health education (score 11)**

Check with an X the existence of the following materials for health education

- 2.4a- Printed materials with directions about hypertension and healthy lifestyle habits for distribution to public - Folders (3.0)
- 2.4b- Materials for health education about hypertension and healthy lifestyle habits for group activities (video, video series) (3.0)
- 2.4c- Television (2.0)
- 2.4d- DVDs (2.0)
- 2.4e- Multimedia projector (1.0)

**Sum of points 2.4: \_\_\_\_\_ Classification: 0-4: Incipient; 4.1-7: Intermediary; 7.1-11: Advanced**

**2.5- Exams and medications (score 57)**

Check with an X the existence of the followings inputs, exams and medications available in the health unit

**always = 3.0; almost always = 2.0; sometimes = 1.0; almost never = 0.5; never = 0.0**

- 25a- Hematocrit (3.0)
  - always  almost always  sometimes  almost never  never
- 25b- Fasting glycemia (3.0)
  - always  almost always  sometimes  almost never  never
- 25c- Total cholesterol (3.0)
  - always  almost always  sometimes  almost never  never
- 25d- HDL cholesterol (3.0)
  - always  almost always  sometimes  almost never  never
- 25e- LDL cholesterol (3.0)
  - always  almost always  sometimes  almost never  never
- 25f- Triglycerides (3.0)
  - always  almost always  sometimes  almost never  never
- 25g- Potassium dosage (3.0)
  - always  almost always  sometimes  almost never  never
- 25h- Creatinine dosage (3.0)
  - always  almost always  sometimes  almost never  never
- 25i- Partial urine test (3.0)
  - always  almost always  sometimes  almost never  never
- 25j- 24-hour Urine Protein Test (3.0)
  - always  almost always  sometimes  almost never  never
- 25k- Electrocardiogram (3.0)
  - always  almost always  sometimes  almost never  never
- 25l- Needles, syringes, test tubes (3.0)
  - always  almost always  sometimes  almost never  never
- 25m- Hydrochlorothiazide (3.0)
  - always  almost always  sometimes  almost never  never
- 25n- Furosemide (3.0)
  - always  almost always  sometimes  almost never  never
- 25o- Alpha methyl dopa (3.0)
  - always  almost always  sometimes  almost never  never
- 25p- Clonidine (3.0)
  - always  almost always  sometimes  almost never  never
- 25q- Propranolol (3.0)
  - always  almost always  sometimes  almost never  never
- 25r- Nifedipine (3.0)
  - always  almost always  sometimes  almost never  never
- 25s- Captopril (3.0)
  - always  almost always  sometimes  almost never  never

**Sum of points 2.5: \_\_\_\_\_ Classification: 0-19 Incipient; 19.1-38: Intermediary; 38.1-57 Advanced**

**2.6- Human Resources (score 36)**

**A-** Concerning human resources that make up the minimal team in FHP and in this health unit, complete the blanks below according to presence of professional. In the last year the team had:

**Total of a = 24 points**

**always = 3.0; almost always = 2.0; sometimes = 1.0; almost never = 0.5; never = 0.0**

2.6a- Physician (3.0)

always almost always sometimes almost never never

2.6b- Nurse (3.0)

always almost always sometimes almost never never

2.6c- Nurse technician (3.0)

always almost always sometimes almost never never

2.6e- Six community agents (3.0)

always almost always sometimes almost never never

Check with an X the professional who had received training to deliver care to hypertensive individuals:

2.6f- Physician (3.0)

2.6g- Nurse (3.0)

2.6h- Nurse technician (3.0)

2.6i- Six community agents (3.0)

**Total of b = 12 points**

**B**

**Health professional as reference**

**1. Presence of the professional**

2.6j- Psychologist

2.0

2.6k- Cardiologist

2.0

2.6l- Nutritionist

2.0

2.6m- Social assistant

2.0

2.6n- Pharmacist

2.0

2.6o- Physical educator

2.0

**Human resource a + b = 36 points**

**Sum of points 2.6: \_\_\_\_ Classification: 0-12: Incipient; 12,1-23: Intermediary; 23,1-36: Advanced**

**3- CARE PRACTICES DIMENSION (score 72 - weight 2)**

**3.1- Health Promotion (score 39)**

**31A- In relation to active searching of new cases - (score 3.0)**

Team develops strategies to identify hypertensive individuals in population age 15 years or older with periodicity (campaign, verification of blood pressure upon spontaneous measurement in all users)

Every 6 months (3.0)

Each year (2.0)

Undefined periodicity (1.0)

Team did not develop strategies to identify hypertensive individuals (0.0)

**31B- Team develops strategies to identify hypertensive individuals (score 21)**

**always =3.0 almost always= 2.0 sometimes =1.0 almost never= 0.5 never= 0.0**

31Ba- In general population

always almost always sometimes almost never never

31Bb- Among obese patients

always almost always sometimes almost never never

31Bc- Among individuals with diabetes

always almost always sometimes almost never never

31Bd- Among smokers

always almost always sometimes almost never never

31Be- Among individuals older than 40 years

always almost always sometimes almost never never

31Bf- Among sedentary individuals

always almost always sometimes almost never never

31Bg- Among alcohol abusers

always almost always sometimes almost never never

**31C- On frequency of educational groups on hypertension and healthy lifestyle habits, check with an X the affirmation that applies to this team (score 3.0)**

Performed once a month (3.0)

Performed quarterly (2.0)

Performed without periodicity (1.0)

Not performed (0.0)

**31D- Regarding strategy to stimulate healthy lifestyle habits (WALKING) check with an X the affirmation that applies to this team (score 3.0)**

- Team develops daily (3.0)
- Develops at least once a week (2.0)
- At least once a month (1.0)
- No periodicity (0.5)
- Not developed (0.0)

**31E- Regarding strategies to stimulate healthy lifestyle habits (HEALTHY EATING) check with an X the affirmation that applies to this team (3.0)**

Developed at least once a month (3.0)

- Quarterly (2.0)
- No periodicity (1.0)
- Not developed (0.0)

**31F- The team carried out individualized care for orientation of healthy lifestyle habits (score 3.0)**

always  almost always  sometimes  almost never  never

3.0      2.0      1.0      0.5      0.0

**31G- The team established goals for individuals with hypertension by health community agents (score 3.0)**

always  almost always  sometimes  almost never  never

3.0      2.0      1.0      0.5      0.0

**Sum of points 3.1: \_\_\_\_\_ Classification: 0-13: Incipient; 13.1-26: Intermediary; 26.1-39: Advance**

**3.2- Individual care (33 points)**

**3.2A- Care by medical consultation is systematized according to protocol of municipality, including initial consultation and return (clinical exam, blood pressure measurement, request of tests) (3.0)**

always  almost always  sometimes  almost never  never

3.0      2.0      1.0      0.5      0.0

**3.2B- In relation to medical care for hypertensive patients, check with an X the affirmation that applies to this team (12 points)**

**always = 3.0; almost always = 2.0; sometimes = 1.0; almost never = 0.5; never = 0.0**

**3.2Ba- Perform medical consultation according to established protocol, including anamnesis, physical examination, orientations of drug treatment and no drug treatment**

always  almost always  sometimes  almost never  never

**3.2Bb- Use of Framingham score for risk classification of patients**

always  almost always  sometimes  almost never  never

**3.2Bc- Therapy is chosen considering patient risk according to Framingham score**

always  almost always  sometimes  almost never  never

**3.2Bd- Guide the patient in relation to risk factors: diet, physical exercise, smoking, use of salt and alcohol**

always  almost always  sometimes  almost never  never

**3.2Ce- In relation to care of hypertensive patients, check with an X the statement that applies to this team (18 points)**

**always = 3.0; almost always = 2.0; sometimes = 1.0; almost never = 0.5; never = 0.0**

**3.2Cf- The nurse performs consultation for hypertensive patients, according to protocol of municipality**

always  almost always  sometimes  almost never  never

**3.2Cg- The team performs home visit for non-adherent hypertensive patients**

always  almost always  sometimes  almost never  never

**3.2Ch- The team performs home visit for hypertensive patients who are bedridden or have motor incapability**

always  almost always  sometimes  almost never  never

**3.2Ci- The team elaborates care plan for hypertensive individuals in systematized form and written out for patients during home visit**

always  almost always  sometimes  almost never  never

**3.2Cj- The team elaborates care plan for family of hypertensive individuals in a systematized form and is written out during home visit**

always  almost always  sometimes  almost never  never

**3.2Ck- The team takes the opportunity of home visit to verify the existence of new cases**

always  almost always  sometimes  almost never  never

**Sum of points 3.2: \_\_\_\_\_ Classification: 0-11: Incipient; 11.1-22: Intermediary; 22.1-33: Advance**

**4-ORGANIZATION DIMENSION OF HEALTH CARE (49 points weight 2)**

**always = 3.0; almost always = 2.0; sometimes = 1.0; almost never = 0.5; never = 0.0**

**4.0a- There is a specific instrument for registration, monitoring and assessment of activities of care program for hypertension**

yes 3.0  no 0.0

**4.0b- The team register patients in information system HIPERDIA**

always  almost always  sometimes  almost  never

**4.0c- Does the team use the care protocol for hypertensive individuals elaborated by health manager?**

always  almost always  sometimes  almost never  never

**4.0d- The team uses the HIPERDIA as instrument for planning and program assessment (3.0)**

always  almost always  sometimes  almost never  never

**4.0e- The team conducts periodic meetings for planning of goals, monitoring and assessment of program with participation of members of the team (3.0)**

always  almost always  sometimes  almost never  never

4.0f- There is systematic reference, with flow formalized by municipality manager for the cardiologist (3.0)

always almost always sometimes almost never never

4.0g- There is contra-reference system with flow formalized by municipality manager for the cardiologist (3.0)

always almost always sometimes almost never never

4.0h- There is reference system with formalized flow by municipality manager for specialized tests (3.0)

always almost always sometimes almost never never

4.0i- There is contra-reference system with formalized flow by the municipality manager for specialized tests (3.0)

always almost always sometimes almost never never

40j- There is protocol for scheduling of consultation for hypertensive patients with guarantee of consultation and time scheduled for each patient (3.0)

always almost always sometimes almost never never

40k- A control done for patients who did not show up to schedule consultations (3.0)

always almost always sometimes almost never never

40l- An active search is done for patients who do not show up for appointment

always almost always sometimes almost never never

In relation to periodicity of consultation schedule of patients with hypertension:

40m- Periodicity of scheduling of medical consultation follows what is indicated by Ministry of Health

yes no (3.0)

40n- Semester for controlled patients and no injury in target organs

always almost always sometimes almost never never

40o- Bimonthly for controlled patients and with injury in target organs

always almost always sometimes almost never never

40p- Monthly for patients without control of hypertension

always almost always sometimes almost never never

40q- Team does not use three monthly scheduling indicated without consider risk classification of patient (1.0)

always almost always sometimes almost never never

**Sum of points 4.1: \_\_\_\_ Classification: 1-16: Incipient; 16.1-33: Intermediary; 33.1-49: Advanced**