

Instrument for the assessment of the performance of nursing professionals in primary health care: arterial hypertension

Instrumento para avaliação do desempenho de profissionais de enfermagem na atenção primária à saúde: hipertensão arterial

Instrumento para la valoración de la actuación de los profesionales de enfermería en la atención primaria en salud: hipertensión arterial

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gp.lopez@uta.edu.ec**ABSTRACT**

Introduction: Blood hypertension (HTA) is a disorder in which blood vessels persistently have high blood pressure and affects more than 1280 million adults in the world. **Objective:** Design and measure the reliability of an instrument to evaluate the performance of nursing professionals in primary health care: arterial hypertension. **Method:** Quantitative approach, experimental design, descriptive and transversal. Development of an instrument to determine its reliability and validity of content. The sample used for the evaluation of internal reliability was composed of 10 patients diagnosed with arterial hypertension who are treated in health centers in zone 3 belonging to the province of Cotopaxi of Salcedo canton who agreed to collaborate with the investigation, check the comprehension of the questions and the operation of the instrument. Internal consistency was determined by calculating Cronbach's Alpha coefficient. **Results:** Experts on the topic of arterial hypertension evaluated the relevance, relevance, and clarity of the 20 items divided into 4 dimensions, qualifying them as applicable. The internal consistency of Cronbach's Alpha was 0.96, which shows that the formulation of the items is reasonable, satisfactorily defined and is adequate in the presence of the questionnaire. **Conclusions.** The results obtained to evaluate the instrument and the application of the pilot were adequate. This instrument is valid and reliable, which justifies its use in research. The instrument is easy and quick to apply, allowing to know the perception of hypertensive patients about the care received by the nursing staff in the PHC.

Keywords: Instrument, first health care, hypertension, nursing care, validation.

RESUMO

Introdução: A Hipertensão Arterial (HTA) é uma doença onde os vasos sanguíneos têm persistentemente uma tensão elevada e afeta mais de 1280 milhões de adultos no mundo. **Objetivo:** Projetar e medir a fiabilidade de um instrumento para a avaliação da atuação dos profissionais de enfermagem na atenção primária em saúde: hipertensão arterial. **Método:** Pesquisa de enfoque quantitativo, de desenho experimental, descritivo e transversal. Elaboração de um instrumento para determinar a sua fiabilidade e validade de conteúdo. A amostra utilizada para a avaliação da confiabilidade interna foi composta por 10 pacientes diagnosticados com hipertensão arterial que são atendidos nos Centros de saúde da zona 3 pertencentes ao Cantão Salcedo Província de Cotopaxi que aceitaram colaborar com a investigação, para verificar a compreensão das questões e o funcionamento do instrumento. A consistência interna foi determinada através do cálculo do coeficiente Alfa de Cronbach. **Resultados:** Os profissionais especialistas no tema de hipertensão arterial avaliaram a pertinência, relevância e clareza dos 20 itens divididos em 4 dimensões qualificando-as como aplicáveis. A consistência interna de Alfa de Cronbach foi de 0,96; o que demonstra que a formulação dos itens é razoável, satisfatoriamente definidos e é apto na presença do questionário. **Conclusões.** Os resultados obtidos para avaliar o instrumento e a aplicação do teste-piloto foram adequados. Este instrumento é válido e fiável, o que justifica a sua utilização no âmbito da investigação. O instrumento é de fácil e rápida aplicação permitindo conhecer a percepção dos pacientes hipertensos sobre o atendimento recebido pelo pessoal de enfermagem na APS.

Palavras-chave: Instrumento, primeiro atendimento em saúde, hipertensão arterial, cuidados de enfermagem, validação.

RESUMEN

Introducción: La Hipertensión Arterial (HTA) es un trastorno donde los vasos sanguíneos tienen persistentemente una tensión elevada y afecta a más de 1280 millones de adultos en el mundo. **Objetivo:** Diseñar y medir la fiabilidad de un instrumento para la valoración de la actuación de los profesionales de enfermería en la atención primaria en salud: hipertensión arterial. **Método:** Investigación de enfoque cuantitativo, de diseño experimental, descriptivo y transversal. Elaboración de un instrumento para determinar su fiabilidad y validez de contenido. La muestra utilizada para la evaluación de la confiabilidad interna estuvo compuesta por 10 pacientes diagnosticados con hipertensión arterial que son atendidos en los Centros de salud de la zona 3 pertenecientes al Cantón Salcedo Província de Cotopaxi que aceptaron colaborar con la investigación, para comprobar la comprensión de las preguntas y el funcionamiento del instrumento. La consistencia interna se determinó a través del cálculo del coeficiente Alfa de Cronbach. **Resultados:** Los profesionales expertos en el tema de hipertensión arterial valoraron la pertinencia, relevancia y claridad de los 20 ítems divididas en 4 dimensiones calificándolas como aplicables. La consistencia interna de Alfa de Cronbach fue de 0,96; lo que demuestra que la formulación de los ítems es razonables, satisfactoriamente definidos y es apto en la presencia del cuestionario. **Conclusiones.** Los resultados obtenidos para evaluar el instrumento y la aplicación de la prueba piloto fueron adecuados. Este instrumento es válido y confiable lo que se justifica su utilización en el ámbito investigativo. El instrumento es de fácil y rápida aplicación permitiendo conocer la percepción de los pacientes hipertensos sobre la atención recibida por el personal de enfermería en la APS.

Palabras clave: Instrumento, primera atención en salud, hipertensión arterial, cuidados de enfermería, validación

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Health Sciences

Main topic:

Primary health care of hypertension

Main practical implications:

The instrument enables efficient evaluation of nursing performance in hypertensive patient care, ensuring quality assessment in primary health care settings. For developing countries such as Ecuador, and with large deficits in the management of the public health system, it may represent original evidence to help decision takers.

Originality/value:

This study offers a reliable, validated tool for assessing patient-perceived nursing care quality in arterial hypertension management.

INTRODUCTION

High blood pressure (HBP) is a disorder where the blood vessels have persistently high tension. Blood pressure is generated by the force of blood pushing against the walls of the arteries when the heart pumps blood to the body. The higher the tension, the more difficulty the heart has in pumping (García L & Centurión O, 2020).

According to the WHO, there are more than 1.28 billion adults between 30 and 79 years old with hypertension, of this percentage a third of them belong to low-income countries, of which 46% are unaware that they suffer from this condition, since it often does not present symptoms and can go unnoticed for years. HTN has become one of the most prevalent diseases in all countries, causing approximately 12.8% of deaths due to the complications it generates when it is not adequately treated (Campbell N et al., 2022; Costa R et al., 2018).

The management, diagnosis and treatment of high blood pressure continues to be a topic that is sometimes poorly attended to, since the assessment is carried out occasionally, it is measured casually in the consultation or when health personnel make a home visit. For another reason, this makes it more difficult to stop and control, 45% of patients with HTN do not know their diagnosis (Guamán J & Egas D, 2022).

In Ecuador, it is estimated that at least 20% of the population over 19 years of age has high blood pressure, according to survey data (STEPS) (Costa R et al., 2018). The urgent need to control HTN in the world drives the continued implementation of strategies such as the one implemented by the WHO called HEARTS, this is a technically large model that encourages the adoption of best practices for the prevention and control of existing cardiovascular diseases in the world. The world population and above all improve the organization of primary care health services through efficient management of hypertension (Flood D et al., 2022).

The Ministry of Public Health (MSP) maintains the current (2019 clinical practice guideline) aimed at hypertensive patients, providing health professionals with recommendations based on scientific evidence. Provides clinical care practice that helps reduce the problems that this disease generates in the patient (Ministerio de Salud Pública, 2019).

The assessment of nursing professionals allows timely monitoring of professional actions to improve competence in primary care centers (PHC). A nursing professional belonging to the PHC is one who maintains skills to promote health in patients, families and the community, therefore, nursing care and actions in this pathology consist of various activities that must be carried out in health care institutions. public health, especially in primary health care, since it is essential in the correct management of these patients and with this action to successfully complete the treatment, in addition to that it allows covering the needs and perspectives of the patient about their state of health (Chasillacta F & Nuñez F, 2022).

Once patients are diagnosed with HTN, they begin treatment and strict follow-up. The nursing staff is the first filter in taking and assessing blood pressure, they daily identify cases of hypertensive patients with uncontrolled values, who go to the different primary care health centers due to some sign of deterioration in their health (Chasillacta F & Nuñez F, 2022; Guamán J & Egas D, 2022).

Nursing functions in the PHC

- Review of the patient's Medical History
- Periodic evaluation to detect possible causes, risk factors and organ damage (Guamán J & Egas D, 2022).
- Home visits and determination of difficulties in attending controls (Chasillacta F & Nuñez F, 2022)
- Measurement and management of digital devices when measuring blood pressure (Lacunza et al., 2021).
- Advice on healthy lifestyles (Ministerio de Salud Pública, 2019).
- Continuity of treatment: Correct management of the treatment regarding the time of intake, this must be strictly followed (Parra L et al., 2023).
- Patient monitoring: These must attend consultation at least once a month for the respective control and acquisition of medication.
- Referral of queries: Preparation of transfer sheets according to the institution's protocol.
- Education in stress control treatment
- Control of anthropometric measurements, thereby keeping track of a healthy weight (Hidalgo E, 2019)

High blood pressure is the chronic condition that maintains a high percentage of non-adherence to treatment with 77.7% among the causative factors found: absence of controls, little importance in pharmacological treatment, failure to

acquire the prescribed treatment, omission of treatment and ignore the established times for taking the medication(Garcés J et al., 2020).

One of the main complications that are addressed in second level units are hypertensive emergencies. (Carbo S et al., 2019). Therefore, it is considered essential that in Primary Health Care the patient is managed comprehensively, since the main objective is to control and reduce blood pressure values that are above 180/120 mmHg(Guamán Tacuri & López Pérez, 2023). Incorrect management of these patients can lead to cardiovascular damage, acute kidney injury such as target organ damage, premature disabilities, and cause serious complications that lead to a higher number of hospitalizations and even death(Mosquera V, 2022).

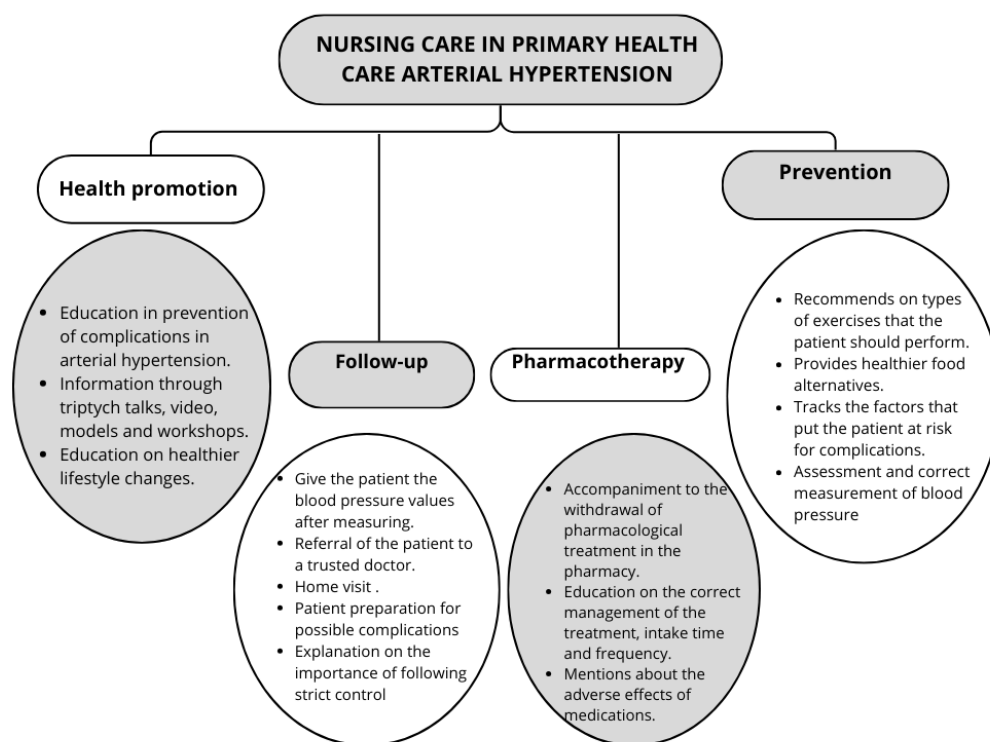
The objective of this research is to allow the assessment of nursing actions in primary health care, to reinforce nursing care in prevention, monitoring, education and treatment, improving the quality of life of hypertensive patients and thereby preventing it from continuing. increasing hospitalizations and public expenses due to the complications that this disease generates, at the second level of care.

METHODOLOGY

This research has a quantitative approach, experimental, descriptive and transversal design. An instrument was designed to assess the performance of nursing professionals in primary health care: arterial hypertension, the process began with the operationalization of the variables, a bibliographic search of the dimensions required to carry out the instrument was carried out. Once the design of the instrument was completed, the instrument was reviewed and validated by 3 experts on the subject of hypertension, with academic training and experience of more than 15 years, who issued their opinions regarding the relevance and clarity. of each of the items and the established scales, in addition to their respective observations.

The instrument is composed of 4 dimensions that address the following indicators of promotion, prevention, monitoring and pharmacological treatment in high blood pressure, which consists of 20 questions in its entirety, where 19 questions are summative that applies a Likert-type scale with assessment from 1 to 5 points, in which never = 1, almost never = 2, = sometimes = 3, almost never = 4, always = 5, and a question that describes the material by which patients receive information from the doctor. nursing professional presenting talks, videos, brochures, models or workshops as options.

Figure 1 Graphic organizer on nursing care in primary health care hypertension



Source: Clinical Practice Guideline (CPG) 2019, STEPS ECUADOR 2018 SURVEY, ESC/ESH Guide 2018 and HEARTS as a tool to integrate hypertension management in primary health care settings

Preparation: Authors

Table 1. Instrument for assessing the performance of nursing professionals in primary health care: arterial hypertension

ANSWER THE QUESTIONS ACCORDING TO THE INFORMATION PROVIDED BY THE NURSING PROFESSIONAL.					
LIKERT TYPE SCALE	NEVER	HARDLY EVER	SOMETIMES	EACH MONTH	ONCE A WEEK
At your health center. How often does the nursing professional talk to you about preventing complications caused by high blood pressure?					
Do you receive information about measures to reduce blood pressure from the nursing professional at your health center?					
LIKERT TYPE SCALE	NEVER	HARDLY EVER	SOMETIMES	ALMOST ALWAYS	ALWAYS
Does the nursing professional provide you with clear information that you can easily understand?					
How often do you receive information about the importance of healthier lifestyle changes throughout the family circle from nursing?					
How often do you receive information through teaching materials?					
Indicate what means the nurse uses to provide you with this information about hypertension.	CHAT	VIDEOS	TRIPTYCHS	MODELS	WORKSHOPS
ANSWER THE QUESTIONS ACCORDING TO THE ACTIVITIES THAT THE NURSING PROFESSIONAL CARRIES OUT TO PREVENT HIGH BLOOD PRESSURE.					
LIKERT TYPE SCALE	NEVER	HARDLY EVER	SOMETIMES	ALMOST ALWAYS	ALWAYS
Climbing stairs, dancing, gardening, including mowing the lawn, jogging, swimming and walking, help reduce high blood pressure. Do you receive these recommendations from the nursing professional?					
Does the nursing professional provide you with healthier alternatives for a balanced diet such as: vegetables, fruits, low-fat dairy, grains, white meat, salt reduction?					
Does the nursing professional mention the factors that put you at risk for cardiovascular complications?					
When taking your blood pressure, does the nursing professional explain the correct steps for a good measurement?					
ANSWER THE QUESTIONS ACCORDING TO THE FOLLOW-UP THAT THE NURSING PROFESSIONAL CARRIES OUT IN YOUR HEALTH CENTER.					
LIKERT TYPE SCALE	NEVER	HARDLY EVER	SOMETIMES	ALMOST ALWAYS	ALWAYS
Is the nursing professional interested in you knowing the blood pressure value once the measurement is performed?					
How often does the nursing professional re-explain to you the steps you must follow to maintain strict control?					
When you miss the check-up, does the nursing professional contact you by phone call?					
Does the nursing professional refer you to your family doctor?					
Do you receive home visits from nursing staff?					
In the event of a possible hypertensive crisis, does the nursing professional explain the steps you should take?					
ANSWER THE QUESTIONS ACCORDING TO THE INFORMATION ON THE DRUG TREATMENT OF HIGH BLOOD PRESSURE					
LIKERT TYPE SCALE	NEVER	HARDLY EVER	SOMETIMES	ALMOST ALWAYS	ALWAYS
After receiving pharmacological treatment, how often does the nursing professional explain to you that it is free and that you can pick it up at the pharmacy?					
Even if the doctor has explained to you how to follow the pharmacological treatment. Does the nursing professional tell you again how, at what time and what would happen if you do not follow the treatment correctly?					
Does the nursing professional explain the risks of non-adherence to the indicated pharmacological treatment?					
Does the nursing professional explain the side effects of antihypertensives?					

Source: Clinical Practice Guideline (CPG) 2019, STEPS ECUADOR 2018 SURVEY, ESC/ESH Guide 2018 and HEARTS as a tool to integrate hypertension management in primary health care settings

Preparation: Authors

INSTRUMENT APPLICATION PROCESS: summative dimensions were implemented with a Likert-type scale with a rating of 1 to 5 points, which, never = 1, almost never = 2, = sometimes = 3, almost never = 4, always = 5.

A pilot test was carried out on 10 patients diagnosed with high blood pressure who are treated in the health centers of zone 3 belonging to the Salcedo Canton, Cotopaxi Province. The patients were randomly chosen from a group of patients where, prior to reading and signing the informed consent, the patients understood the objective of the study, the instructions and each of the items mentioned at that time, which they did not have any problem in. agree to participate in the research.

Ethical aspects

This study adhered to the provisions of the Declaration of Helsinki (2017) provided by the General Health Law, where the ethical principles that protect the subjects participating in the study are applied. The confidentiality of the information was protected and informed consent was obtained from the people exposed to the research and subsequently (autonomy) was applied, with this people have the right to decide if they want to participate in the research (Arévalo et al., 2023).

RESULTS AND DISCUSSION

After obtaining the results of the surveys, the measurement was carried out with the Cronbach's alpha test, which gave us a result of 0.96, which guaranteed the reliability, correlation of the items and internal consistency of the instrument. This is a coefficient that serves to measure the reliability of a scale, which produced a result of excellent application (Heo et al., 2015; Gabriel Pérez-León, 2022).

Table 2. Results Of The Cronbach Alpha Test By Dimensions

First dimension: Health promotion	
Alpha of Cronbach	N of elements
.714	5
Second dimension: Prevention	
Alpha of Cronbach	N of elements
.960	4
Third dimension: Monitoring	
Alpha of Cronbach	N of elements
.904	6
Fourth dimension: Pharmacological treatment	
Alpha of Cronbach	N of elements
.759	4

Preparation: Authors (2024)

The Cronbach's alpha coefficient applied to the items of the health promotion dimension yielded a result of 0.714, indicating an acceptable reliability score as it is greater than 0.7, allowing the application to proceed (Gabriel Pérez-León, 2022). For the prevention dimension, the coefficient was 0.960, demonstrating excellent reliability as it exceeds 0.9, thus validating the application (Heo et al., 2015; Gabriel Pérez-León, 2022). Similarly, the monitoring dimension showed an excellent reliability score with a coefficient of 0.904, also surpassing the 0.9 threshold and confirming the application's validity (Heo et al., 2015; Gabriel Pérez-León, 2022). However, for the pharmacological treatment dimension, the coefficient was 0.759, which, despite being greater than 0.7 and indicating acceptable reliability, mistakenly claims to exceed 0.9; nonetheless, the application proceeds (Heo et al., 2015; Gabriel Pérez-León, 2022).

Table 3. General Statistics of the Instrument

Reliability statistics	
Alpha of Cronbach	N of elements
.961	19

Preparation: Authors (2024)

The Cronbach's alpha coefficient applied to the items of the construct, and which was measured using SPSS, gave a result of 0.961, which maintains an excellent reliability score, since it is greater than 0.9 and is applied to the patients with diagnosis of arterial hypertension (Gabriel Pérez-León, 2022).

This study proposes the application of the questionnaire to nursing professionals in the health sector at the primary care level, because it allows patients to be quickly and easily characterized from the perspective of the perceived quality of care and guides the decision-making process of timely measures that allow the patient to be satisfied with having received excellent quality care.

The instrument was developed and evaluated several aspects regarding the validity of the "Instrument for the assessment of the performance of nursing professionals in primary health care: arterial hypertension" (Gabriel Pérez-León, 2022). As a final result, an instrument was obtained consisting of 20 items that represent 4 dimensions regarding the correct management of hypertensive patients, required by the 2019 arterial hypertension guide of the MSP and the HEARTS model implemented by the WHO (Ministry of Public Health, 2019). The instrument focuses on promotion, prevention, monitoring and pharmacological treatment and the peculiarity of this instrument is that it assesses the skills of nurses carried out in hypertensive patients (Kjeldsen et al., 2019). These guidelines focus especially on treatment strategies; lifestyle changes and drug treatment (Mu L, 2022). The four dimensions are related to exercise, healthy eating, patient information and treatment management (Neto B & Cantuña G, 2023).

The clinical management guidelines in force in Ecuador currently recommend performing at least 30 to 60 minutes of exercise 3 times a week (Costa R et al., 2018). Likewise, it recommends a change in the diet with the consumption of fruits,

vegetables, low-fat dairy products, whole grains, vegetable proteins, a decrease in sweets and red meat (Márquez D et al., 2022). The goal is to have a healthy weight and an adequate body mass index (Zapata L et al., 2020).

To reduce blood pressure, the guidelines also recommend that health care providers evaluate the tobacco and alcohol consumption of all patients who attend control appointments, provide them with accessories and alternatives for quitting if the patient does so (Palmero J et al., 2020).

Regarding the follow-up of hypertensive patients, home visits are recommended, especially in patients with comorbidities, white-coat or masked hypertension and suspicion of non-adherence to treatment (Kjeldsen et al., 2019). Compliance with the control should be at least once during the first 2 months, in order to evaluate the effects on BP and inquire about possible side effects, until BP remains controlled (Gómez J et al., 2019).

In the last dimension it is related to the pharmacological treatment, which was evaluated through four items, which assess the recommendations regarding taking the medications, the dose, indicated hours which adjust to the first 3 dimensions where it is recommended. change in lifestyle and adherence to pharmacological treatment (Ministerio de Salud Pública, 2019). The fundamental role of the nursing staff is the referral and control of symptoms (severe headache, dizziness, vision changes, anxiety, ringing in the ears, nosebleeds and changes in heart rate) through physical examination and application of the activities recommended in the ministry of health guide (Mosquera V, 2022).

Nursing resolves situations that may put the patient at risk, which is why it refers the patient from the health center to one of greater complexity when the problem cannot be resolved in the way expected, using form 053 in force in healthcare establishments. health of Ecuador. Likewise, in the counter-referral, nursing receives the patient, after receiving the pertinent care, to guarantee the continuity and complementarity of care (Ministerio de Salud Pública, 2019).

CONCLUSIONS

The bibliographic search methodically operationalized variables based on scientific principles, strictly adhering to the regulations set by the Ministry of Public Health for managing arterial hypertension. This rigorous approach ensured the precise and accurate measurement of variables to obtain unequivocal and reliable information in pursuit of our defined objective (Ministerio de Salud Pública, 2019). The instrument has exhibited high reliability, corroborated through the measurement of Cronbach's alpha, consistently producing reliable results (Gabriel Pérez-León, 2022b). Consequently, the instrument expedited the efficient assessment of nursing professionals' performance, with patients evaluating them across crucial dimensions, including promotion, prevention, monitoring, and treatment of hypertensive patients (Costa R et al., 2018).

The development and validation of this instrument for assessing nursing performance in hypertensive patients is aimed at ensuring its seamless application in Primary Health Care. It meticulously evaluates nursing actions in four vital areas: promotion, prevention, monitoring, and pharmacological treatment of this chronic degenerative pathology. The Cronbach's alpha test yielded an outstanding reliability index of 0.965. However, the reliability analysis of the health promotion dimension revealed an index of 0.714, indicating that the items did not entirely meet the test's requirements, resulting in acceptable reliability.

Given the imperative need for an instrument to evaluate nursing performance with hypertensive patients, the created instrument has unequivocally proven to be a valuable tool for assessing nursing care in various PHC health centers. This instrument effectively complements the nursing staff by identifying common issues that may hinder the provision of quality care. Ultimately, the primary goal of the nursing staff is to ensure a superior quality of life for patients and reduce care costs for the state.

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A. theoretical and conceptual foundations and problematization:	50%	50%
B. data research and statistical analysis:	50%	50%
C. elaboration of figures and tables:	50%	50%
D. drafting, reviewing and writing of the text:	50%	50%
E. selection of bibliographical references	50%	50%
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