

**Profile of hypertensive and / or diabetic patients of a Basic Health Unit in Maranhão,
Brazil**

**Perfil de pacientes hipertensos e/ou diabéticos de uma Unidade Básica de Saúde do
Maranhão, Brasil**

**Perfil de pacientes hipertensos y/o diabéticos de una Unidad Básica de Salud de
Maranhão, Brasil**

Received: 10/02/2020 | Reviewed: 10/05/2020 | Accept: 10/08/2020 | Published: 10/10/2020

Gabriela Oliveira Parentes da Costa

ORCID: <https://orcid.org/0000-0001-9473-8986>

Instituto Federal do Maranhão, Brasil

E-mail: gabiparentes@hotmail.com

Aclênia Maria Nascimento Ribeiro

ORCID: <https://orcid.org/0000-0002-5582-9663>

Universidade Federal do Piauí, Brasil

E-mail: aclennya@hotmail.com

Catiane Raquel Sousa Fernandes

ORCID: <https://orcid.org/0000-0003-3979-2730>

Universidade Federal do Piauí, Brasil

E-mail: catianersousa@gmail.com

Maria Clara Costa Vieira

ORCID: <https://orcid.org/0000-0002-1459-6218>

Centro Universitário Santo Agostinho, Brasil

E-mail: marieclariecosta@gmail.com

Camilo José Soares Araújo

ORCID: <https://orcid.org/0000-0002-1091-5023>

Centro Universitário Santo Agostinho, Brasil

E-mail: camilojsaraujo08@gmail.com

Adriana de Medeiros Santos

ORCID: <https://orcid.org/0000-0001-9345-480X>

Universidade Federal do Piauí, Brasil

E-mail: adriana.medeirossantos@yahoo.com.br

Francisca das Chagas de Jesus Soares Oliveira

ORCID: <https://orcid.org/0000-0002-6138-3813>

Centro Universitário Santo Agostinho, Brasil

E-mail: f.ca.soares@hotmail.com

Ricardo Clayton Silva Jansen

ORCID: <https://orcid.org/0000-0002-6392-8100>

Universidade Federal do Maranhão, Brasil

E-mail: ricardojansen_20@hotmail.com

Michelle Kerin Lopes

ORCID: <https://orcid.org/0000-0002-0243-246X>

Faculdade Estácio de Sa, Belo Horizonte, Brasil

E-mail: michellekerin@hotmail.com

Luciana Stanford Baldoino

ORCID: <https://orcid.org/0000-0002-5052-7607>

Universidade Estadual de Campinas, Brasil

E-mail: lsbaldoino@hotmail.com

Raquel Vilanova Araujo

ORCID: <https://orcid.org/0000-0001-5902-9869>

Universidade Federal do Piauí, Brasil

E-mail: raquelvilanovabb@gmail.com

Ana Danúsia Izidório Rodrigues de Araújo

ORCID: <https://orcid.org/0000-0002-4373-2805>

Universidade Federal do Piauí, Brasil

E-mail: anadanusia_15@hotmail.com

Abstract

Objective: to know the profile of hypertensive and / or diabetic patients treated at a basic health unit in Maranhão. Method: This is a descriptive, retrospective study with a quantitative approach, performed in April 2018, with data from medical records of 137 patients enrolled in the HIPERDIA program. Data were collected through a structured script and tabulated using the SPSS SamplePower Software. Results: in the researched unit there were 195 registered patients, hypertensive and / or diabetic. A higher number of female hypertensive and / or diabetic patients was observed, with a higher prevalence of these pathologies in individuals

between 60 and 69 years, followed by those aged between 50 and 59. The predominant weight among participants was between 60 and 69kg. The main blood pressure values found were <120/80 (45.99%) and with 140-159 / 90-99 (22.63%). Conclusion: weight gain is related to older age and it would be interesting to follow a nutritionist and a physical educator within the multiprofessional team in the basic health units, since both pathologies need weight control so that the rates remain stable. When prescribing medications, attention should be paid to protocols regarding the risks of drug interaction that exist among some antihypertensives.

Keywords: Hypertension; Diabetes Mellitus; Health of the elderly.

Resumo

Objetivo: conhecer o perfil dos pacientes hipertensos e/ou diabéticos atendidos em uma unidade básica de saúde do Maranhão. Método: trata-se de um estudo descritivo, retrospectivo, com abordagem quantitativa, realizado em abril de 2018, com dados de prontuários de 137 pacientes cadastrados no programa HIPERDIA. Os dados foram colhidos através de um roteiro estruturado e tabulados através do Software *SPSS SamplePower*. Resultados: na unidade pesquisada havia 195 pacientes cadastrados, entre hipertensos e/ou diabéticos. Observou-se maior número de pacientes hipertensos e/ou diabéticos do sexo feminino, com maior prevalência dessas patologias em indivíduos entre 60 e 69 anos, seguido dos com faixa etária entre 50 e 59. O peso predominante entre os participantes foi entre 60 e 69kg. Os principais valores de pressão arterial encontrados foi <120/80 (45,99%) e com 140-159/90-99 (22,63%). Conclusão: o aumento de peso está relacionado à idade mais avançada e seria interessante o acompanhamento de um nutricionista e um educador físico dentro da equipe multiprofissional nas unidades básicas de saúde, já que as duas patologias necessitam de controle do peso para que as taxas permaneçam estabilizadas. Para prescrição dos medicamentos deve-se atentar para os protocolos referentes aos riscos de interação medicamentosa, existentes entre alguns anti-hipertensivos.

Palavras-Chave: Hipertensão; Diabetes Mellitus; Saúde do idoso.

Resumen

Objetivo: conocer el perfil de pacientes hipertensos y / o diabéticos tratados en una unidad básica de salud en Maranhão. Método: Este es un estudio descriptivo, retrospectivo con un enfoque cuantitativo, realizado en abril de 2018, con datos de registros médicos de 137 pacientes inscritos en el programa HIPERDIA. Los datos se recopilaron a través de un script estructurado y se tabularon utilizando el software *SPSS SamplePower*. Resultados: en la

unidad investigada había 195 pacientes registrados, hipertensos y / o diabéticos. Se observó un mayor número de pacientes femeninas hipertensas y / o diabéticas, con una mayor prevalencia de estas patologías en individuos entre 60 y 69 años, seguidos de los que tenían entre 50 y 59 años. El peso predominante entre los participantes fue de entre 60 y 69 kg. . Los principales valores de presión arterial encontrados fueron <120/80 (45.99%) y con 140-159 / 90-99 (22.63%). Conclusión: el aumento de peso está relacionado con la edad avanzada y sería interesante seguir a un nutricionista y un educador físico dentro del equipo multiprofesional en las unidades básicas de salud, ya que ambas patologías necesitan control de peso para que las tasas se mantengan estables. Al recetar medicamentos, se debe prestar atención a los protocolos con respecto a los riesgos de interacción farmacológica que existen entre algunos antihipertensivos.

Palabras clave: Hipertensión; Diabetes Mellitus; Salud del anciano.

1. Introduction

The Family Health Strategy (FHS) is the main gateway to health prevention, promotion and recovery in Brazil. In order for the health problems of this strategy to have solutions, it is necessary to discover the real needs of its individuals, something that is possible when tracing the epidemiological profile of the population served and planning actions with scientifically based data (Nascimento & Joselma, 2019). Among the various consultations performed in the FHS, we highlight Diabetes Mellitus (DM) and Systemic Arterial Hypertension (SAH), which are prevalent and of increasing magnitude, often asymptomatic, which makes it difficult to start treatment and, consequently, can influence on sequels such as heart attack, stroke, among others. These two pathologies are among the top five causes of mortality in the world, in the elderly population, leading to decreased life expectancy (Francisco et al., 2019). In Brazil, these chronic non-communicable diseases have been causing an important economic impact, due to their capacity for morbidity and mortality. Arterial hypertension and Diabetes Mellitus have as main treatment, changes in lifestyle, such as physical activity and healthy eating, in addition to preventive control of glucose and blood pressure (Dias et al., 2019). The inappropriate use of medications can contribute to the uncontrolled of these diseases, since the treatment is for long periods and the continuous maintenance of the prescription is as important as the change in lifestyle (Freitas et al., 2018).

In order to avoid such complications, early identification is essential and fundamental for promoting the health of these patients and for decreasing health problems,

since routine monitoring at the Basic Health Unit (UBS) has reduced the number of hospitalizations and mortality due to these damages, since these patients are guided and “supervised” in relation to the use of medications and habits that can uncontrolled blood glucose and blood pressure rates.

Correlating the importance of prior identification of DM and SAH cases with successful treatment, the guiding question arises: What are the main peculiarities of hypertensive and / or diabetic patients seen at a basic health unit?

To answer this question, it is necessary to analyze specific traits of the studied population. Therefore, the objective of this research is to know the profile of hypertensive and / or diabetic patients treated at a basic health unit in Maranhão, Brazil.

2. Method

This is a descriptive, retrospective study, with a qualitative and quantitative approach. According to Shitsuka, Parreira & Shitsuka (2018), the qualitative method contributes significantly to the data collection plan, valuing the results of the study.

The study was carried out in a UBS on the outskirts of the city of Timon, in the state of Maranhão, Brazil, a municipality that currently has 57 family health teams.

The selection by the basic unit was made for convenience, given the accessibility of the researchers. Data were collected in April 2018, from the unit's nurse record book, after prior authorization. The researchers recorded the information collected carefully, in order to maintain the confidentiality and privacy of patient data.

The inclusion criteria were: records of the last visits of patients who were registered and followed up for hypertension and / or diabetes. The exclusion criteria were: incomplete records.

For data collection, a previously established script for organizing information was built. The variables surveyed were: sex, age group, body mass index (BMI), waist circumference (WC), blood pressure (BP) value and medications used by patients. Remembering that data from the last visits of each patient were taken into account.

The data were tabulated using the SPSS SamplePower 3.0 software, for better organization and appreciated through descriptive analysis. Then, the data were expressed in graphs, for better visualization of the results.

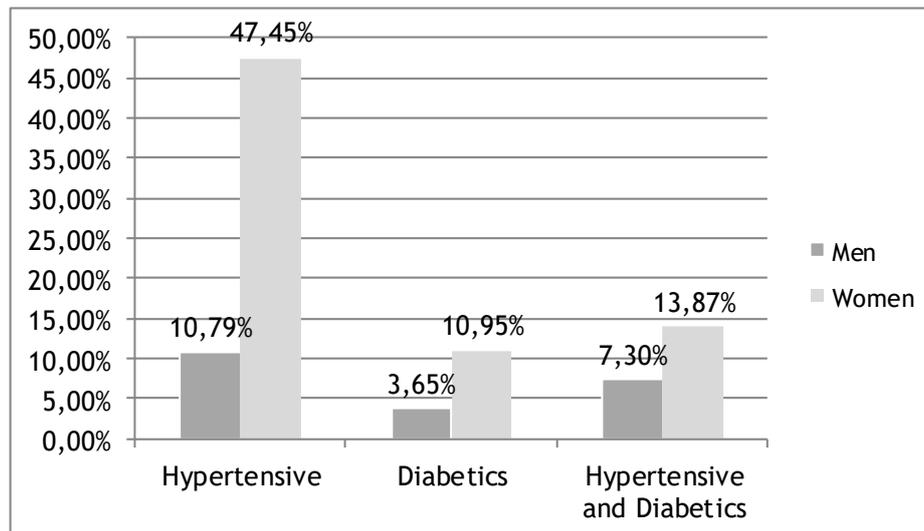
Researches that have the objective of deepening the theory of situations that emerge spontaneously and contingently in professional practice, do not need registration in the CEP /

CONEP system, as long as they do not reveal data that can identify the subject, as is the case of this research.

3. Results and Discussion

In the UBS surveyed, 195 patients were registered, between hypertensive and diabetic patients, or with both pathologies. Of the 137 patients selected from the inclusion and exclusion criteria, 88 (64.23%) were hypertensive, 20 (14.60%) had DM and 29 (21.17%) had both pathologies, with females prevailing in the three groups (Graph 1).

Graph 1 - Number of hypertensive, diabetic or both pathological patients. April 2018. Timon - MA, Brazil.



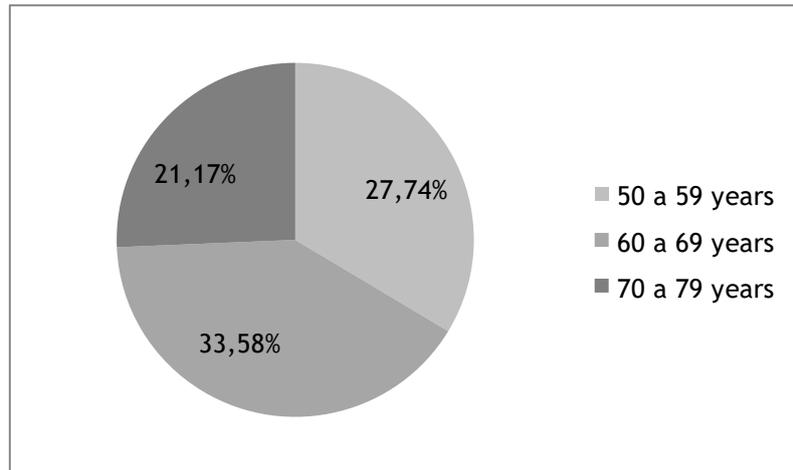
Fonte: Authors.

It was observed that there is a greater number of female hypertensive and / or diabetic patients. This is due to the fact that women are considered more vulnerable than men when it comes to health-related changes, such as multiple diseases, obesity and, consequently, the use of multiple medications (DIAS et al., 2019). Most studies reinforce the prevalence of care among women. In a municipality in Pernambuco, a survey showed that the number of hypertensive patients registered in 2012 was 12,879, of which 67% were female and 1057 registered diabetics, 62% were women, according to the SUS Department of Informatics (2019). Another municipality in Pernambuco showed that of the 35,596 registered hypertensive patients, 65% were women (Lima, Gaia, & Ferreira, 2012). However, it is

known that the number of registered men who attend a UBS is reduced, becoming a bias for the result of the gender variable (Pereira et al., 2019).

Regarding age, 38 (27.74%) of those registered were between 50 and 59, 46 (33.58%) were between 60 and 69 years old, 29 (21.17%) were between 70 and 79 years old (Graph 2).

Graph 2 - Age of hypertensive, diabetic or both pathological patients. April 2018. Timon-Ma, Brazil.

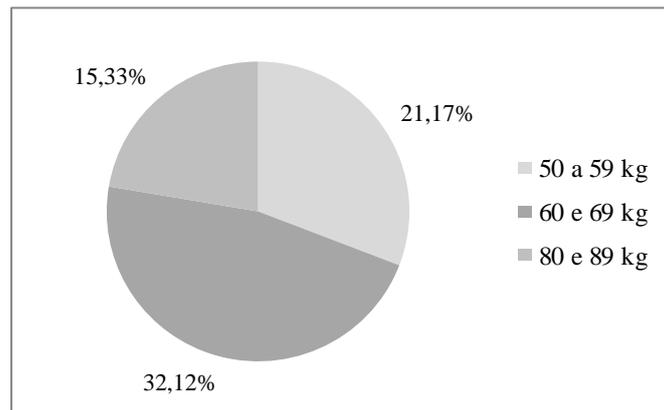


Fonte: Authors.

The study showed that, in the researched field, there is a higher prevalence of these pathologies in individuals aged between 60 and 69 years, followed by individuals aged between 50 and 59. This is explained by the fact that there is a higher prevalence in cases of hypertension in patients older than 50 years; it is stipulated that 65% of the elderly have this systemic pathology and is directly related to the most advanced age groups (Castro et al., 2019). Bearing in mind that it is proven that the patient who has one of these pathologies is more likely to develop the other (Fonsêca, 2018). Costa et al., (2020), evidenced in their research, a high number of individuals in the age group of 60 with hypertension and diabetes, which confirms the data of this research.

As for the weight of the patients, 29 (21.17%) had 50 to 59 kg, 21 (15.33%) had between 80 and 89 kg and 44 (32.12%) had between 60 and 69 kg, (Graph 3).

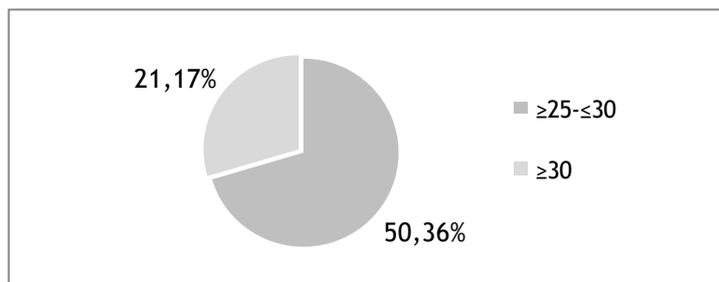
Graph 3 - Weight of hypertensive and / or diabetic patients. April 2018. Timon - MA, Brazil.



Fonte: Authors.

When checking the BMI * values, the following data were obtained: 69 (50.36%) had values between ≥ 25 - ≤ 30 and 29 (21.17%) had BMI ≥ 30 (Graph 4).

Graph 4 - BMI of hypertensive and / or diabetic patients. April 2018. Timon - MA, Brazil. * Reference of BMI values according to the guidelines for the collection of anthropometric data in health services.



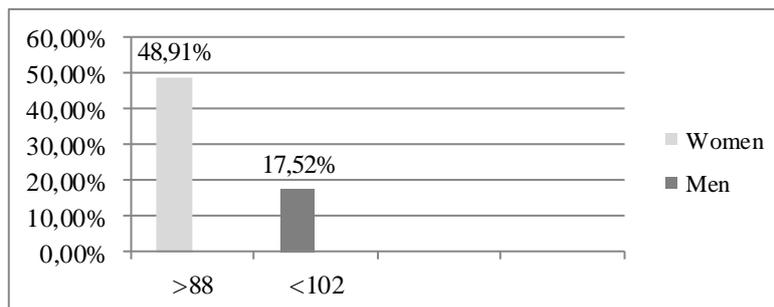
Fonte: Authors.

It can be seen that the predominance of patients' weight was between 60 and 69 kg, followed by those with 50 to 59 kg. However, this data becomes more concrete when the Body Mass Index is applied, which allows to analyze the degree of overweight and obesity of the individual. Thus, 69 of the patients were weighing between ≥ 25 - ≤ 30 , which means that they were overweight.

The increased overweight index, verified in this study leads us to infer that it is necessary to carry out activities that encourage healthy habits for the patients of the UBS surveyed, considering that sedentary lifestyle is a risk factor for cardiovascular disease, as well as for SAH and DM (Castro et al., 2019).

Regarding abdominal circumference, 67 (48.91%) women had values > 88, presenting above normal standards, and 24 (17.52%) of men had circumference <102, within normal limits * (Graph 5).

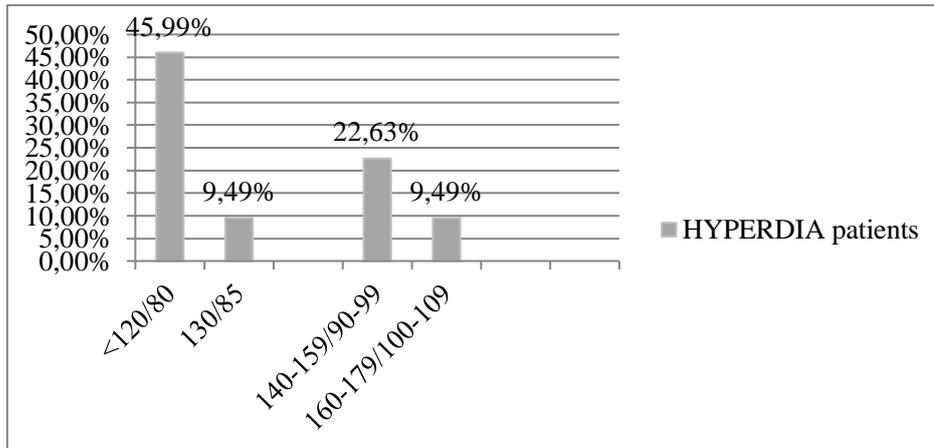
Graph 5 - Abdominal circumference of hypertensive, diabetic or both pathological patients. April 2018. Timon-Ma, Brazil. * Reference of AC values according to the guidelines for the collection of anthropometric data in health services, according to the Ministry of Health (2011).



Fonte: Authors.

It was observed that women who were followed up for SAH and / or DM were above the waist circumference stipulated by the Ministry of Health, while most of the men surveyed were within normal standards. Studies have shown that the value of increased abdominal circumference represents risks for the evolution of chronic diseases, especially cardiovascular diseases, dyslipidemia and glucose intolerance (Giroto, Andrade & Cabrera, 2010). The blood pressure values found in the records were: 63 (45.99%) <120/80; 31 (22.63%) scored 140-159 / 90-99; 13 (9.49%) with 130/85; and 13 (9.49%) with 160-179 / 100-109 Graph 6).

Graph 6 - Blood pressure values of hypertensive and diabetic and hypertensive patients. April 2018. Timon - MA, Brazil.

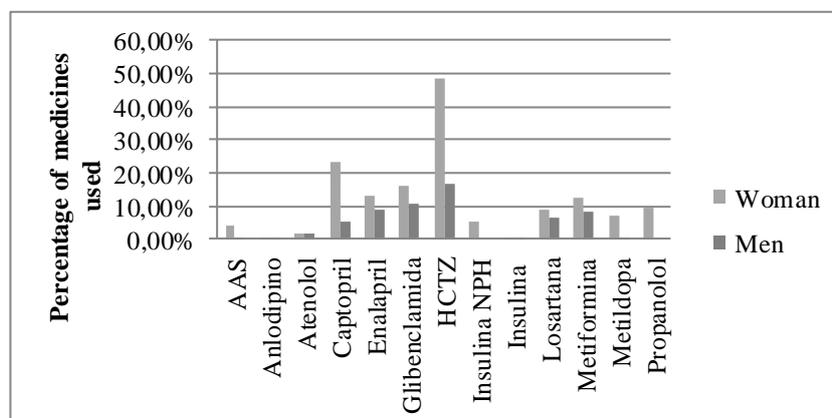


Fonte: Authors.

We chose to specify the values of arterial hypertension due to the higher prevalence of hypertension in the basic unit. It is noted that despite the high number of individuals treating this pathology in the studied area, the blood pressure values of most of them are within the normal range, thus confirming the effectiveness of the attention directed to them, in this basic unit studied.

The drugs most used by both sexes were hydrochlorothiazide (HCTZ), followed by captopril, glibenclamide, losartan, among others (Graph 7).

Graph 7 - Drugs used by hypertensive, diabetic or both pathological patients. April 2018. Timon-Ma, Brazil.



Fonte: Authors.

Some patients had up to four prescribed antihypertensive drugs, which calls attention to the need to reassess the client and his medication regimen. Another factor to note is that there were many patients using HCTZ and propranolol concomitantly, something that, according to the Brazilian Society of Cardiology (2010), can cause interaction and raise blood glucose levels.

Pharmacological therapies for the elderly require a certain amount of care when prescribed, since many patients use several medications a day, for the treatment of SAH or DM and other degenerative diseases resulting from old age, and the improper association of these drugs can cause drug interactions, toxic effects or adverse reactions.

4. Final Considerations

The findings showed the prevalence of female patients in routine consultations, alerting to actions that encourage and enable men's adherence to health services. It was also noticed that the weight gain is related to older age, a phase in which the metabolism decreases and it would be interesting to include the monitoring of a nutritionist and a physical educator, within the multiprofessional team in the basic health units, already that the two pathologies mentioned in the study, need weight control so that the rates remain stabilized. A weakness was observed when it comes to the prescription of medications, since the protocols regarding the risks of drug interaction, existing among some antihypertensive drugs, must be respected. Early diagnosis alone is not enough to improve the pathological condition of hypertensive and diabetic patients. Identifying the profile of these patients seen at the UBS, in order to guide the development of preventive actions, such as monthly monitoring and follow-up, guidelines, lectures, conversation circles, among other promotion actions, is essential to minimize these problems.

The data analyzed in this study, made it possible to perceive the relevance of the routine monitoring of the HIPERDIA program, as well as the importance of annotating patient information in the medical record, at the time of the consultation, since, through these data, one can have a broader epidemiological view of assistance to these users and, from then on, improve the assistance model. The lack of some complete records implied the size of the final sample and consequently became a limiting factor in the study. At the same time, inconsistencies in the records pointed out important gaps for the health team's intervention.

In view of the difficulties encountered by researchers, with regard to patient data, new research is suggested that deals with the nursing record in primary care, since nursing

notes and developments are of great value for gathering information that guide the public health actions.

Referências

Castro, L. S. et al. (2019). Perfil epidemiológico da hipertensão arterial sistêmica em uma população da zona urbana do Maranhão. *REAS/EJCH*. (18),125.

Costa, G. D., et al. (2020). Estudo epidemiológico da prevalência simultânea de hipertensão e diabetes de pacientes cadastrados no Hiperdia em uma cidade do estado do Piauí. *Research, Society and Development*. 9(2).

Departamento de Informática do SUS. (2019). Brasília (DF).

Dias, J. R. P., et al. (2019). Analysis of the clinical and epidemiological profile of elderly carriers of systemic arterial hypertension in USF tenoné microarms 4, 6 and 7. *Braz. J. Hea. Rev., Curitiba*. 2(1), 2-41.

Francisco, P. M. S. B., et al. (2019). Prevalence of concomitant hypertension and diabetes in Brazilian older adults: individual and contextual inequalities. *Ciênc. saúde coletiva*. 23(11), 3829-3840.

Freitas, P. S., et al. (2018). Use of health services and medicines by hypertensive and diabetic patients in the municipality of Rio de Janeiro, Brazil. *Ciênc. saúde coletiva*. 23(7), 2383-2392.

Fonsêca, J. R. (2018). Estudo descritivo da distribuição por sexo e faixa etária da hipertensão e diabetes no município do Paulista-PE. Recife, PE, Brasil.

Giotto, E., Andrade, S. M., Cabrera, M. A. S. (2010). Prevalência de obesidade abdominal em hipertensos cadastrados em uma Unidade de Saúde da Família. *Arq Bras Cardiol*.94(6),754-762.

Lima, A., Gaia, E. S. M., Ferreira, M. A.(2012). A importância do Programa Hiperdia em uma Unidade de Saúde da Família do município de Serra Talhada - PE, para adesão dos hipertensos e diabéticos ao tratamento medicamentoso e dietético. *Saude Colet Debate*. 2(1), 30-39.

Brasil. (2011). Ministério da Saúde (BR). Orientações para a coleta de dados antropométricos em serviços de saúde. Brasília(DF).

Nascimento, A. G., & Joselma, C. (2019). Núcleo ampliado de saúde da família e atenção básica: análise do processo de trabalho. *Trab. educ. saúde*. 17(2),252-259.

Pereira, S. M., Lima, F. E. S., Gonçalves, F. I. R., Silva, N. B. S. S., Santos, W. Q., & Sousa, P. V. (2019) Accessibility of men to basic health unit. *REAS/EJCH*. 11(2),108.

Pereira, A. S., Shitsuka, D. M., Parreira, F. J., & Shitsuka, R. (2018). Metodologia da pesquisa científica. *Editora UAB/NTE/UFSM, Santa Maria/RS*.

Sociedade Brasileira de Cardiologia (SBC). (2010). Sociedade Brasileira de Hipertensão, Sociedade Brasileira de Nefrologia. VI Diretrizes Brasileiras de Hipertensão. *Arq Bras Cardiol*. 95(1),100-151.

Percentage of contribution of each author in the manuscript

Gabriela Oliveira Parentes da Costa – 23%

Aclênia Maria Nascimento Ribeiro –7%

Catiane Raquel Sousa Fernandes–7%

Maria Clara Costa Vieira–7%

Camilo José Soares Araújo–7%

Adriana de Medeiros Santos–7%

Francisca das Chagas de Jesus Soares Oliveira–7%

Ricardo Clayton Silva Jansen–7%

Michelle Kerin Lopes–7%

Luciana Stanford Baldoino–7%

Raquel Vilanova Araujo–7%

Ana Danúsia Izidório Rodrigues de Araújo–7%