Silva FHM da, Correia VGA, Silva MT da, Lima RTS, et al.



## CASE REPORT ARTICLE

# HEALTH INTERVENTION ON HYPERTENSION AND DIABETES INTERVENÇÃO DE SAÚDE SOBRE HIPERTENSÃO E DIABETES INTERVENCIÓN DE SALUD SOBRE HIPERTENSIÓN Y DIABETES

Fernando Henrique Meneses da Silva<sup>1</sup>, Victorugo Guedes Alencar Correia<sup>2</sup>, Mariana Teixeira da Silva<sup>3</sup>, Ráyla Tuane Soares Lima<sup>4</sup>, Eduardo de Oliveira Martins Dantas<sup>5</sup>, Bartolomeu da Rocha Pita<sup>6</sup>, Jéssica Denise Vieira Leal<sup>7</sup>, Heidy Priscilla Velôso<sup>8</sup>

#### **ABSTRACT**

Objective: to present the experience of an intervention performed with hypertensive and diabetic patients, following the parameters of the Methodology of the Arch of Charles Maguerez. Method: this is a qualitative, descriptive study, a type of experience report, about a health intervention performed by nursing students and health professionals in a Basic Health Unit. The activity on non-adherence of users to the HiperDia program and, as methodology, Charles Maguerez's Problematization with Arch was followed. Results: the non-adherence of hypertensive and diabetic patients to HiperDia's consultations was identified and, with the aid of the steps of Charles Maguerez Arch, a health intervention was carried out, where the participants were offered Nursing consultations with: blood pressure, blood glucose test and weight. After the consultation, a nutritious snack is distributed, emphasizing the importance of a healthy diet, as well as stimulating the regular practice of physical activity in a correct way, making this process essential for the control and treatment of diseases. Conclusion: a positive and satisfactory result was obtained and, therefore, it is understood that the accomplishment of health actions like this makes a total difference in the health-disease process. Descritores: Nursing; Movement; Intervention; Health Education; Information; Chronic Disease.

#### **RESUMO**

Objetivo: apresentar a experiência de uma intervenção realizada com pacientes hipertensos e diabéticos, seguindo os parâmetros da Metodologia do Arco de Charles Maguerez. Método: trata-se estudo qualitativo, descritivo, tipo relato de experiência, sobre uma intervenção em saúde realizada por acadêmicos de Enfermagem e profissionais da saúde em uma Unidade Básica de Saúde. Referiu-se a atividade sobre a não adesão dos usuários ao programa HiperDia e, como metodologia, foi seguida a Problematização com Arco, de Charles Maguerez. Resultados: identificou-se a não adesão dos pacientes hipertensos e diabéticos às consultas de HiperDia e, com o auxílio das etapas Arco de Charles Maguerez, realizou-se uma intervenção em saúde onde foram ofertadas, aos participantes, consultas de Enfermagem com: verificação da pressão arterial, teste de glicemia e peso. Distribui-se, após a consulta, um lanche nutritivo, ressaltando a importância de uma alimentação saudável, bem como estimulando a prática regular de atividade física de forma correta, tornando esse processo essencial para o controle e tratamento das doenças. Conclusão: obteve-se um resultado positivo e satisfatório e, dessa forma, compreende-se que a realização de ações em saúde como essa faz total diferença no processo saúde-doença. Descritores: Enfermagem; Movimento; Intervenção; Educação em Saúde; Informação; Doença Crônica.

#### **RESUMEN**

Objetivo: presentar la experiencia de una intervención realizada con pacientes hipertensos y diabéticos, siguiendo los parámetros de la Metodología del Arco de Charles Maguerez. Método: se trata de un estudio cualitativo, descriptivo, tipo relato de experiencia, sobre una intervención en salud realizada por academicos de Enfermería y profesionales de salud de una Unidad Basica de Salud. Se referió a la actividad sobre la no adhesión de los usuarios al programa HiperDia y, como metodologia, fue seguida la Problematización con Arco de Charles Maguerez. Resultados: se identificó la no adhesión de los pacientes hipertensos y diabéticos a las consultas de HiperDia y, con el auxilio de las etapas Arco de Charles Maguerez, se realizó una intervención en salud donde se ofrecieron a los participantes consultas de Enfermería con: verificación de la presión arterial, prueba de glucemia y peso. Se distribuye, después de la consulta, una merienda nutritiva, resaltando la importancia de una alimentación sana, así como estimulando la práctica regular de actividad física de forma correcta, haciendo este proceso esencial para el control y tratamiento de las enfermedades. Conclusión: se obtuvo un resultado positivo y satisfactorio y, de esa forma, se comprende que la realización de acciones en salud como esa hace total diferencia en el proceso salud-enfermedad. Descritores: Enfermería; Movimiento; Intervención; Educación en Salud; Información; Enfermedad Crónica

1,2,3,4,5,6,7 Federal University of Piauí / UFPI. Picos (PI), Brazil. ORCID iD: http://orcid.org/0000-0002-0169-4142 E-mail: <a href="mailto:fernandohenrique-meneses@hotmail.com">fernandohenrique-meneses@hotmail.com</a> ORCID iD: <a href="mailto:http://orcid.org/0000-0002-7731-9664">http://orcid.org/0000-0002-7731-9664</a> E-mail: <a href="mailto:bartopita@hotmail.com">bartopita@hotmail.com</a> ORCID iD: <a href="mailto:http://orcid.org/0000-0003-2440-">http://orcid.org/0000-0003-2440-</a> E-mail: victorugoguedes@hotmail.com ORCID iD: http://orcid.org/0000-0002-1904-0921 E-mail: marytsilva44@gmail.com /orcid.org/0000-0001-9472-6336 E-mail: raylatuanny@hotmail.com ORCID iD: http://orcid.org/0000-0001-5813-2629 http://orcid.org/0000-0001-9472-6336 E-mail: raylatuanny@hotmail.com ORCID iD: http://orcid.org/0000-0001-5813-2629 E-mail: eduardo8\_oliveira@hotmail.com; ORCID iD: http://orcid.org/0000-0001-5607-3506 E-mail: jessicadenisevl@hotmail.com 

\*\*University Paulista/UNIP. Goiânia (GO), Brasil. ORCID iD: http://orcid.org/0000-0002-0009-5519 E-mail: heidypriscilla@hotmail.com

#### How to cite this article

Silva FHM da, Correia VGA, Silva MT da, Lima RTS, Dantas EOM, Pita BR, et al, health intervention on hypertension and diabetes. J Nurs UFPE online. 2019;13:e240593 DOI: <a href="https://doi.org/10.5205/1981-8963.2019.240593">https://doi.org/10.5205/1981-8963.2019.240593</a>

The manuscript was not extracted from thesis, dissertation and related.

Silva FHM da, Correia VGA, Silva MT da, Lima RTS, et al.

### INTRODUCTION

Over time, a significant increase in life expectancy is observed, so that the population is getting older and old age ends up triggering chronic health problems that, when associated with inadequate living habits, become more worrying.<sup>1</sup> These problems include Diabetes Mellitus (DM) and Systemic Arterial Hypertension (SAH).

It is known that DM is a group of metabolic diseases associated with hyperglycemia, which may be caused by lack of insulin, in its action or both.<sup>2</sup> Because of the metabolic imbalance associated with this disease, the affected individuals are at high risk for long-term macro and microvascular complications, which can lead to the development of cardiovascular diseases, <sup>3</sup> such as SAH.

Based on the 7th Brazilian Hypertension Directive (BHD), it is understood that hypertension is a multifactorial health condition that presents characteristics such as high and sustained levels of blood pressure (BP) and, therefore, causes changes in organs such as: the heart, brain, kidneys and blood vessels.<sup>4</sup>

There is a high prevalence of SAH, which is one of the main modifiable problems, being one of the most important factors that affect public health, having a direct relation with the age, reaching more than 60% in the age group over 65 years; <sup>4</sup> the DM already affects about 14.3 million people worldwide.<sup>5</sup>

In Primary Care, actions are focused on the prevention and control of chronic diseases, such as early and clinical diagnosis through active search, which can be done with a home visit and in the community, conducting examinations, treating confirmed cases for the prevention of more serious complications and educational activities and promotion.<sup>6</sup>

It should be emphasized that the professional health team is paramount in providing effective, quality and integral assistance<sup>7</sup> and, for the accomplishment of the activity described in this study, there was, initially, the process of territorialization of a neighborhood, in which the reality of the Basic Health Unit and identified the absence in the demand of the consultations directed to people diagnosed with SAH and DM.

## **OBJECTIVE**

• To present the experience of an intervention performed with hypertensive and diabetic patients, following the parameters of the Methodology of the Arch of Charles Maguerez.

### **METHOD**

This is a descriptive study, an experience report, about a health intervention performed by

nursing students and health professionals in August 2017 at a Basic Health Unit (BHU) in the city of Picos, Piauí. The activity on the non-adherence of the users to the HiperDia program was mentioned and, as methodology, it was followed the Problematization, with Arch of Charles Maguerez.

As participants in the activity, persons with hypertension and / or diabetes who resided in the territory of the BHU were enrolled. In view of the needs found, it was sought to make frequent and long-lasting queries of HiperDia.

### Methodology of Problematization

The Methodology of Problematization is used in situations in which subjects are related to the social life of the people, based on the Method of the Arc by Charles Maguerez, presented for the first time by Bordenave and Pereira in the year 1923.<sup>8</sup> The following steps were followed for the development of the Arc: 1. Observation of reality; 2. The key points; 3. Theorizing; 4. The chances of a solution; 5. Application to reality, which are described in figure 1.<sup>9</sup>

Silva FHM da, Correia VGA, Silva MT da, Lima RTS, et al.

Steps	Description
1. Observation of reality	This stage refers to the phase in which a social reality view occurs with the participation of the participants who, in the case of this study, were hypertensive and / or diabetic. Here, a reading of the theme to be worked. 10-1
2. Key points	What is really important is analyzed here, identifying the key points. Here, there was the synthesis of the subject that would be studied about the problem. <sup>9,11</sup>
3. Theory	It is at this stage that the problems are perceived and reflected on the motives of the events observed in the previous stages. It is emphasized that in order to have a complete understanding of the manifestations in experiments and theoretical principles, a well-developed theorization is needed. Here, all involved should study the subject and there are analytical mental operations that aid in the intellect. <sup>9,11</sup>
4. Solution hypotheses	In this fourth stage, in a critical and creative way, the creation of options to try to solve the problems encountered occurs. This is done through a confrontation between theory and reality. <sup>8</sup>
5. Application to reality	It concerns the fifth stage of the methodology of the Arc, by Charles Maguerez, when the application occurs in which those involved construct new knowledge to transform the reality found through previously made plans. Here, there are questions about how to solve the problem, how to transform reality and what are the challenges in using the methodology employed.

Figure 1. Description of steps of the Arch Method, by Charles Maguerez. Picos (PI), Brazil, 2019.

### **RESULTS**

It was identified and understood, through a territorialisation of the BHU neighborhood, the possible health problems that the population faced. Due to this, a planning was carried out in which the idealization of an intervention project was put into practice, according to the main problems encountered.

For the idealization of this planning process, the steps of Arco, by Charles Maguerez, described in the methods of this study, are of fundamental importance for the development of the problem. It was observed, on the face of it, by the nursing students, the reality witnessed, identifying that the main problem faced in this BHU would be the non adherence of the hypertensive and diabetic patients to the consultations of HiperDia.

From the identification and observation of the problematic, the following key points to compose the second stage of the arc were traced: the non-attendance of the patients to the Nursing consultations related to the HiperDia system; the lack of active search of patients who are absent; resistance to treatment; the lack of articulation with the professionals that are part of the Family Health Support Center (FHSC) so that there is a better interaction among the patients regarding the health-disease process; difficulty for some patients to reach the BHU; lack of permanent health education by professionals; lack of medication and materials and supplies.

In the third stage, we inquired about nursing students' theorizing about perceived reality, about certain events identified in the previous stages. As a guiding base, the Ministry of Health's basic attention books (Systemic Arterial Hypertension and Diabetes Mellitus) were used as a guiding base, being of fundamental importance in the

process and in the quality of care provided to the population.

In the application of the fourth stage of the Arch of Maguerez, the hypotheses of solution was built.

Firstly, it was important to carry out the active search of patients who are absent, with the collaboration of the community health agents (CHA), so that their participation in the consultations becomes more effective, always articulating with the professionals that integrate the network health professionals, promoting guidelines for professionals working in the care of hypertensive and diabetic patients, emphasizing the importance of having a better attention to this target audience, carrying out conversations with patients, so that the dialogue becomes more present and treatment adherence occurs.

It was planned to carry out a health intervention with the objective of bringing the patient closer to the professionals who work in the Family Health Strategy (FHS), providing knowledge about the health problem, and intensifying the projects of health education by professionals in order to propose an improvement in the quality of life and then to plan new strategies so that there is a continuous replacement of inputs and medications in the BHU.

It was also proposed for professionals, the importance of becoming more effective the control, distribution and validity of inputs and medications. The idea was to maintain, as routine, a day for the professionals to move to the most needy community to be provided health care and, in addition, to effect and intensify the care that should be offered and, finally, conduct weekly meetings with all staff, together with FHSC professionals, in search of better planning in the

Silva FHM da, Correia VGA, Silva MT da, Lima RTS, *et al*. quality of care provided to hypertensive and diabetic patients.

In the fifth and last stage of the arc (application to reality), a meeting was held, with the aim of intensifying the Nursing consultations related to the HiperDia system of the BHU, together with the CHA and the professionals who work in the in practice the implementation of a health intervention aimed at hypertensive and diabetic users.

In this sense, a health intervention was proposed by Nursing academics of the Federal University of Piauí (UFPI), whose main objective was a better adhesion of hypertensive and HiperDia users program, diabetic to the emphasizing the importance of Nursing consultations.

In the intervention entitled "HiperDia in action", participants were offered Nursing consultations with: blood pressure check; blood glucose test; Weight; BMI and, after the consultation, a nutritious snack was distributed, emphasizing the importance of a healthy diet, as well as stimulating the regular practice of physical activity in a correct way, making this process essential for the control and treatment of diseases.

### **DISCUSSION**

It started with a territorialization to have a knowledge of the neighborhood in analysis and, thus, to intervene preventively in problems considered relevant for public health. It was decided to use the Arch by Charles Maguerez because, according to Reibnitz, the main objective of this method is the viable solution for an improvement of the problems observed, as well as to offer a better assistance in the BHU by identifying the reality.<sup>8</sup>

It should be noted that in order to prevent the occurrence of chronic diseases, including hypertension, the individual should adopt healthy habits from an early age and this includes a healthy and balanced diet, reduced salt and fat intake, combat sedentary lifestyle, reduction of alcohol consumption and smoking, <sup>4</sup> also recommended for diabetic patients.

It is emphasized that people with chronic diseases need self-care and, for this, they need to understand about adequate dietary intake, besides the use of insulin, in the case of DM, <sup>12</sup> reflecting, therefore, the importance of carrying out intervention activities with this population with the purpose of transmittinknowledge and interacting among them.

It is emphasized that both adherence to treatment and follow-up of these patients by health professionals are essential for the control and prevention of diseases, and in one study it was seen that the main causes that lead patients to non-adherence to treatment are the forgetting to

take medication, absence of symptoms, presence of side effects and insufficient knowledge of the disease, mainly in the elderly.<sup>13</sup>

It is emphasized that preventive education activities must be put into practice by all health staff and their effectiveness depends on dialogue, with the creation of bonds and respect. It also reinforces the importance of health education in the treatment of chronic diseases, especially in self-care.<sup>14-5</sup>

It stimulates the sharing of lived facts through the formation of interaction activities, with the construction of knowledge in a collective way, favoring an understanding of the participants.<sup>16</sup>

### CONCLUSION

It was realized how significant it was to be able to pass on knowledge and information about diseases to the neighborhood public. Nursing care was provided, contributing to a better understanding and clarification about the importance of healthy habits for the control of blood pressure and Diabetes Mellitus.

It is believed that teamwork makes a total difference in people's lives, because it is with the community that great ideas and expectations are built in relation to the planning and implementation of Nursing care offered to the population.

A positive and satisfactory result was obtained with the accomplishment of the action in health and, in this way, it came to understand that the accomplishment of actions in health like this, that sought an improvement in the quality of life of the people, makes total difference in the it is necessary that health professionals working in the FHS better monitor these patients with hypertension and diabetes, stimulating them to self-care, in addition to making this process a priority for better adherence to HiperDia's consultations.

## **REFERENCES**

1. Porciúncula RCR, Carvalho EF, Barreto KML, Leite VMM. Socio-epidemiological profile and autonomy of elderly in the city of Recife, northeastern Brazil. Rev Bras Geriatr Gerontol. 2014;17(2):315-25.

http://dx.doi.org/10.1590/S1809-98232014000200009

2. Ministério da Saúde (BR), Secretaria de Atenção à Saúde, Departamento de Atenção Básica. Estratégias para o cuidado da pessoa com doença crônica: Diabete Mellitus [Internet]. Brasília: Ministério da Saúde; 2013 [cited 2019 Abr 02]. Available from: <a href="http://bvsms.saude.gov.br/bvs/publicacoes/estrategias\_cuidado\_pessoa\_diabetes\_mellitus\_cab36.p">http://bvsms.saude.gov.br/bvs/publicacoes/estrategias\_cuidado\_pessoa\_diabetes\_mellitus\_cab36.p</a>

Intervenção de saúde sobre hipertensão...

Silva FHM da, Correia VGA, Silva MT da, Lima RTS, et al.

3. 3.National Institute for Health and Care Excellence. Internal Clinical Guidelines Team. Type 2 Diabetes in adults management [Internet]. London: National Institute for Health and Care Excellence; 2015 [cited 2019 abr 08]. Available from:

https://www.ncbi.nlm.nih.gov/pubmed/26741015

- 4. Malachias MVB, Póvoa RMS, Nogueira AR, Souza D, Cosa LS, Magalhães ME. 7ª Diretriz Brasileira de Hipertensão Arterial. Arq Bras Cardiol [Internet]. 2016 Sept [cited 2019 Jan 15];107(3):01-83. Available from: <a href="http://publicacoes.cardiol.br/2014/diretrizes/2016/05\_HIPERTENSAO\_ARTERIAL.pdf">http://publicacoes.cardiol.br/2014/diretrizes/2016/05\_HIPERTENSAO\_ARTERIAL.pdf</a>
- 5. International Diabetes Federation. IDF Diabetes Atlas [Internet]. Brussels: IDF; 2015 [cited 2019 Apr 09]. Available from: https://www.idf.org/e-library/epidemiology-research/diabetes-atlas/13-diabetes-atlas-seventh-edition.html
- 6. Ministério da Saúde (BR), Gabinete do Ministro. Portaria nº 95, de 26 de janeiro de 2001 [Internet]. Norma operacional de assistência à saúde- NOAS/SUS- 01/2001. Brasília: Ministério da Saúde; 2001 [cited 2019 Jan 15]. Available from: <a href="http://bvsms.saude.gov.br/bvs/saudelegis/gm/20">http://bvsms.saude.gov.br/bvs/saudelegis/gm/20</a> 01/prt0095\_26\_01\_2001.html
- 7. Melo EG, Santos CLJ, Batista Filho RA, Souza LL, Vasconcelos DS, Lima ACC, et al. Sociodemographic and clinical profile of diabetic elderly. J Nurs UFPE online. 2019 Mar;13(3):707-14. Doi: <a href="https://doi.org/10.5205/1981-8963-v13i03a236991p707-714-2019">https://doi.org/10.5205/1981-8963-v13i03a236991p707-714-2019</a>
- 8. Reibnitz KS, Prado ML. Inovação e educação em enfermagem. Florianópolis: Cidade Futura; 2006.
- 9. Bordenave JD, Pereira AMP. Estratégias de ensino-aprendizagem. 25th ed. Petrópolis: Vozes; 2004.
- 10. Prado ML, Velho MB, Espíndola DS, Hilda Sobrinho S, Backes VMS. Charles maguerez arc: reflecting methodology strategies on active training for health professionals. Esc Anna Nery Rev Enferm [internet]. 2012 Jan/Mar [cited 2019 Apr 09];16(1):172-7. Available from: http://www.scielo.br/pdf/ean/v16n1/v16n1a23.pdf
- 11. Berbel NAN. Metodologia da problematização: fundamentos e aplicações. Londrina: Ed INP/UEL; 1999.
- 12. Queiroz MVO, Brito LMMC, Pennafort VPS, Bezerra FSM. Sensitizing the child with diabetes to self care: Contribution to educational practice. Esc Anna Nery Rev Enferm. 2016; 20(2):337-43. Doi: 10.5935/1414-8145.20160046
- 13. Ferreira EA, Barros Júnior J, Alves DCSQ, Lavor JV, Duarte VC, Parnaíba FJB et al. Abandonment of anti-hypertensive treatment in elderly: knowing its conditioners. J Nurs UFPE

online. 2019 Jan;13(1):118-25. Doi: <a href="https://doi.org/10.5205/1981-8963-v13i01a236249p118-125-2019">https://doi.org/10.5205/1981-8963-v13i01a236249p118-125-2019</a>

14. Torres HC, Pereira FRL, Alexandre LR. Avaliação das ações educativas na promoção do autogerenciamento dos cuidados em diabetes mellitus tipo 2. Rev Esc Enferm USP. 2011 Oct;45(5):1077-82.

http://dx.doi.org/10.1590/S0080-62342011000500007

- 15. Cattalini M, Marin DA, Mucci NO, Prado SER, Vidal VGO, Catallini SAC, et al. Resposta dos marcadores bioquímicos de portadores de síndrome metabólica após intervenção educacional junto aos familiares. CuidArte Enferm [Internet]. 2011 July/Dec [cited 2019 Apr 09];5(2):81-9. Available from: <a href="http://fundacaopadrealbino.org.br/facfipa/ner/pdf/CuidArte%20Enfermagem%20v.%205,%20n.%202">http://fundacaopadrealbino.org.br/facfipa/ner/pdf/CuidArte%20Enfermagem%20v.%205,%20n.%202</a>, %20jul.-dez.%202011.pdf
- 16. Almeida JS, Almeida JM. Health education and treatment of type 2 diabetes mellitus in a Family Health Unit. Rev Fac Ciênc Méd Sorocaba. 2018; 20(1):13-7. Doi: 10.23925/1984-4840.2018v20i1a4

Submission: 2019/04/10 Accepted: 2019/06/05 Publishing: 2019/06/20

### **Corresponding Address**

Fernando Henrique Meneses da Silva

E-mail: fernandohenrique-meneses@hotmail.com



All the contents of this article is licensed under a Creative Commons Atribuição 4.0 Internacional