

**Diabetic and Hypertensive Patient's Handbook: adaptation of the *Caderneta de Saúde da Pessoa Idosa* for nursing assistance in Secondary Care****Caderneta do diabético e do hipertenso: adaptação da *caderneta de saúde da pessoa idosa* para a assistência de enfermagem na atenção secundária****Libreta del diabético y del hipertenso: adaptación de la *cartilla de salud del anciano* a los cuidados de enfermería en la atención secundaria****Received: 01/06/2021****Approved: 16/10/2021****Published: 01/01/2022****Francine Santos Giovanini<sup>1</sup>****Bárbara Longhi de Oliveira<sup>2</sup>****Rita de Cássia Helú Mendonça Ribeiro<sup>3</sup>****Vânia Del'Arco Paschoal<sup>4</sup>****Daniele Alcalá Pompeo<sup>5</sup>****Alexandre Lins Werneck<sup>6</sup>**

Cross-sectional study with descriptive design, quantitative analytical approach, carried out in 2021, in a specialty clinic in the city of São José do Rio Preto, São Paulo, Brazil. It aimed to present an adapted version of the *Carteira de Saúde da Pessoa Idosa* (Health Handbook for the Elderly Person) to users with diabetes mellitus and arterial hypertension in Secondary Care. Two instruments were applied: one to evaluate the treatment before the experience and the other after the experience with the handbook (collection instrument 1) and the Diabetic and Hypertensive Patient's Handbook (collection instrument 2 adapted from the *Carteira de Saúde da Pessoa Idosa*). Fifty patients participated, of which 60% were women aged 51 to >60 years, 72% suffered from type II diabetes mellitus and 56% suffered from arterial hypertension. They reported that the handbook helped with treatment (94%), medication schedule, food, participation in treatment; and that they read the entire handbook (78%). In terms of association before and after, the most significant issues were: taking the medications at the established time, fitting medication schedules into daily activities, and complying with the treatment without supervision from family or friends. The adapted handbook proved to be an important instrument, especially for health education in secondary care, with a view to expanding knowledge, as well as facilitating nursing care.

**Descriptors:** Nursing care; Secondary health care; Hypertension; Diabetes mellitus.

Estudo transversal com delineamento descritivo, abordagem quantitativa do tipo analítica, realizado no ano de 2021, em ambulatório de especialidades da cidade de São José do Rio Preto, São Paulo, com objetivo de apresentar uma versão adaptada da Carteira de Saúde da Pessoa Idosa a usuários com diabetes mellitus e hipertensão arterial em Atenção Secundária. Foram aplicados dois instrumentos, um para avaliar o tratamento antes da experiência e outra após a experiência com a caderneta (instrumento de coleta 1) e a caderneta do Diabético e Hipertenso (instrumento de coleta 2 adaptada da caderneta de saúde da pessoa idosa). Participaram 50 pacientes, 60% de mulheres, entre 51 a >60 anos, 72% com diabetes mellitus tipo II e 56% com hipertensão arterial. Relataram que a caderneta colaborou com tratamento (94%), horário de medicação, alimentação, participação no tratamento; e, leram toda a caderneta (78%). Em termos de associação antes e depois, as questões com maior significância foram: toma as medicações no horário estabelecido, encaixa os horários dos remédios nas atividades do dia a dia e, cumpre o tratamento sem supervisão de sua família ou amigos. A caderneta adaptada mostrou-se importante instrumento, sobretudo de educação em saúde na atenção secundária, com vistas a ampliação de conhecimento, bem como de facilitar a assistência de enfermagem.

**Descritores:** Cuidados de enfermagem; Atenção secundária à saúde; Hipertensão; Diabetes mellitus.

Estudio transversal con diseño descriptivo, enfoque cuantitativo de tipo analítico, realizado en el año 2021, en un ambulatorio de especialidad de la ciudad de São José do Rio Preto, São Paulo, Brasil, con el objetivo de presentar una versión adaptada de la cartilla de salud para el anciano a los usuarios con diabetes mellitus e hipertensión en la atención secundaria. Se aplicaron dos instrumentos: uno para evaluar el tratamiento antes de la experiencia y otro después de la experiencia con la libreta (instrumento de recogida 1) y la Libreta del Diabético e Hipertenso (instrumento de recogida 2 adaptado de la libreta de salud del anciano). Participaron 50 pacientes, de los cuales 60% eran mujeres, con edades comprendidas entre 51 y >60 años, 72% con diabetes mellitus tipo II y 56% con hipertensión. Informaron de que la libreta colaboró con el tratamiento (94%), el horario de la medicación, la dieta, la participación en el tratamiento; y leyeron toda la libreta (78%). En cuanto a la asociación antes y después, las cuestiones más significativas fueron: tomar la medicación a tiempo, adaptar el horario de la medicación a sus actividades diarias y cumplir el tratamiento sin supervisión de la familia o los amigos. La libreta adaptada resultó ser un instrumento importante, especialmente para la educación en salud en la atención secundaria, con vistas a ampliar los conocimientos, además de facilitar los cuidados de enfermería.

**Descritores:** Atención de enfermería; Atención secundaria de salud; Hipertensión; Diabetes mellitus.

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## INTRODUCTION

Chronic non-communicable diseases (NCDs) were shown to be the cause for approximately 56.9% of deaths in Brazil, with the population aged 30 to 69 years being the most affected<sup>1</sup> and considered a global public health problem<sup>2</sup>. NCDs account for 80% of deaths in low and middle-income countries<sup>3</sup>. About 22 countries have mortality rates from NCDs above the regional average<sup>2</sup>.

The NCDs that most affect the population are: cardiovascular diseases, diabetes mellitus (DM), cancer and chronic respiratory diseases<sup>4</sup>. According to the World Health Organization, most deaths related to NCDs are caused by bad lifestyle habits, constituting a set of factors, namely: poor diet, smoking, lack of physical exercise and excessive consumption of alcoholic beverages<sup>5</sup>. The increase in the incidence of NCDs has been one of the major causes of death in the world, responsible for 38 million deaths per year, of which 16 million are premature deaths and approximately 28 million in low and middle-income countries<sup>6</sup>.

In 2006, the Brazilian National Health Promotion Policy was approved. Its intent is to provide quality of life, reduce vulnerability and health risks, offer expertise followed by health practices and the health system, and provide health promotion activities in the System Unified Health System (SUS)<sup>7</sup>, formed by popular practices and knowledge, which seeks to provide health promotion and disease prevention through educational processes, consisting of knowledge in health<sup>8</sup>. In this context, the participation of the health team is important, as it can provide health education actions that provide a reduction in risk factors and the occurrence of chronic diseases in the SUS<sup>9</sup>.

Nursing care plays an essential role in the treatment of patients with NCDs, helping to adapt and accept better lifestyles, adherence to treatment, follow-up, educational activities and patient guidance<sup>10</sup>. The care provided by nurses ranges from patient admission, diagnosis, nursing interventions, nursing consultations, assessment of care for patients with chronic diseases, quality of care, professional and client relationship and technical procedures<sup>11</sup>.

Secondary Care (SC) has been growing more and more, as a result of the organization of health systems in the conception of the Health Care Network, defragmenting the work process and leading to the integration of services. The composition of the SC consists of specialized outpatient and hospital services, favoring intermediate technological density and medium-complexity procedures<sup>12</sup>.

With the current COVID-19 pandemic, NCDs are some of the main comorbidities in patients with COVID-19, resulting in worse conditions, increased length of hospital stay and deaths<sup>13,14</sup>. Social distancing has been one of the efficient methods to reduce the spread of the new virus, but at the same time, it has had an impact on the quality of life of patients with NCDs<sup>15</sup>.

Non-adherence to better lifestyle habits for NCD patients can cause disabilities, secondary diseases, and even death. Thus, this study aims to present an adapted version of the *Caderneta de Saúde da Pessoa Idosa* (Health Handbook for the Elderly Person) to users with diabetes mellitus and arterial hypertension in Secondary Care.

## METHODS

This is a cross-sectional study with a descriptive design, a quantitative analytical approach with correlation between variables.

The population was chosen by sequential non-probabilistic sampling, that is, all patients with Type 1 DM, Type 2 DM and AH registered and treated by the specialty clinic were considered. The inclusion criteria were: having Type 1 DM, Type 2 DM and AH, patients with set medical appointments; and as an exclusion criterion: absence of chronic disease and not having a medical diagnosis.

Data collection was carried out according to the schedules of the specialties outpatient clinic of a Teaching Hospital in January 2021. In the first contact with the patient, the consent form and the instrument were delivered by the nurse.

Initially, the collection instrument 1 (1<sup>st</sup> Term), with 12 questions was applied by nurses to assess treatment adherence, patient self-care, age, gender, Type 1 DM, Type 2 DM and AH. The second step was the delivery of the Diabetic and Hypertensive Patient's Handbook for patients to monitor their DM and/or AH.

The Diabetic and Hypertensive Patient's Handbook contained a presentation, personal data, person of reference, diagnoses and previous intervention, anthropometric data, lifestyle, blood pressure control, blood sugar control, medical appointment scheduling, as well as guidelines for better habits of life in food, physical activity and sexuality and guidance on the use of medications.

The patients were contacted between 15 days and a month after through telephone calls, and the collection instrument 1 (2<sup>nd</sup> Term) was applied again, to analyze whether there was an improvement in the adherence of the treatment and self-care after the use of the instrument, also asking the following questions and using as variables: "*Did the handbook help in any way with your treatment?*" and "*Did you read all the guidelines in the handbook?*".

The Diabetic and Hypertensive Patient's Handbook was created based on the Health Handbook for the Elderly Person, developed by the Brazilian Ministry of Health<sup>16</sup>. After reading this handbook, the relevant information for the construction of a handbook that works in the promotion, prevention, health education and monitoring of patients with DM and AH was transferred to a Microsoft Word document. Thus, the Health Handbook for the Elderly Person was adapted, in which previously absent information was added.

Data analysis was performed using the mean, median, mode, standard deviation, standard error, maximum value, minimum value, significance, Komologorov-Smirnov and t test. To know the outcomes of non-parametric variables, the Mann-Whitney U test, Spearman correlation or \*Kruskall Wallis test was applied. The result was considered significant when  $p < 0.05$ . After tabulating the collected data, two statistical analysis functions were performed: descriptive and inferential. Finally, all analyzes were obtained using the SPSS Statistics® software (version 23), linked to the features of the Microsoft Excel® tool (version 2016).

This study was approved by the Research Ethics Committee of the Faculdade de Medicina de São José do Rio Preto (FAMERP), Opinion No. 4,353,050 of October 21, 2020. All participants signed the Informed Consent Form. The collection site was in the city of São José do Rio Preto, applied in the specialties outpatient clinic of a teaching hospital.

## RESULTS

For this study, existing information was initially collected from 61 patients, 11 of which were excluded for not answering the 2<sup>nd</sup> Term. These patients were followed up at the Specialty Outpatient Clinic of the Hospital de Base de São José do Rio Preto – SP. The population sample consisted of 58% women, with ages ranging from 51 years to > 60 years, as shown in Table 1.

**Table 1.** Characterization of age and gender of research participants. São José do Rio Preto, SP, Brazil. 2020.

<i>Age</i>	<i>No</i>	<i>%</i>
<i>Up to 30 years</i>	7	14.00
<i>31 to 40 years</i>	5	10.00
<i>41 to 50 years</i>	12	24.00
<i>51 to 60 years</i>	13	26.00
<i>&gt; 60 years</i>	13	26.00
<b><i>Gender</i></b>		
<i>Female</i>	29	58.00
<i>Male</i>	21	42.00
<b><i>TOTAL</i></b>	<b>50</b>	<b>100.00</b>

72 % had Type 2 DM; and 56% had AH, according to Table 2.

**Table 2.** Comorbidities presented by patients. São José do Rio Preto, SP, Brazil. 2021

<b><i>Diabetes Mellitus - Type 1</i></b>	<b>No</b>	<b>%</b>
<i>Yes</i>	14	28.00
<i>No</i>	36	72.00
<b><i>Diabetes Mellitus - Type 2</i></b>		
<i>Yes</i>	36	72.00
<i>No</i>	14	28.00
<b>AH</b>		
<i>Yes</i>	28	56.00
<i>No</i>	22	44.00
<b>TOTAL</b>	<b>50</b>	<b>100.00</b>

Table 3 shows that 94% of patients reported that the handbook helped with treatment, and 78% read all the guidelines presented.

**Table 3.** Handbook Answers. São José do Rio Preto, SP, Brazil. 2021

<b><i>Did the handbook help with treatment</i></b>	<b>No</b>	<b>%</b>
<i>Yes</i>	47	94.00
<i>No</i>	3	6.00
<b><i>Did you read all guidelines in the handbook</i></b>		
<i>Yes</i>	39	78.00
<i>No</i>	11	22.00
<b>TOTAL</b>	<b>50</b>	<b>100.00</b>

Table 4 shows all the questions present both in Term 1 and in Term 2, with the values that showed impact in this research.

Table 5 shows the variables that showed significance. When comparing the answers to the question, "*Do you take the medications at the established time*", with the 1<sup>st</sup> (before receiving the handbook) and 2<sup>nd</sup> Terms (after receiving the handbook), it is observed that the variables analyzed using the T-Test showed a statistically significant difference ( $p=0.001$ ). A positive result was obtained when observing the 1<sup>st</sup> Term and the 2<sup>nd</sup> Term, as 26% of participants said they "*always*" took the medications at the established time at the application of the 1<sup>st</sup> Term, and, after the experience with the handbook, 88% revealed that they "*always*" take their medications at the established time at the 2<sup>nd</sup> Term.

At the intersection of the questions: "*Do you follow a diet, do you fit the medication schedule in your daily activities, do you comply with the treatment without supervision from your family or friends, do you discuss how to comply with the treatment*" all significance values were equal in both terms ( $p= 0.000$ ). In the 1<sup>st</sup> Term, it was found that 26% of patients "*almost always*" follow a diet and, when applying the 2<sup>nd</sup> Term, 44% said "*almost always*" follow a diet. Then, they were asked if they "*fit the medication schedule in their daily activities*", in the 1<sup>st</sup> Term, it was shown that 38% of the patients "*always*" did and, in the 2<sup>nd</sup> Term, 66% "*always*" did.

**Table 4.** Questionnaire variable responses. São José do Rio Preto, SP, Brazil. 2021

<b>Do you take the medications at the established time - 1<sup>st</sup> Term</b>	<b>No</b>	<b>%</b>
Sometimes	16	32.00
Almost always	20	40.00
Always	13	26.00
<b>Do you take the medications at the established time - 2<sup>nd</sup> Term</b>	44	88.00
Always	44	88.00
<b>Do you take all the doses prescribed - 1<sup>st</sup> Term</b>		
Sometimes	14	28.00
Almost always	24	48.00
Always	11	22.00
<b>Do you take all the doses prescribed - 2<sup>nd</sup> Term</b>		
Always	43	86.00
<b>Do you follow a diet - 1<sup>st</sup> Term</b>		
Almost never	11	22.00
Sometimes	20	40.00
Almost always	13	26.00
<b>Do you follow a diet - 2<sup>nd</sup> Term</b>		
Almost always	22	44.00
Always	20	40.00
<b>Do you go to medical appointments - 1<sup>st</sup> Term</b>		
Always	47	94.00
<b>Do you go to to medical appointments - 2<sup>nd</sup> Term</b>		
Always	41	82.00
<b>Do you perform indicated physical exercises - 1<sup>st</sup> Term</b>		
Never	16	32.00
Sometimes	13	26.00
<b>Do you perform indicated physical exercises - 2<sup>nd</sup> Term</b>		
Sometimes	13	26.00
Almost always	15	30.00
Always	11	22.00
<b>Do you fit the medication schedules in your daily activities - 1<sup>st</sup> Term</b>		
Almost always	29	58.00
Always	19	38.00
<b>Do you fit the medication schedules in your daily activities - 2<sup>nd</sup> Term</b>		
Almost always	14	28.00
Always	33	66.00
<b>Do you and your doctor decide together the treatment to be followed - 1<sup>st</sup> Term</b>		
Sometimes	10	20.00
Almost always	24	48.00
<b>Do you and your doctor decide together the treatment to be followed - 2<sup>nd</sup> Term</b>		
Almost always	26	52.00
Always	21	42.00
<b>Do you comply with the treatment without supervision from your family or friends - 1<sup>st</sup> Term</b>		
Almost always	13	26.00
Always	28	56.00
<b>Do you comply with the treatment without supervision from your family or friends - 2<sup>nd</sup> Term</b>		
Almost always	15	30.00
Always	26	52.00
<b>Do you carry the treatment through without much effort - 1<sup>st</sup> Term</b>		
Almost always	23	46.00
Always	21	42.00
<b>Do you carry the treatment through without much effort - 2<sup>nd</sup> Term</b>		
Almost always	17	34.00
Always	30	60.00
<b>Do you use reminders to carry out treatment - 1<sup>st</sup> Term</b>		
Never	30	60.00
<b>Do you use reminders to carry out treatment - 2<sup>nd</sup> Term</b>		
Never	21	42.00
Always	12	24.00
<b>Do you discuss how to comply with treatment - 1<sup>st</sup> Term</b>		
Sometimes	16	32.00
Almost always	27	54.00
Always	1	2.00
<b>Do you discuss how to comply with treatment - 2<sup>nd</sup> Term</b>		
Almost always	26	52.00
Always	20	40.00
<b>You can give your opinion on the treatment that the doctor has prescribed - 1<sup>st</sup> Term</b>		
Almost never	20	40.00
Sometimes	14	28.00
Almost always	12	24.00
<b>You can give your opinion on the treatment that the doctor has prescribed - 2<sup>nd</sup> Term</b>		
Almost always	26	52.00
Always	16	32.00
<b>TOTAL</b>	<b>50</b>	<b>100.00</b>

When asked if they “comply with the treatment without supervision from family and friends”, most patients answered “always” in both terms. Then, when asked “Do you discuss how to comply with the treatment” it was identified that, in the 1<sup>st</sup> Term, only 1% reported “always” discussing their treatment with their doctor. In the 2<sup>nd</sup> Term, after the experience with the handbook, 40% reported “always” discussing their treatment with their doctor ( $p=0.000$ ).

The question: *Do you and your doctor decide together the treatment to be followed*, it is observed that the variables analyzed from the T-Test showed a statistically significant difference between terms ( $p =0.006$ ). When asked in the 1<sup>st</sup> Term, 48% revealed “almost always” deciding their treatment with their doctor and, in the 2<sup>nd</sup> Term, 52% revealed “almost always” deciding their treatment with their doctor. Not a big difference, although the answer “always” for the same question went from 22% in the 1<sup>st</sup> Term to 42% in the 2<sup>nd</sup> Term, thus showing almost double the answers “always” and an improvement in treatment.

**Table 5.** Significant variables. São José do Rio Preto, SP. Brazil. 2021

QUESTIONS	ANSWERS	1 <sup>st</sup> TERM		2 <sup>nd</sup> TERM		P-Value
		No	%	No	%	
<i>Do you take the medications at the established time</i>	Always	13	26.00	44	88.00	0.001
<i>Do you follow diet rules</i>	Almost always	13	26.00	22	44.00	0.000
<i>Do you fit the medication schedules in your daily activities</i>	Always	19	38.00	33	66.00	0.000
<i>Do you comply with the treatment without supervision from your family or friends</i>	Always	28	56.00	26	52.00	0.000
<i>Do you discuss how to comply with treatment</i>	Always	1	1.00	20	40.00	0.000
<i>Do you and your doctor decide together the treatment to be followed</i>	Always	2	4.00	21	42.00	0.006

## DISCUSSION

Data from the survey on the *Vigilância de Fatores de Risco e Proteção para Doenças Crônicas por Inquérito Telefônico - Vigitel* (Surveillance of Risk Factors and Protection for Chronic Diseases by Telephone Survey) applied by the Ministry of Health in Brazilian capitals and the Federal District, with approximately 45,448 elderly respondents showed that the population consisted of 61% of female patients, similar to what was found in this research, with a prevalent age ranging from 65 to 69 years<sup>17</sup>.

In another study, carried out with 28,496 patients with DM and AH, in 13 Primary Health Care units, located in the Southern region of the city of São Paulo, there was a prevalence of females (63.2%) and an age greater than 50 years, results similar to those of this research using the same statistical methods<sup>18</sup>. The aging of the population, along with lifestyle habits, can favor comorbidities<sup>19</sup>.

Studies carried out with women with AH indicate that one of the variables for the lack of adherence to the treatment of NCDs is low income and low education<sup>20</sup>. Another study reported an association of DM with unemployed women, low socioeconomic conditions and low education levels<sup>21</sup>.

In the present study, the predominant comorbidity is DM, specifically Type 2 DM (72%). A research that analyzed comorbidities and clinical complications, as well as factors associated with mortality in elderly patients hospitalized for hip fractures, evaluated 67 medical records of patients aged 65 years and over, with AH as the predominant NCD, with a prevalence of 61.1%<sup>22</sup>. The largest record of AH in that study, a contrast with this research, which had DM as predominant, is probably due to the location, that develops a group of diabetes.

When questioning patients with NCDs, regarding their experience with the handbook, in the period of time of data collection, 94% revealed that the handbook helped with their treatment, showing the effectiveness of the instrument, as it allowed the registration and monitoring of the patient, who managed to monitor lifestyle habits, blood pressure and blood

sugar, medications used, diagnoses of previous intervention, anthropometric data, personal information, social and family data and their health conditions, in addition to guidelines such as storage of medicines, access to medicines in SUS, 10 steps to healthy eating, physical activity and sexuality.

When asking the following question: *“Do you take the medications at the established time”*, in the 1<sup>st</sup> Term, only 26% reported *“always”* taking it, while the 2<sup>nd</sup> Term showed an increased to 44%. The handbook has a page in which the patient can write down all the medications, dosage and frequency of use, helping them to remember to take the medication at the correct time. Another reason would be the guidance that was given to the patient at the time of delivery of the handbook. The recommendation was to keep the handbook together with the medications, facilitating access and avoiding forgetting to take them at the correct time.

The failure of therapeutic effectiveness results in many causes of death and hospitalization, as a result from the incorrect use of medication, poor adherence to prescribed treatment, lack of access to medication, difficulty in organizing the schedule of the various medications used in one day, not understanding dosages and not believing in their improvement. Professional guidance and assistance are important for the patient's understanding of their treatment, along with educational activities<sup>23</sup>. The guidelines given were positively understood with the approach during the interview and with the guidelines present in the handbook.

After asking if they *“follow a diet”* in the 1<sup>st</sup> Term, the patients reported not *“always”* following a diet; in the 2<sup>nd</sup> Term, this number increased to 40%. Within the guidelines given in the handbook, page 25 shows the 10 steps to healthy eating, addressing the importance of three meals a day, healthy foods, importance of eating fruits and vegetables in all meals, amount of oils, fats, sugar and salt used in the preparation of meals, the importance of drinking water, attention to nutritional information on the labels of processed and outdated products, among many other information<sup>16</sup>. At the time of delivery of the handbook, the importance of diet in the treatment was pointed out to the patients, as these factors contributed to the improvement in adherence to diets.

Good eating habits are characterized as the main and essential means in the prevention and control of NCDs, as the consequences result from unhealthy habits and lifestyles<sup>5</sup>. A study showed that 80% of the occurrences of DM and AH would be preventable based on good dietary practices, increasing the consumption of vegetables and fruits, and reducing the intake of saturated fat, sodium and sugary drinks<sup>24</sup>.

When asking the question *“do you fit the medication schedules in you daily activities”*, in the 1<sup>st</sup> Term, 38% reported they always did. In the 2<sup>nd</sup> Term, there was an increase, rising to 66%. The reason for this increase is given by the table with the drugs used and the times, making the patient remember to take the drug at a set time. The importance of taking the medication at the right time was also advised.

When questioning whether they *“discussed how to comply with the treatment and you and your doctor decide together the treatment to be followed”*, there was a significant increase from the 1<sup>st</sup> Term to the 2<sup>nd</sup> Term. This increase is due to the guidelines present in the handbook, highlighting information at the beginning of the handbook, alerting the patient to the patient to talk to their health professional and clarify their doubts. After completing the application of the 1<sup>st</sup> Term, they were instructed that they had the right to clarify all doubts that arose during medical consultations and the importance of participating in the decision of their treatment.

The patient has autonomy in their treatment, thus being able to participate in the elaboration of their treatment and give their opinion, and the professional must address the importance of adherence for the control of their disease. The concept of patient autonomy is knowing how to listen to their wishes and preferences, thus having freedom of decision. If the patient refuses to undergo treatment, the professional should try as much as possible to

convince them of its importance, putting into practice the principle of beneficence. At the end, everything that was said should be resumed<sup>25</sup>. Upon delivery of the handbook, there was a resumption and resolution of doubts.

The handbook contributed to the expansion of knowledge, as it addressed important guidelines, such as storage of medicines, food, physical activity, access to medicines in the SUS, sexuality and with nursing care in follow-up. The participation of nurses throughout the treatment is important, as it is the professional closest to the patient, to provide guidance, answer questions and assist in their treatment. Thus, it is noted that the professional must be trained and have light technologies to provide quality care, providing effective verbal and non-verbal communication, building bonds and problem-solving<sup>26</sup>.

As it is a chronic disease, monitoring must occur continuously, emphasizing the transcendence of the patient, and it is necessary that they are properly oriented, have knowledge about their disease, so that, in this way, they observe essential habits, such as healthy eating, physical activity, and always keep in mind the importance of following treatment, reducing complications resulting from poor treatment adherence and being able to identify early signs and symptoms that could result in a health problem<sup>27</sup>.

NCDs, when uncontrolled and without treatment adherence, will result in secondary diseases. With this, the nursing professional has the duty to seek methods for the control and prevention of patients undergoing NCDs, through health education actions, thus preventing the evolution of the disease. Education is considered an indispensable element in both individual and collective decision-making. It can be used as an instrument for hygienist approaches, disease prevention, social determinants of health, health promotion, health<sup>29</sup>. In another study that portrayed health education as an indispensable instrument for the care of patients with DM, a solid and comprehensive monitoring was obtained, acting in health promotion and prevention of injuries resulting from chronic disease<sup>30</sup>.

## CONCLUSION

This research identified that the adaptation and implementation of the Diabetic and Hypertensive Patient's Handbook in nursing care proved to be effective in the treatment of patients with AH and DM.

This instrument was relevant in several aspects: working with education and health promotion through the guidelines that were given in the first contact by the nursing staff and those brought in the handbook regarding storage and importance of medicines, the best eating habits, sexuality and physical activity.

Benefits for nursing practice were also identified, helping to improve knowledge and their techniques for developing methods that can contribute to adherence, monitoring and control of patients with NCDs in outpatient clinics and health units.

Also, the adapted handbook proved to be efficient in solving doubts and provided guidance for the control of chronic disease, monitoring of lifestyle habits, control of appointments (scheduled appointments), place to write down the medications used and diagnoses of previous intervention.

The limitations of the study were due to the COVID-19 pandemic, as the patients had difficulties in attending the clinic, many due to restrictions imposed by Government Decrees (lockdown) and, some, due to fear of contagion. Also, the adapted handbook was not validated, as it did not pass through experts in the area, added there to the lack of comparative studies of before and after access to the handbook and brothers still with adaptations. In turn, this research brings to light the need for comparative studies before and after the use of the referred handbook, as well as the need for adaptations and/or inclusions that seek to expand and facilitate better knowledge of the user with NCDs.



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**Francine Santos Giovanini** collaborated in the conception of the study and its design, data collection and analysis, writing and review. **Bárbara Longhi de Oliveira** contributed to the writing. **Rita de Cássia Helú Mendonça Ribeiro** participated in the design and writing. **Vânia Del'Arco Paschoal** and **Daniele Alcalá Pompeo** contributed to the review. **Alexandre Lins Werneck** participated in the project design, writing and review.

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