Objective: to investigate the epidemiological profile of elderly hypertensive patients registered in HiperDia program by the Family Health Strategy. Method: a descriptive, retrospective study with a quantitative approach. Secondary data were collected recorded in the registered HiperDia program, from January 2009 to December 2012, processed in SPSS version 20.0. The project was approved by the Research Ethics Committee, CAAE n. 19869113.0.0000.5210. Results: the results indicated that of the 287 hypertensives were registered in HiperDia program, 68.3% were female. Among the forms of surveyed hypertensive elderly in the Family Health Strategy, 53.3% of respondents were 60 years; 62.7% were illiterate and 44.3% of the brown color. In the presence of complications prevailed stroke in males (61.5%) with renal disease (23.1%). Conclusion: it is considered the magnitude of the problem, reinforcing the need for targeted strategies for the adoption of healthy habits among hypertensives. Descriptors: Elderly; Hypertension; Family Health.

RESUMO
Objetivo: investigar o perfil epidemiológico de idosos hipertensos cadastrados no programa HiperDia pela Estratégia Saúde da Família. Método: estudo descritivo e retrospectivo, com abordagem quantitativa. Foram levantados dados secundários registrados no cadastro do Programa HiperDia, no período de janeiro de 2009 a dezembro de 2012, processados no SPSS versão 20.0. O projeto foi aprovado pelo Comitê Ético e Pesquisa, CAAE n. 19869113.0.0000.5210. Resultados: os resultados indicaram que dos 287 idosos hipertensos cadastrados no programa HiperDia, 68,3% eram do sexo feminino. Entre os formulários pesquisados de idosos hipertensos na Estratégia Saúde da Família, 53,3% dos pesquisados tinham 60 anos; 62,7% eram analfabetos e 44,3% da cor parda. Na presença de complicações, prevaleceu o acidente vascular encefálico no sexo masculino (61,5%) juntamente com as doenças renais (23,1%). Conclusão: considera-se a magnitude do problema, reforçando a necessidade de estratégias voltadas para a adoção de hábitos saudáveis entre idosos hipertensos. Descriptores: Idoso; Hipertensão; Saúde da Família.
INTRODUCTION

The aging, once considered a phenomenon, now is a part of the reality of most societies. The world is aging. It is estimated that for the year 2050, there are about two billion people sixty years or more in the world, most of them living in developing countries.1

In Brazil, in recent decades, began a process of inversion in population characteristics, there has been a decrease in birth and mortality rates, which caused the increase in population aged 60 years or more. This process is occurring due to the relative decrease in population contingent in the younger age groups from zero to 14 years, the expansion of the population aged 15-59 years and the increase in the range of 60 or more.2

With the aging population, there is an increased prevalence of chronic and disabling diseases and a paradigm shift in public health. Due to the relevance of this problem, the World Health Organization (WHO) created World Report for Innovative Care for Chronic Conditions, this report is an important step in the preparation of those responsible for policy development, the planners of the health sector and other agents relevant to the development of actions aimed at reducing the threats posed by chronic conditions to the population.2

The elderly are the fastest growing segment in the Brazilian population. Epidemiological studies on the conditions and determinants of health of the elderly are essential to support health policies to this population. Thus, to investigate the epidemiological profile of elderly hypertensive patients can describe the frequency, distribution, pattern and time trend of health-related events in specific and/or sub-populations, demonstrating the presence of complications. Among the elderly, hypertension is a highly prevalent disease, affecting about 50% to 70% of the population in this age group. It is a determinant of morbidity and mortality, but, when properly controlled, significantly reduces the functional limitations and disability in the elderly. Systemic arterial hypertension (SAH) is a major public health problem in Brazil and in the world, yet one of the most important risk factors for developing cardiovascular disease, cerebrovascular and chronic renal. It is responsible for at least 40% of deaths from stroke and 25% of deaths from coronary artery disease.1

In Brazil, the estimated prevalence of hypertension is currently 35% of the population over 40 years. This is in absolute numbers a total of 17 million people with the disease, according to 2004 estimates from the Brazilian Institute of Geography and Statistics (IBGE). About 75% of these people turn to the Unified Health System (SUS) to receive care in Primary Care. To meet people with hypertension, the Ministry of Health has the National Program for Attention to Hypertension and Diabetes Mellitus (HiperDia). The HiperDia comprises a set of actions on health promotion, prevention, diagnosis and treatment of hypertension diseases. The goal is to reduce the number of hospitalizations, the demand for emergency care, spending on treatments for complications, early retirements and cardiovascular mortality, with the consequent improvement of the quality of life of patients.1

In Piauí, hypertension affects 290,000 inhabitants, of which 43,000 are in addition to hypertension diabetes. This data was revealed by the Department of Health and includes the population over 40 years, reflecting the lifestyle of Piauí, which has a poor diet and not practice exercises regularly.4

In recent years, the Family Health Strategy (FHS), as a national public policy, has emerged as reorganization strategy of primary care, health monitoring of logic, representing a concept of health focuses on promoting quality of life, through its main objectives which are: prevention, promotion and recovery of health. In many states, the work of the FHS allows the knowledge of social reality, making coverage of the socioeconomic conditions, food, health, and the family structure of individuals with hypertension and diabetes, facilitating the performance of the team in determining the health-disease process. Besides, the strategy detects the difficulties that prevent greater adherence to treatment and seeks to form partnerships to disseminate the importance of care to patients and their families. These activities provide the link between the patients and the FHS.5

One of the tools used in the FHS is HiperDia System, established by the Ministry of Health. The program was developed with the main objective to allow the monitoring of treated and patients registered in the outpatient network of the Unified Health System (SUS) and to generate information for acquisition, dispensing and distribution of systematically drugs to these patients. This system is one of the benefits the knowledge of the epidemiology of hypertension and the population, in addition to promoting an adequate and strict control treatment.6
The aging process is known as senescence and results from a complex interaction of genetic, metabolic, hormonal, immunological and structural acting on molecular, cellular, histological and organic levels.7

Population aging is a global phenomenon. In Brazil, there was an increase of 8.8% to 11.1% of the elderly, between the years 1998 and 2008. Currently, it is estimated that there are in the country 21 million individuals aged 60 or more.8

The Pan American Health Organization (PAHO) defines aging as "[…] a sequential process, individual, cumulative, irreversible, universal, non-pathological, deterioration of a mature organism itself to all members of a species, so that time makes it less able to cope with the stress of the environment and, therefore, increase your chance of death". Aging can be understood as a natural process of gradual reduction in the functional reserve of individuals senescence that, under normal conditions, does not usually cause any problems. However, under overload conditions, for example, diseases, accidents, and emotional stress can cause a pathological condition requiring assistance to senility. It should be noted that certain changes resulting from the aging process may have its effects minimized by the assimilation of a more active lifestyle1.

For the United Nations (UN), the elderly conception is different between developed and developing countries. In the first, they are considered elderly people aged 65 or more, while in developing countries, such as Brazil, are elderly those with 60 years or more. This definition was established by the UN in 1982, through Resolution 39/125, during the First United Nations World Assembly on aging population.2

For the definition of the elderly population, we can use the functional age, which evaluates the age according to the functional performance or chronological age, consisting of years lived since birth. The chronological method is the most widely used because it is the easiest; however, it is not the most effective. For example, you can compare two people with the same age and observe many functional, physical, mental and health discrepancies between them.

It is estimated that at least 65% of elderly Brazilians are hypertensive. Most have isolated or predominant elevation of systolic pressure, increasing pulse pressure, which shows strong correlation with cardiovascular events. For the treatment of hypertensive elderly patients, as well as risk stratification is critical evaluation of comorbidities and medication use. The goal of treatment is a gradual reduction in blood pressure to below 140/90 mmHg. In some very old patients, it is difficult to reduce the pressure below 140 mmHg, even with good adhesion and multiple agents. In such cases, distal secondary causes, can accept less pronounced reductions of systolic blood pressure (e.g., 160 mmHg).9

Study shows that treatment of hypertension in the elderly reduces the incidence of cognitive impairment. Hypertensive patients with more than 80 years and associated with heart disease should be treated. On the other hand, the pharmacological therapy of people over 80 years and without cardiovascular comorbidities is still under investigation, but probably confers cardiovascular protection.9

Hypertension is the leading risk factor for mortality and the third leading cause of years of life with disability worldwide. The overall prevalence is 26% in the adult population, with increasing projections in the coming decades. The risk of developing hypertension increases with age and is the most common chronic disease in the elderly, with an incidence equal to or greater than 60% in developed countries.14

With the development of hypertension, elevated blood pressure tends to occur mainly during the day, so there is a predisposition to the development of diseases and harmful health consequences, such as deregulation of factors that influence the cardiovascular system.18

Acute myocardial infarct and stroke, are some of the problems that tend to occur mainly during this time of day, leading us to believe that the increase in blood pressure can lose control when the patient is the correct use of leaves medication to use it, with the same or not practicing any physical activity.19

Pharmacological treatment is indicated for moderate and severe hypertension, and for those with risk factors for cardiovascular disease and/or significant damage to target organs. However, few hypertensive achieve the optimum control of the pressure with a single therapeutic agent and often a combination therapy it is necessary, particularly in elderly individuals with significant comorbidities. Drug therapy, although effective in reducing blood pressure values, morbidity and mortality, is costly and can have side effects, prompting the abandonment of treatment.12

In non-pharmacological interventions, it has been pointed out in the literature at low
cost, minimum risk and efficacy in lowering blood pressure. Among them are: the reduction of body weight, alcohol restriction, smoking cessation and regular physical activity.

Whereas hypertension to high morbidity, with high costs involved in your treatment, it is expected that with adequate blood pressure control, there is reduction in mortality and morbidity rates and the costs related to this disease. 10

The HiperDia program adds to the actions of health workers, and proposes the prevention of complications arising from non-adherence to antihypertensive treatment prescribed by the doctor. When this fact is related to the lack of financial resources for the purchase of medicines, the program enables registered users, access to free medication and medical care.

The basic network health professionals have primary importance in hypertension control strategies, both in defining the clinical diagnosis and therapeutic management, both in the efforts required to inform and educate the hypertensive patient to follow the treatment. 11

These blood pressure changes that occur during the home visit cannot be considered as a retained value for closing the diagnosis of hypertension. There should be a set of specific actions that demonstrate in fact the presence of the condition. 20

It is necessary to the development and implementation of strategies to analyze the profile of elderly hypertensive patients enrolled in the HiperDia program and to provide these users with a better quality of life and health care, with a view to the results may contribute in the future to improve the quality of care provided to this group.

This study aims to characterize the epidemiological profile of elderly hypertensive patients registered in HiperDia program in the Family Health Strategy.

METHOD

Descriptive and retrospective study with a quantitative approach, performed in Alto Longá, located in the state of Piauí, with six Basic Health Units in the Family Health Strategy. 1,099 patients are registered in the program HiperDia, according to the municipality reports, being not identified the classification of the specific amount of hypertension and diabetes.

The records used for research were patients who lived / live in the area, and sought the basic unit for consultation in the period from January 2009 to December 2012.

Inclusion criteria were: age or over 60 years old, be registered in HiperDia program, the study site between the years 2009 to 2012. Among the exclusion criteria: hypertension, and diabetes at the same time, patients who are not registered in HiperDia program in the study of place or period prior to determined. Age under 60 years.

To represent the sample were surveyed 287 medical records of elderly, collected through a random sampling of simple casual type and calculated. Whereas a 95% confidence level, determining a Z = 1.96, a margin of error of 5% and the parameter 0.25 12.

The data were processed using the Statistical Package for Social Sciences for Windows (SPSS) version 20.0. Univariate analysis, using graphs, frequency tables, averages and confidence intervals. For bivariate analysis, we used the chi-square test or Fisher's exact test, and to compare the years, the likelihood ratio test was used.

It is noteworthy that the research was conducted in accordance with the provisions of Resolution 466/12 n. IV. 8, the National Health Council.

It is reserved the right to confidentiality and guaranteed privacy, image protection of medical records. The research presents risks of losing important information or even if there is leakage. But precautions were taken to prevent this from happening.

Since it is a study involving data of human beings, the project was submitted to the Research Ethics Committee (CEP) of UNINOVAFAPI, CAAE n. 19869113.0.0000.5210 for approval and forwarded to the Health Secretary of the Municipality of Alto Longá - PI.

RESULTS

287 registered hypertensive data were analyzed in HiperDia program, and of these 196 (68.3%) were female and 91 (31.7%) were male.

In Figure 1, the most prevalent in elderly hypertensive patients is 2009 (131) as test (p <0.05). According to the data analysis, the prevailing female with Hypertension and 2009 with the highest number of registration in HiperDia program in both sexes. This could be because it was the year of renewal of registration in the program in the municipality.

English/Portuguese

J Nurs UFPE on line., Recife, 10(Suppl. 3):1407-14, Apr., 2016

1410
Among the forms of surveyed hypertensive elderly in the Family Health Strategy, 53.3% of respondents were 60 years; 62.7% were illiterate and 44.3% of the brown color (Table 1).

As shown in Table 2, there is a relation between gender, complications and risk factors, the Fisher test and chi-square. It is observed that, although minimum the presence of cerebrovascular accident (CVA), it was the main complication that prevailed in both genders, along with coronary artery disease.
studies indicate that the kidney diseases, which does not reliably lead to adverse health effects. It was observed in Brazil between study participants more of these factors. Similar results were observed in the United States, in a study 19% of hypertensive patients had a probability of vascular complications related to heart disease, because it increases 9% chance of reported stroke is still a major cause of clinical repercussions because their functional reserve is less. If we consider that there were 116 hypertensive women, then (45.8%) of them were sedentary. Recital 53 hypertensive men, then (45.7%) were sedentary. Therefore, a sedentary lifestyle prevailed among women. Among the risk factors, physical inactivity, obesity and family history prevailed in women, while smoking is more present in men. The association between the risk factor variables of hypertensive elderly, among both genders, physical inactivity was the most prevalent, and females with 18.6%, according to Table 2.

Obesity and excessive weight have been described as a risk factor for the aging unsuccessful in several studies. People who are overweight are more likely to develop hypertension, type 2 diabetes and other risk factors for chronic conditions, such as dyslipidemia. As for smoking, studies indicate that the habit of the current or previous smoking increases 9.9% chance of reported hypertension in the elderly. Smoking worsens heart disease, because it increases atherosclerosis.

Hypertension is a very prevalent condition that contributes to adverse health effects.

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**DISCUSSION**

The possibility of underreporting in 2010 makes the health situation of older people surveyed even more disturbing, because the observed prevalence was low compared to other years. It is noteworthy also the possibility of reverse typical causality in cross-sectional studies, which does not reliably establish the causal links between events as shown in Figure 1. Between the years 2011-2012, the number of registration of hypertensive is settled down.

With regard to gender, it was observed in the univariate analysis that women had a higher prevalence of hypertension than men, as seen in other studies for this age group. Women generally have a greater awareness of the disease, are more likely to self-care and seek more medical care than men, which would tend to increase the probability of having diagnosed hypertension.

A higher prevalence of hypertension in the lower stratum of education was observed. Research indicates that individuals with unfavorable socioeconomic integration would be more prone to depression and chronic stress caused by the daily difficulties, increasing catecholamine levels and hence the heart rate and blood pressure.

The elderly are an important risk group for vascular complications related to hypertension, and 85% of strokes occur in this population. The stroke is still a major cause of functional dependence in this group, besides lead to significant complications.

The concomitant cardiovascular risk factors prevalent among hypertensive. In the United States, in a study 19% of hypertensive patients have high blood pressure not accompanied by other risk factors, while 30% had three or more of these factors. Similar results were observed in Brazil between study participants Bambuí (MG). Among hypertensive patients, 7% had not accompanied hypertension of other risk factors, while 41% had three or more of such factors.

The presence of renal complications is higher in males (23.1%), because they usually don’t adhere to treatment. High blood pressure and kidney disease are closely related. If high pressure is not controlled may be kidney damage. Hypertension is a leading cause of kidney failure worldwide. Kidney disease in the elderly has higher rates of clinical repercussions because their functional reserve is less.

If we consider that there were 116 hypertensive women, then (45.8%) of them were sedentary. Recital 53 hypertensive men, then (45.7%) were sedentary. Therefore, a sedentary lifestyle prevailed among women. Among the risk factors, physical inactivity, obesity and family history prevailed in women, while smoking is more present in men. The association between the risk factor variables of hypertensive elderly, among both genders, physical inactivity was the most prevalent, and females with 18.6%, according to Table 2.

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**Table 2. Presence of complications and risk factors in elderly hypertensive patients according to gender from 2009 to 2012. Alto Longá, Piauí, 2014.**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Gender</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
<td>P</td>
</tr>
<tr>
<td></td>
<td>n (%)</td>
<td>n (%)</td>
<td></td>
</tr>
<tr>
<td>Presence of complications</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVC</td>
<td>6 (75.0)</td>
<td>8 (61.5)</td>
<td>0.042**</td>
</tr>
<tr>
<td>Coronary Artery Disease</td>
<td>2 (25.0)</td>
<td>2 (15.4)</td>
<td></td>
</tr>
<tr>
<td>Kidney disease</td>
<td>0 (0.0)</td>
<td>3 (23.1)</td>
<td></td>
</tr>
<tr>
<td>Risk factors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sedentary lifestyle</td>
<td>116 (45.8)</td>
<td>53 (45.7)</td>
<td>0.035*</td>
</tr>
<tr>
<td>Family history - cardiovascular</td>
<td>65 (25.7)</td>
<td>30 (25.9)</td>
<td></td>
</tr>
<tr>
<td>Overweight / obesity</td>
<td>47 (18.6)</td>
<td>11 (9.4)</td>
<td></td>
</tr>
<tr>
<td>Smoking</td>
<td>25 (9.9)</td>
<td>22 (19.0)</td>
<td></td>
</tr>
</tbody>
</table>

*Chi-square test significant (p <0.05).
**Significant Fisher test (p <0.05).
stroke (CVA), explaining 54% of deaths from stroke and 47% of those for ischemic heart disease.

It is considered that the objectives set for this study were achieved as it was possible to know of the reality of elderly enrolled at HiperDia program, with emphasis on their social, economic and epidemiological characteristics.

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