



## NURSE INVOLVEMENT IN THE MANAGEMENT OF PATIENTS WITH CARDIOVASCULAR DISEASE

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### Abstract

The article presents the dynamics of the incidence of cardiovascular diseases both in the republic as a whole and in its individual regions. Some risk factors of cardiovascular diseases and the role of nurses in their detection and prevention of CVD complications are defined.

**Key words:** cardiovascular diseases, risk factors, prevention, visiting nurses.

The complexity and diversity of changing social and environmental factors determining the health of the population require an in-depth socio-hygienic study, which would cover a set of diverse, interacting factors that determine the health of people and their way of life [1,5,7]. According to World Health Statistics (2015), there has been an increase in non-communicable diseases in recent years. Especially there is an increase in diseases of the cardiovascular system[2]. Every year cardiovascular diseases cause 48% of deaths in Europe and 42% of all deaths in EU countries. Analysis of the literature suggests that the prevalence of these diseases varies from country to country, and even from region to region of a particular country[1,2,3,5]. Despite the state programs on health protection, the problem of cardiovascular diseases is still urgent in Uzbekistan.

### Study Objective

To characterize the state of morbidity of the population of Uzbekistan with cardiovascular diseases, taking into account regional characteristics for the period 2012-2018 and to determine the role of nurses in the prevention of these diseases.

### Material and methods of research

Statistical analysis of the dynamics of individual cardiovascular diseases over the past 10 years was performed [6]. To determine the level of nurses' awareness of risk factors





and prevention of cardiovascular diseases, we conducted a sociological survey of nurses of family polyclinics, rural family polyclinics and rural health centers using the developed questionnaire. The nursing survey questionnaire contained 26 multiple-choice questions. For each question there are several possible answers. A total of 383 nurses were interviewed. Statistical processing of the results was performed on a personal computer using Microsoft Excel.

### **Results of the study**

The analysis of the dynamics of cardiovascular disease incidence allowed us to conclude about its gradual growth over the years of the study, both in the country as a whole, and in its individual regions. Since 2012, the incidence of cardiovascular diseases in the republic has increased by more than 1.2 times. The trend is roughly the same in other regions of the country. It should be noted that the growth rate of the morbidity rate varies by oblast. The highest incidence rate is registered in Tashkent province and Tashkent city. In this area, the total incidence of cardiovascular diseases exceeds the average national level by 1.4-1.9 times. Apparently, this is due to the fact that in the city and suburban areas, due to the presence of many diagnostic centers and clinics, the possibility of diagnosing the disease and identifying it is relatively higher. Over the years of the study, the level of cardiovascular morbidity in Tashkent tends to increase, with an increase in the rate of morbidity mainly among the adult population, while among children and adolescents the rate is stable. The average annual rate of cardiovascular morbidity is 4,880.2 per 100,000 population. The highest incidence of hypertension, it accounts for almost half of all diseases in this group (42.9%). Hypertension is significantly more common among women than among men (2,339.6 and 1,839.9 per 100,000 of the respective sexes). The next most important and most frequent pathology is coronary heart disease (CHD). This pathology occurs at a rate of 1,888.5 per 100,000 population. In contrast to hypertension, coronary heart disease is more common among men (2084.3 per 100,000 of the male population) than among women (1701.1 per 100,000 of the female population). In 42.8% of cases, CHD occurs without signs of hypertension and in 57.2% with the hypertensive syndrome. Among patients suffering from CHD with hypertension in 57.1% of cases angina is registered, in 5% of cases they had myocardial infarction, which in 2.5% of cases ended in death.





Among cardiovascular diseases, cerebrovascular diseases pose the greatest danger to the life of the patient. On average, there are 523.4 cases of this pathology per 100,000 people per year.

The analysis showed that the risk of cardiovascular disease is almost the same among men and women, except for hypertension and rheumatism, which are 1.3 times more common among women, and myocardial infarction, which is 2.2 times more common among men. There is the fact that myocardial infarction in the male population occurs more often at a younger age than in women, on average 8 to 10 years earlier. According to the analysis we can conclude that CVD are the most common pathology, its rejuvenation is noted. All this causes and will continue to cause enormous economic damage to the state, due to morbidity, temporary disability, disability and premature mortality. Under these conditions, the role of medical professionals in implementing prevention programs and educating patients about healthy lifestyles is increasing.

A number of studies have demonstrated the effectiveness of information technology and patronage in different groups of patients with chronic non-infectious diseases, aimed at changing lifestyles, correction of risk factors [1, 3, 4].

Numerous epidemiological studies have proven that premature morbidity and mortality from many chronic noncommunicable diseases can be prevented through effective, regular prevention programs [4,7]. In countries where primary prevention education is actively implemented and educational technologies are implemented during rehabilitation programs for patients at risk (Canada, United Kingdom, USA, Finland), positive dynamics of cardiovascular morbidity and decrease in myocardial infarction and mortality rates can be clearly seen. The main components of rehabilitation programs are physical training, preventive education (teaching healthy lifestyles) and psychological support. For Uzbekistan, the traditions of a healthy lifestyle are not something completely new, brought over from the culture of other countries. On the contrary, it should be noted that one of the founders of a healthy lifestyle was our great compatriot Ibn Sina (Avicenna), who wrote his treatise "On Healthy People" 1000 years ago. According to the WHO, the length and quality of life of a person depends on his or her lifestyle by more than 50%. Consequently, it is very important for each of us to build this harmony of development and improvement of our health with our way of life. The health of the population is increasingly determined by people's life activities, labor activity, their behavior in specific conditions.





Therefore, the main focus of the work of general practitioners, nurses, and home care nurses should be to actively promote healthy lifestyles.

At the same time, for many years the concept of a healthy lifestyle was identified only with the promotion of the fight against smoking, alcohol, sedentary lifestyle, etc. Healthy lifestyle programs were of a general recommendatory nature and were not aimed at a comprehensive solution to the problem of improving the health of an individual.

Nowadays, it is very important to form an understanding of the importance of a healthy lifestyle, designed to improve life not only through material well-being, but also through increasing the educational and cultural level, as well as forming a responsibility towards one's health.

Attracting nurses to conduct in the primary health care system, promoting healthy lifestyles among the population will contribute to solving the above problem. At present, CVD cannot be cured, but it is possible to control the course of the disease and prevent complications, prolong patients' life and improve its quality. However, it is impossible to successfully control this disease even with the maximum use of the arsenal of modern medicine, but without the active participation of the patient. The training is patient-centered and helps patients and their families understand the cause of the disease, lead a healthy lifestyle, and provide proper care.

Nurses must be able to adapt their professional behavior to the educational level and perceptions of different patients. It is important for the nurse to be aware of patients' needs, taking into account their emotional state and talking clearly about the disease, its causes and treatments, to help patients manage their lifestyle and the various factors that can interfere with the treatment process. A preliminary survey of doctors in polyclinics and rural health centers led to the conclusion that most doctors believe it is necessary to involve nurses in the organization of home visits and outreach work among patients with CVD.

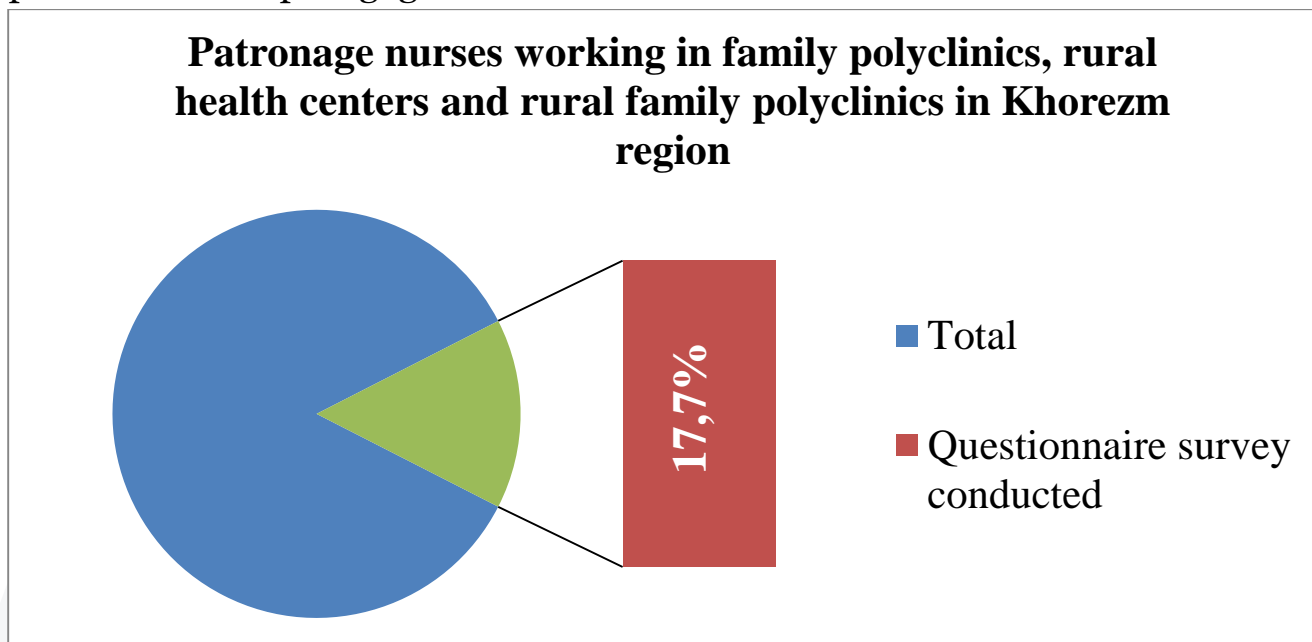
Unfortunately, it is very common to find a lack of understanding of the disease by patients themselves and an inadequate response to intervention by medical professionals and, consequently, many errors arising in treatment interventions occur because of patients' low (or incorrect) awareness of their disease and refusal to follow the doctor's orders.

The patient's role in the treatment of his illness cannot be limited to passive obedience to medical prescriptions. He must be an active, responsible participant in the therapeutic process, and he can be helped by a medical professional who has full



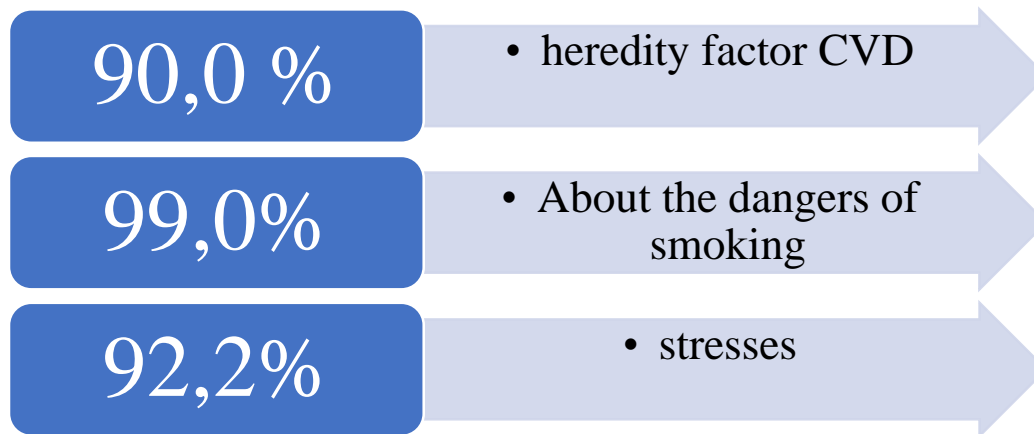


medical knowledge and is familiar with the issues of risk factors, prevention, and the main symptoms of CVD. A nurse must be both a psychologist and an educator, i.e. the nurse must be prepared to perform tasks related to the analysis of public health, organization and implementation of preventive, health promotion activities, implementation of pedagogical and educational activities.



(Diagram 1).

To determine nurses' knowledge of CVD prevention, a survey was conducted among 363 visiting nurses working in family practice clinics and rural health units (diagram 1), of whom 94% were nurses with a specialized secondary education and 6% with a higher medical education. More than half of the respondents were able to give a complete and correct answer to the question - what nosological forms of CVD diseases you know. When asked what risk factors contribute to CVD, 100% considered obesity, 99% pointed to smoking, 92% stress and 90% noted the factor of heredity (figure1). When visiting patients, almost 86% of the nurses recommend a proper diet (fruits and vegetables, fish, lean meat, low-fat dairy products, eggs, restriction of salt, fats, lack of alcohol), physical activity (exercise, walking slowly), avoidance of stressful situations and at the same time monitor the implementation of the doctor's prescription for cardiovascular disease.



(figure 1)

Thus, the survey of nurses showed that most of them are aware of prevention issues, risk factors, the primary symptoms of CVD. Consequently, as noted by physicians, nursing staff should be seen as a valuable health care resource for the prevention of non-communicable diseases, including CVD, the formation of a healthy lifestyle among healthy people and patients, i.e. providing affordable, acceptable and economically cost-effective care to the population. Professionally trained nurses can help the patient understand what is going on, show the connection between his or her behavior and health risks, and the need to follow treatment recommendations and lead a healthy lifestyle to prevent complications.

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