PriMera Scientific
Medicine and Public Health
Volume 5 Issue 4 October 2024
ISSN: 2833-5627

PriMera Scientific Publications

Analysis of the Potential and Limitations of the Prevention of Chronic non-Communicable Diseases in Polyclinics in the CIS Countries

Type: Research Article
Received: August 01, 2024
Published: October 04, 2024

Citation:
Mamedov Mehman Niyazievich., et al. "Analysis of the Potential and Limitations of the Prevention of Chronic non-Communicable Diseases in Polyclinics in the CIS Countries". PriMera Scientific Medicine and Public Health 5.4 (2024): 36-44.

Copyright:
© 2024 Mamedov Mehman Niyazievich., et al. This is an open-access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Mamedov Mehman Niyazievich[1]*, Mardanov Bakhodir Umarovich[2], Kutsenko Vladimir Alexandrovich[3] and Drapkina Oksana Mikhailovna[4]

[1]Doctor of Medical Sciences, Professor, Head, Department of Secondary Prevention of Chronic Noncommunicable Diseases, National Research Center for Therapy and Preventive Medicine, Moscow, Russia

[2]PhD, Senior Researcher, Department of Secondary Prevention of Chronic Non-Communicable Diseases, National Medical Research Center for Therapeutic and Preventive Medicine, Russia

[3]Jr. scientific. sotr. Biostatistics Laboratory of the Department of Epidemiology of Chronic Noncommunicable Diseases, National Research Center for Therapy and Preventive Medicine, Moscow, Russia

[4]Doctor of Medical Sciences, Professor, Academician of the Russian Academy of Sciences, Director of the National Research Center for Therapy and Preventive Medicine, Moscow, Russia

***Corresponding Author:** Mamedov Mehman Niyazievich, Doctor of Medical Sciences, Professor, Head, Department of Secondary Prevention of Chronic Noncommunicable Diseases, National Research Center for Therapy and Preventive Medicine, Moscow, Russia.

Abstract

The aim of the study: To conduct a medical and sociological survey among doctors in 4 Commonwealth of Independent States (CIS) countries for the effectiveness of the implementation of secondary prevention of noncommunicable diseases (NCDs) in outpatient healthcare.

Material and methods: Outpatient doctors from 6 cities in 4 CIS countries participated in the simultaneous study. A total of 210 doctors of therapeutic profile took part in the survey: Bishkek (Kyrgyzstan) - 42 doctors, Minsk (Belarus) - 37 doctors, Astana, Shymkent, Aktobe (Kazakhstan) - 55, 30, 10 doctors, Baku (Azerbaijan) - 36 doctors. The survey was carried out according to a questionnaire previously prepared by the National Research Center for Therapy and Preventive Medicine, which consisted of 11 blocks of questions. Answers to each question were offered in several gradations.

Results: In three countries, patients in the age range of 50-59 years prevailed among men who applied to the primary health care unit, whereas in Azerbaijan, men aged 60-65 years were dominant. In the CIS countries, patients most often go to the polyclinic for chronic forms of CHD. In Azerbaijan, Kazakhstan and Belarus, the incidence of type 2 diabetes with or without complications is more than 20%. Doctors in large cities of the CIS countries do not recommend non-drug treatment methods in up to 10% of cases. Preferential drug provision differs slightly between the analyzed cities. In Kazakhstan and Belarus, doctors note about 70% of cases when

75% of the target level is reached. In Kyrgyzstan and Azerbaijan, the same level is reached 2-3 times less often. In Kazakhstan, Belarus and Kyrgyzstan, there is a relatively high frequency (satisfaction in 75% of cases), while Azerbaijani doctors claim that 52% are not satisfied and 44% of cases are partially satisfied with interaction with specialized hospital doctors. In Azerbaijan and Belarus, 75% of the staffing of outpatient clinics prevails. In Kyrgyzstan, in 84% of cases, 100% staffing is detected. At the same time, in Kazakhstan, 50% and 75% staffing levels have a comparable frequency. In these countries, a similar pattern is being monitored for the provision of secondary medical staff at the polyclinic level.

Conclusion: Patients with CHD and type 2 diabetes mellitus predominate among patients with NCDs observed in polyclinics. Adherence to therapy is insufficient in every second case. Coverage of preferential drugs and achievement of target levels of the main risk factors among patients.

Keywords: secondary prevention; non-communicable chronic diseases; medical and sociological survey; doctors; CIS countries

Introduction

Noncommunicable chronic diseases (NCDs) are highly prevalent among adults worldwide. Every year, 41 million people die from NCDs, which accounts for 74% of all deaths in the world. Of these, 17 million people are under the age of 70. 86% of these premature deaths occur in low- and middle-income countries. Low- and middle-income countries account for 77% of all deaths from NCDs. In the structure of mortality from CNDs, the largest share falls on cardiovascular diseases, from which 17.9 million people die every year, followed by cancer (9.3 million cases), chronic respiratory diseases (4.1 million) and diabetes (2.0 million, including diabetes-related kidney disease). These four groups of diseases cause 80% of all cases of premature death from chronic NCDs [1].

The increase in the absolute number of deaths from NCDs is mainly due to the growth and aging of the population [2]. New data confirm the trend towards an increase in life expectancy: the average life expectancy in the world, which was slightly less than 67 years in 2000, increased by 6 years and in 2019 amounted to more than 73 years. However, on average, only 5 of these additional years of life people live in good health. Indeed, there has been an increase in disability rates. To a large extent, the diseases and pathologies that cause the greatest mortality are also the cause of the greatest number of lost years of healthy life. Heart disease, diabetes, stroke, lung cancer and chronic obstructive pulmonary disease combined to cause the loss of almost 100 million additional years of healthy life in 2019 compared to 2000.

The risk of death from NCDs is increased by factors such as low levels of physical activity, alcohol consumption, unhealthy diet and air pollution. Trends such as rapid and disordered urbanization, the global spread of unhealthy lifestyles and an aging population also contribute to the development of these diseases. The main directions of the fight against NCDs include the detection, screening, treatment and prevention [2].

Secondary prevention of NCDs is important in reducing complications and improving the quality of life of patients with various diseases. Comprehensive measures in this direction include the creation of health schools, achieving targets for various NCDs, increasing patient adherence to treatment and prevention, availability of medical and high-tech methods of care, timely inpatient care, including in the development of acute incidents, staffing of health facilities with equipment and medical staff, provision of high-quality medical care by outpatient healthcare [3].

Conducting a medical and sociological survey among doctors makes it possible to assess the possibilities and limitations of implementing secondary prevention of NCDs in primary health care settings, in particular in polyclinics.

Materials and methods

Outpatient healthcare doctors from 6 cities in 4 CIS countries took part in the cross-sectional study. A total of 210 therapeutic doctors took part in the survey:

- Bishkek (Kyrgyzstan) - 42 doctors.
- Minsk (Belarus) - 37 doctors.
- Astana, Shymkent, Aktobe (Kazakhstan) - 55, 30, 10 doctors.
- Baku (Azerbaijan) - 36 doctors.

The survey was carried out according to a questionnaire previously prepared at the National Research Center for Therapy and Preventive Medicine, which consisted of 11 questions, including the following:

1. The frequency of patient referrals depending on gender and age range.
2. The frequency of treatment for the following chronic infectious diseases: chronic forms of CHD, chronic heart failure, type 2 diabetes mellitus, COPD and oncological diseases.
3. Assessment of adherence to non-drug and drug-based therapies
4. The place of non-drug therapy in the treatment of various somatic diseases.
5. Coverage of patients with preferential drug provision.
6. Achieving the target levels of the main risk factors.
7. Satisfaction of interaction with specialized hospital doctors.
8. Problems with timely hospitalization.
9. Advisory assistance of hospital doctors in polyclinics.
10. Staffing of doctors for secondary prevention in polyclinics.
11. Staffing of the nurses for secondary prevention in polyclinics.

Answers to each question were offered in several gradations.

The data were entered into a pre-prepared unified form for further statistical processing.

Statistical analysis

Statistical analysis was carried out in the data analysis environment R 4.1. Qualitative indicators are described by relative frequencies in percentages. The differences between the two independent groups for continuous parameters were evaluated using the exact Fisher criterion. For pairwise comparisons between groups, the Hill correction for multiple comparisons was carried out. The differences were considered significant at $p<0.05$.

Results

The medical and social survey was attended by outpatient doctors from the capital's hospitals in 4 CIS countries: Belarus, Kazakhstan, Azerbaijan and Kyrgyzstan.

Gender and age characteristics of patients observed in polyclinics

In three countries, patients in the age range of 50-59 years prevailed among men who applied to the primary health care unit, whereas in Azerbaijan, men aged 60-65 years were dominant ($p<0.009$ compared to Kazakhstan). Among men who are observed in polyclinics, up to 20% belong to the age category of 65+ years. Men of two age groups (40-49 years old and 60-65 years old) they make up a comparable frequency, namely up to 20% in terms of circulation in three CIS countries, except Kazakhstan. In all 4 cities, the number of men aged 30-40 years is no more than 5%.

Unlike men, the frequency of different age ranges among women who applied to polyclinics in CIS countries has no general trends. In Kyrgyzstan, women aged 65 and above make up 50%, three age categories have a comparable frequency (15-19%). In Belarus, the number of visits to polyclinics in three age categories (50-59, 60-65 and over 65 years old) was comparable, women aged 30-50 years go to the polyclinic less often. In Kazakhstan, the frequency of visits to the polyclinic is dominated by women aged 50-59 years. At the same time, older and younger women attend polyclinics with the same frequency (23.5% and 25.5%, respectively). In Azerbaijan, a third of the attendance comes from women aged 60-65 years, a similar pattern is observed in the age group of 50-59 years. At the same time, women of older and younger age categories are 1.5-3 times less likely to go to a polyclinic. Statistically significant differences were found in the frequency of women aged 65+ between Kyrgyzstan on the one hand, Kazakhstan and Azerbaijan on the other hand ($p<0.0001$ and $p<0.005$, respectively).

The structure of disease turnover

According to a survey of doctors from 4 cities of the CIS countries, patients most often go to the polyclinic for chronic forms of CHD. This is more pronounced in Belarus and Kyrgyzstan, and in Kazakhstan and Azerbaijan, the frequency of referrals for chronic forms of CHD was 50% lower ($p<0.01$). In Azerbaijan, Kazakhstan and Belarus, the number of referrals with type 2 diabetes with or without complications is more than 20%. In Azerbaijan, COPD also occupies a quarter of the structure of diseases in terms of outpatient treatment, in other countries the incidence of COPD was 2-4 times lower ($p<0.003$, $p<0.0001$ and $p<0.009$, respectively). For oncological diseases, patients practically do not go to the polyclinic, with the exception of Kazakhstan, where the number of patients was about 12%. CHF causes up to 13% of outpatient visits in different CIS cities, while the observed differences between them are 1.5-3 times without statistical significance.

Evaluation of the appointment of non-drug therapy (lifestyle changes)

Doctors in large cities of the CIS countries do not recommend non-drug treatment methods in up to 10% of cases. In Belarus, non-drug therapy is prescribed in all cases. At the same time, the ratio of non-drug treatment applications of both main and secondary lines of therapy in all 4 countries is comparable.

Preferential drug coverage

Preferential drug provision differs slightly between the analyzed cities. In Kyrgyzstan, a quarter of doctors stated that there was no preferential provision, similar data were obtained in Azerbaijan and Kazakhstan, while in Belarus not a single doctor stated that there was no preferential provision. In general, in Belarus, in 27% of cases, 100% provision of preferential drugs is observed, in every third case, patients have 50-75% provision of medicines according to indications. The same pattern is being tracked across Kazakhstan. And in Azerbaijan, 80% of the privileged category of patients receive medicines in 50-75% of cases (the reliability of the difference compared to other countries is $p< 0.001$).

Assessment of adherence to non-drug and drug therapy

According to doctors, in Kyrgyzstan, most patients are committed to drug and non-drug correction. At the same time, partial adherence to both types of treatment is about 40% of cases. The same, but less pronounced pattern is observed in Kazakhstan. In every fifth case, doctors declare partial non-adherence of patients to the prescribed therapy. In Belarus, the number of people with partial adherence and non-adherence to therapy is comparable and in total accounts for up to 50% of cases. In Azerbaijan, the situation is somewhat different, in every second case, according to doctors, patients are partially or completely not committed to drug correction (the reliability of the difference compared to other countries is $p<0.0001$), the situation for non-drug correction is somewhat better. In general, a complete lack of adherence to non-drug and drug-based therapies is observed in up to 10% of cases in different CIS countries that participated in the survey.

Achieving the target levels of risk factors

Almost none of the CIS cities has announced 100% achievement of target levels. In Kazakhstan and Belarus, doctors note about 70% of cases when 75% of the target level is reached. In Kyrgyzstan and Azerbaijan, the same level is achieved 2-3 times less frequently ($p<0.0001$ compared with Kazakhstan and Belarus), at the same time, in these countries, in every second case, 50% achievement of the targets of the main risk factors among patients is noted. In Belarus and Kazakhstan, 50% achievement of target levels is observed in every fifth patient who applied to a polyclinic ($p<0.002$ compared with Kyrgyzstan and Azerbaijan). It should be noted that in Azerbaijan, every third patient reaches 25% of the target level ($p<0.002$ and $p<0.0001$ the reliability of the difference compared with Belarus and Kazakhstan, respectively).

Consulting services of hospital doctors in polyclinics

Doctors of the outpatient health care unit, answering the question about the advice of hospital doctors in polyclinics, claim that they receive it in every second case. In Kazakhstan, Belarus and Kyrgyzstan, up to 35% of cases also show up to 75% satisfaction with advisory assistance. In these countries, counseling prevails in less than 50% of cases and the indicators were comparable. In Azerbaijan, in every second case, inpatient counseling is not provided or is provided in less than 50% of cases ($p<0.001$ compared to other countries).

Problems with hospitalization

In Kyrgyzstan, outpatient doctors in every second case declare that there are no problems with timely hospitalization of patients. In Belarus and Kazakhstan, up to 30% declare that there are no problems with hospitalization. At that time, this indicator turned out to be the lowest in Azerbaijan and amounted to 6% ($p<0.009$ and $p<0.0001$ compared to Kyrgyzstan and Kazakhstan, respectively). In other cases, Azerbaijani doctors state that there are minor problems with timely hospitalization of patients. In Belarus and Kazakhstan, minor problems with timely hospitalization are also observed in about 70% of cases, in Kyrgyzstan this figure was 45%. The differences in indicators compared with Azerbaijan turned out to be significant ($p<0.0001$ and $p<0.002$ compared with Kyrgyzstan and Kazakhstan, respectively). In all 4 countries, serious difficulties with hospitalization occurred in up to 6% of cases.

Staffing levels of doctors and nurses

In Azerbaijan and Belarus, 75% staffing of outpatient clinics prevails ($p<0.0001$ compared with Kyrgyzstan and $p<0.01$ compared with Kazakhstan). In Kyrgyzstan, 100% staffing is detected in 84% of cases. At the same time, in Kazakhstan, in 50% of cases, staffing in 75% has a comparable frequency.

A similar pattern is observed in terms of staffing of the nurses in different cities of the CIS countries. In Azerbaijan and Belarus, 75% staffing of the nurses prevails in polyclinics ($p<0.0001$ compared with Kyrgyzstan and $p<0.05$ compared with Kazakhstan). Kyrgyzstan is dominated by 100% staffing of the nurses. In Kazakhstan, 50% and 75% staffing of the nurses have a comparable frequency and is 40% each ($p<0.008$ and $p<0.05$ compared to Kyrgyzstan), and 100% staffing is detected in every fifth case.

	30-39 years n, %	***40-49 years n, %***	***50-59 years n, %***	***60-65 years n, %***	***65+ years n, %***
Men					
Kyrgyzstan	0 (0)	2 (11.8)	10 (58.8)	2 (11.8)	3 (17.6)
Belarus	2 (4.9)	8 (19.5)	18 (43.9)	7 (17.1)	6 (14.6)
Kazakhstan	2 (2)	21 (20.8)	59 (58.4)	15 (14.9)	4 (4.0)
Azerbaijan	2 (4)	8 (16.0)	13 (26.0)	20 (40.0)	7 (14.0)
Women					
Kyrgyzstan	0 (0)	4 (15.4)	5 (19.2)	4 (15.4)	13 (50.0)

Belarus	2 (5.6)	6 (16.7)	11 (30.6)	9 (25.0)	8 (22.2)
Kazakhstan	3 (2.9)	26 (25.5)	43 (42.2)	24 (23.5)	6 (5.9)
Azerbaijan	3 (6)	10 (20.0)	15 (30.0)	16 (32.0)	6 (12.0)

Table 1: Age distribution of patients in polyclinics.

	Chronic forms of CHD n, %	***CHF n, %***	***Type 2 DM n, %***	***COPD n, %***	***Oncological diseases n, %***
Kyrgyzstan	26 (61.9)	2 (4.8)	13 (31.0)	1 (2.4)	0 (0.0)
Belarus	40 (66.7)	2 (3.3)	16 (26.7)	2 (3.3)	0 (0.0)
Kazakhstan	102 (44.2)	18 (7.8)	53 (22.9)	31 (13.4)	27 (11.7)
Azerbaijan	78 (34.8)	29 (12.9)	60 (26.8)	57 (25.4)	0 (0.0)

Table 2: Incidence of chronic non-communicable diseases in outpatient clinics.

	Basic n, %	***Secondary n, %***	***Not assigned n, %***
Kyrgyzstan	28 (48.3)	25 (43.1)	5 (8.6)
Belarus	19 (59.4)	13 (40.6)	0 (0.0)
Kazakhstan	76 (49.4)	66 (42.9)	12 (7.8)
Azerbaijan	28 (56.0)	18 (36.0)	4 (8.0)

Table 3: The place of non-drug therapy in the treatment of patients.

	are not provided n, %	***less than 50 % of patients n, %***	***50-75 % of patients n, %***	***100% patients n, %***
Kyrgyzstan	10 (23.8)	0 (0.0)	15 (35.7)	17 (40.5)
Belarus	0 (0.0)	15 (40.5)	12 (32.4)	10 (27.0)
Kazakhstan	15 (15.8)	22 (23.2)	29 (30.5)	29 (30.5)
Azerbaijan	7 (19.4)	0 (0.0)	29 (80.6)	0 (0.0)

Table 4: Coverage of preferential drug provision.

	Non-drug therapy 1, n, %	***Non-drug therapy 2, n, %***	***Non-drug therapy 3, n, %***	***Drug therapy 1, n, %***	***Drug therapy 2, n, %***	***Drug therapy 3, n, %***
Kyrgyzstan	45 (38.8)	12 (10.3)	1 (0.9)	44 (37.9)	13 (11.2)	1 (0.9)
Belarus	22 (26.2)	15 (17.9)	5 (6.0)	16 (19.0)	25 (29.8)	1 (1.2)
Kazakhstan	103 (33.0)	44 (14.1)	8 (2.6)	93 (29.8)	60 (19.2)	4 (1.3)
Azerbaijan	25 (24.5)	23 (22.5)	2 (2.0)	5 (4.9)	45 (44.1)	2 (2.0)
Note. 1- partial commitment, 2- partial non-commitment, 3- total non-commitment						

Table 5: Adherence to non-drug and drug therapy.

	25% n, %	***50% n, %***	***75% n, %***	***100% n, %***
Kyrgyzstan	12 (20.7)	26 (44.8)	20 (34.5)	0 (0.0)
Belarus	1 (2.4)	9 (21.4)	32 (76.2)	0 (0.0)
Kazakhstan	2 (1.3)	36 (23.2)	107 (69.0)	10 (6.5)
Azerbaijan	16 (32.0)	29 (58.0)	5 (10.0)	0 (0.0)

Table 6: Assessment of the achievement of the target levels.

	No problem experienced n, %	*Minor problems n, %*	*Always difficult to hospitalize patients n, %*
Kyrgyzstan	22 (55.0)	18 (45.0)	0 (0)
Belarus	8 (21.1)	28 (73.7)	2 (5.3)
Kazakhstan	27 (29.3)	61 (66.3)	4 (4.3)
Azerbaijan	3 (6.2)	45 (93.8)	0 (0)

Table 7: Analysis of hospitalization problems.

Cities	*50% staffing n, %*	*75% staffing n, %*	*100% staffing n, %*
Doctors			
Kyrgyzstan	0 (0)	3 (15.8)	16 (84.2)
Belarus	4 (25.0)	11 (68.8)	1 (6.2)
Kazakhstan	54 (41.2)	59 (45.0)	18 (13.7)
Azerbaijan	0 (0)	36 (92.3)	3 (7.7)
Nurses			
Kyrgyzstan	0 (0)	1 (6.2)	15 (93.8)
Belarus	3 (20.0)	11 (73.3)	1 (6.7)
Kazakhstan	42 (39.6)	43 (40.6)	21 (19.8)
Azerbaijan	0 (0)	36 (92.3)	3 (7.7)

Table 8: Staffing of doctors and nurses for secondary prevention in polyclinics.

Discussion

The study is devoted to the assessment of important components of secondary prevention of NCDs in outpatient healthcare. According to statistics, up to 80% of clinical cases are considered and resolved in primary health care institutions, in particular in polyclinics. The implementation of secondary prevention of NCD is one of the important areas of medical care in outpatient settings. The CIS countries, including Russia, are at high risk of developing a number of NCDs, primarily CVD, COPD and diabetes mellitus [2]. Healthcare is faced with the task of not only reducing morbidity among the adult population, but also preventing complications among patients with verified diagnosis.

Conducting a medical and sociological survey among doctors and analyzing the data obtained can be used to further improve the secondary prevention of NCDs. A comparative analysis between countries with common traditions of the health system will allow a systematic assessment of the positive aspects and limitations, which together can be used to optimize the improvement of secondary prevention in the primary health care of these countries.

According to doctors, among patients with various NCDs observed in polyclinics, men aged 50-59 years predominate, and among women the age range is wider - from 50-65 years. There are some differences in the analyzed countries. In Azerbaijan, men aged 60-65 years predominate, and in Kyrgyzstan, every second woman with NCDs is aged 65 years and older. On the one hand, it can be assumed that there is a tendency to rejuvenate chronic diseases, on the other hand, timely measures within the framework of secondary prevention can make a significant contribution to reducing the frequency of complications.

In the structure of diseases in outpatient healthcare in all 4 countries, CHD prevails. At the same time, the frequency of CHD varies between countries. In Kyrgyzstan and Belarus, patients are treated for CHD 50% more often than in Kazakhstan and Azerbaijan. It should be noted that among the causes of death of adults in terms of 100,000 people, coronary heart disease is 388 cases in Azerbaijan (2nd place in the world ranking), 282 cases in Belarus (10th place), 246 cases in Kyrgyzstan (16th place) and 181 cases in Kazakhstan (35th place) [1]. It is noteworthy that up to 30% of cases in the structure of NCDs at the outpatient level are type 2 diabetes mellitus,

which indicates a significant increase in its incidence and improvement of its screening in the CIS countries.

In a prospective Interepid study, it was found that smoking in men, obesity in women and hypertension in both sexes were associated with an increased risk of death among residents of rural areas of Russia and Kyrgyzstan. Differences were found only in relation to low physical activity and eating habits, which requires differentiated therapeutic and preventive measures, taking into account the characteristics of risk factors and their impact on the prognosis of life [4].

One of the approaches to secondary prevention is to educate patients in health schools, the purpose of which is to reduce the incidence and progression of complications of NCDs, as well as mortality and increase life expectancy of the population. Attention is drawn to the high attendance of enrolled patients and the significant predominance of women among them, as well as the elderly [5].

The role of lifestyle changes is an integral part of the secondary prevention of most NCDs. The appointment of non-drug therapy as a primary and secondary line has a comparable frequency in all 4 countries. On the other hand, doctors state that in every second case there are problems of varying degrees with patients' commitment to non-drug correction. It should be noted that adherence to drug therapy has the same pattern. In a study conducted in East Kazakhstan with the participation of 2,346 patients aged 55.2±1.1 years with hypertension, it was revealed that full adherence to drug therapy was determined in 41.1% of cases, lack of adherence in 26.9% of cases. In the presence of concomitant coronary heart disease, diabetes and their combinations, full adherence was observed significantly more often than in the absence of these diseases. Also, a significant excess of the indicator of full commitment was found in persons with high and satisfactory economic status compared with a subgroup with low economic status [6].

A survey of 450 pharmacy visitors using the Moriski-Green questionnaire in Vitebsk (Belarus) determined that the degree of adherence to therapy depends on age (patients aged 60 years and older tend to follow medical prescriptions more closely than respondents under the age of 60, $p = 0.0104$); social status (non-working citizens have a higher level of compliance, $p = 0.0002$); and gender (men are less committed to treatment, $p = 0.0166$). It was found that 63.85% of respondents under the age of 60 and 52.32% aged 60 and older are incompetent with the therapy prescribed by a doctor [7]. It can be assumed that an increase in adherence to therapy should be considered as an important link in improving the secondary prevention of NCDs. Provision of preferential medicines takes a significant part in the medical correction of some NCDs. Drug reimbursement (insurance) is the provision of free or discounted medicines to everyone who needs outpatient treatment. Such systems have been successfully operating for a long time in many countries of the world, ensuring the effectiveness of treatment, primarily of chronic diseases. If the availability of drugs in outpatient treatment is reduced, then the quality of medical care in general actually suffers. If there is a difference in the solvency of the population, then different sizes of co-payments are established, social and age groups are differentiated, and the drugs themselves used for life-threatening conditions or improving the quality of life. But, as a rule, for oncological and cardiovascular diseases, orphan diseases, diabetes mellitus and some others, almost one hundred percent coverage is provided. The list of preferential drugs may vary from country to country, although patient management standards are developed based on international recommendations.

According to doctors, the coverage of preferential drugs in the analyzed countries is about 60% of the required level. The subjectivity of the doctors' assessment cannot be excluded. Achieving the targets of the main risk factors is an important indicator of the effectiveness of secondary prevention of NCDs. The analysis of the questionnaire of doctors shows that in two countries, namely in Belarus and Kazakhstan, the target levels of the main risk factors are achieved in 75% of cases, in the other two countries this indicator is achieved in 50% of cases. Of course, these data are aggregated in nature, the achievement of the target levels of each risk factor varies significantly in many countries. According to the Azerbaijani Heart Study, up to 60% of patients with hypertension (760 people, average age 53±1.15 years) do not take or take inadequate antihypertensive therapy. Diabetes mellitus and a very high cardiovascular risk were found in every sixth and third patient, respectively [8].

Timely hospitalization during exacerbations and acute incidents can affect the prognosis of patients with NCDs. According to this survey, in most cases, doctors note minor difficulties with hospitalization. With the exception of Azerbaijan, interaction with hospital doctors is observed at an average level in three CIS countries.

Staffing of doctors and nurses in outpatient healthcare directly affects the quality of medical care, including the effective implementation of secondary prevention of NCDs. According to official statistics from Rosstat, in 2018, the Russian Federation took a leading position among the states of the "post-Soviet" space (CIS member states and Ukraine) in terms of the provision of doctors (per 100,000 population). In addition to the Russian Federation, there are high levels of security in Armenia, Belarus, and Ukraine. The lowest indicator was registered in Tajikistan, Kyrgyzstan and Uzbekistan, while Azerbaijan and Kazakhstan are among the countries with average indicators of provision of doctors [9].

Among the 4 countries, the staffing of doctors and nurses was high only in Kyrgyzstan. In Belarus and Azerbaijan, 75% of the staffing of medical personnel prevails, while in Kazakhstan there is a shortage of staffing.

Conclusion

Thus, after analyzing several issues affecting the implementation and effectiveness of secondary prevention of NCDs in the CIS countries, the following conclusions can be drawn. The average age of people with NCDs observed in polyclinics in large cities of 4 CIS countries is 50-59 years, among them patients with CHD and type 2 diabetes mellitus predominate. Adherence to therapy is insufficient in every second case. Coverage of concessional drugs and achievement of target levels of the main risk factors among patients with NCDs is on average 60% of cases. In three of the analyzed four CIS countries, there are problems with staffing doctors and nurses. Addressing these issues can optimize the quality of medical care and the implementation of secondary prevention of NCDs at the outpatient level of healthcare in the CIS countries.

References

1. Global Burden of Disease Collaborative Network, Global Burden of Disease Study 2019 (GBD 2019) Results (2020, Institute for Health Metrics and Evaluation - IHME).
2. Drapkina OM., et al. "Prevention of chronic non-communicable diseases in the Russian Federation". National guidelines. Cardiovascular Therapy and Prevention 21.4 (2022): 3235. (In Russ.)
3. Maslennikova GYa and Oganov RG. "Prevention of noncommunicable diseases as an opportunity to increase life expectancy and healthy longevity". Cardiovascular Therapy and Prevention 18.2 (2019): 5-12. (In Russ.)
4. Myrzamatova AO., et al. "Results of a 7-year prospective follow-up in the Interepid study: factors influencing all-cause and cardiovascular mortality in rural residents of Russia and the Kyrgyz Republic". Russian Journal of Cardiology 27.5 (2022): 4999. (In Russ.)
5. Larina VN., et al. "Secondary prevention for non-communicable diseases at out-patient stage: schools of health for patients at municipal polyclinic". Cardiosomatics 10.2 (2019): 49-55. (In Russ.).
6. Musina AE and Tuleutaeva RE. "Factors influencing adherence to antihypertensive therapy in patients with arterial hypertension in Eastern Kazakhstan". Science and Healthcare 5 (2017): 42-54. (In Russ.)
7. Troina SG and Kugach VV. "Assessment of adherence to therapy of pharmacy visitors using the Morisky-Green questionnaire". Bulletin of Pharmacy 4.90 (2020) : 14-22. (In Russ.)
8. Mamedov MN, Deev AD and Mehdiyev SKh. "Priorities of primary prevention of cardiovascular disease: the results of multicenter international cohort study AHS I (Azerbaijan Heart Study, part I)". International Heart and Vascular Disease Journal 18 (2018): 4-14.
9. Shakhabov IV, Melnikov YY and Smyshlyaev AV. "Analysis of doctors of different specialties staffing in the Russian Federation and abroad". Siberian Medical Review 5 (2020): 96-101. (In Russ).