
CINDI PROGRAM IN BULGARIA - RESULTS AGAINST REALITY

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Abstract: For several decades, worldwide health systems efforts have focused on the control of the epidemic of chronic noncommunicable diseases and, to date, success in many developed countries has been reported, with a reduction in risk factors.

The article does not criticize the CINDI program, which has been shown to play a positive role in reducing the impact of risk factors for chronic noncommunicable diseases, but its writing is provoked by the lack of the ultimate goal of the program - improving the health of the nation. The issue "CINDI results against reality" is discussed, presenting the discrepancy between the results reported in the implementation of the CINDI program in Bulgaria and the actual statistics on the health of the nation over a five-year period. A special emphasis is placed on the nature of the WHO CINDI program.

The main causes of the problem are the non-implementation of the principles of the CINDI program, due to economic reasons, organization of the health system, the deepening process of social inequality among the population - a reason for limiting access to medical care in all aspects: medical services, medicines, preventive activities. Disregarding the "cybernetic nature of the system", in this case the health care - its emergent course.

The failure to achieve the long-term health goals of the nation through the implementation of the CINDI - Improvement of Health Indicators Program is due to its subsidiary nature, applying a universal approach to all countries, without taking into account certain activities in the organization of healthcare, in the country-specific economic and social environment; and the "insufficiency" of policies to support the control of chronic non-specific diseases

The CINDI program can be considered as a standard, with universal criteria for measuring the quality of prevention activities, but applied under different socio-economic conditions in different countries. The consequence is a discrepancy between optimal CINDI indicators and morbidity and mortality statistics.

To reduce the CINDI reality gap, the program needs to be enriched with new criteria drawn from the country's economic and social environment to support national health policies for the control of chronic non-specific diseases

Keywords: prevention, CINDI program, chronic noncommunicable diseases, risk factors, health indicators, subsidiary

INTRODUCTION

The CINDI Program is one of Europe's largest integrated action projects for the prevention of chronic non-communicable diseases and health promotion in the WHO European Region.

In 2015, positive results from the implementation of the program were reported in Bulgaria, but three years later, in 2018, the country's health indicators remained poor and unchanged compared to previous years.

The aim of this publication is to show that there is a discrepancy between the results reported by the implementation of the CINDI program in Bulgaria and the actual statistics on the health of the nation and outline the factors behind this problem.

1. AIM AND ESSENCE OF THE CINDI PROGRAM UNTIL NOW

The CINDI program aims to control non-communicable diseases. By concluding agreements with countries, the WHO is helping to develop national policies for the control of chronic non-specific diseases. The cooperation between the parties is carried out under a single policy framework, which includes uniform procedures, approaches, evaluation of the results of the program, uniform monitoring rules.

The CINDI program includes over 30 countries from Europe as well as Canada. Bulgaria joined the program in 1985. It is being implemented in several non-permanent demonstration zones in the country and is funded by the Ministry of Health. Initially, these zones are the districts of Veliko Turnovo, Gabrovo, Stara Zagora, Sliven. After the interruption, the program started again in Veliko Turnovo, Lovech, Stara Zagora, Yambol, Kardzhali, Borovo (Ruse District).

The CINDI policy is based on several principles (Figure 1).

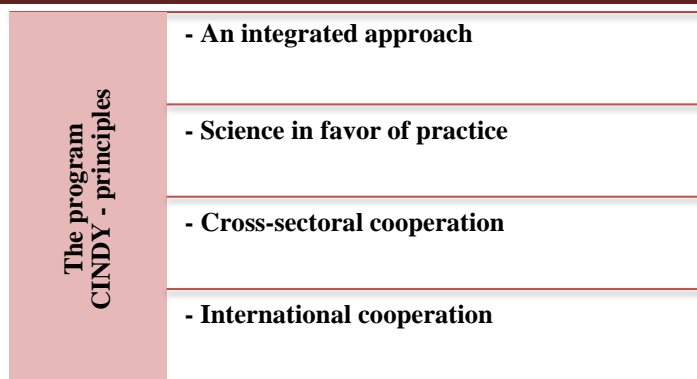


Figure 1 CINDI Policy Principles

An integrated approach means: health promotion, disease prevention, therapy, rehabilitation and impact on risk factors. Practice science means: using existing knowledge and experience in the field of prevention, creating new models for prevention, new research and evaluating results. Cross-sectoral cooperation - coordination between sectors of social development, investment for health. International cooperation - use of a unified approach by the participating countries in the project, exchange of experience.

The programme's priority areas include:

1. Priority diseases: cardiovascular diseases, malignancies, chronic non-specific respiratory diseases.
2. Risk factors: smoking, unhealthy eating, low physical activity, alcohol abuse, obesity, high blood pressure and cholesterol.
3. Health-supporting Environment - A physical health-promoting slice, a living environment and a health-promoting work.

2. RESULTS OF THE CINDI PROGRAM INTEGRATED ACTIVITIES IN BULGARIA

In relation to the major risk factors for chronic non-specific diseases by 2020, the program has several objectives:

Reduction of **smoking** after adults by 10%, reduction of smoking among persons up to 20 years by 10%. 50% reduction in smoking intensity in male smokers 25-64 years old. Increase in number of smokers visited general practitioner to 50% who were suggested to quit smoking. Reduce the number of pregnant women who smoke during pregnancy by 50%. Increase by 30% the relative share of **exercise practitioners** who meet WHO recommendations. A 20% reduction in the relative share of persons with **low physical activity**. Reduce the relative share of alcohol abusers by 30%. Reducing the number of **road traffic related deaths** by 50%.

Improving the nutritional intake of the population by 15%. Reduction of the relative share of overweight and obesity by 15% - over 25 kg/m² among the population. Increase to 50% of overweight and obese individuals who have visited a medical practice and consulted a doctor. **Provision of clean drinking water** for 99% of the population. Reduction of air pollution due to **transport, industrial and household pollutants**.

Reduction of **average noise levels** in areas with increased noise by 60%. Increase in the number of enterprises that have created conditions for **safe work** by 50%.

The target groups are children and students, people from 25 to 64 years of age at risk, in the demonstration zones mentioned above.

With regard to the main risk factors for non-communicable diseases by 2020, the program has reported positive results [2], namely:

As of 2015, the main finding is the positive implementation of the program, namely: Smoking in men decreased by 10 points and in women increased by 3 points (the trend is also characteristic of the European Union).

Alcohol abuse decreased by 4 points. Physical activity has increased but has not reached the level of prophylactic effect. Positive change in nutrition - every second consumes fish chicken meat and vegetables, reduced salt consumption. The proportion of persons with normal weight and a slight increase in the number of obese persons has increased. The following cholesterol value was reduced by 0.02 mmol/l. The triglyceride level is below 1.7 mmol/l. The share of men with arterial hypertension decreased by 6.2 points, for women - by 10 points.

The main conclusions of the results presented in 2015 from the implementation of the CINDI Program in Bulgaria are [1]:

- The proportion of people controlling the main health risk factors in the study areas has increased: arterial hypertension - 80%, dyslipidemia - 30% and weight - 50%.
- The relative proportion of individuals carrying two or more measurable risk factors (smoking, high cholesterol, hypertension, overweight) has decreased
- The mortality of chronic non-specific diseases under the program has been reduced.

3. THE REAL NATIONAL HEALTH STATISTICS IN BULGARIA

Probably, the methodology of the program implies a correlation between the percentage of goals and the percentage of results. Despite the positive results reported in the implementation of the program, the result of the highest importance for the Bulgarian society - mortality, remains high and there is a tendency for increase. According to Eurostat data, over the last eight years, the mortality rate in Bulgaria has been around 15 per 1,000 people, exceeding 15 per thousand in the last five years and a trend of continuous increase (Figure 2).

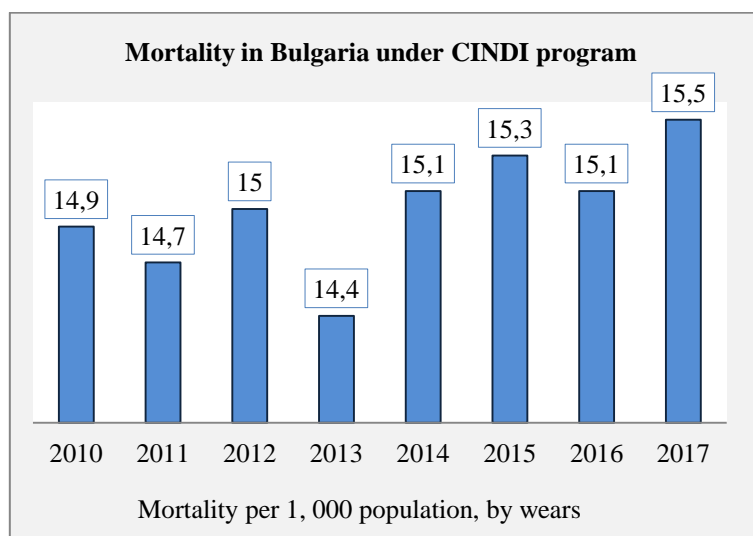


Figure 2 Mortality in Bulgaria for a Seven Year Period. Source: Eurostat database, August 2018)

The structure of mortality by major causes in 2017, repeats the trend that has dominated Bulgaria and European countries in recent decades. Diseases of the circulatory organs are leading, followed by neoplasms, diseases of the respiratory system, diseases of the digestive system and external causes of morbidity and mortality (Figure 3, 4, 5) [4].

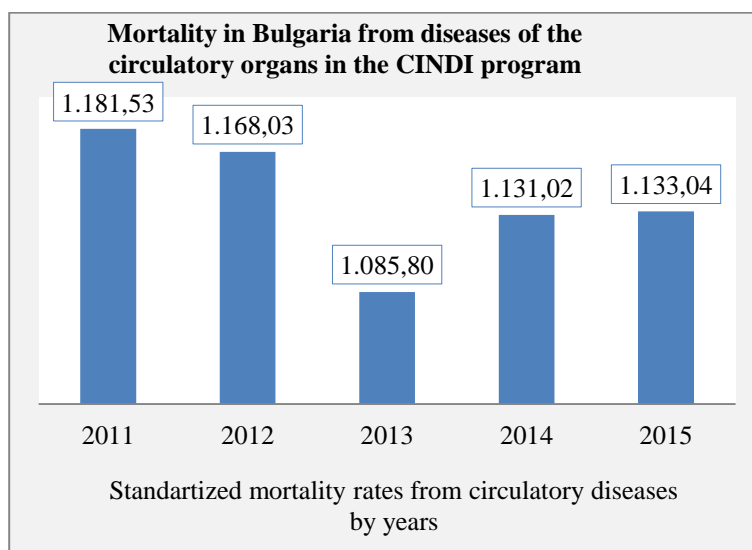


Figure 3 Mortality in Bulgaria from circulatory diseases over a five-year period

For the five-year period presented, cardiovascular mortality remains at a constant level, although it remains the leading cause of nation mortality. The stationing of the factor may be due to the application of innovative therapeutic approaches, such as interventional procedures in cardiology and neuropsychology. An analysis of this factor is needed to answer the question why, despite high technology, mortality rates are high and where the weaknesses are - the organization of emergencies, the organization of out-of-hospital medical assistance or hospital care, diagnoses or staff qualifications ?

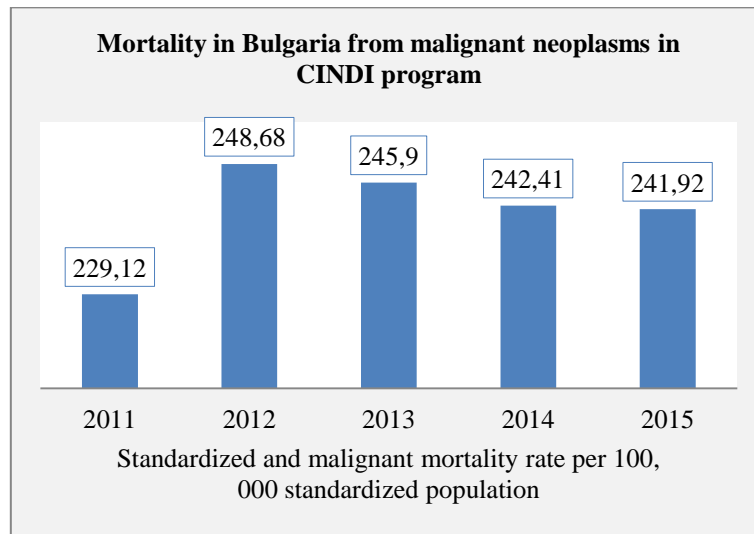


Figure 4 Cancer mortality in Bulgaria for a five-year period

Over the five-year period, mortality from malignancies has increased and there is a trend towards hospitalization. The reason could be the use of quality medicines, improving the condition over a period of time and the underutilization of targeted therapy, which would increase the chance of survival.

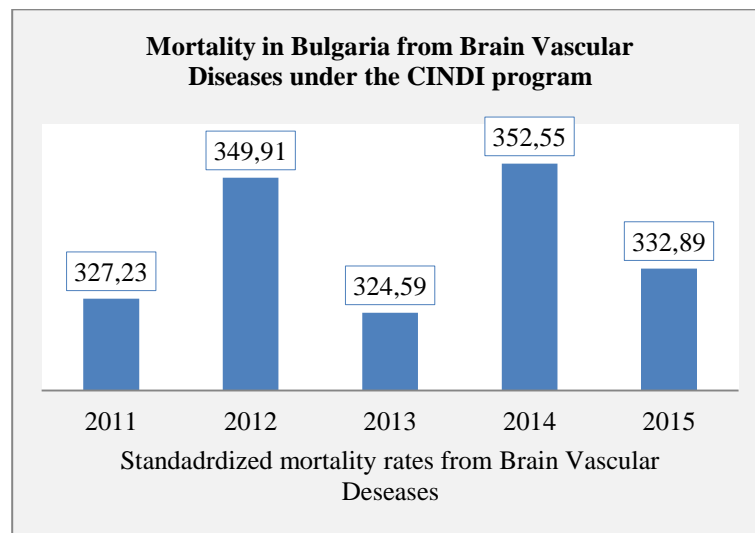


Figure 5 Mortality in Bulgaria of Brain Disease for a five year period

For a five-year period, mortality from cerebrovascular disease has been maintained at a relatively constant level, although in 2013 and 2015 there has been a corresponding decline and a jump in data. It remains the major risk factor with the greatest weight.

4. NON-CONFORMITY BETWEEN RESULTS AND STATISTICS - CAUSES - FACTORS

When comparing the results of the monitoring of the CINDI program, presented in a publication of the National Center for Public Health and Analyzes of the Ministry of Health in Bulgaria and Eurostat data on Bulgaria in terms of morbidity and mortality, there is a "gap", rift: " good ", positive results from the prevention of chronic non-specific diseases, against reality - evidence of increased morbidity and mortality, with a tendency to increase. (Figure 6).

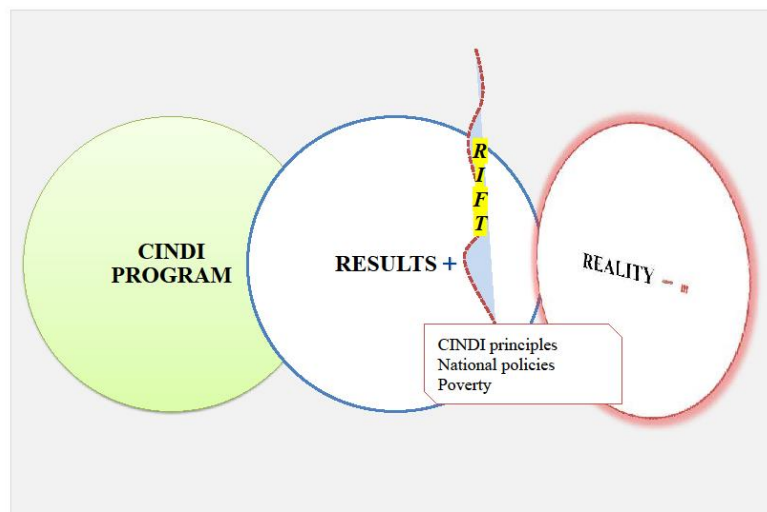


Figure 6 Cindy Results vs. Reality gap and reasons

What is the reason for this discrepancy between the results of the implementation of the CINDI program and the statistics on the health indicators of the Bulgarian nation?

For the discrepancy between results and reality, three main factors can be defined, each of which is due to causes - weaknesses of the health system in the general sense, as follows

First factor: CINDI's failure to implement the principles:

1. The integrated approach does not ensure coordination between the different levels of care in the system. There is a preponderance of hospital care over hospital care. The reasons are economic - low salaries for hospital staff, the legislature.
2. The torn link between outpatient and hospital care - which has existed since the beginning of the reform - 2000, which contradicts the CINDI approach - "prevention performed in out-of-hospital medical care by a general practitioner".
3. Scientific advances are difficult to break through and difficult to implement in medical practice due to limited financial resources.
4. There are "cracks" in cross-sectoral cooperation - the transfer of social activities from the social sphere to the healing field. The social activity accompanying medical care remains without provision of services.
5. International cooperation provides guidance but cannot solve problems within a country's health system because they are the result of the level of economic development of a society and are "rooted" in its consciousness as values and traditions.

For example: insufficient collection of health insurance contributions due to unemployment, which is one of the factors of insufficient financing of the system with all its consequences, as well as the expectations and perception of the doctor as authority.

Second factor: The deepening process of social inequality in the population, which is the reason for:

1. Restriction of access to medical care in all its aspects: medical services, medicines, preventive activities;
2. Shifting the focus of people's motivation to meet basic food and shelter needs, ignoring social adaptation, health education.

Factor Three: Unrealistic / Inadequate National Health Policy for Controlling Chronic Non-Specific Diseases and Activating Country Resources

5. CONCLUSIONS BETWEEN THE RESULTS OF THE APPLICATION OF THE CINDI AND THE STATISTICS IN BULGARIA

- Discrepancy between reported improvements in the values of major risk factors for chronic non-specific diseases and the health indicators of the nation - improvement in proximate goals, against deterioration and failure to reach the end goal.
- The integrity of the healthcare process has been violated.
- Health indicators are influenced by factors not monitored by the CINDI Program as social events: low income, unemployment, job dissatisfaction, affecting people's mental health and behavior, reducing motivation and responsibility for their own health.

The failure to achieve the long-term health goals of the nation through the implementation of the CINDI - Improvement of Health Indicators Program is due to its subsidiary nature, applying a universal approach to all countries, without taking into account certain activities in the organization of healthcare, in the country-specific economic and social environment; and the "insufficiency" of policies to support the control of chronic non-specific diseases.

6. CONCLUSION

The CINDI program can be considered as a standard, with universal criteria for measuring the quality of prevention activities, but applied under different socio-economic conditions in different countries. The consequence may be a mismatch between the optimal CINDI indicators and the morbidity and mortality statistics.

To reduce the CINDI reality gap, the program needs to be enriched with new criteria drawn from the country's economic and social environment to support national health policies for the control of chronic non-specific diseases.

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