

**Marijan BOSHEVSKI**

## **CARDIOVASCULAR DISEASES BURDEN IN THE REPUBLIC OF MACEDONIA**

### **Introduction**

**T**he importance of cardiovascular diseases in the community, which together with cerebrovascular disease and peripheral artery disease fall under the category of circulatory disorders, is due to their morbidity and mortality.

The burden of cardiovascular diseases has been increasing both globally and in the Republic of Macedonia. In comparison to 1991 when 104.3 cases per 1000 persons were registered, the 2012 morbidity rate was reported to be 396.3 cases per 1000 persons according to the primary healthcare data. The 2012 statistical data show that cardiovascular diseases (CVDs) accounted for 13.4% of hospital morbidity rate with patients having 8.2 days of hospital stay in average. According to the Institute of Public Health of the Republic of Macedonia, the standardized mortality rate in 2012 was 578.6 deaths per 100.000 persons in comparison to 359.5 deaths per 100.000 persons in 1991.

*The author is Specialist  
in cardiology  
at the University Clinic  
of Cardiology and  
Associate Professor  
at Medical Faculty -  
Skopje*

## Objectives for way forward

Taking this data into consideration as well as the data discrepancy between the Republic of Macedonia and the European countries, the World Health Organization (WHO) has defined, together with the Ministry of Health of the Republic of Macedonia, the following objectives within the National Health 2020 Strategy:

- Reduction of morbidity and mortality rates from diseases of the circulatory system (cardiovascular and cerebrovascular diseases), as well as from the remaining chronic non-communicable diseases;
- Prevention of modifiable risk factors (smoking, unhealthy diet, overweight and obesity, physical inactivity, alcohol, hypertension).

In terms of CVDs prevention, two types of strategy are the most important:

*A population-oriented strategy* or population strategy comprises a series of activities mainly in the field of health policy. The most relevant activities are:

- Prohibition of smoking, health warnings about the health risks of smoking as well as raising taxes on tobacco;
- Promotion of physical activity (60 minutes or more of physical activity per day i.e. 150 minutes or more per week);
- Proper nutrition including greater intake of unsaturated fatty acids and limited intake of salt (salt intake of less than 5 grams per day or of 2 grams, as recommended by the WHO);
- Limited use (both chronic and episodic) of alcohol as well as marketing activities towards alcohol use reduction.

This strategy has been considered as the most cost-effective and thus elaborated at the Sixty-sixth World Health Assembly in 2013.

## Heart is more than an organ, health is more than health sector

In the Republic of Macedonia this strategy can be implemented through numerous activities, such are: promotion of better heart health, promotion of the World Heart Day, promotion of the Heart Failure Awareness Day, initially organized by the Macedonian Society of Cardiology and suggested by the European Society of Cardiology i.e. the World Heart Federation. As a result, promotional activities have been undertaken such are the organized free-of-charge preventive examinations and the CSDs monitor-

ing and evaluation plan in the Republic of Macedonia developed in 2012 (Ministry of Health of the Republic of Macedonia).

This strategy also aims to identify the patients at high cardiovascular risk (using appropriate scores such as EuroSCORE) i.e. to diagnose CVDs in patients. In order to do so, primary prevention measures are needed for the former ones i.e. secondary prevention measures for the latter ones. These measures are comprised within the *Strategy for high-risk patients*:

- Use of Aspirin as a secondary prevention measure in patients with diagnosed coronary artery disease or peripheral arterial disease;
- Use of statins, that is other lipid-regulating drugs to obtain target values of total cholesterol (5mmol/L) and of LDL cholesterol (2,5 mmol/L in risk patients i.e.; 3mmol/L in other patients);
- Regulation of blood pressure (defined as reduction in systolic blood pressure: 140 mmHg, that is in diastolic pressure: 90 mmHG);
- Ensuring access to essential medicines and affordable technologies to patients in need;
- Dietetic regimen to lower the body mass index (BMI) in overweight (BMI = 25 kg/m<sup>2</sup>) and obese patients (BMI = 30 kg/m<sup>2</sup>).

These measures aim at reducing *premature cardiovascular diseases as well as premature cardiovascular mortality*. They have been developed to improve the quality of life of the individual. Furthermore, they can be applied at all levels of healthcare: primary, secondary and tertiary.

The following are considered as successfully met goals at both global and national levels: achievement of relative reduction of excessive alcohol consumption at national level by at least 10%, relative reduction of existing physical inactivity prevalence by 10%, reduction of population average salt intake by 30% as well as reduction of tobacco use by 30%. The overall goal of all these measures related to cardiovascular risk factors is relative reduction of arterial hypertension prevalence at national level and reduction of obesity and diabetes prevalence that would ultimately reduce the total cardiovascular disease mortality rate at national level by at least 25%.

Considerable efforts have been made in the Republic of Macedonia in this direction, in both secondary and tertiary health care (technological equipment of medical institutions, creation of regional intervention centers, continuing medical education of physicians and health professionals).

Nevertheless, these objectives require further strengthening of the health system to address cardiovascular diseases, introducing comprehensive surveillance system for both CVDs and risk factors (WHO Steps Survey) and expanding human resources in public health.

Further actions would strive to strengthen CVD prevention and control in the primary health care, enhance the integrated approach and coordination among all health care levels in relation to these diseases and to involve all structures of the society to reduce the burden of cardiovascular diseases.

## **Executive summary**

The importance of cardiovascular diseases in the community, which together with cerebrovascular disease and peripheral artery disease fall under the category of circulatory disorders, is due to their morbidity and mortality. Taking the situation and data into consideration as well as the data discrepancy between the Republic of Macedonia and the European countries, the World Health Organization (WHO) has defined, together with the Ministry of Health of the Republic of Macedonia, the cardiovascular diseases as one of the priorities within the National Health 2020 Strategy. In this strategy, cardiovascular diseases and associated risk factors have a very specific place together with other major noncommunicable diseases of the modern living.

Further actions would strive to strengthen CVD prevention and control in the primary health care, enhance the integrated approach and coordination among all health care levels in relation to these diseases and to involve all structures of the society to reduce the burden of cardiovascular diseases.

## References

1. WHO on Cardiovascular Diseases. <http://www.euro.who.int/en/health-topics/noncommunicable-diseases/cardiovascular-diseases>
2. WHO. Regional Committee for Europe. 62<sup>nd</sup> Session 2012
3. Министерство за здравство и Македонско здружение по Кардиологија. Медицина базирана на докази – Препораки и протоколи по кардиологија. [http://zdravstvo.gov.mk/kardiologija\\_update/](http://zdravstvo.gov.mk/kardiologija_update/)