

# Kardiovaskularne bolesti — veličina problema i mogućnosti prevencije

## *Cardiovascular diseases — magnitude of the problem and possibilities of prevention*

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### Globalna veličina problema

Kardiovaskularne bolesti (KVB) predstavljaju glavni uzrok smrti u gotovo svim zemljama svijeta. Prema podacima Svjetske zdravstvene organizacije, one su uzrok smrti 17,3 milijuna ljudi diljem svijeta, odnosno uzrokuju 30% sveukupne smrtnosti. Od toga je 7,3 milijuna smrti od ishemijskih bolesti srca (IBS), a 6,2 milijuna od cerebrovaskularnih bolesti. Udio prijevremenih smrti od KVB kreće se od 4% u visoko dohodovnim zemljama do 42% u nisko dohodovnim zemljama, što dovodi do rastuće nejednakosti u pojavnosti i ishodu od KVB među zemljama i populacijama. Procjenjuje se da će do 2030. godine umirati 23,6 milijuna ljudi zbog KVB.

Na razini Europe ova skupina bolesti odgovorna je za 4,3 milijuna smrti godišnje, odnosno 48% svih smrti (54% smrti u žena i 43% smrti u muškaraca), a u zemljama Europske Unije odgovorna je za 42% smrti. Nešto manje od polovine smrti od KVB uzrokovano je IBS, a oko trećine cerebrovaskularnim bolestima. KVB su i vodeći uzrok smrti u dobi do 65 godina na razini Europe (31% smrti u muškaraca i 29% smrti u žena do 65 godine), dok su u zemljama EU na drugom mjestu s udjelom od 24%, iza novotvorina s udjelom od 35%. U većini zemalja sjeverne, zapadne i južne Europe smrtnost od KVB smanjuje se zadnjih tridesetak godina, dok u zemljama i istočne Europe još uvijek raste ili stagnira, međutim stope bolničkog liječenja pokazuju trend porasta u većini europskih zemalja.

### Veličina problema u Hrvatskoj

U Hrvatskoj su KVB također vodeći uzrok smrti s udjelom od 48,7% u ukupnom mortalitetu 2011. godine. Uzrok su smrti 55,4% umrlih žena i 41,8% umrlih muškaraca. Pozitivan je pokazatelj što je ovo treća godina u kojoj je udio KVB u ukupnom mortalitetu ispod 50% (2009. godine udio je iznosio 49,6%, a 2010. 49,2%), a nakon dugogodišnjeg udjela ove skupine bolesti s više od 50% u ukupnoj smrtnosti.

U 2011. godini od KVB umrla je 24.841 osoba, od toga 14.319 žene i 10.522 muškaraca. U dobnoj skupini do 65 godina KVB su drugi uzrok smrtnosti s 2.731 umrlih i udjelom od 26,4% u mortalitetu te dobne skupine, a na prvom

### Global size of the problem

Cardiovascular diseases (CVD) are the leading cause of death in almost all countries of the world. According to the data of the World Health Organization, they are the cause of death of 17.3 million people worldwide, that cause 30% of all deaths. Out of these deaths, 7.3 million people die from ischemic heart disease (IHD), and 6.2 million people die from cerebrovascular diseases. The portion of premature deaths from CVD ranges from 4% in high-income countries to 42% in low-income countries, leading to growing inequalities in the incidence and outcome of CVD among the countries and populations. It is estimated that by 2030, some 23.6 persons will be dying from CVD.

At the European level, this group of diseases is responsible for 4.3 million deaths on an annual basis, or 48% of all deaths (54% of deaths in women and 43% of deaths in men), and in the European Union it is responsible for 42% of deaths. Somewhat less than a half of deaths from CVD are caused by IHD, and about a third of deaths is caused by cerebrovascular diseases. CVD are the leading cause of death at the age up to 65 at the European level (31% of deaths in men and 29% of deaths in women under 65), while in the EU countries, CVD takes the second place with a portion of 24%, followed by neoplasms with a portion of 35%. In most of northern, western and southern European countries, the mortality from CVD has decreased over the past thirty years, while in the countries of Eastern Europe it is still growing or stagnates, however, the rates of hospital treatment show a rising trend in most European countries.

### Magnitude of the problem in Croatia

In Croatia CVD also represents the leading cause of death, accounting for 48.7% of total mortality in 2011. This is the cause of death of 55.4% of dead women and 41.8% of dead men. There is a positive indicator that this is the third year that the portion of CVD in total mortality is under 50% (in 2009, the portion was 49.6% and in 2010 the portion was 49.2%) after many years when the portion of this group of diseases was over 50% in total mortality.

mjestu uzrok smrtnosti u toj dobi su maligne bolesti s 4.213 umrlih, odnosno s udjelom od 40,7%.

Vodeće dijagnostičke podskupine su IBS s udjelom od 21,3% (10.866 umrle osobe) i cerebrovaskularne bolesti s udjelom od 14,7% (7.508 umrlih osoba) u ukupnom mortalitetu, zatim slijede srčana insuficijencija s 1.844 umrlih osoba (3,6%) i hipertenzija s 1.494 umrlih (2,9%).

Posljednjih deset godina prisutan je pozitivan trend smanjenja smrtnosti od KVB Hrvatskoj, što je izraženije za cerebrovaskularne bolesti, nego za IBS i to posebice za dob do 64 godine.

Uspoređujući smrtnost od KVB u Hrvatskoj s drugim zemljama Europe, Hrvatska sa standardiziranom stopom smrtnosti od 386/100.000 u 2009. godini, pripada među zemlje u Europi koje imaju srednje visoke stope smrtnosti. Prosjek za zemlje Europske regije iznosi 415/100.000, za zemlje EU 235/100.000, a raspon stopa za zemlje EU je od 127-611/100.000. Zemlje Istočne Europe imaju uglavnom više stope smrtnosti od Hrvatske, Ruska Federacija ima skoro dvostruko višu stopu smrtnosti (782/100.000), a zemlje Zapadne i Južne (mediteranske) Europe imaju znatno niže stope smrtnosti od Hrvatske sa stalnim trendom smanjenja.

## Mogućnosti prevencije kardiovaskularnih bolesti

Prema studijama provedenim u različitim populacijama, čak 44-76% smanjenja smrtnosti od IBS pripisuje se prevenciji i promjeni rizičnog ponašanja, dok se 23-47% smanjenja smrtnosti pripisuje terapijskim intervencijama.

Suvremeni pristup prevenciji zalaže se za uravnoteženu kombinaciju populacijskog pristupa i pristupa visoko rizičnim skupinama za postizanje učinkovitog nadzora nad epidemijom KVB. Dakle, preventivne mjere mogu biti usmjerene pojedincu, odnosno liječenju čimbenika rizika u visoko rizičnim skupinama i cijeloj populaciji. Populacijski pristup uključuje mjenjanje načina života i čimbenika okoliša, društvenih i ekonomskih odrednica te mora biti sastavnim dijelom javne politike i uključivati druge sektore društva. Geoffrey Rose je devedesetih godina dao ključni argument da je populacijski pristup najisplativiji i ima najveći učinak na incidenciju, prevalenciju i mortalitet. Naime, on je dokazao da male promjene u cijeloj populaciji postižu veće smanjenje smrtnosti nego velike promjene u relativno malom broju osoba s visokim rizikom.

Prema Europskim smjernicama za prevenciju KVB iz 2012. godine moguće je spriječiti 80-90% KVB. Implementacijom preventivnih mjera na razini populacije, kao što je povećanje poreza i reguliranje oglašavanja duhana, alkohola, nezdrave hrane, moguće je izbjeći 50% smrti od KVB u Europi. Najisplativije intervencije na populacijskoj razini jesu: zaštita od duhanskog dima uključujući zabranu pušenja na javnim mjestima, upozorenja o opasnosti uporabe duhana, provedba zabrane oglašavanja i reklamiranja duhanskih proizvoda te sponzorstva duhanske industrije, povećanje poreza na duhanske proizvode, ograničavanje dostupnosti alkohola, provedba zabrane oglašavanja alkoholnih pića, povećanje poreza na alkohol, smanjenje unosa soli i količine soli u hrani, zamjena trans-masnih kiselina u hrani s višestruko nezasićenim kiselinama, podizanje svijesti o važnosti pravilne prehrane i provođenja tjelesne aktivnosti.

Posljednjih desetljeća na međunarodnoj razini jačaju aktivnosti usmjerene prevenciji KVB. Stoga je na razini Europe nastao velik broj strateških dokumenata, deklaracija, rezolu-

U 2011, some 24,841 persons died of CVD, of whom 14,319 women and 10,522 men. In the group of persons aged up to 65, CVD are the second cause of mortality with 2,731 deaths and a portion of 26.4% in mortality of this age group, while malignant diseases with 4,213 dead persons are the first cause of mortality in this age group, that is, with a portion of 40.7%.

The leading diagnostic subgroups are IHD with a portion of 21.3% (10,866 dead persons) and cerebrovascular disease with a portion of 14.7% (7,508 deaths) in total mortality, followed by heart failure with 1,844 deaths (3.6%) and hypertension with 1,494 of dead persons (2.9%).

In the last ten years there is a positive trend in reducing mortality from CVD in Croatia, which is more pronounced for cerebrovascular diseases, than for IHD, particularly for the persons aged up to 64.

Comparing mortality from CVD in Croatia with mortality in some other European countries, Croatia with a standardized mortality rate of 386/100.000 in 2009 is among the countries in Europe that record medium-high mortality rates. The average for countries in the European region is 415/100,000, the average for EU countries is 235/100,000, and rates for the EU countries ranges from 127 to 611/100,000. The Eastern European countries have generally higher mortality rates than Croatia, while the Russian Federation has almost twice as high mortality rate (782/100,000), while Western and Southern (Mediterranean) European countries have significantly lower mortality rates than Croatia that records a continuous downward trend.

## Possibilities of preventing cardiovascular diseases

According to the studies conducted in different populations, even 44-76% of reduction in mortality from IHD is attributed to the prevention and changes in risk behavior, while 23-47% of reduction in deaths is attributed to therapeutic interventions.

A modern approach to prevention advocates a balanced combination of population approach and approach to high-risk groups for achieving effective control of the CVD epidemic. Thus, preventive measures can be focused on an individual or the treatment of risk factors in high-risk groups and general population. The population approach involves changing lifestyle and environmental factors, social and economic policies, and must be an integral part of public policy and include any other sectors of the society. In the nineties, Geoffrey Rose gave the key rationale that the population approach is the most cost effective and has the greatest impact on the incidence, prevalence and mortality. He namely proved that small changes in the overall population result in greater reduction of mortality than major changes in a relatively small number of high-risk persons.

According to the 2012 European guidelines for CVD prevention, it is possible to prevent 80-90% of CVD. The implementation of preventive measures at the population level, such as an increase in taxes and regulation of advertising tobacco, alcohol, unhealthy foods may result in avoidance of 50% of deaths from CVD in Europe. Most cost-effective interventions at a population level include: protection from tobacco smoke, including a ban on smoking in public places, warning about the danger of tobacco use, enforcement of the ban on commercials and advertisement of tobacco products and tobacco industry sponsorship, increase in taxes

cija i smjernica kojima se potiču zemlje da na nacionalnoj razini pridu rješavanju problematike KVB. Jedna od najznačajnijih aktivnosti, bio je sastanak na najvišem nivou unutar Opće skupštine Ujedinjenih naroda (UN) o prevenciji i kontroli nezaraznih bolesti održan u New Yorku, 19. i 20. rujna 2011. godine. Na sastanku je prihvaćen dokument pod nazivom Politička deklaracija sastanka na visokom nivou Opće skupštine UN o prevenciji i kontroli nezaraznih bolesti koji predstavlja osnovu budućeg djelovanja na nacionalnom i međunarodnom nivou u borbi protiv kroničnih nezaraznih bolesti, uključujući i KVB. Dokument naglašava važnost učinkovitih populacijskih intervencija usmjerenih na sprječavanje čimbenika rizika, ali također i mjere liječenja u primarnoj zdravstvenoj zaštiti usmjerenih na one koji već imaju rizikne čimbenike ili kroničnu nezaraznu bolest.

Prevencija KVB zahtjeva strategiju koja zagovara sveobuhvatni i integrirani pristup te koja istodobno na populacijskoj razini promiče zdravlje i provodi preventivne programe, aktivno pristupa pojedincima i skupinama s visokim rizikom, osigurava maksimalni obuhvat populacije učinkovitim liječenjem te utječe na determinante zdravlja.

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on tobacco products, limitation of the availability of alcohol, enforcement of a ban on advertising alcoholic drinks, increase in tax on alcohol, reduction of salt intake and the amount of salt in food, replacement of trans-fatty acids in food with polyunsaturated fatty acids, raising awareness about the importance of proper nutrition and doing physical exercises.

Activities focused on the prevention of CVD have been strengthened internationally in the last few decades. Therefore, a large number of policy documents, declarations, resolutions and guidelines have been created in Europe that encourage the countries to start addressing the problem of CVD at a national level. One of the most important activities was the meeting at the highest level within the General Assembly of the United Nations (UN) on prevention and control of noncommunicable diseases that took place on 19 and 20 September 2011 in New York. At this meeting the members adopted the document entitled Political declaration at a high level meeting of the General Assembly of UN on prevention and control of noncommunicable diseases, which is the basis for future action at the national and international level in fighting against chronic noncommunicable diseases, including CVD. The document emphasizes the importance of effective population interventions aimed not only at the prevention of risk factors, but also the measures of treatment in primary healthcare aimed at those who already had risk factors or chronic noncommunicable disease.

CVD prevention requires a strategy that advocates a comprehensive and integrated approach that simultaneously promotes health at the population level and implements preventive health programs, actively approaches high-risk individuals and groups and includes the population in efficient treatment to a maximum degree and affects the health determinants at the population level.

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