Kronične nezarazne bolesti – teret bolesti stanovništva Hrvatske

Chronic Noncommunicable Diseases – Burden of Disease in the Population of Croatia

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SAŽETAK: Svijet je danas suočen s epidemijom kroničnih nezaraznih bolesti. One su glavni uzrok smrti u gotovo svim zemljama svijeta, a ugrožavaju život i zdravlje ljudi, ali i gospodarski razvoj. Obilježavaju ih zajednički čimbenici rizika, zajedničke determinante koje do njih dovode, kao i zajedničke mogućnosti prevencije. Posebno se ističu kardiovaskularne i zloćudne bolesti, dijabetes i kronične respiratorne bolesti povezane s četirima zajedničkim najvažnijim čimbenicima rizika – pušenjem, nepravilnom prehranom, tjelesnom neaktivnosti i štetnom konzumacijom alkohola. Međutim, potrebno je istaknuti i povezanost nezaraznih bolesti i zajedničkih čimbenika rizika s mentalnim poremećajima i ozljedama, koji zahtijevaju posebnu pozornost u sklopu kroničnih bolesti. Sve to zajedno znatno opterećuje zdravstveni sustav, uzrokuje visoke troškove i u konačnici utječe na socijalni i ekonomski razvoj države.

SUMMARY: Today, the world faces an epidemic of chronic noncommunicable diseases. They are the main cause of death in almost all countries of the world, endangering both the life and health of the people and economic development in general. They are characterized by shared risk factors, shared determinant causes, and shared prevention strategies. Particularly dangerous are cardiovascular and malignant diseases, diabetes, and chronic respiratory diseases associated with the four main shared risk factors – smoking, improper diet, lack of physical activity, and harmful alcohol consumption. However, it is important to also emphasize the association between noncommunicable diseases and shared risk factors with mental disorders and injuries, which requires special attention when discussing chronic diseases. All of this places a significant strain on the health care system, causes a large financial burden, and consequently influences the social and economic development of a country.

KLJUČNE RIJEČI: kronične nezarazne bolesti, teret bolesti, prevencija.

KEYWORDS: chronic noncommunicable diseases, disease burden, prevention.

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Situacija u svijetu

Posljednjih je desetljeća došlo do porasta kroničnih nezaraznih bolesti (KNB) u gotovo svim zemljama svijeta. Prema procjenama Svjetske zdravstvene organizacije (SZO), 68 % smrti, u svijetu u 2012. godini, uzrokovano je kroničnim bolestima. Od ukupno 56 milijuna umrlih, 38 milijuna umrlo je zbog kroničnih bolesti (17,5 milijuna od kardiovaskularnih bolesti (KVB), odnosno 46,2 %; 8,2 milijuna od zloćudnih bolesti – 21,7 %; 4 milijuna od respiratornih bolesti –10,7 %; 1,5 milijuna od dijabetesa – 4 %). Približno tri četvrtine smrti od KNB-a (28 milijuna)

The global situation

During recent decades, there has been an increase in the incidence of chronic noncommunicable diseases (NCDs) in almost every country in the world. According to World Health Organization (WHO) estimates, 68% of global deaths in 2012 were caused by chronic diseases. Out of the 56 million total deaths, 38 million died from chronic diseases (17.5 million from cardiovascular diseases (CVD) – 46.2%; 8.2 million from malignant diseases – 21.7%; 4 million from respiratory diseases – 10.7%; 1.5 from diabetes – 4%). Approximately

dogodi se u zemljama s niskim i srednje visokim dohotkom. Standardizirane stope smrtnosti od KNB-a najniže su u zemljama s visokim dohotkom – 397/100 000, a najviše u zemljama s niskim i srednje visokim dohotkom – 625 i 673/100 000. Oko 42 % smrti od KNB-a pojavljuje se u dobi prije 70. godine života te označuje prijevremenu smrtnost. Većina se prijevremenih smrti (82 %) pojavljuje u zemljama s niskim i srednje visokim dohotkom. S prisutnošću navedenih bolesti i njihovih čimbenika rizika povezani su siromaštvo, niže razine edukacije i druge socijalne determinante zdravlja. Dok se broj smrti od zaraznih bolesti smanjuje, procjenjuje se da će do 2030. godine broj umrlih od KNB-a narasti na 52 milijuna godišnje.[1,2]

Prema studiji globalnog opterećenja bolestima, mortalitet od KNB-a povećao se s 57 % u ukupnom mortalitetu 1990. godine na 65 % u 2010. godini.[3,4] Prema istoj studiji, 54 % DALYs (prilagođene godine života s dizabilitetom – u čiji izračun ulaze izgubljene godine života zbog prijevremenog umiranja i godine onesposobljenosti zbog bolesti) 2010. godine uzrokovano je KNB-om, dok je 1990. godine taj udio iznosio 43 %. Povećanje je uglavnom rezultat porasta DALYs od KVB-a (22,6 %), dijabetesa (69 %) i raka (27,3 %).[5]

U Europi, prema podatcima SZO-a, 86 % smrtnosti i 77 % opterećenja bolestima uzrokovano je kroničnim nezaraznim bolestima.[6] Prema procjenama SZO-a za 2012. godinu, u Europi su vodeći uzroci smrti bile ishemijska bolest srca, cerebrovaskularne bolesti, rak pluća, kronična opstruktivna bolest pluća te rak kolona i rektuma.[7]

three quarters of NCD-related deaths (28 million) happens in low or moderately-high income countries. Standardized mortality rates from NCDs are lowest in high-income countries – 397/100 000, and highest in low or moderately-high income countries – 625 and 673/100 000, respectively. Approximately 42% of deaths due to NCDs take place before 70 years of age and are considered to be premature deaths. Most premature deaths (82%) happen in in low or moderately-high income countries. The presence of these diseases and related risk factors is associated with poverty, lower levels of education, and other social determinants of health. While the number of deaths from infectious diseases is decreasing, it is estimated that deaths from NCDs will grow to 52 million annually by 2030.[1,2]

According to the study The Global Burden of Diseases 2010, NCDs mortality increased from 57% of total mortality in 1990 to 65% in 2010.[3,4] The same study showed that 54% of disability adjusted life years (DALYs – which calculates years of life lost due to premature deaths and years disabled due to disease) in 2010 were caused by NCDs, whereas that ratio was 43% in 1990. The increase is primarily due to an increase in DALYs due to CVD (22.6%), diabetes (69%), and cancer (27.3%).[5]

In Europe, according to WHO data, 86% of deaths and 77% of the disease burden is caused by chronic NCDs.[6] According to WHO estimates for 2012, the leading causes of death in Europe were ischemic heart disease, cerebrovascular disease, lung cancer, chronic obstructive pulmonary disease, and colon and rectal cancer.[7]

Table 1. 10 Leading Causes of YLL in European Region, 2012.

		WHO European Region	
Rank	**Cause**	**YLL (000s)**	**% YLL**
0	**All Causes**	**205.656**	**100.0**
1	Ischemic heart disease	41.809	20.3
2	Stroke	21.971	10.7
3	Trachea, bronchus, lung cancers	9.945	4.8
4	Cirrhosis of the liver	6.325	3.1
5	Self-harm	5.449	2.7
6	Lower respiratory infections	5.254	2.6
7	Colon and rectum cancers	5.237	2.6
8	Chronic obstructive pulmonary disease	4.556	2.2
9	Road injury	4.341	2.1
10	HIV/AIDS	4.240	2.1

YLL = Years of life lost.
Source: World Health Organization. Global Health Estimates.

Table 2. 10 Leading Causes of DALYs in European Region, 2012.

		WHO European Region	
Rank	**Cause**	**DALYs (000s)**	**% DALYs**
0	**All Causes**	**314.387**	**100.0**
1	Ischemic heart disease	44.088	14.0
2	Stroke	23.033	7.3
3	Unipolar depressive disorders	11.976	3.8
4	Back and neck pain	10.353	3.3
5	Trachea, bronchus, lung cancers	10.034	3.2
6	Alcohol use disorders	9.005	2.9
7	Chronic obstructive pulmonary disease	8.057	2.6
8	Falls	7.270	2.3
9	Diabetes mellitus	6.885	2.2
10	Road injury	6.793	2.2

DALY = Disability-Adjusted Life Year.
Source: World Health Organization. Global Health Estimates.

Pokazatelj prijevremenog umiranja jesu izgubljene godine života (YLL), a prvih pet uzroka u Europi su ishemijska bolesti srca, cerebrovaskularne bolesti, rak pluća, ciroza jetre i samoozljeđivanje (**tablica 1**).

Vodeći uzroci opterećenja bolestima izraženi pokazateljem DALYs bile su ishemijska bolest srca, cerebrovaskularne bolesti, unipolarna depresija, bol u leđima i vratu te rak pluća (**tablica 2**).[7] U Europi stope ukupne smrtnosti postupno rastu od zapada prema istoku, osobito pokazatelji prijevremene smrtnosti. Smrtnost od KVB-a u velikoj mjeri pridonosi zapadno-istočnom jazu u ukupnom mortalitetu i očekivanom trajanju života.[8] I u zemljama članicama Europske unije vodeći su javnozdravstveni problem kronične bolesti, uz znatne razlike u očekivanom trajanju života i stopama smrtnosti od najčešćih bolesti.[9]

Kontrola kroničnih nezaraznih bolesti u svijetu i nadzor nad njima

Zbog rastućeg opterećenja KNB te zbog njihova negativnog utjecaja na ekonomiju i razvoj, zadnjih petnaest godina postoji sve snažniji interes međunarodne zajednice za izradu i provođenje usklađenih aktivnosti za borbu protiv nezaraznih bolesti izražen različitim političkim i strateškim dokumentima. Posebno važan događaj i prekretnica u borbi s KNB-om bio je sastanak Opće skupštine Ujedinjenih naroda (UN) s visokim predstavnicima vlada zemalja članica u rujnu 2011. godine u New Yorku s temom globalnog zdravlja, što je bilo drugi put u povijesti UN-a. Čelnici zemalja sastali su se sa svrhom da se problematika sprječavanja i suzbijanja KNB-a podigne na najvišu političku razinu te da se dogovore daljnje aktivnosti na tom planu. Na sastanku je prihvaćen dokument pod nazivom Politička deklaracija sastanka na visokom nivou Opće skupštine UN-a o prevenciji i kontroli nezaraznih bolesti koji čini osnovu budućega djelovanja na nacionalnoj i međunarodnoj razini u borbi protiv KNB-a.[10,11]

Na globalnoj razini donesena je 2000. godine Globalna strategija za prevenciju i kontrolu nezaraznih bolesti koja pokriva praćenje, prevenciju i liječenje nezaraznih bolesti naglašavajući važnost multisektorskoga pristupa aktivnostima za smanjenje rizičnih čimbenika. Ostali važni dokumenti bili su Okvirna konvencija za nadzor i kontrolu duhana, donesena 2003. godine, Globalna Strategija za prehranu, tjelesnu aktivnost i zdravlje, donesena 2004. godine, Akcijski plan za globalnu strategiju za prevenciju i kontrolu nezaraznih bolesti iz 2008. te novi iz 2013. godine za razdoblje od 2013. do 2020. godine, koji uključuje devet globalnih ciljeva i 25 indikatora za praćenje nezaraznih bolesti i nadzor nad njima. Na europskoj razini 2006. godine prihvaćena je Strategija za prevenciju i kontrolu nezaraznih bolesti, a Akcijski plan za provođenje Strategije za razdoblje od 2012. do 2016. godine, prihvaćen je 2011. godine.[12]

Vezano za sve ove aktivnosti UN i SZO pozivaju zemlje da poduzmu snažnije aktivnosti te da smanje smrtnost od KNB-a za 25 % do 2025. u populaciji dobne skupine između 30 i 70 godina, s obzirom na smrtnost 2010. godine, usvajajući slogan „25 do 25".[13]

Kronične nezarazne bolesti u Hrvatskoj

Hrvatska je prošla „demografsku tranziciju" i ubraja se među zemlje sa „starim stanovništvom" s visokim udjelom stanovništva starijeg od 65 godina, a na to su utjecali dugogodišnje smanjivanje broja rođenih, porast smrtnosti mlađih dobnih skupina

Years of life lost (YLL) is an indicator of premature death, and the top five causes in Europe are ischemic heart disease, cerebrovascular disease, lung cancer, cirrhosis, and self-harm (**Table 1**).

The leading causes of disease burden expressed in DALYs were ischemic heart disease, unipolar depression, back and neck pain, and lung cancer (**Table 2**).[7] In Europe, total mortality rates gradually increase towards the east, premature death indicators in particular. CVD mortality greatly contributes to the difference between Eastern and Western Europe in total mortality and life expectancy.[8] Chronic diseases are the main public health issue in European Union member countries as well, with a significant difference in life expectancy and mortality rates compared with the most common diseases.[9]

Prevention and control of chronic noncommunicable diseases globally

Due to the growing disease burden from NCDs and their negative influence on economic development, there has been growing interest in the international community during the last fifteen years for setting up and implementing coordinated initiatives to combat NCDs, which resulted in different political and strategic documents. An especially important turning point in the fight with NCDs was the meeting of the General Assembly of the United Nations (UN) with representatives of member states in September 2011 in New York to discuss global health, for the second time in the history of the UN. Heads of state met to bring the issue of preventing and combating NCD to the highest political level and agree on further activities towards that goal. The meeting resulted in the adoption of the Political Declaration of the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases, which is the basis for further action at the national and international levels in combating NCDs.[10,11]

At the global level, the Global Strategy for the Prevention and Control of Noncommunicable Diseases was adopted in the year 2000, which covers monitoring, prevention, and treatment of NCDs, stressing the importance of a multi-sector approach to initiatives aimed at reducing risk factors. Other important documents included the Framework Convention on Tobacco Control in 2003, the Global Strategy on Diet, Physical Activity and Health in 2004, the Action Plan for the Global Strategy for the Prevention and Control of Noncommunicable Diseases in 2008, and the new action plan in 2013 for the period between 2013 and 2020, which includes nine global goals and 25 indicators for monitoring and managing NCDs. At the European level, the Strategy for the Prevention and Control of Noncommunicable Diseases was adopted in 2006, and the Action plan for implementation of the European Strategy for the Prevention and Control of Noncommunicable Diseases 2012–2016 was adopted in 2011.[12]

As a consequence of all these initiatives, the UN and WHO have called for countries to take more forceful action and reduce NCD mortality by 25% by 2025 in the age group between 30 and 70 in comparison with 2010, taking up the slogan 25 x 25.[13]

Chronic noncommunicable diseases in Croatia

Croatia has undergone "demographic transition" and is counted among countries with an "aging population", with a high per-

tijekom rata, negativna migracijska kretanja te smanjenje smrtnosti, odnosno dulje očekivano trajanje života. Očekivano se trajanje života od samostalnosti Republike Hrvatske povećalo sa 71,0 godine ukupno (66,1 za muškarce, 76,2 godine za žene) u 1991. godini na 77,2 godine ukupno (za muškarce 74,2, a za žene na 80,2 godine) u 2013. godini.[14] Teret bolesti koje nosi stanovništvo Hrvatske upućuje na to da je prošla i „epidemiološku tranziciju", odnosno da u opterećenju stanovništva prevladavaju KNB, a ne više zarazne bolesti.[15] Prema pokazateljima smrtnosti i pobola, u Hrvatskoj prevladavaju kronične nezarazne bolesti, na prvome mjestu kardiovaskularne, zatim maligne bolesti, dijabetes, mentalni poremećaji, kronične respiratorne bolesti te ozljede i njihove posljedice (**slika 1**). Procjenjuje se da je čak do 93 % smrtnosti u Hrvatskoj uzrovano nezaraznim bolestima.[16]

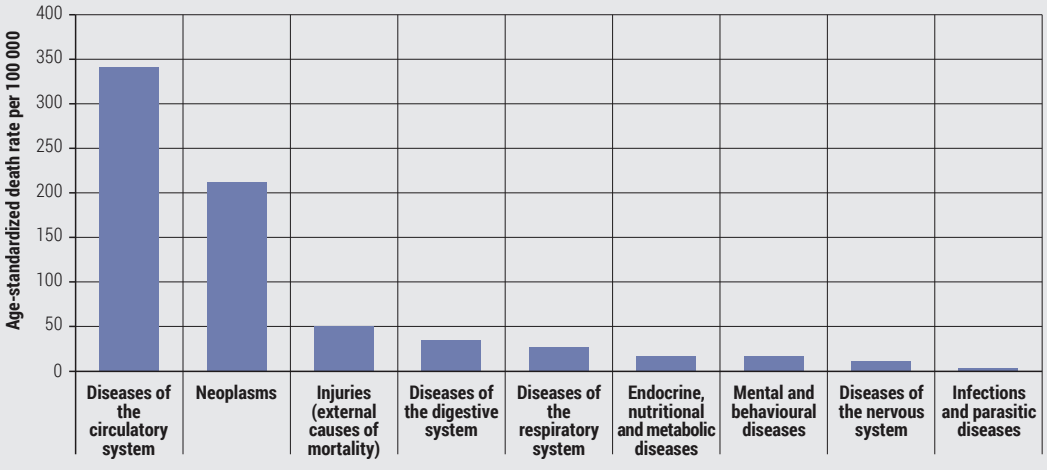
Vodeći uzrok opterećenja bolestima u Hrvatskoj 2012. godine, prema procjenama SZO-a, jesu KVB s udjelom od 26 % svih DALYs. Na drugom su mjestu su maligne bolesti s udjelom od 20,4 %, a slijede mentalni poremećaji (11,7 %) te nenamjerne ozljede (7,3 %) i bolesti mišićno-koštanog sustava (6,7 % DALYs). Prema pojedinim dijagnostičkim entitetima (**tablica 3**), na prvom je mjestu ishemijska bolest srca, zatim cerebrovaskularne bolesti, a slijede unipolarni depresivni poremećaj, rak pluća i dijabetes. Iz skupine nenamjernih ozljeda najčešći su padovi i prometne nesreće, a od bolesti mišićno-koštanog sustava najčešći su bolovi u leđima i vratu kao uzrok opterećenja bolestima.[7]

Prema procjenama DALYs za Hrvatsku, unipolarni depresivni poremećaji zauzimaju 3. mjesto među svim promatranim entitetima. Bilježi se uzlazni trend depresivnih poremećaja u bolničkom pobolu uz znatni porast stopa hospitalizacija. Stope hospitalizacija u svim dobnim skupinama više su u žena, u kojih su posljednjih godina depresivni poremećaji vodeći uzrok hospitalizacija zbog mentalnih poremećaja. Mentalni poremećaji uzrokovani alkoholom, shizofrenija, depresivni poremećaji i reakcije na teški stres, uključujući posttraumatski stresni poremećaj, kao pojedinačne dijagnostičke kategorije, čine gotovo dvije trećine svih uzroka bolničkog pobola zbog mentalnih poremećaja.[15]

centage of the population being older than 65. This was caused by many years of falling birthrates, an increase in mortality of the younger age groups during the war, negative migration, and reduced mortality, i.e. longer life expectancy. The life expectancy since the Republic of Croatia became independent increased from 71.0 years (66.1 for men, 76.2 for women) in 1991 to 77.2 (74.2 for men, 80.2 for women) in 2013.[14] The disease burden in the Croatian population indicates it has also undergone "epidemiological transition", with NCDs becoming predominant, instead of infectious diseases.[15] According to mortality and morbidity indicators, chronic NCDs predominate in Croatia, primarily cardiovascular diseases, followed by malignant diseases, diabetes, mental disorders, chronic respiratory diseases, and injuries and their consequences (**Figure 1**). As much as 93% of the mortality in Croatia is estimated to be caused by NCDs.[16]

CVD are the leading cause of the disease burden in Croatia in 2012, according to WHO estimates, accounting for 26% of all DALYs. The second place is taken by malignant diseases with 20.4%, followed by mental disorders (11.7%), non-intentional injuries (7.3%), and disease of the skeletomuscular system (6.7%). Regarding individual disease entities (**Table 3**), ischemic heart disease is the most common, followed by cerebrovascular diseases, unipolar depressive disorder, lung cancer, and diabetes. In the group of non-intentional injuries, most common are falls and traffic accidents, and in the skeletomuscular system diseases group most common as a cause of disease burden are back and neck pain.[7]

According to DALYs estimates for Croatia, unipolar depressive disorders are the third most common among all observed entities. An upward trend has been noted in depressive disorders in hospital morbidity, with a significant increase in hospitalization rates. Hospitalization rates in all age groups are higher in women, in which depressive disorders have been the leading cause of hospitalizations for mental disorders over the past several years. Mental disorders caused by alcohol, schizophrenia, depressive disorders, and severe stress reactions including post-traumatic stress disorder, as



Source: WHO, European Detailed Mortality Database (DMDB), November 2014.

FIGURE 1. Mortality by diseases group in Croatia, 2012, age-standardized death rate per 100 000.

Table 3. 10 Leading Causes of DALYs in Croatia, 2012.

		Croatia	
Rank	**Cause**	**DALYs (000s)**	**% DALYs**
0	**All Causes**	**1563.9**	**100.0**
1	Ischemic heart disease	204.2	13.1
2	Stroke	117.0	7.5
3	Unipolar depressive disorders	78.9	5.0
4	Trachea, bronchus, lung cancers	71.0	4.5
5	Diabetes mellitus	50.5	3.2
6	Falls	50.4	3.2
7	Back and neck pain	49.3	3.2
8	Chronic obstructive pulmonary disease	48.1	3.1
9	Colon and rectum cancers	44.9	2.9
10	Road injury	37.2	2.4

DALY = Disability-Adjusted Life Year.
Source: World Health Organization. Global Health Estimates.

Table 4. 10 Leading Causes of YLL in Croatia, 2012.

		Croatia	
Rank	**Cause**	**YLL (000s)**	**% YLL**
0	**All Causes**	**984.6**	**100**
1	Ischemic heart disease	193.3	19.6
2	Stroke	112.8	11.5
3	Trachea, bronchus, lung cancers	70.4	7.2
4	Colon and rectum cancers	43.6	4.4
5	Cirrhosis of the liver	34.6	3.5
6	Chronic obstructive pulmonary disease	26.6	2.7
7	Hypertensive heart disease	25.5	2.6
8	Self-harm	25.2	2.6
9	Diabetes mellitus	23.6	2.4
10	Road injury	20.8	2.1

YLL = Years of life lost.
Source: World Health Organization. Global Health Estimates.

Prema izgubljenim godinama života (YLL), pokazatelju prijevremenog umiranja, prvih pet uzroka jesu ishemijska bolest srca, cerebrovaskularne bolesti, rak pluća, rak kolona i rektuma te ciroza jetre. Po izgubljenim godinama života visoko su zastupljeni samozljeđivanje i prometne nesreće iz skupine ozljeda[7] (**tablica 4**).

Vodeći uzroci smrtnosti u Hrvatskoj

U usporedbi s drugim europskim zemljama, Hrvatska pripada skupini zemalja sa srednje visokim stopama smrtnosti.[8]

Vodeći uzrok smrtnosti u Hrvatskoj jesu KVB s udjelom od 47,4 % u ukupnom mortalitetu 2014. godine, slijede maligne bolesti s udjelom od 27,9 %, ozljede (5,4 %), bolesti dišnog sustava (4,4 %) i bolesti probavnog sustava (4,2 %). Dijabetes kao zasebni entitet sudjeluje u ukupnom mortalitetu s udjelom od 2,6 % (**slika 2** i **tablica 5**). U 2014. godini od KVB-a je umrlo 24 112 osoba, a od toga 13 800 žena i 10 312 muškaraca. Vodeće su dijagnostičke podskupine ishemijska bolest srca s udjelom od 21,3 % i cerebrovaskularne bolesti s udjelom od 14,4 % u ukupnom mortalitetu.[17]

Maligne su bolesti drugi uzrok smrtnosti s 14 206 umrlih osoba 2014. godine, od toga su 6143 žene i 8063 muškarca. Prema podatcima Registra za rak RH, 2013. godine bilo je 20 905 novooboljelih od raka. Incidencija raka u žena bila je 440,3/100 000, odnosno 9786 novooboljelih žena, a u muškaraca 538,9/100 000, odnosno 11 136 novooboljelih muškarca.[18]

individual diagnostic categories, comprise almost two thirds of all hospital morbidity caused by mental disorders.[15]

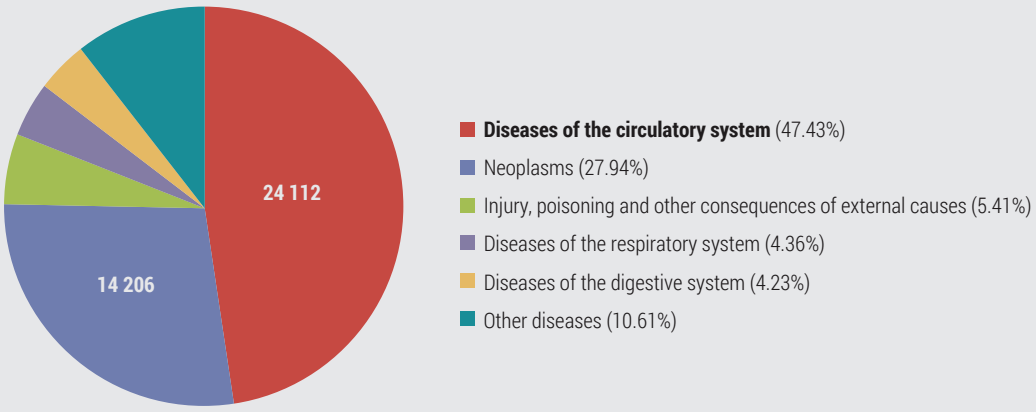
According to years of life lost (YLL), an indicator of premature mortality, the five top causes are ischemic heart disease, cerebrovascular disease, lung cancer, colon and rectal cancer, and cirrhosis of liver. Self-harm and traffic accidents are very common in the injury group[7] (**Table 4**).

Leading causes of death in Croatia

In comparison with other European countries, Croatia is in the group of countries with moderately high mortality rates.[8]

The leading cause of death in Croatia is CVD at 47.4% of total mortality in 2014, followed by malignant diseases at 27.9%, injuries (5.4%), respiratory system diseases (4.4%), and digestive tract diseases (4.2%). As an individual entity, diabetes is responsible for 2.6% of the total mortality (**Figure 2** and **Table 5**). In 2014, 24 112 persons died from CVD, of which 13 800 women and 10 312 men. Leading diagnostic subgroups are ischemic heart disease at 21.3% and cerebrovascular diseases with 14.4% of total mortality.[17]

Malignant diseases are the second most common cause of death, with 14 206 deaths in 2014, of which 6143 women and 8063 men. According to data from the Croatian National Cancer Registry, 20 905 persons were newly diagnosed with cancer in 2013. Cancer incidence in women was 440.3/100 000, which translates to 9786 newly diagnosed women, and 538.9/100 000



Source: Croatian Central Bureau of Statistics, Croatian National Institute of Public Health.

FIGURE 2. Leading causes of death by diseases group in Croatia, 2014.

Table 5. Rank of the 10 leading causes of death in Croatia, 2014.

Rank	ICD Code	Diagnosis	No.	%
1	I20-I25	Ischemic heart diseases	10.831	21.3
2	I60-I69	Cerebrovascular diseases	7.300	14.4
3	C33-C34	Malignant neoplasms of trachea, bronchus and lung	2.827	5.6
4	C18-C21	Malignant neoplasms of colon, rectum and anus	2.094	4.1
5	J40-J47	Chronic lower respiratory diseases	1.721	3.4
6	I10-I15	Hypertensive diseases	1.589	3.1
7	E10-E14	Diabetes mellitus	1.333	2.6
8	I50	Heart failure	1.311	2.6
9	C50	Malignant neoplasm of breast	1.086	2.1
10	K70, K73-K74	Chronic liver diseases, fibrosis and cirrhosis	1.020	2.0
	First 10 causes		**31.112**	**61.2**
	Total		**50.839**	**100.0**

Source: Croatian Central Bureau of Statistics, Croatian National Institute of Public Health.

U usporedbi s ostalim europskim zemljama, Hrvatska je zemlja srednje visoke incidencije i visokog mortaliteta od raka.

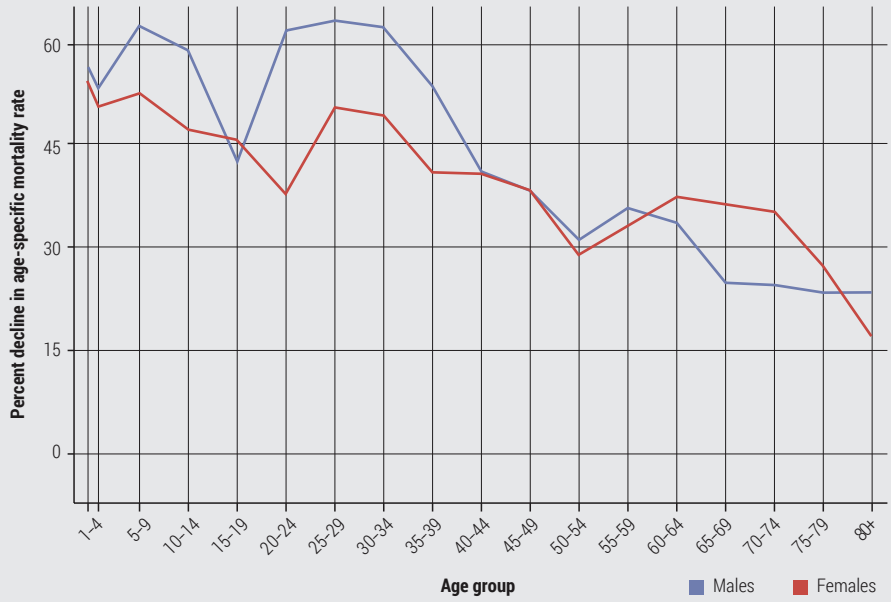
Ozljede su treći uzrok smrtnosti s 2750 umrlih osoba, 1134 žene i 1616 muškaraca. Vodeći vanjski uzroci smrti od ozljeda jesu padovi (35 %), samoubojstva (26 %) i prometne nesreće (15 %).[17]

Analiza kretanja dobno specifičnih stopa smrtnosti od svih uzroka ukupno za Hrvatsku, u razdoblju od 1990. do 2010. godine, pokazuje da je došlo do smanjenja ukupne smrtnosti u svim dobnim skupinama i u obama spolovima, a najveći pad

in men, i.e. 11 136 newly diagnosed male patients.[18] In comparison with other European countries Croatia has a moderately high incidence and high mortality from cancer.

Injuries are the third most common cause of death, with 2750 deaths, of which 1134 women and 1616 men. Leading external causes of the injuries are falls (35%), suicide (26%), and traffic accidents (15%).[17]

Trend analysis in age-specific mortality from all causes in Croatia for the period from 1990 to 2010 shows that there has



Adapted: Institute for Health Metrics and Evaluation. The Global Burden of Disease Study. GBD Profile: Croatia.

FIGURE 3. Percent decline in age specific mortality rate by sex from 1990-2010 in Croatia.

smrtnosti zabilježen je u muškaraca dobne skupine 25 – 29 godina, za čak 63 %. U žena dobne skupine 80+ zabilježen je najmanji pad stope smrtnosti od 17 % (**slika 3**).[19]

Kretanje standardiziranih stopa smrtnosti za najčešće dijagnostičke skupine u razdoblju od 2000. do 2012. godine pokazuje da je došlo do znatnog smanjenja smrtnosti od KVB-a u tom razdoblju i u žena i u muškaraca (od 680 na 461/100 000 u muškaraca) te nešto manje od ozljeda. Za maligne, kronične respiratorne bolesti i dijabetes trend je smrtnosti u promatranom razdoblju uglavnom stabilan (**slika 4**).[20] Stoga se može zaključiti da je do smanjenja cjelokupne smrtnosti došlo najvećim dijelom zahvaljujući smanjenju smrtnosti od kardiovaskularnih bolesti.

Kronične nezarazne bolesti – prioritet hrvatskoga javnozdravstvenog sustava

Prema procjenama SZO-a, oko 50 % opterećenja bolestima u Hrvatskoj mjereno s DALYs uzrokuju tri vodeća čimbenika rizika. To su nepravilna prehrana, povišeni arterijski tlak i pušenje, a zatim slijede povišeni indeks tjelesne mase, štetna konzumacija alkohola i nedovoljna tjelesna aktivnost.[19-21]

S obzirom na sve navedeno, jasno je da su KNB-i prioritet hrvatskoga javnozdravstvenog sustava te je donesen niz političkih i strateških dokumenata u svrhu prevencije tih bolesti.[22] Najznačajniji dokumenti jesu:

- Strateški plan razvoja javnog zdravstva 2012 – 2015.
- Nacionalna strategija za sprječavanje štetne uporabe alkohola i alkoholom uzrokovanih poremećaja, za razdoblje od 2011. do 2016. godine
- Akcijski plan za prevenciju i smanjenje prekomjerne tjelesne težine donesen je za razdoblje od 2010. do 2012.
- Nacionalna strategija zaštite mentalnog zdravlja od 2011. do 2016. godine

been an reduction in total mortality in all age groups and in both genders, with the greatest reduction in mortality taking place in the men in the age group of 25-29 years of age, at 63%. The lowest reduction in mortality was found in women of 80+ years of age, at only 17% (**Figure 3**).[19]

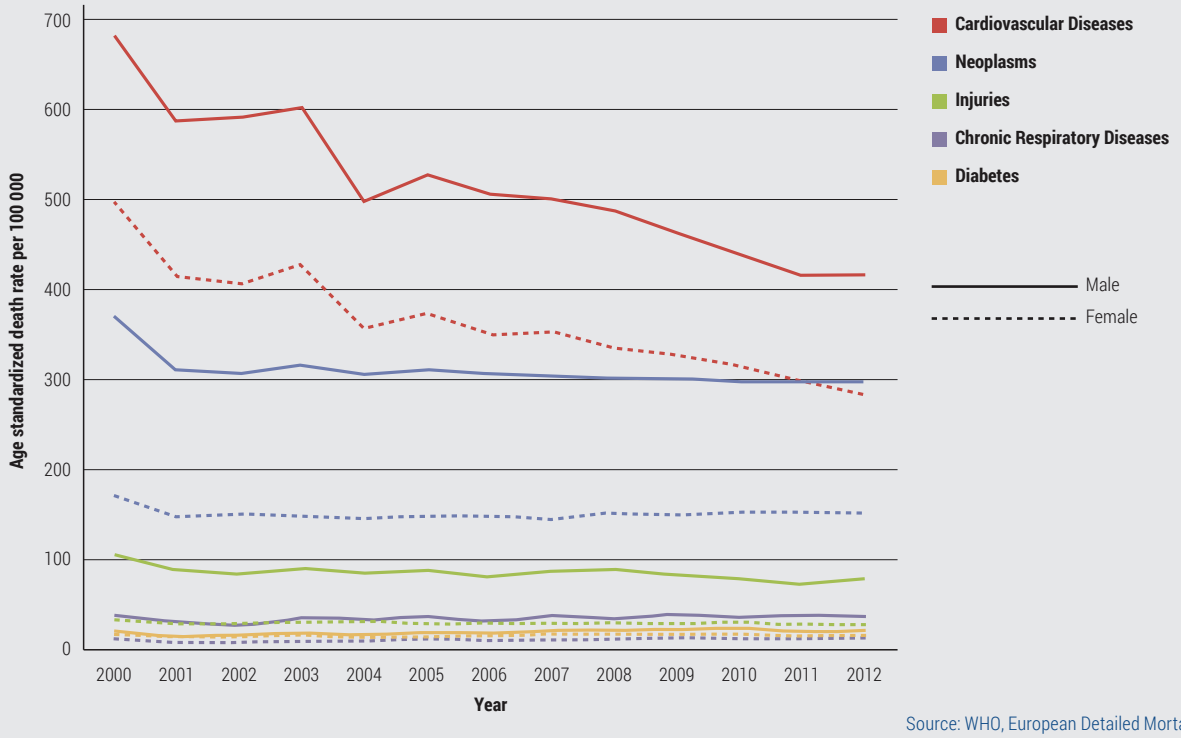
Trends in standardized mortality rates for the most common diagnostic groups for the period from 2000 to 2012 show that there has been a significant reduction in CVD mortality in that period in both women and men (from 680 to 461/100 000 in men) and a somewhat lower reduction in mortality from injuries. For malignant and chronic respiratory diseases as well as diabetes, the mortality trends have been mostly stable in the observed period (**Figure 4**).[20] We can thus conclude that the reduction in total mortality is primarily due to a reduction in mortality from cardiovascular diseases.

Chronic noncommunicable diseases – a priority for the Croatian public health system

According to WHO estimates, about 50% of DALYs is caused by three main risk factors: improper diet, elevated blood pressure, and smoking, which are then followed by increased body mass index, harmful alcohol consumption, and inadequate physical activity.[19-21]

Based on the above, it became obvious that NCDs are a priority for the Croatian public health system, so a number of political and strategic documents were introduced for the prevention of these diseases.[22] The most significant documents are:

- Strategic Plan of Public Health Development 2012-2015
- National Strategy for Preventing Harmful Use of Alcohol and Alcohol Related Disorders 2011-2016
- Action Plan for Overweight Prevention 2010-2012
- National Strategy for Mental Health Care 2011-2016



Source: WHO, European Detailed Mortality Database (DMDB), November 2014.

FIGURE 4. Mortality by diseases group in Croatia from 2000-2012, age standardized death rate per 100 000.

- Zakon o ograničavanju uporabe duhanskih proizvoda
- Zakon o ratifikaciji Okvirne konvencije o kontroli duhana Svjetske zdravstvene organizacije
- Akcijski plan za jačanje nadzora nad duhanom za razdoblje od 2013 – 2016. godine
- Strateški plan za smanjenje prekomjernog unosa kuhinjske soli u Republici Hrvatskoj 2015 – 2019.

Također su doneseni i provode se nacionalni programi specifično usmjereni na primarnu i sekundarnu prevenciju:

- Preventivni pregledi osiguranih osoba starijih od 50 godina od 2004. godine
- Nacionalni program intervencije kardiologije od 2005. godine
- Nacionalni program ranog otkrivanja raka dojke od 2006. godine
- Nacionalni program ranog otkrivanja kolorektalnog raka od 2007. godine
- Nacionalni program ranog otkrivanja raka vrata maternice od 2012. godine
- Nacionalni program za dijabetes od 2007. godine
- u srpnju 2015. godine donesen je Nacionalni program „Živjeti zdravo" koji se sastoji od komponenti zdravstvenog obrazovanja, zdravstvenog turizma, zdravlja i prehrane, zdravlja i radnog mjesta, zdravlja i okoliša
- u proceduri je donošenja Akcijski plan za prevenciju i kontrolu kroničnih nezaraznih bolesti 2015. – 2020.

- Act on the Restriction of the Use of Tobacco Products
- The Adoption of the World Health Organization Framework Convention on Tobacco Control Act
- Croatian Tobacco Control Action Plan (2013-2016)
- Strategic Plan for the Reduction of Excessive salt Intake in Croatia 2015-2019.

A number of national programs specifically targeted at primary and secondary prevention have been introduced as well:

- Preventive checkups for insured persons over 50 years of age since 2004
- National Program for Interventional Cardiology (2005)
- National Program for the Early Detection of Breast Cancer (2006)
- National Program for the Early Detection of Colorectal Cancer (2007)
- National Program for the Early Detection of Cervical Cancer (2012)
- National Diabetes Prevention Program (2007)
- The "Healthy Living" national program was introduced in July 2015 consisting of several components: health education, health tourism, health and diet, workplace health, and health and the environment
- In preparation: Action Plan for the Prevention and Control of Chronic Noncommunicable Diseases 2015-2020.

Zaključak

Poznato je da se kronične nezarazne bolesti u velikoj mjeri mogu spriječiti, da imaju zajedničke čimbenike rizika i determinante koje do njih dovode te da postoje učinkovite, ekonomski isplative, na dokazima utemeljene intervencije za prevenciju kroničnih nezaraznih bolesti i nadzor nad njima, a kojima je moguće izbjeći prijevremenu smrtnost i dizabilitet, smanjiti opterećenje bolestima i unaprijediti kvalitetu života. Posebno važan napredak može se postići ako se poduzmu potrebne mjere na nacionalnoj razini na trima osnovnim područjima: praćenje i nadzor, prevencija te liječenje.

Možemo reći da je Hrvatska u odgovoru na epidemiološku situaciju s KNB-om donijela i provodi niz zakonskih i strateških dokumenata. Međutim, uvijek je izazov provesti odgovarajuće politike i mjere u učinkovite intervencije u praksi, za čiju su implementaciju potrebna čvrsta politička volja, odgovarajući kapaciteti i financijska potpora.

Conclusion

It is known that chronic NCDs are largely preventable, that they share risk factors and determinant causes, and that effective, economical, and evidence-based interventions exist that can prevent and manage chronic NCDs in order to avoid early mortality and invalidity, reduce the disease burden, and improve quality of life. Important progress can be achieved if the necessary measures are introduced at the national level in three basic areas: monitoring and management, prevention, and treatment.

Croatia has responded to the epidemiologic situation regarding NCDs with the introduction of a number of strategic and legal documents and measures. However, it is always a challenge to translate policies and measures into effective interventions in practice, which requires a firm political will, adequate institutional capacities, and financial support.

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