

Razvoj kardiološkog sestrinstva i pozicioniranje u zdravstvenom sustavu u skladu sa zahtjevima moderne prakse

The Development of Cardiac Nursing and Its Positioning in The Healthcare System Based on the Requirements of Modern Medical Practice

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SAŽETAK: Svrha je ovog rada bila prikazati ključne segmente i kretanja razvoja edukacije i pozicije kardioloških medicinskih sestara u svjetskoj i hrvatskoj kardiološkoj praksi. Medicinske sestre kao najbrojniji zdravstveni profesionalci moraju biti prepoznate kao ključni čimbenik u oblikovanju socijalne i zdravstvene politike u svojim zemljama jer mogu dati velik prinos u smanjenju tereta kardiovaskularnih bolesti. Primjeri i rezultati moderne svjetske prakse dobar su putokaz kako pozicionirati kardiološko sestrinstvo u hrvatski zdravstveni sustav.

SUMMARY: The aim of this article was to describe the key segments and new trends in the development of education and the position of cardiac nurses in global and Croatian cardiac practice. Nurses are the most numerous healthcare professionals and must be recognized as a key factor in shaping the social and healthcare policies in their countries, as they can provide a great contribution to reducing the burden of cardiovascular diseases. Recent examples and results in modern global medical practice are a good indication of how to position cardiac nursing within the Croatian healthcare system.

KLJUČNE RIJEČI: uloga i pozicija kardiovaskularnih medicinskih sestara, kardiovaskularna praksa, Hrvatska.

KEYWORDS: the role and position of cardiac nurses, cardiovascular practice, Croatia.

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Uvod

Kardiovaskularne su bolesti vodeći uzrok smrtnosti u razvijenim zemljama te u zemljama u razvoju, pa tako i u Hrvatskoj. Razvoj biomedicinskih i tehnoloških znanosti u posljednjim dvama desetljećima znatno je utjecao na smanjenje smrtnosti i poboljšanje kvalitete življenja ljudi. Dijagnostičke i terapijske procedure te potrebe bolesnika postale su složenije i zahtjevnije, a u skladu s time i zdravstvena je njega postala kompleksnija. Medicinske sestre morale su steći višu razinu znanja, vještina, sposobnosti i stajališta kako bi osigurale učinkovitu i kvalitetnu skrb te štatile sigurnost bolesnika za koju su još potkraj prošlog stoljeća preuzele odgovornost. Ako pratimo demografska i epidemiološka kretanja iz perspektive budućnosti kardiovaskularnih bolesti, izgledno je da nas i u budućnosti očekuje višedimenzionalan problem. Starenje populacije na globalnoj razini pa tako i u Hrvatskoj povećava udio kardiovaskularnih bolesti, tehnološki razvoj i dalje će mijenjati pristup u kliničkoj

Introduction

Cardiovascular diseases represent the leading cause of death in both developed and developing countries, and thus in Croatia as well. Advancements in biomedical and technological sciences in the last two decades have significantly influenced the reduction of mortality and improvements in quality of life in the general population. Diagnostic and treatment procedures, as well as the needs of patients, have become more complex and demanding, with a consequent increase of complexity in healthcare. Nurses have had to achieve higher levels of knowledge, skills, and competencies to ensure effective and high-quality care and protect the safety of patients, for which they have been responsible since the close of the last century. If we look at demographic and epidemiologic trends from the perspective of the future of cardiovascular diseases, it is likely that we will be faced with a multi-dimensional problem in the future. Aging of the population both at the global level and in Croatia increases the

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praksi, što će dovesti i do povećanih zahtjeva u radu medicinskih sestara. Edukacija kardioloških medicinskih sestara u razvijenim zemljama pratila je trendove razvoja moderne kardiološke prakse, a njihovo pozicioniranje u zdravstvenom sustavu u skladu sa stečenim kompetencijama dovelo je do općeg poboljšanja skrbi. Hrvatsko kardiološko sestринство također neprestano traga za novim spoznajama i za izgradnjom profesionalne izvrsnosti sa svrhom poboljšanja skrbi za hrvatske bolesnike.

Edukacija kardioloških medicinskih sestara i pozicioniranje u zdravstvenom sustavu u europskim zemljama

Kardiovaskularne bolesti vodeći su uzrok smrtnosti u svijetu i čine znatno globalno zdravstveno opterećenje. Najveći zdravstveni izazov s kojim se danas suočavamo jest rastuće starenje stanovništva uz porast epidemije stanja povezanih sa životnim stilom poput pretilosti i dijabetesa¹. Potrajat će veća potražnja za naprednim tehnologijama, poput skeniranja i dijagnostičkih usluga, jer se trenutačni tempo tehnoloških inovacija ubrzano nastavlja². Takva transformacija može ugroziti održivost pružanja zdravstvenih usluga u nekim zemljama³. Prema različitim izvještajima Svjetske kardiološke federacije i Europskoga kardiološkog društva zahtjevi i izazovi današnje kardiološke prakse isti su ili slični u gotovo svim zemljama, iako polaze s različitih polazišta i različitih konteksta pružanja skrbi. Vijeće kardiovaskularnih medicinskih sestara i srodnih profesionalaca Europskoga kardiološkog društva (*Council on Cardiovascular Nursing and Allied Professions of the ESC, CCNAP*) provelo je analizu stanja u zemljama ujedinjene Europe u kontekstu skrbi koju pružaju medicinske sestre. Analize su pokazale da je različit kontekst vidljiv osobito što se tiče edukacije i formalnog pozicioniranja medicinskih sestara. Različitost se očituje u obrazovnoj pripremi medicinskih sestara i opsegu njihove uloge i u njima povezanih odgovornosti². Polazeći od spoznaje da su kardiovaskularne bolesti vodeći uzrok smrtnosti i da nas taj teret očekuje u budućnosti analize koje su provedene dale su i smjernice kako se bolje uhvatiti ukoštac s navedenim problemom. Dobri su rezultati postignuti u primarnoj i sekundarnoj prevenciji. Dobrom suradnjom članova multidisciplinarnih timova i usmjerivanjem pozornosti na rad i pružanje podrške zdravoj i rizičnoj populaciji u vođenju zdravog stila življenja postignuti su značajni rezultati u primarnoj prevenciji. Gdje god je to moguće, naglasak mora biti na proaktivnom izbjegavanju lošega zdravlja preko prevencije, a ne da usredotočenost bude na liječenju nakon što se zdravstveno stanje već razvilo³. Usredotočenost je na „njezi“, a ne na „liječenju“, i to je bitan pomak paradigme². Medicinske sestre kao najbrojniji zdravstveni djelatnici dale su velik obol u provedbi ovakve transformacije u nekim razvijenim zemljama.

Edukacija kardioloških medicinskih sestara u razvijenim zemljama pratila je kretanja razvoja moderne kardiološke prakse. Programi i načini provedbe specijalističkih programa za edukaciju i certifikaciju medicinskih sestara definirani su u suradnji zdravstvenog sustava i stručnih društava, a u skladu sa zahtjevnošću kliničke prakse. Na taj način sestre, uz spoj znanja, vještina, stajališta i vrijednosti koje su stekle svojom izobrazbom, razvijaju i dodatne kliničke kompetencije. Svjetska je zdravstvena organizacija kompetencije identi-

prevalence of cardiovascular diseases, while technological developments will continue to alter approaches in clinical practice, leading to increasingly demanding responsibilities in nursing work. Education of cardiac nurses in developed countries has followed the development trends of modern cardiologic practice, while the positioning of cardiac nurses in the healthcare system that is appropriate to competencies they have acquired has led to a general improvement in care. Cardiac nursing in Croatia is also always searching for new insights and development of professional excellence with the goal of improving care for Croatian patients.

Education of cardiac nurses and their position in the healthcare system in European countries

Cardiovascular diseases are the leading cause of mortality in the world and represent a significant global health burden. The healthcare challenges we are faced with today are the increasing aging of the population along with the epidemic of conditions associated with lifestyle habits such as obesity and diabetes¹. There will continue to be increasing demand for advanced technologies such as imaging and diagnostic services, since the current rate of technological innovations is rapidly continuing². This transformation can threaten the sustainability of providing healthcare services in some countries³. According to different reports by the World Heart Federation and the European Society of Cardiology, the demands and challenges of modern cardiologic practice are the same or similar in almost all countries, despite their starting points and healthcare situations being different. The Council on Cardiovascular Nursing and Allied Professions of the ESC (CCNAP) performed an analysis of the status of EU countries especially in the context of the care provided by nurses. The analyses showed that the differences in context are especially noticeable regarding education and the formal position of nurses. The differences are found in educational training of nurses and the scope of their role and associated responsibilities². Based on the fact that cardiovascular diseases are the leading cause of mortality and that this burden is expected to continue, the analyses that have been performed also provided guidelines on how to best address this issue. Good results were achieved in primary and secondary prevention. Successful cooperation between members of interdisciplinary teams and focusing on working with and supporting both healthy and at-risk populations in adopting a healthy lifestyle have achieved significant results in primary prevention. Wherever possible, the focus must be on proactive avoidance of poor health through prevention, as opposed to focusing on treatment after a health condition has already developed³. The focus is on „care“ instead of „treatment“, which represents a significant paradigm shift². Medical nurses, as the most numerous among healthcare professionals, have provided a large contribution to the implementation of this transformation in some developed countries.

The education of cardiac nurses in developed countries has followed the development trends of modern cardiologic practice. Programs and ways of implementing specialist residency programs for education and certification of medical nurses are defined through cooperation of the healthcare system and professional societies and according to the demands of clinical practice. In this way, nurses develop additional clin-

ficirala kao ključni čimbenik za pozicioniranje zdravstvenih djelatnika unutar zdravstvenog sustava. Razvoj specifičnih kliničkih kompetencija u sestinstvu doveo je do toga da se u mnogim zemljama provodi prijenos određenih kompetencija s liječnika na medicinske sestre. Na taj način medicinske sestre zauzimaju ključnu ulogu u određenim segmentima skrbi. Važni su iskoraci napravljeni u primarnoj i sekundarnoj prevenciji kardiovaskularnih bolesti, zatajivanju srca (*heart failure nurse*), arterijskoj hipertenziji, intenzivnoj kardiološkoj skrbi i dr. Osobito su bitni pomaci napravljeni u prevenciji i rehabilitaciji kardiovaskularnih bolesti. Europske i američke sestrijske asocijacije: *Preventive Cardiovascular Nurses Association* (PCNA), ESC-CCNAP i *Council on Cardiovascular Nursing of the American Heart Association* (CCNAHA) pod pokroviteljstvom su Svjetske kardiološke federacije još 2011. godine objavile dokument „Global cardiovascular disease: A call to action for Nursing“. Dokument vrlo detaljno opisuje i razjašnjava ulogu i poziciju sestre te zašto je ona ključna u prevenciji kardiovaskularnih bolesti danas i s obzirom na očekivanja u budućnosti. Pozicioniranje medicinskih sestara u skladu sa stečenim kompetencijama u provedbi mjera preventivne kardiologije dovela je do znatne redukcije čimbenika rizika, poboljšanja kvalitete života i smanjenja smrtnosti kardioloških bolesnika. Uloga je medicinske sestre u timu ključna i može se podijeliti na tri razine: prva je razina tehnička i njezin cilj je suradnja i koordinacija s ostalim članovima tima kako bi se dobio portret bolesnika. Druga se razina sastoji u davanju informacija bolesniku i članovima obitelji kako bi se suočili s bolesti, te pružanje podrške u poželjnim koracima prema promjeni stila življenja. Treća je razina praćenje provedbi mjera i evaluacija ciljeva⁴.

Važnost medicinske sestre specijalizirane za zatajivanje srca u smanjivanju broja idućih hospitalizacija za bolesnike hospitalizirane zbog dekompenzacije dokazana je brojnim istraživanjima. Kliničko istraživanje koje su još 1995. godine proveli Rich i sur. donijelo je novo svjetlo na ulogu sestre u liječenju bolesnika s kroničnim zatajivanjem srca. Rezultati istraživanja pokazali su da je rad sestara u edukaciji bolesnika i članova obitelji, planiranju otpusta, planu prehrane, davanju detaljnih uputa o uzimanju lijekova i u praćenje nakon otpusta broj rehospitalizacija u prvih 90 dana smanjena za 56% u odnosu na standardni postupak⁵.

U Američkoj kardiovaskularnoj praksi definirana je i regulirana uloga i pozicija kardiovaskularnih medicinskih sestara. Razvoj certificiranih edukacijskih programa za medicinske sestre pratio razvoj i zahtjevnost kliničke prakse. Posve je jasno definirano tko i nakon koliko godina kliničke prakse može pristupiti certifikaciji te kada i kako se provodi recertifikacija za pojedino supspecijalističko područje.

Analize koje je CCNAP proveo u europskim zemljama pokazale su da se obrazovni programi koje medicinske sestre prolaze kako bi ih pripremili za kliničku praksu razlikuju po sadržaju, trajanju, isporuci i postavljanju^{2,6-12}. Institucionalna izobrazba kardioloških medicinskih sestara u većini zemalja ne ispunjava zahtjeve moderne kardiološke prakse. Stoga je Edukacijski odbor Vijeća kardiovaskularnih medicinskih sestara i srodnih profesionalaca (*Education Committee CCNAP*) pristupio izradi i 2015. godine objavio program specijalističkoga studija za kardiovaskularne sestre *A core curriculum for the continuing professional development of nurses*. Svrha je izrade programa bila pomoć kardiovaskularnim sestrama u

ical competencies along with the combination of knowledge, skills, principles, and values acquired through their education. The World Health Organization has identified competencies as the key factor in the positioning of healthcare workers within the healthcare system. The development of specific clinical competencies in nursing has in many countries led to the transfer of certain competencies from physicians to nurses. In this way, nurses have adopted a key role in certain segments of care. Important advancements have been made in primary and secondary prevention of cardiovascular diseases, heart failure (heart failure nurses), arterial hypertension, intensive cardiological care, etc. Especially significant advancements have been made in the prevention and rehabilitation of cardiovascular diseases. Under the sponsorship of the World Heart Federation, the European and American nursing associations Preventive Cardiovascular Nurses Association (PCNA), ESC-CCNAP, and the Council on Cardiovascular Nursing of the American Heart Association (CCNAHA) published a document in 2011 under the title “Global cardiovascular disease: A call to action for Nursing”. This document details and explains the role and position of nurses and why they are crucial in the prevention of cardiovascular diseases today and will remain so in the future. Appropriate positioning of nurses based on the acquired competencies regarding implementing preventive cardiologic measures has led to significant reduction of risk factors, improvements in quality of life, and reduction of mortality in cardiac patients. The role of the nurse in the team is crucial and can be divided into three levels: the first level is technical, and its goal is cooperating and coordinating with other members of the team to get the clinical picture of the patient. The second level consists of providing the patient and their family with the information they need to come to terms with the disease and providing support in making steps towards desirable lifestyle changes. The third level is monitoring the implementation of measures and evaluation of goals⁴.

The importance of nurses specialized in heart failure for the reduction of the number of subsequent hospitalizations in patients hospitalized for acute decompensated heart failure has been demonstrated by numerous studies. A clinical study conducted as early as 1995 by Rich *et al.* provided a new perspective on the role of nurses in the treatment of patients with chronic heart failure. The study results showed that the work of nurses in educating patients and family members, planning hospital discharge, diet planning, providing detailed instruction for taking medications, and monitoring after discharge reduced the number of rehospitalizations within the first 90 days by 56% in comparison with the standard procedure⁵.

The role and position of cardiovascular nurses is defined and regulated in American cardiovascular practice. The development of certified education programs for nurses has followed the developments and demands in clinical practice. It is clearly defined who and after how many years of clinical practice may apply for certification as well as when and how recertification is conducted for individual sub-specialist fields.

Analyses conducted by CCNAP in European countries showed that educational programs attended by nurses to prepare for clinical practice differ by content, duration, deliver, and setup^{2,6-12}. Institutional education of cardiac nurses in most countries does not meet the demands of modern cardiological practice. Therefore, the CCNAP Education Committee created and published a specialist study program for cardio-

zemljama ujedinjene Europe u edukaciji i ujednačivanju standarda europske kardiološke prakse.

Edukacija kardioloških medicinskih sestara i pozicioniranje u Hrvatskome zdravstvenom sustavu

Hrvatska kardiološka praksa danas stoji uz bok kardiološkoj praksi u razvijenim zemljama svijeta. Medicinske sestre kao najbrojniji zdravstveni profesionalci zauzimaju središnje mjesto u interdisciplinarnom timu. O načinu odgovora medicinskih sestara na zahtjeve uvelike ovisi hoće li rezultat skrbi biti djelotvoran, siguran i učinkovit.

Današnja klinička praksa postavlja postulate interdisciplinarnosti, što znači da se unutar tima uloge različitih profesionalaca međusobno prožimaju. Dobra usklađenost i mogućnost kvalitetnoga prožimanja znači ujednačen pristup novim znanjima, inovacijama i novim aplikacijama. Medicinske su sestre svjesne svoje pozicije te neprestano tragaju za novim spoznajama kako bi pružile kreativna rješenja za sadašnje i buduće izazove u područjima svoje kliničke odgovornosti. Kako bi se svim medicinskim sestrama u hrvatskoj kardiološkoj praksi omogućio ujednačen pristup novim znanjima, osnovana je Hrvatska udruga kardioloških medicinskih sestara (HUKMS). Svrha je osnivanja HUKMS-a bila pomoć medicinskim sestrama da kroz različite edukacijske programe mogu razmijeniti znanja, iskustva i stajališta s domaćim i međunarodnim stručnjacima te potaknuti kritička klinička promišljanja koja će pridonijeti gradnji profesionalne izvrsnosti. Poticaj osnivanju i velik doprinos u razvoju HUKMS-a dao je predsjednik Hrvatskoga kardiološkog društva (HKD) akademik Davor Miličić, ali i svi članovi HKD-a. Dobra suradnja dvaju stručnih društava prezentira se svake dvije godine u suorganizaciji nacionalnog kardiološkog kongresa, ali i u organizaciji simpozija i kongresa naših radnih skupina. Kako bismo potaknuli hrvatski zdravstveni sustav na uvođenje edukacijskih programa za razvoj i stjecanje formalnih kompetencija i pozicioniranje kardioloških medicinskih sestara u skladu sa stečenim kompetencijama, osnovana je i Radna skupina dvaju stručnih društava. Članovi radne skupine definirali su prioritete i izradili programe za poslijediplomske tečajeve, i to za sljedeća područja: prevenciju i rehabilitaciju, zatajivanje srca, ehokardiografiju i aritmije i elektrostimulaciju srca. HUKMS je prepoznata i kao vrijedan partner CCNAP-a, koji je 2018. godine prerastao u *Association on Cardiovascular Nurses and Allied Professions* (ACNAP). U suorganizaciji CCNAP-a i HUKMS-a 2015. godine u Dubrovniku je održan kongres EuroHeartCare2015. Na kongresu je sudjelovalo više od 600 sudionika iz oko 50 zemalja svijeta. Predavanja na kongresu držali su potvrđeni stručnjaci svjetske kardiološke prakse te je to bila izvrsna prigoda za stjecanje znanja i razmjenu iskustva za više od 200 sestara iz domaće kardiološke prakse. HUKMS je nastavio suradnju s ACNAP-om te se zalažemo za ujednačivanje standarda sestrinske prakse u zemljama ujedinjene Europe. Suglasni smo dakle s ACNAP-om da se edukacija kardioloških medicinskih sestara provede prema specijalističkom programu. HUKMS je pokrenuo postupak izrade standarda zanimanja za kardiološku medicinsku sestru u Hrvatskoj. Od CCNAP-a smo dobili dopuštenje i preveli *Core Curriculum*. Vijeće Medicinskog fakulteta Sveučilišta u Zagrebu prihvatilo je provedbu specijalističkoga programa

vascular nurses in 2015, "A core curriculum for the continuing professional development of nurses". The goal of this program was to assist cardiovascular nurses in EU countries in their education as well as to equalize standards of European cardiological practice.

Education of cardiac nurses and their positioning in the Croatian healthcare system

Today, Croatian cardiological practice stands side by side with cardiological practice in developed countries. As the most numerous healthcare professionals, nurses hold a central place in the interdisciplinary team. The way nurses respond to these professional demands is a significant factor in whether the results of care will be effective, safe, and efficient.

Current clinical practice postulates the requirement of interdisciplinarity, which means that the roles of different professionals within a team intertwine with one another. Good coordination and proper integration results in consistent adoption of new knowledge, innovations, and new applications. Nurses are aware of their position and are always in search of new insights to provide creative solutions for current and future challenges in their areas of clinical responsibility. The Croatian Association of Cardiology Nurses (CACN) was formed in order to provide all nurses in Croatian cardiological practice with a consistent approach to new knowledge. The goal of CACN was to employ various educational programs to help nurses exchange knowledge, experience, and opinions with Croatian and international experts and to encourage critical thought in clinical analysis, which will contribute to the growth of professional excellence. Support in the foundation of CACN and great contributions to its development was provided by the president of the Croatian Cardiac Society (CCS), Academician Davor Miličić, as well as all members of the CCS. The successful cooperation between these two professional societies is presented every two years at the jointly organized national cardiological congress, as well as in the organization of symposiums and congresses by our working groups. The two societies have also formed a Working Group in order to stimulate the Croatian healthcare system to introduce education programs for the acquisition and development of formal competencies and the positioning of cardiac nurses in the healthcare system according to their acquitted competencies. The members of the working group defined the priorities and created programs for post-graduate courses for the following fields: prevention and rehabilitation, heart failure, echocardiography and arrhythmias, and cardiac electrical stimulation. CACN was recognized as a valuable partner by CCNAP, which grew into the Association on Cardiovascular Nurses and Allied Professions (ACNAP) in 2018. In 2015, CCNAP and CACN jointly organized the EuroHeartCare2015 congress in Dubrovnik, Croatia. Over 600 participants from approximately 50 countries attended the congress. Lectures at the congress were held by established international experts in cardiological practice, and the congress was an excellent opportunity to acquire knowledge and exchange experiences for over 200 nurses from Croatian cardiac practice. CACN has continued working with ACNAP and advocates the equalization of standards of nursing practice in EU countries. We are thus in agreement with ACNAP that

za kardiološku medicinsku sestru. Očekujemo da i u zdravstvenom sustavu, odnosno u kardiološkoj praksi kardiološke medicinske sestre budu pozicionirane u skladu s razvojem i stečenim kompetencijama. Razvojem kliničkih kompetencija i pozicioniranje medicinskih sestara u hrvatskome zdravstvenom sustavu u skladu sa stečenim kompetencijama za sigurno će pridonijeti poboljšanju kvalitete života i smanjenju smrtnosti kardioloških bolesnika u Hrvatskoj.

U nastavku ovoga broja časopisa *Cardiologia Croatica* bit će prikazani ustroj i organizacija rada u intenzivnoj kardiološkoj skrbi – koronarnim jedinicama iz različitih bolničkih centara u Hrvatskoj. U suorganizaciji HUKMS-a i Klinike za bolesti srca i krvnih žila Kliničkoga bolničkog centra Sestara milosrdnica 24. svibnja 2019. održan je Prvi simpozij o akutnom koronarnom sindromu za medicinske sestre. Na simpoziju su prikazani rad i uloga medicinskih sestara u koronarnim jedinicama. Prikazani radovi i rasprava sudionika upozorili su na kompleksnost i zahtjevnost sestrinske skrbi u koronarnim jedinicama. U razvijenim zemljama svijeta u jedinice intenzivne skrbi – koronarne jedinice – ne zapošljavaju se medicinske sestre koje su tek došle u kliničku praksu. Nakon određenoga kliničkog iskustva medicinske sestre prolaze specijalizirano napredno usavršavanje i nakon položena ispita pozicioniraju se u intenzivnoj skrbi u skladu sa stečenim kompetencijama.^{13,14} Kako bi podržao medicinske sestre u naporima koje ulažu u to da mjerodavne subjekte u hrvatskome zdravstvenom sustavu potaknu na to da se u hrvatskoj kliničkoj praksi slijede primjeri svjetske prakse, urednik nacionalnoga kardiološkog časopisa profesor Mario Ivanuša predložio je da se prikaže njihov rad u hrvatskim centrima.

Zaključak

Medicinske sestre kao najbrojniji zdravstveni profesionalci moraju biti prepoznate kao ključni čimbenik u oblikovanju socijalne i zdravstvene politike u svojim zemljama jer mogu dati velik prinos smanjenju tereta kardiovaskularnih bolesti. Implementacija specijalističkih programa u edukaciju i pozicioniranje medicinskih sestara u skladu sa stečenim kompetencijama dovest će do općega poboljšanja skrbi. U prilog tome govore primjeri današnje kardiološke sestrinske prakse u razvijenim zemljama ujedinjene Europe i u Sjedinjenim Američkim Državama.

the education of cardiac nurses should be performed through a specialty residency program. CACN has therefore initiated the procedure of creating occupational standards for cardiac nurses in Croatia. CCNAP has allowed us to translate the Core Curriculum. The Academic Council of the University of Zagreb School of Medicine has accepted the implementation of the specialty residency program for cardiological nurses. We expect cardiac nurses to be positioned appropriately within the healthcare system and cardiological practice, given their education and acquired competencies. The development of clinical competencies and positioning of nurses in the Croatian healthcare system based on these acquired competencies will surely contribute to improvement of quality of life and reduction in mortality for cardiac patients in Croatia.

This issue of the *Cardiologia Croatica* journal will describe the structure and organization of work in intensive cardiac care – coronary units – in different hospital centers in Croatia. CACN and the Clinic for Cardiovascular Diseases of the "Sestre milosrdnice" University Hospital Centre jointly organized the 1st Symposium for Acute Coronary Syndrome for Nurses on May 24, 2019. The symposium discussed the work and role of nurses in coronary units. The presented works and ensuing discussion emphasized the complexity and demanding role of nursing in coronary units. In developed countries, intensive care units – coronary units – do not employ nurses that have just entered clinical practice. After a certain amount of clinical experience, nurses go through a special advanced education program and, after completing an exam, are employed in intensive care based on the competencies they have acquired.^{13,14} In order to support nurses in their efforts to encourage the authorities in the Croatian healthcare system to follow global trends in clinical practice, Professor Mario Ivanuša, the editor of the society's cardiological journal, suggested describing the work of Croatian centers in the journal.

Conclusion

As the most numerous among healthcare professional, nurses must be recognized as a key factor in shaping the social and healthcare policies in their countries, as they can provide a great contribution to the reduction of the burden of cardiovascular diseases. The implementation of specialist residency programs for the education and positioning of nurses based on acquired competencies will lead to a general improvement in care. This is supported by examples of current cardiac nursing practice in developed countries of the EU and the USA.

The Development of Cardiac Nursing and Its Positioning in The Healthcare System Based on the Requirements of Modern Medical Practice

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