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Department of Social Sciences and Medical Humanities

“Health for all?! Healthy ageing!”

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REPUBLIKA HRVATSKA

PREDSJEDNIK

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MEDICINSKI FAKULTET SVEUČILIŠTA U RIJECI
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I EPIDEMIOLOGIJU
prof.dr.sc. Tomislav Rukavina, pročelnik

Poštovani gospodine Rukavina,

primio sam Vašu obavijest o pripremi i održavanju međunarodnog simpozija „Zdravlje za sve?! Zdravo starenje“ od 29. do 30. svibnja 2014. godine u Rijeci.

Pozdravljam i svojim pokroviteljstvom podržavam Simpozij čiji je cilj, uz razmjenu znanja i iskustava, pridonijeti ostvarenju javnozdravstvenih prioriteta i stvaranju preduvjeta za kvalitetan i zdrav život građana Republike Hrvatske.

U uvjerenju kako će najavljeni skup sudjelovanjem istaknutih domaćih i inozemnih stručnjaka pridonijeti upravo tim ciljevima, želim Vam uspjeh u organizaciji i održavanju Simpozija, kao i puno uspjeha i poticaja u daljnjem znanstvenom i stručnom napredovanju.

Srdačno,



PREDSJEDNIK
REPUBLIKE HRVATSKE

Tomislav Josipović

Uvodna riječ

Katedra za socijalnu medicinu i epidemiologiju i Katedra za društvene i humanističke znanosti u medicini Medicinskog fakulteta Sveučilišta u Rijeci ove godine, po drugi puta organiziraju Međunarodni simpozij „Zdravlje za sve?! Zdravo starenje“, za koji se nadamo da će prerasti u tradicionalni skup.

Ovogodišnji Simpozij obilježavaju dvije novine. Prva se novina odnosi na međunarodni karakter Simpozija, obzirom da će u radu Simpozija sudjelovati stručnjaci iz nekoliko europskih zemalja. Druga novina je što će Simpozij biti tematski posvećen jednoj od najaktualnijih javno-zdravstvenih tema današnjice, a to je zdravlje naših starijih sugrađana. Svjedoci smo porasta udjela starijeg stanovništva što je jedno je od glavnih obilježja suvremenih demografskih kretanja, posebice u razvijenim zemljama. Funkcionalno sposoban stariji čovjek je najkorisniji član zajednice u kojoj živi i stvara. Ovim se Simpozijem tematski želimo usredotočiti na moguća, iznimno značajna područja budućeg djelovanja i istraživanja s ciljem poboljšanja zdravlja, kako starijih stanovnika, tako i stanovništva u cjelini. Simpozij je zamišljen kao interdisciplinarni skup koji želi okupiti sve one koji su u svom svakodnevnom radu usmjereni na zdravlje starije populacije što predstavlja temeljno bogatstvo svakog pojedinca, ali i društva u cjelini, a njegov je glavni cilj razmjena znanja i iskustava iz ove iznimno značajne teme.

Iznimno nas veseli što će i ove godine, u radu Simpozija aktivno sudjelovati i studenti završne godine Studija medicine

Medicinskog fakulteta Sveučilišta u Rijeci, što će zasigurno doprinijeti dodanoj vrijednosti našeg skupa.

Na kraju želimo istaknuti da smo kao organizatori iznimno ponosni što se ovogodišnji skup održava pod visokim pokroviteljstvom Predsjednika Republike Hrvatske, te Ministarstva znanosti, obrazovanja i sporta Republike Hrvatske, Ministarstva zdravlja Republike Hrvatske, Ministarstva socijalne politike i mladih Republike Hrvatske, Primorsko-goranske županije, Grada Rijeke, Grada Opatije, Grada Kastva, Grada Kraljevice, Sveučilišta u Rijeci te Medicinskog fakulteta Sveučilišta u Rijeci. Sama činjenica o ovako velikom broju institucionalnih pokrovitelja, nama kao organizatorima predstavlja veliko priznanje i daje nam naznake kako su naši napori usmjereni u dobrom pravcu.

S poštovanjem,

Tomislav Rukavina

Predsjednik organizacijskog odbora

Foreword

The Department of Social Medicine and Epidemiology along with the Department of Social and Humanistic Sciences in Medicine of the Medical Faculty University of Rijeka for the second time organize International Symposium "Health for All?! Healthy Ageing" that we hope will become a traditional meeting.

This year's Symposium is characterized by two novelties. The first is related to the international character of the Symposium, since experts from several European countries will actively participate in its programme. The second novelty is that Symposium is thematically dedicated to the health of senior citizens, the one of the most important public health topics of the present. The contemporary demographic trends, especially in developed countries, are characterized by the raise of the proportion of senior citizens. Functionally capable senior citizen is of the greatest value for the community. The aim of selected topics of the Symposium is to point out some of the important areas of future activities and research with the final goal, the improvement of the health of both senior citizens, and the population as a whole. The general idea of the Symposium is to be interdisciplinary and to bring together all those professionals that work in the field of health of senior citizens to exchange their knowledge and experiences.

We are especially pleased that this year again students of the final year of Medical Study of the Medical Faculty, University of Rijeka will actively participate in the work of the Symposium. We believe that this fact will certainly represent additional value of our meeting.

Finally, we would like to emphasize that the organizers are extremely proud that this year's Symposium will be held under the high patronage of the President of the Republic of Croatia, and under the auspices of the Ministry of Science, Education and Sports of the Republic of Croatia, Ministry of Social Policy and Youth of the Republic of Croatia, Primorsko-goranska County, University of Rijeka, City of Rijeka, City of Opatija, City of Kastav, City of Kraljevica, University of Rijeka, and the Medical Faculty of the University of Rijeka. The mere fact of such a large number of institutional sponsors represents a tremendous acknowledgment to us as organizers, and indicates that our efforts are directed in the right direction.

Sincerely,

Tomislav Rukavina

President of the Organizing Committee

Chronic disease and Polypharmacy

Durakovic Zijad, Mišigoj Durakovic Marjeta

Side effects and polypharmacy in the elderly

Croatian Gerontological and Geriatric Society, Croatia Faculty of Kinesiology University of Zagreb

The elderly population takes 25% more drugs than the total population. The errors in the use of drugs are particularly pronounced if the number of medications is more than 3 per day. If two drugs are administered simultaneously, then the chance for adverse interaction in elderly age is about 5%, while the chance for adverse interaction of five drugs reaches 50%. The regularity of drug administration in elderly patients is inversely proportional with the number of drugs taken. Adverse drug are proportional to the number of drugs taken. Polypharmacy is often a problem in the elderly, who usually take 4 to 5 different drugs daily. These patients generally suffer from several diseases simultaneously, with many new disease elements. This imposes adequate and careful dosing. Yet, even when the diagnosis has been adequately established, elderly patients are often inadequately managed. Reasons for this are numerous: disrespect for particular alterations in the body of an elderly person, too high dose applied, inadequate treatment of each disease symptoms and disrespect for specific changes in drug effect on the body of an

elderly patient. The unjustifiable number of drugs taken by an elderly patient is, according to the data, from 3-12 daily, the significant number being ineffective. An elderly patient who visits many physicians is in danger for polypharmacy. Apart from his general practitioner, rather often a patient consults different specialists, and if the old patient is not approached comprehensively, the number of prescribed drugs will be rather large.

Dohoczky Csaba

The possibility of preventing undesirable consequences of drug interactions in elderly patients

Croatian Society for Pharmacoeconomics and Health Economics

Despite Croatia have long tradition among physicians in ADR reporting and continuous efforts in raising awareness of importance of reporting the results are somehow disappointing. In 2012 total of 1737 drug adverse events was reported to national Agency for Medicinal Products and Medical Devices. This number is steady for last years with small fluctuations (y 2011- 1831reported, y 2013 – 2223 reported) Taking into the considerations that in the same year there where trough Croatian Health Insurance Fund prescribed 72 000 000 packs of various medications the number of reported ADR are fare away from reality of number of ADR occurred in population. Additionally taking into the consideration that elderly people are taking simultaneously more various medicinal products and

potential interactions should be added to ADRs caused by single products. Simple calculation of exposure to atorvastatin in y 2012 (in Croatia most prescribed lipid lowering product) should give at least total of several thousand common ADRs ($\geq 1/100$, $< 1/10$ estimated frequencies of ADR according to summary of product characteristics). With no systematic clinical research and clinical trial results justifying safe generic switch in elderly population between original products and available generic copies on market should raise concerns about proper drug adverse event (ADR) reporting system. Bioequivalence demonstrated on different population (usually healthy young volunteers) does not guarantee same safety profile and ADR incidence in elderly patient. Simple automatic substitution of original medicinal product with a generic copy should not be recommended especially in polypharmacy situation in elderly population. Burden of ADR reporting lies on healthcare professionals. They should be encouraged to maintain a high level of vigilance and to take appropriate steps to report ADRs.

Early detection of frailty

L.F.J. Martijn (Rens):

Frailty! What is your reaction ?

University of Applied Science Rotterdam, Netherlands

The trend of population aging encourages a search for workable detection and interventions to support older adults in aging successfully. In the last decades phrases like 'healthy aging', 'aging well', 'active aging', and 'successful aging' have become guiding themes in both the scientific field of gerontology and in policy development concerning the aging population (e.g. WHO 2002). We know that there will be more frail Elderly the next years. Experts estimate that 35.6 million people worldwide suffered from Alzheimer's Disease (AD) alone in 2010, with the numbers expected to nearly double every 20 years, to 65.7 million in 2030 and 115.4 million in 2050. We know there will be less professional cure and care and a shift from the hospital to the home. It is widely recognized that community-based services have the potential to be more effective in achieving good quality of life for people with long-term needs for support. We know that frailty was originally a medical concept, nowadays more and more researchers are convinced of its multidimensional nature, including a psychological and social domain of frailty as well as a physical domain. The objective of a study by Robbert Gobbens, 2014 was to test the hypothesis that the prediction of quality of life by physical frailty components is

improved by adding psychological and social frailty components. We know there will be more technology available. Reflecting the importance of the demographic change and its consequences on the quality of life of the citizens. We know that there is a development from Institutional care to Home and semi-residential care and Home care with informal providers. This implicates a changing roll for the professional. Conclusion: based on a literature search, several research projects in Europe, the presentation gives awareness of the chances and possibilities in the near future in relation to frailty and aging. It is about the changing role of the professional.

Van Den Heuvel Wim J¹, Olaroiu Marinela²

The concept of frailty

¹*University of Groningen The Netherlands*

²*Titu Maiorescu University, Bucharest, Romania*

For over a decade, the concept of frailty and its relevance have been discussed in the scientific literature. Is it an adverse consequence of lifestyle or of growing old? Research findings suggest that frailty is common in old age, but prevalence varies widely because of different definitions and assessment instruments. Researchers state that frailty, co-morbidity and disability are overlapping concepts. Is it a disease, a diagnosis or a complication? A consensus group of the American Geriatric Society defines frailty as univocal and one-dimensional in line with the five frailty markers defined by Fried et al.. In the scientific literature it is defined as a syndrome characterized by

decreased reserve and resistance to stressors, resulting from cumulative decline across multiple physiologic systems, and causing vulnerability to adverse outcomes. There is a continuing debate about the nature and definition of frailty. Should we accept variety in the definitions of the concept 'frailty' as some suggest? The variation in definitions has consequences for the assessment of frailty. We will present an overview of the concepts on frailty and present some cases indicating the consequences frailty may have in daily life. Frailty is evidently related to higher risk to (more) disability, (more) dependence and loss of autonomy, more utilization of care facilities, affecting quality of life negatively and mortality.

Van Den Heuvel Wim J¹, Olariou Marinela²

The assessment of frailty and interventions

¹*University of Groningen The Netherlands*

²*Titu Maiorescu University, Bucharest, Romania*

Frailty is a very relevant concept in geriatrics and in primary health care. Therefore, it is important to assess frailty in a valid and reliable way. A valid screening tool to identify frailty is essential from both clinical and social perspective. What instruments are available to assess frailty and what are their psychometric qualities? There is a wide variety of instruments and most of these are not validated. An overview on screening instruments for frailty in primary care will be presented as well as research findings about the psychometric qualities. Frailty may be assessed in different ways: i.e. in an open population or in

a clinical sample, by interview, medical examination or self-rating, by health care professionals, by central caregivers or elderly themselves or by an combination of these. In many European countries primary health care plays an important role in identifying persons at risk. Therefore, we will discuss two other important questions: What intervention are available and feasible to be executed in primary health care? What evidence is available about the effectiveness of such interventions?

Cicvarić Tedi, Štiglić Damir

Hip fractures in elderly

University Hospital Rijeka, Department of Surgery

Geriatric hip fractures (GHP) are the major problem in the geriatric traumatology and it is estimated that treatment of GHF will spend a large amount of health care resources. The aim of this retrospective study was to compare differences in incidence of operatively treated patients with GHF, type of treatment depending of the type of fracture, early postoperative mortality, length of stay and costs of used implants within a 10 years period. Surgically treated 2478 patients, older than 65 years with hip fractures were included in the study. Patients were grouped according to the type of fracture (femoral neck fracture or intertrochanteric femoral fracture) and used implant. Results showed increasing trend in GHF in our County in the last 10 years. There was a shifting trend in used implants, and new surgical techniques were used more commonly in the last few years. In observed period there

were no significant changes in revision surgery and length of hospital stay. The mortality decreased, especially in males, but generally it was not in correlation with used implant. At the 10-years period increase in patients with GHF of 179% was followed with 4 time higher increase in implant prices. Present reimbursement in health care system does not calculate the difference of implant costs in hospital expenses; therefore proper usage of modern implants and careful planning in the treatment of GHF is necessary. Development of geriatric trauma concept can improve the outcome of these patients in a future.

Gulan Gordan, Jurdana Hari, Mikačević Marijan, Zec Andrej, Jotanović Zdravko

Osteoporosis from orthopedic point of view

Clinic for Orthopaedic Surgery Lovran, Medical Faculty University of Rijeka

Osteoporosis is the most common age-related disease that affects women more often than men. It can result in devastating physical, psychosocial, and economic consequences. It is often overlooked and undertreated, however, in large part because it is so often clinically silent before manifesting in the form of fracture. Osteoporosis generally does not become clinically apparent until a fracture occurs. Medical care includes the identification and treatment of potentially treatable underlying causes of osteoporosis and promoting bone apposition. For vertebral fracture surgical care includes vertebroplasty and kyphoplasty, which are minimally invasive spine procedures, used for the management of painful osteoporotic vertebral compression fractures and for other

fractures the osteosynthesis or joint replacement surgery are used with special consideration on bone quality

m-Health

Čišić Dragan¹, Ukovich Walter², Kittl Christian³, Rukavina Tomislav⁴, Boban Marko⁴

m-Health for aging well

¹*University of Rijeka, Faculty of Maritime Studies, Rijeka iLivinglab*

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Mobile technology is available everywhere and most people are connected to mobile devices at home, in their work environment or on the move. Nearly half of the world population uses mobile communications, reaching 3,6 billion users in 2014, Regardless of challenging economic circumstances in many regions, the market is expected to grow even more over the next five years, with expected additional 3 billion users. By 2017 mobile broadband will exceed 5,1 billion users. In developed countries mobile technology is universally available and most people are connected to mobile devices at home, in their work place or on the move. Studies suggest that in Europe penetration rate is bigger than 100%, and that in US and UK more than 80% of physicians currently use mobile phones or tablets in their workplace. Availability of such pervasive mobile infrastructure offers remarkable potential for healthcare IT solutions. Utilisation of mobile technologies to rapid and accurate evaluation and adjustment of behaviour, biological states and contextual facts has great ability to

transform medical research .Advances in mobile technologies and the ever-present nature of these technologies in daily life have created opportunities for research applications that were not formerly possible , for example simultaneously assessing real-time behavioural, physiological, and psychological patient state in the real life environment. One of the primary benefit that comes to mind is that mobile technologies can improve communications between patients and physician. Patients depend very much on the meetings they have visiting a primary care doctor or hospital, and mHealth applications could facilitate that, moving some of the care from an acute care environment to the community or even to the patient's home , where, over the long period, treatment is more convenient allowing big savings for the healthcare system . In the study PWC made last year, after mHealth adoption, Europe will save €100 billion in healthcare costs by 2017 as well as add €93 billion in GDP. In December 2012, the European Commission launched its eHealth Action Plan 2012-2020, which aims to take benefit of these technologies and give patients more control over their care, and is launching broad stakeholder consultation from 10 April until 3 July 2014, on existing barriers and issues related to mHealth deployment and help identify the right way forward to unlock the mHealth potential. The key challenges in healthcare today are the aging population, increased life expectancy and the increasing numbers of patients with chronic diseases. In this environment, mHealth could be one of the tools to confront these challenges by contributing to a more patient-focused healthcare, and sustaining the shift towards prevention while at the same time increasing the efficiency of the system. Ageing populations are correlated with the greater burden of non-communicable diseases such as diabetes, cancer, and cardiovascular problems,

that could be efficiently supported with. mHealth. In the presentation main benefits and problems of mHealth systems will be discussed. Prototype of the mHealth application showing basic categories : wellness, prevention, diagnosis, treatment and prevention will be presented. Healthcare systems strengths. aimed at improving the efficiency of healthcare providers in delivering patient care: emergency response services , practitioner support healthcare surveillance and Healthcare Administration, will be exhibited.

Healthy ageing

Perhat Ankica, Dankić Kristina

Healthy ageing strategy in Rijeka 2009-2013/Rijeka, the city where the third age swims upstream

City of Rijeka, Department of Health and Social Welfare

In order to meet the increasingly sophisticated needs of a growing share of the elderly in the total population more structurally, the City of Rijeka decided to develop a healthy ageing strategy according to the guidelines of the Healthy Ageing Group that operates within the framework of the WHO European Healthy Cities Network. The final phase of producing the Strategy began with defining the vision, the mission and determining the main strategic goals. This was followed by five workshops of which the first one had pensioners participating. Experts from various professional fields were engaged in succeeding workshops and after presenting relevant data and opinions from the pensioners they defined 17 strategic initiatives and 92 activities. All of them find their own place in annual action plans. Strategy is a joint product of more than 50 persons: local political representatives, members of the Rijeka Healthy City project team, pensioners and numerous experts of different profiles. It has been published in 400 copies and distributed to all members of WHO European Healthy City Network project, Croatian cities with which we collaborate and

all relevant institutions and individuals in the City of Rijeka. The success of the Strategy guarantees foundation of goals on the obvious indicators of needs and problems of the targeted group, a multidisciplinary approach and equally realistic assessment of various (human, material, time) resources for the implementation of planned activities. The subjective well-being of the target group confirms its success.

Vuletić Gorka

Quality of life of people in the homes for the elderly and disabled

Faculty of Humanities and Social Sciences, Department of Psychology, Osijek, Croatia

The aim of this research was to investigate the relationship between social support and the quality of life of people living in homes for elderly and disabled. Another aim was to see if subjective quality of life in homes for elderly and disabled is different from average quality of life of the Croatian population, as well as to determine differences in the quality of life regarding the frequency of visits and the contribution of certain variables in the subjective quality of life. The research was conducted on 91 tenants of homes for elderly and disabled in Slavonija. The following instruments were used in the research: Personal Wellbeing Index (PWI) for research on subjective quality of life and Multidimensional scale of perceived social support for identifying the factors of social support perceived by an individual. The results have shown that the quality of life in homes for elderly and disabled is not different from average quality of life of the Croatian population. In addition, a major

connection between subjective quality of life and perceived social support was determined. People who have greater perceived social support, also have greater subjective quality of life. Further on, people who receive visits once a week or often have a greater subjective quality of life than people who receive visits less than once a week, but the difference was not statistically significant. In the end, perceived social support has shown itself as the most important predictor of the subjective quality of life.

Tomek-Roksandić Spomenka, Tomasović Mrčela Nada,
Šostar Zvonimir

The base of gerontology and health care for the elderly in Croatia

Referral Centre of the Ministry of Health, Croatia for Health of the Old People

Center of Gerontology, Dr. Andrija Štampar Institute of Public Health.

According to the UN classification, Croatian population belongs to the fourth group of countries as “very old population” with the share of 17.7 % due to the number of ≥ 65 years old people. This has an impact on efforts in establishing efficient organization of gerontologic public health care management. Gerontology public health indicators provide the necessary basis for comprehensive gerontologic public health care management. The gerontology-public health measures ensure gerontoprophylaxis of pathological aging through the network of gerontologic public health care management. Gerontologic public health care management has been developed at three

levels of superior, medium and basic health care management. Department of Gerontology, Dr. Andrija Štampar Institute of Public Health, as Reference Centre for Health Care of the Elderly of the Ministry of Health of the Republic of Croatia, provides superior gerontologic public health care management based on the monitoring, studying, evaluation and reporting of health care needs and functional disablement of this population segment, and takes an active part in the development of the Program of health care measures and procedures for the elderly. Keeping gerontological databases at the county /regional level perform the activities of medium gerontologic public health care management. Basic health care management for the elderly provides institutional and non-institutional care for the elderly through Gerontological Centres, geriatric hospitals, day-hospitals for geriatric patients, rehabilitation facilities, Old People's Homes, primary health care, and geronto-host service for the elderly in their local community. All gerontologic public health care management levels (superior, medium, basic) in coordination with each other are crucial for appropriate meeting the defined health needs of the elderly and to preserve their functional ability.

ORAL PRESENTATION

Chronic disease and Polypharmacy

Popović Branislava¹, Radošević Quadranti Nives², Mimica Matanović S.^{3,4}, Diminić Lisica Ines¹, Ljubotina Aleksandar¹, Vlahović-Palčevski Vera^{4,5}

Potentially inappropriate prescribing in elderly outpatients

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The prevalence of potentially inappropriate medications (PIMs) in the elderly is high. Inappropriate prescribing is associated with a higher risk of adverse drug reactions, morbidity and mortality, and contributes to the increase of health care costs. Several screening tools have been developed to identify PIMs. The aim of the study was to examine the prevalence of inappropriate prescribing to the elderly using administrative database of prescriptions with a new comprehensive protocol by authors Mimica Matanović and Vlahović-Palčevski. Methods. Medications prescribed to the elderly outpatients (≥ 65), in Primorsko-goranska county, Croatia, who received ≥ 5 different drugs at October 2010. A total of 31.2% patients received one

or more inappropriate drugs due to an unfavorable risk-benefit ratio (male patients 35.4%, women 28.04%, $p < 0.001$, OR = 1.40 (95% CI 1.25 to 1.58)). The most commonly prescribed drugs were long-acting benzodiazepines, amiodarone, methyl digoxin. Medications that should be avoided in certain diseases were NSAIDs in the treatment of osteoarthritis, (4.6% of patients) and long-acting benzodiazepines in depression (significantly more frequent in women). More than a third of potentially serious drug interactions was the combination of antihypertensive drugs and NSAIDs (36.6%), followed by the combination of ACE inhibitors and potassium supplements (24.5%). Appropriate prescribing can improve quality of life in the elderly. There is a need to reduce prescribing of potentially inappropriate drugs in elderly. Simple tools such as the protocol used in this study may help in achieving the goal.

Strenja-Linić Ines

Primary and secondary prevention of stroke- public health issue or a lack of strategy

University Hospital Centre Rijeka, Department of Neurology

Stroke is one of the main noncommunicable diseases of public health importance. Despite the enormous and growing burden of stroke, the disease does not receive the attention it deserves — including funds for prevention, management and research. Most conventional vascular risk factors — age, tobacco smoking, diabetes and obesity — are broadly similar for ischaemic stroke and for vascular disease in other parts of the arterial tree. Almost a third of all strokes occur in patients who

have previously had a stroke, and about 15% of all strokes are preceded by TIAs. Recently, an encouraging amount of new information has emerged to modify clinical practice in a primary and secondary prevention of ischaemic stroke and TIA. Governments and health planners in most of the countries tend to underestimate the importance of stroke. Top priority for resource allocation for stroke services should go to primary prevention of stroke, and in particular to the detection and management of hypertension, discouragement of smoking, diabetes control and other lifestyle issues. To achieve this task, stroke prevention awareness must be raised among health-care planners and governments. Another priority is education of the general public and health-care providers about the preventable nature of stroke, as well as about warning symptoms of the disease and the need for a rapid response. Furthermore, allocation of resources for implementation and delivery of stroke services should also be a priority. Finally, it is very important to establish key national institutions and organizations that would promote training and education of health professionals and dissemination of stroke relevant information.

Meštrović Špoljar Josipa, Vajagić Maja

Costs of Ageing

Croatian Health Insurance Fund, Service for Health Care Contracting

The aim of this paper is to show how the increase of aging population has influence on growing of health care costs. The analysis shows the demographic picture of Croatia, changes in the number of insured persons over 65 years old at the county level. It is important to highlight the number of cases of treatment in primary care, hospital care and specialist care, depicting by sex and age groups (65-69, 70-74, 75-79, 80-84, 85-89, 90-99, 100+). All this is shown from the economic side with the cost of treatments by age groups at the expense of compulsory and supplementary health insurance for a period of 2009th- 2013th. Total health expenditure is in Croatia at 7.8% of GDP (€3.5bn), lower than the EU average of 10.2%. Total public expenditure on health care as a percentage of GDP (6.6%) has been increasing over the last decade. Obtained data shows how increasing of life years are in the correlation with increasing of health care costs. For the population of people over 65 years in primary care commonly identified diseases and conditions are diseases of the circulatory system, diseases of the muscular - skeletal system and connective tissue disorders, endocrine diseases, nutrition and metabolic diseases and respiratory diseases. According to the Population census from 2011, 17.7% of Croatian population is population aged over 65 years, and it ranks Croatia among the EU countries with a very old population. Life expectancy at birth for both women and men is respectively 80.6 years and 73.9 years and is although increasing. Contrary to that, the healthy life years at birth for both sexes are with 64.5 years (women) and 62.0 years (men)

slightly higher than the EU-average (61.9 and 61.3 respectively). With further expected rapid aging of the population, it can be expected that the aging population significantly affect the more pronounced increase in health care use and consumption of resources in the health system. The aging population is also recognized as a significant public health problem in the development strategy of the health of the 2012th to 2020th.

Šendula Jengiđ Vesna

Mental Health in the elderly in Primorsko-goranska County – practice, projects and legal issues

Psychiatric Hospital Rab, Rab, Croatia

School of Medicine, University of Rijeka, Rijeka, Croatia

In Primorsko-goranska County the share of persons over 65 years of age has risen from 16.74% in 2001 to 18.91% in 2013. There is a constant trend of the increase of elderly population for decades. It is a well-known fact that the elderly are prone to physical illness. However, due to additional risk factors, such as poorer economic status, decease of life partner, lack of occupational tasks and duties, they are often lonely, unorganized, inactive and at a higher risk of mental illness. The growing rate of mentally ill elderly people corroborates the above mentioned facts. In 2009 Primorsko-goranska County started a project aimed at prevention of mental illness in the elderly and care for the elderly mentally ill persons. The project consisted in providing life-long education for the staff of nursing homes, home nursing care and monitoring after hospital

discharge and setting up of a protocol of organized care for elderly persons with mental illness which involved the cooperation of diverse institutions coming from different sectors. In this process there are important medical, ethical and legal issues that need to be known, taken into account and balanced in good practice.

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Depression in elderly

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Late-life is a particularly vulnerable age of human life and is not surprising that depressive disorder as the most common mental disorder is more frequent in this age. In recent decades, the lifestyle, human relations and communication are all important factors to increase the frequency of depression. Croatia today with 17.7% of the population older than 65 years is among the countries with the old population. The prevalence of depression in elderly ranges 18-33% and varies in different countries of Europe. Increased rate of suicide among the elderly is often associated with physical illness, loss of social roles and interpersonal relationships and untreated depression. Etiology of depressive disorders in older age is explained by the interaction of predispositions, psychosocial and physical factors. Depression in older age often appears as pseudodementia. In all forms of depression in elderly beside the depressive mood,

somatization and hypochondric sensation occur. In research most findings conclude that the selective serotonin reuptake inhibitors (SSRI) usage is recommended and safety in elderly. Depressive disorder significantly affect the mental abilities, general ability, the outcome of other physical illnesses as well as the quality of life in elders. Aging is not just a "loss". Timely treatment can be achieved recovery or significant improvement of the physical and mental illness

Habjanič Ana, Pajnikihar Majda

Palliative care in Slovenia

Faculty of Health Sciences, University of Maribor

By entering the European Union Slovenia committed itself to the fulfillment of the citizens' right to palliative care. Due to the lack of knowledge of holistic processes and benefits to patients and their relatives, the knowledge as well as well-organized implementation of palliative care are still lacking. We carried out a quantitative cross-sectional study which included health practitioners working in primary and secondary health care. By using a structured questionnaire we collected data on knowledge and attitudes of health professionals in clinical practice towards palliative care. According to the results of the survey, health practitioners obtained their knowledge and experience in palliative care largely through clinical practice and, to a minor degree, through education. They evaluated their skills as only satisfactory (53.0 %). As regards their attitudes about their knowledge and abilities to advise patients on health problems and their abilities to communicate with patients, these were evaluated with the average rating of 2.7 to

3.2; which means that they are able to deal with (and resolve) the situation independently to a certain extent. A comparison of these proportions among health workers in primary and secondary care showed no statistically significant differences. There is a need for change as regards the mentality and attitudes towards palliative care among health care workers and in the society as a whole. The process of caring for the suffering patient needs to be brought closer to the people in the sense of its being a natural process of life, and people should be encouraged to think about the pain experienced by chronically ill and dying. Education in palliative care is still inadequate. More investment in education in the field of palliative care is needed, both in undergraduate and graduate study, and both in nursing and in medicine

m-Health

Šuljić Petra¹, Šuljić Uroš², Rukavina Tihana¹

Modern technology - improving health in elderly population

¹*Teaching Institute of Public Health of Primorsko-goranska County*

²*Croatia insurance d.d., ICT department*

As the age of general population increases so does the interest in the topic of old age. The prolongation of lifespan is not the only matter of concern, other matters include increasing the quality of life, disease prevention etc., in other words living a long, healthy, active and independent life through the assurance of healthy aging preconditions. The psychological changes in senior population occur on the intellectual, emotional and motivational plane. These factors were taken into consideration when the goals of the educational computer workshops for senior population of the Municipality of Matulji were formed. These workshops were designed to increase the computer literacy of the senior population, to encourage both personal and social functionality of attending individuals as well as to decrease the social isolation. In the last 3 years the computer literacy course (beginner and advanced) was attended by 96 members of the Pensioner Association. The workshops are being held throughout the year, 2 times a week in equipped schoolrooms where each attendant uses a single computer with Internet access. The goal was to teach the senior

population the basics of computer, tablet and smartphone usage so that their everyday life is facilitated as well as to provide them with feelings of being equally worthy members of the society since most of them felt completely incompetent, restrained and outdated. Thrilled by the discovery of the digital world the seniors of Matulji sought more new knowledge each day and supported one another in learning, working and socializing.

Dankić Kristina¹, Perše Tatjana², Perhat Ankica¹

EGOV4U: Society where I learn and feel fine

¹City of Rijeka, Department of Health and Social Welfare

²City of Rijeka, Information Technology Department

The aim of this project was to improve social inclusion of older people, as well as their mental health and wellbeing through their digital inclusion. In order to achieve this, it was necessary to teach the elderly IT skills, create a context for the use of IT and the realization of social interaction and to motivate them for online and offline communication and socialization. After determining the human, social, organizational, environmental, infrastructural, financial and reputational resources of organizations that care for the elderly in the City of Rijeka (Dom za starije i nemoćne osobe PGŽ Kantrida Rijeka and Matica umirovljenika grada Rijeke) the following tasks were: 1) to organize free IT courses and make adequate educational materials; 2) to equip 65+ Clubs with small digital centres; 3) to create a new website for the elderly citizens of Rijeka. During the project 230 elderly people acquired basic and/or advanced computer literacy, four small digital centres, where IT support

is provided by peers and opportunity was given to participate in one-day workshops (Facebook, Skype), and a special website for the elderly was developed (<http://penzici.rijeka.hr>). Along with the aforementioned organizations, the project was also realized with the help of the University of Rijeka, health and social institutions, IT education centres and local media. The involvement in the international project EGOV4U, financed from the EU funds and local budget, helped us to achieve one of the main strategic priorities of city's strategies of healthy aging – the empowering of older people (in this case the use of digital technology). The effect of implemented activities on mental health of the elderly (emotion, loneliness, perceived social support and depression) is to be subsequently determined.

Healthy ageing and prevention of falls

Mićović Vladimir^{1,2}, Malatestinić Đulija³, Sorta-Bilajac Turina Iva^{1,2}

Personalised Medicine – Health Literacy for Healthy Aging

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Personalised medicine has the potential to embrace a proactive, pre-emptive, participative and preventive approach to the health and wellbeing of all citizens. This is why it represents one of the key concepts of contemporary public health. This potential of personalised approach to the entire health care can be highlighted through the concept of proactive P4 medicine (predictive, preventive, personalised, and participatory), where public health initiatives become participatory health initiatives, based on the inclusiveness of participatory biocitizens, taking action in participatory health communities. This calls for a new taxonomy of health and disease and a re-definition of health-care, which now has to be understood more as a process than as a system. At the centre of this new paradigm is an individual who has to be empowered to manage one's own health and disease. The health literacy initiative plays the key-role in this inclusiveness, especially in the context of healthy aging.

Vlah Nevenka¹, Glibotic Kresina Helena^{1,2}, Gašparović Babić Svjetlana^{1,2}, Kresina Sandro¹, Beg Zrakić Ljiljana¹, Sorta Bilajac Turina Iva^{1,2}

The Golden Age of Adulthood - Presentation of work of the Department of Gerontology (Teaching Institute of Public Health of Primorsko-Goranska County)

¹Teaching Institute of Public Health of Primorsko-Goranska County,

²Faculty of Medicine, University of Rijeka

Aging is one of the greatest social, economic and health challenges of the 21st century. Aging and old age are clearly distinct. Aging is a progressive, continuous and gradual process of reducing the structure and function of organs and organ systems, while old age itself represents a certain period of life associated with chronological age. The World Health Organization divides old age into: early (65-74 years), middle (75-84), old age (85 and over). The share of over 65 years in Croatia, according to the census of the 2011 amounts to 17.7% of the total population; 1.4% are older than 85 years. Demographic forecasts predict that in 2050, 60% of the European population will be older than 65 years. Teaching Institute of Public Health of Primorsko – Goranska County, the Department of Gerontology conducts a number of public health activities to promote active, healthy, productive aging, preserving functional capacity, improving positive health behaviors, prevention of risk factors in the development of diseases and injuries, keeping the elderly population in their residence community in which they live with their own family as

long as possible. Department also conducts numerous health education and disease prevention activities as well as promotion of healthy lifestyle for the elderly in Primorsko-Goranska County (gerontology workshops 'The Golden Age of Adulthood', programs of secondary prevention (osteoporosis screening), examinations and education for early detection of melanoma, program 'Obesity - a Disease of Modern Society'), as well as the activities of continuing education for health professionals (gerontology discussions for physicians, lectures, workshops, symposiums, etc.), and celebrates the International Day of Older Persons each year. The main motto of the global activities of the health and social care of older people is their integration into society with the aim of adding life to years, not years to life.

Lukić Marica¹, Županić Mara^{2,3}, Garić Slavica⁴, Deucht A.⁵

Program of four levels of geriatric health care with documentation for nurses and procedure guide for general/family medicine practitioners in the elderly care homes

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²*University for Applied Health Studies*

³*Health Centre Zagreb – Centre*

⁴*Home for the elderly and frail, Centre, Zagreb*

⁵*Home for the elderly and frail, "Sveta Ana", Zagreb*

Four degrees of geriatric nursing in homes for the elderly, at the level of primary health care for the elderly, with participants from family medicine teams with the appropriate number of nurses with other health professionals, is effective with respect to meeting the health needs and functional ability of the insured geriatric. The main indicator for determining minimum staff requirements of health care professionals in geriatric number of insured persons in the houses and the stationary part of homes for the elderly, is defined on the basis of determining the functional ability in relation to physical mobility and mental independence of geriatric patients or customers of homes for the elderly.

Vajagić Maja¹, Lang Morović Maja², Grbović Ena³, Miloš Maja⁴, Janković Damir⁵

Characteristic of Elderly Life Quality

¹*Croatian Health Insurance Fund*

²*Clinical Hospital Center Sestre Milosrdnice*

³*Institut for public health Montenegro*

⁴*Zagreb foundation for helping people suffered from cerebrovascular disease*

⁵*GlaxoSmithKline*

To encourage and raise awareness about the need to provide elderly with various activities related to healthy aging. Also, we aim to highlight the importance of healthy lifestyles, early detection of disease, and active participation in the healing process. Everyday life of elderly people is characterized by many

difficulties and obstacles that a person has not encountered previously. So health or sickness, culture, sense of belonging or loneliness, and many other moments greatly affect numerous aspects of life, as well as its quality in older people. In order to obtain an overview of health determinants and needs of elderly, we carried out a literature review to detect various conditions that significantly affect individual's quality of life. Based on the review of literature, more than 80% people over 65 years are suffering from a form of chronic illness. Further, about quarter of elderly people are limited in performing daily activities, and about 15% of elderly cannot perform most daily activities independently. Thus, about 85 % of elderly is completely or mostly self-contained in everyday life. One of the major concerns of older people is how to maintain independence, mobility, and the ability to fully participate in the society. Stimulating and motivating communities with a strong policy that supports safe ageing and the remaining of active involvement in the community, presents a significant contribution to the quality of life. We emphasize the importance of physical activity, social inclusion and healthy diet help in preventing chronic conditions and increasing the quality of life of older people.

Tusić Rozmari

The role of visiting nurses in promoting intergenerational solidarity

Community Primary Health Centre, Primorsko-goranska County, Croatia

The demographic structure of the population today has changed and there is increasing proportion of elderly population in the total population. Therefore, it is necessary to intensify activities on raising awareness of the contribution of the elderly in society and the ways in which this contribution can support. Intergenerational means "relationship between two generations" and refers to the exchange of information, thoughts, feelings and experiences between the two generations that can enrich both. Intergenerational learning is usually informal. Encouraging intergenerational solidarity will raise awareness of the contribution of older people to society. Active aging is defined as the process of creating the optimal conditions for health, participation and security in order to enhance the quality of life of elderly people. This allows elderly people to realize their potential that can contribute of all throughout their lives and to participate in society according to their needs, desires and capabilities. In Croatia, we have seen how the local and regional governments , as well as other governmental and non-governmental organizations (NGOs) are actively involved in programs of intergenerational solidarity and to encourage older people to take active participation in various social activities, in order to improve their quality of life and active living. Visiting nurses should be an important factor in promoting intergenerational solidarity with regard to providing

care to both young and old and can realize the potential of young people as well as the needs of the elderly population

Mlinar Reljić Nataša, Šostar - Turk Sonja, Pajnkihar Majda

Nursing students competencies for healthy elderly

University of Maribor Faculty of Health Sciences

The practical training of nursing students is very important. Graduates have to be completely independent, sovereign and responsible in nursing practice. A quantitative approach to non-experimental research design and descriptive method of work was used. As a research tool, we used the method of field study with structured questionnaire. The sample was chosen deliberately. Acquired data were processed by using IBM SPSS Statistics, version 20.0. We found that students are rated as the most qualified to perform the competencies in the field of professional and personal development - quality improvement (93.3%) and continuing education (87.3%), management and administration of nursing (90.3%). For the implementation of Professional Competence, ethical practice - the responsibility of full-time students are assessed more qualified than part - time students ($t=3.30$, $p<0.05$). Full-time students are more qualified than part-time students to implement the competencies of the key principles of practice ($t=2.8$, $p<0.05$). Practical education of nursing students is crucial to independently perform activities of nursing and makes an important role in the qualification of future graduates for the implementation of quality nursing practice. Real - time verification of qualifications for

independent practice of nursing should become a guideline for the reflection of a student's academic and professional education.

Pokrajčić Mladen

Recreation for the elderly

Home for the elderly and infirm, Primorsko-goranska County "Mali Kartec", Krk

In 1998 our Home for the elderly and Infirm "Mali Kartec" introduced physical activities for its residents. The program was started with the professional help of professor Nikola Turk, who provided a recreational exercise program for the elderly, and coordinated the program's implementation. This program of physical activities for our residents has been practiced for six years now and excellent results have been achieved in maintaining the functional ability of our residents. The recreational physical exercise program for the elderly was recognized and regarded highly by the Home's emp.

Uvodić-Đurić Diana, Kutnjak Kiš Renata, Payerl-Pal Marina,
Bacinger Klobučarić Berta

Healthy lifestyle programme implemented in Donja Dubrava municipality of Medjmurje County

Institute of Public Health of Medjmurje County

As part of the EU project ACTION-FOR-HEALTH, which aims to reduce health inequalities through health promotion by using structural funds, the Institute of Public Health of Medjmurje County has created the “Strategic Plan for Tackling Health Inequalities in Medjmurje County through Health Promotion 2014 – 2020”. For the pilot implementation, which was one of our project tasks, we chose objective 2 – Promoting a healthy lifestyle and objective 3 – Improving the prevention, early detection and control of chronic non-communicable diseases. Our Institute designed the “Healthy lifestyle programme” implemented in the municipality of Donja Dubrava, the second furthest municipality from the county capital where the situation analysis had shown the mortality rates for cardiovascular diseases in the period 1996 – 2010 to be among the highest in Medjmurje County. The programme was carried out by different experts: medical doctors of different specialties, nurses, professors, pshychologists, kinesiologists, nutritionists, culinary experts, etc. The target population included middle-aged and elderly people, primarily women. We offered lectures, workshops, a demonstration of how to prepare a healthy meal, a demonstration of different forms of physical activity, anthropometrical measurements, individual and group medical counselling and group workouts in

altogether 14 meetings. The programme included 190 participants (157 women and 33 men) of the average age of 59. The number of people attending lectures/workshops was 73 on average. For the people who attended at least 50% of the lectures/workshops, the average BMI was 29,5 before and 28,8 after the intervention. Participants lost 47 kilograms together, one kilogram per person in two months. They also lowered their body pressure from 153/85,5 mmHg to 141/78,7 mmHg (on average). The programme resulted in increased knowledge about healthy habits related to diet and physical activity, as well as about risk factors and the main symptoms of stroke, heart attack and diabetes. Both participants and experts assessed this healthy lifestyle programme as very successful and necessary.

Brusich Tatjana

How nurses and students of nursing can promote prevention for active aging

School of Medicine Rijeka, Department of health care

In this work I studied the ways how nurses and students of nursing can promote prevention for active aging. Aging is a natural and irreversible physiological process that is characterized by chronological age and individual differences between people also known as biological age. I wanted to explain the difference between primary, secondary and tertiary prevention and the specific methods that can be applied in each segment for the prevention of active aging. I emphasize the importance of a well developed health care plan with the cooperation of different organizations that will include

preventive examinations, health advice and education, support groups for elderly persons and family members. In the end I present a few case reports where is shown how a structured and individualized approach can promote active aging and improve quality of life.

Poster and student section

Pal Sven¹, Tambić Andrašević A.²

E-bug project - why is it important to implement modern technologies in our education

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²*Interdisciplinary Section for Antibiotic Resistance Control (ISKRA) of the Croatia Ministry of Health*

E-bug project is an international project led by the Public Health England Primary care unit and involves 28 international partner countries. The purpose of the project is to educate young people, both junior and senior level, using interactive and modern technologies about the difference between viruses and bacteria as well to raise the awareness of bacterial resistance to antibiotics and means to prevent it as basic principles of hand hygiene.

Some of the most developed countries in the European Union have translated and implemented the project in their curriculums. The results of the project are visible and the efforts that have been made were indeed justified. As the bacterial resistance became one of the biggest threats to our modern society it is very important to start the education and raising awareness from the youngest ages. In order to prevent irresponsible behavior among the future adults and to secure the information about the prudent use of antibiotics it is crucial to start with this kind of education, both in children and their parents, as soon as possible.

Schools represent a real challenge and a perfect place to raise the awareness and to implement the importance of the prudent

use of antibiotics as well as basic microbiological knowledge in future generations. Proper implementation of knowledge in youth reflects as a correct attitude towards this growing public health problem.

Rezaković Saida

Basal cell carcinoma (BCC) as the most common malignant tumor among elderly patients

Policlinic "Eskulap" for internal medicine, dermatology and venerology, neurology, psychiatry, surgery, gynecology, urology, otorinolaryngology and physical medicine rehabilitation, Zagreb, Croatia

The aim of this review is to emphasize the significance of identifying basal cell carcinoma (BCC) as the most common malignant tumor among elderly patients as well as to identify risk factors and preventive strategies including avoidance of sun exposure and mandatory photoprotection in outdoor surroundings.

Basal cell carcinoma (BCC) is the most common form of skin cancer and generally the most common malignant tumor among all human neoplasms. It is commonly developing in elderly age, appearing in the sun-exposed areas, most often in the face, above the imaginary line that connects lip angles with ear laps. Apart from genetic predisposition and light-colored skin, sun exposure is one of the most significant ethiological factors in pathophysiology of basal cell carcinoma (BCC). Consequently, the majority of BCC cases are triggered by DNA

mutations produced by UV radiation. Basal cell carcinomas grow slowly, taking months or even years to become sizable. Although majority of these tumors are highly suspected clinically, in order to make final diagnose, a skin biopsy is performed for pathohistological verification. Clinical symptoms of BCC include broad spectrum of heterogeneous presentations including nodular basalioma, pigment basalioma, infiltrated basalioma, superficial basalioma, morpheiform basalioma, cystic basalioma and most rare of them all metastatic basalioma. Numerous therapeutic approaches have been developed for treatment of BCC. Each of these methods has its limitations and neither of them doesn't completely prevent the risk of relapse. The aim of treatment is to remove the tumor to the margin of normal tissue with most acceptable cosmetic outcome. Surgical treatment represents standard therapy method for BCC removal. Examples of the variety of treatment modalities used besides surgical excision are curretage and electrodesiccation, cryosurgery, radiation therapy, Mohs' micrographic surgery, laser surgery, photodynamic therapy, imiquimod, and 5-fluorouracil therapy. Adequate treatment option is generally chosen based upon factors such as localization and size of the tumor and patient's age and comorbidity.

Although basal cell carcinoma (BCC) progresses slowly and metastasizes rarely, it can cause significant destruction and disfigurement by invading surrounding tissues. Consequently, early detection and on time treatment strategies are of crucial importance in order to have satisfactory therapeutical outcome. Furthermore, raising awareness of UV radiation as the most

important risk factor for development of basal cell carcinoma (BCC) and consequently conducting mandatory photoprotection is the most important preventive strategy

Saida Rezaković,¹ Ana Lamza²

Chronic venous insufficiency (CVI) as the most common venous disorder in elderly patients

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The aim of this review is to emphasize the significance of identifying chronic venous insufficiency (CVI) as the most common disorder of venous system in elderly population. Chronic venous insufficiency (CVI) is a condition that occurs when the venous wall and/or valves in the leg veins are not working effectively, making it difficult for blood to return to the heart from the legs. Disease presents a significant cause of morbidity and lowers quality of life, affecting up to 25 % of Western populations. Clinical symptoms of chronic venous insufficiency present in heterogeneous clinical forms including oedema, pain, hypostatic dermatitis and finally formation of venous ulcer representing the final stage of this disease. Venous ulcers are amongst most common chronic wounds in human with incidence of 75% of all chronic wounds, characterised by a

cyclical pattern of healing and high rate of recurrence. Considering high incidence and prevalence of this condition, it has led to rapid and drastic improvements in preventive and treatment options. Early diagnostic investigation and treatment is of the crucial importance as it can prevent progression of the disease and may reduce the risk for complications. The therapeutic options for chronic venous insufficiency include broad spectrum of conservative as well as interventional and surgical methods. Apart from various surgical and noninvasive procedures, the main treatment as well as the best preventive option is continuous daily use of a compression therapy (bandage or stocking) in order to aid venous return. Compression increases ulcer healing, decreases rates of recidives and it has the key role in prevention and further progression of the clinical symptoms.

Chronic venous insufficiency (CVI) is most common disorder of the venous system of elderly patients. Considering it is expensive, time-consuming, difficult to treat and often with uncertain treatment outcome it is still great health, social and economic problem. Increasing awareness of the disease and further development of the preventive strategies are the cornerstone of the venous ulcer prevention and chronic venous insufficiency management

Babić Ivana, Beslać Dušanka, Salopek Igor

Stand by me – campaign of destigmatization of mental illnesses

Faculty of Medicine, University of Rijeka

The word stigma indicated a visible mark of shame or discredit. Nowadays, it is used to describe a set of negative and often untrue beliefs that society or a group of people have towards something. It is associated with preconceptions, stereotypes, and discrimination. It is well known that people who suffer from mental illnesses are exposed to public stigma. However, not many are aware of the subsequent consequences – self-stigma, low self-esteem and self-efficacy of the patients, late diagnoses, poor treatment outcome, etc. There are many public awareness campaigns worldwide regarding this issue. Students of the University of Rijeka are organizing antistigma week „Stand by me – destigmatization of mental illnesses“. The agenda of this student initiative is to raise public awareness and reduce stigma of mental illnesses through education and direct contact with people who suffer from mental illnesses. The campaign includes various activities such as workshops in schools, public lecture, visiting Psychiatric hospital Rab, student art exhibition, and many more.

Baković A., Belčić D., Benjak I., Blagaj V., Blaslov K., Blažeković A., Brnardić M., Buljeta I., Crljenica M., Cikać M., Đuherić K., Germek K., Gregurović F., Hegediš D., Karmelić D., Kezerić P., Kocijan A., Simunović V., Tot D., Kabalin M.

Graduate without burnout: prevalence of burnout syndrome in Rijeka School of Medicine medical students and proposed measures or prevention

Faculty of Medicine, University of Rijeka

Aim: Burnout syndrome (BS) is a syndrome of emotional exhaustion (EE), depersonalization (DP), and reduced sense of personal accomplishment (PA) that often occurs in social professions. Aim of this research was to examine prevalence of BS and its dimensions among medical students according to gender and year of study.

Examinees and methods: A tripartite questionnaire was conducted among medical students of 1st, 3rd and 6th year of Rijeka School of Medicine. It included Maslach Burnout Inventory, checklist of symptoms associated with BS and a questionnaire of attitudes related to BS.

Results: 136 students were examined (41 male). Prevalence of BS within students according to year and gender was established. Prevailing symptoms were headache, anxiety and emotional exhaustion. Out of three BS dimensions, PA dominated in 3rd and 6th year students, EE is present in moderate and high degree in all years while significant DP is

least present. There was no significant difference between genders.

Conclusion: The authors propose the following measures to minimize incidence of BS and development of higher degrees of BS: comprehensive professional orientation and selection of high school students, hiring of psychologist to be of service to students for individual and group counselling, workshops of stress management, providing a room for exercise for students, establishing of a foundation for financing student projects which promote teambuilding and creativity, active support of student volunteering, engaging with therapeutic animals, reorganization of curriculum and humanization of working environment.

Fockert Floor, Leeuw de Angela, Maan Vera, Mourik Boukje, Mourik Piet

Healthy ageing beyond borders

University of Applied Science, Hogeschool Rotterdam

WHO (2003): Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

WHO defines active ageing as ‘the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age’ allowing people to ‘realize their potential for physical, social and mental well-being throughout the life course’. “Self-management and autonomy are the key-words towards healthy ageing”

Self-management= to deal with the chronic disease in such way that the condition is embedded in optimal life (symptoms,

treatment, physical and social consequences and corresponding changes in lifestyle)

Autonomy= the condition or quality of being autonomous; independence.

The most common diseases to be found at a higher age include coronary heartdiseases, strokes, arthritis and diabetes. All of these are found to significantly reduce the numberof healthy years. New focus points and the matching specific interventions are developed to increase the number of 'healthyagers' in the future. Focus points within nursery, ccupational therapy and physiotherapy in Rotterdam, the Netherlands includes;

- Accompaniment instead of taking over controle
- Decrease risk behaviour
- Education about active ageing
- Prevention
- Self-management combined with autonomy

Project: Urban Health Centre 2.0: UHC2.0

Anthony Polychronakis

Main structure of Dutch Health Care

Health insurance Act (cure)

Financed partly out of insurances people pay for themselves, but mostly out of social premium (average 10% is collectively financed).

- Hospitals
- Medication
- General Practitioners

Access: everybody that has paid his insurance fee

Administration by: private care insurance companies, regulated by national govt (mostly fixed care products and prices)

Provided by: cure suppliers

Exceptional Medical Expenses Act (care)

Financed out of social premium (which is kind of tax, income dependent). Average 12,5% of income)

- Institutions for elderly care (e.g. nursery homes)
- Institutions for disabled
- Institutions for mentally ill
- Nursery care at home

For institutional care, a big contribution is asked (up to 90% of income).

Access: only people with certain limitations (physical, mental), judged by independent national body

Administration by: national government (fixed care products and prices)

Provided by: care suppliers

Social Support Act

Financed out of taxes (mostly 'hidden' in income taxes)

- Care and support for the homeless
- Care and support for (abused) women
- Support for disabled (wheelchairs, scootmobiles, adaption to homes, special transport)
- Housekeeping support (2-4 hours a week)
- Social Work
- Coaching of educational problems

Small contribution is asked for Special Transport and Housekeeping support

Access: everybody who can't organize this support for himself

Administration by: local government (municipalities)

Provided by: local care and /or support suppliers

Tomislav Rukavina

UHC2.0: Pilot City Rijeka

Faculty of Medicine, University of Rijeka

Demographic changes in the developed countries indicate a continuous increase in the proportion of population older than 65 years. Data for the City of Rijeka from 2011. indicates that almost one-fifth of the population is older than 65 years, and nearly 10 % are older than 75 years. The older population is burdened with a whole range of medical conditions that require a strengthened efforts of the health and social systems. Instant access to long-term care for the elderly is not sustainable and it is necessary to find new solutions to maximize the effectiveness of existing care. UHC2.0 was conceived as a project that will integrate health and social care through early detection and identification of frailty, polypharmacy management and prevention of falls with the aim of an active and healthy aging in European cities. The City of Rijeka is one of five cities that will be involved in the pilot implementation of solutions for integrated health and social care with the help of modern information technology. Prior to the implementation will be carried out research which will determine the actual needs of the elderly population related to these subjects. In the survey will be included academic institutions in collaboration with the local government and primary level of health care in order to achieve the goals of the project - a city tailored for elderly population.