



Seventh Interdisciplinary Symposium of Public Health, Nursing, Social Work and Laboratory
Investigating Methods with International Participation

Organized by the Faculty of Health Sciences and Social Work Trnava University

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HEALTHY AGING

Book of Abstracts

October 7th-8th, 2014

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WELCOME

Dear participants,

Welcome to the Faculty of Health Care and Social Work at the Trnava University in Trnava!

It is truly a pleasure to welcome you all to Trnava. Today, we have the privilege of being joined by active participants from Slovakia, Czech Republic, USA and other countries, which will provide some wide and diverse views in the field of public health, medicine, development, humanitarian and social work, laboratory research, health management and nursing.

The conference aims to provide a platform for you to network with other colleagues. Here, you will have a unique opportunity to share your experiences with others and to learn from theirs. In one single place, you will be able to listen to other delegates from Slovakia and abroad, forge new partnerships and make professional contacts.

During the conference, Slovak and international experts will address many different scientific and educational topics. To get the most out of this occasion we encourage you to keep an open mind and discover some of the current innovations.

During your stay, please be sure to take the time to discover the wonderful city of Trnava, which is well known for its monuments, culture, history and charm. Without doubt, Trnava will be the best complement to your conference experience.

Thank you for attending and we wish you a fruitful conference!

On behalf of Scientific and Organising Committees

prof. Martin Rusnak, CSc

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CONTENTS

<i>DIE ÜBERWACHUNG DER STRAHLENEXPOSITION BEI DER KORONAREN CT-ANGIOGRAPHIE</i>	1
<i>DEPRESSION AND QUALITY OF LIFE IN WOMEN WITH BREAST CANCER</i>	2
<i>ALKAPTONURIA AND OCHRONOSIS IN THE SLOVAK POPULATION</i>	3
<i>HISTORY AND THE PRESENT</i>	3
<i>MORTALITY DATA: WE ALL RELY ON IT, BUT HOW ACCURATE IT IS?</i>	5
<i>THE IMPACT AND EFFECTIVENESS OF POPULATION HEALTH MANAGEMENT: THE ELDERLY POPULATION IN EASTERN EUROPE</i>	7
<i>ANTI-ANGIOGENESIS: THE FIGHT AGAINST COLORECTAL CANCER</i>	10
<i>ASSESSMENT OF ANTHROPOMETRIC PARAMETERS IN HIV INFECTED CHILDREN TREATED WITH HAART</i>	11
<i>BURDEN OF BLOODSTREAM INFECTIONS DUE TO ENTEROBACTERIACEAE IN TRNAVA UNIVERSITY HOSPITAL</i>	12
<i>THE USE OF SOCIAL MEDIA IN IMPROVING HEALTH LITERACY IN THE ADULT POPULATION (AGE 60+) IN THE CZECH REPUBLIC, SLOVAK REPUBLIC, AND POLAND</i>	15
<i>SATISFACTION OF SOCIAL NEEDS IN CONNECTION WITH DEPRESSION AND QUALITY OF LIFE OF THE ELDERLY IN INSTITUTIONAL SETTINGS</i>	16
<i>E-ROMA RESOURCE: PROJECT FOCUSED TO AWARENESS RAISING ON THE IMPORTANCE OF COLLABORATION AND EXCHANGE OF BEST PRACTICES</i>	17
<i>TRAFFICKING AS A MULTICULTURAL PHENOMENON</i>	19
<i>VALIDATION OF NURSING DIAGNOSIS CAREGIVER ROLE STRAIN (00061) - PRELIMINARY RESEARCH</i>	20
<i>SUICIDAL BEHAVIOR IN ELDERLY POPULATION: ANALYSIS OF TRENDS AND PATTERNS IN SLOVAKIA</i>	22
<i>DEFINING CHARACTERISTICS AND RELATED FACTORS OF THE NURSING DIAGNOSIS INTERRUPTED FAMILY PROCESSES (00060) – PRE-RESEARCH</i>	27
<i>CHALLENGES IN IMPROVING MENTAL HEALTH IN SLOVAKIA: A CLOSE LOOK AT DEPRESSION AND MENTAL ILLNESS</i>	35
<i>COMPARATIVE STUDY OF HEALTH PROMOTION IN SLOVAKIA, POLAND, AND CZECH REPUBLIC</i>	36
<i>EXPLAINING THE DECLINE IN CORONARY HEART DISEASE MORTALITY RATES IN THE SLOVAK REPUBLIC BETWEEN THE YEARS 1993-2008 USING THE IMPACT MODEL</i>	37
<i>EVIDENCE-BASED RECOMMENDATIONS IN ACUTE BRONCHITIS AND THEIR USE IN THE PEDIATRIC DEPARTMENT IN THE TEACHING HOSPITAL IN TRNAVA IN 2010</i>	39
<i>AWARENESS OF EPIDEMIOLOGIC SITUATION, RISK FACTORS AND PREVENTION OF CHLAMYDIAL INFECTIONS AMONG STUDENTS OF THE FACULTY OF HEALTH CARE AND SOCIAL WORK, TRNAVA UNIVERSITY AND STUDENTS OF SECONDARY MEDICAL SCHOOL IN TRNAVA</i>	40
<i>AGING POPULATION IN EUROPE –MORE DEATH FROM FALL?</i>	42
<i>PATIENT SAFETY IN AGING POPULATION</i>	43
<i>STILL DISMAL PROGNOSIS OF PANCREATIC CANCER</i>	44
<i>MENTAL AND PHYSICAL HEALTH WITH OMEGA-3-FATTY ACID</i>	45
<i>OVERVIEW OF INFECTION DISEASES IN ELDERLY: CURRENT SITUATION IN UNIVERSITY HOSPITAL TRNAVA</i>	46

<i>USING A COMMUNITY BASED COALITION TO IDENTIFY AND ADDRESS DEPRESSION IN THE AGING POPULATION</i>	47
<i>THE COMPLEX BORRELIA BURGDORFERI SENSU LATO CIRCULATING IN NATURAL FOCI OF IXODES RICINUS IN POVAŽSKÉ PODOLÍ</i>	48
<i>POPULATION HEALTH & AGING: REDESIGNING HEALTHCARE SERVICES & SYSTEMS TO IMPROVE OUTCOMES</i>	51
<i>THE USE OF BIOMARKERS IN PATIENTS WITH MILD TRAUMATIC BRAIN INJURY</i>	52
<i>CARE OF OLDER REFUGEES</i>	53

DIE ÜBERWACHUNG DER STRAHLENEXPOSITION BEI DER KORONAREN CT-ANGIOGRAPHIE

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Die Computertomographie des Herzens, die koronare CT-Angiographie, die Strahlenbelastung, die effektive Dosis, das Krebsrisiko-Potential

Die Herz-Computertomographie hat erwiesen, dass sie eine geeignete Methode für Früherkennungsdiagnostik der koronaren Herzkrankheit ist. Aber die Strahlenexposition und Nutzen-Risiko-Potential sind das große Problem für die Radiologie. Das Hauptziel der Studie war die Ausrechnung der Größe der Strahlenexposition der koronaren CT-Angiographie für die retrospektive EKG-synchronisierte Bildrekonstruktion.

Die Studie waren in Trnava realisiert. Für die Studie waren die Data von 1078 Patienten ausgewertet (492 Männer und 586 Frauen), die die Untersuchung der koronaren CT-Angiographie auf die Maschine Toshiba Aquilion 64 in der Zeit von den Jahren 2010 bis 2013 sich unterzogen. Dann war die effektive Dosis der koronaren CT-Angiographie ausgerechnet. Die effektive Dosis war mit Hilfe des Dosis-Längen-Produkt und des Konversionsfaktor „k“ ($k = 0,017 \text{ mSv}/(\text{mGy}\cdot\text{cm})$) ausgerechnet.

Der arithmetische Durchschnitt des CTDI_{vol} für alle Patienten ($n=1078$) betrug $186,38 \pm 52,3$ mGy. Die Zahlenwert des CTDI_{vol} für die Männer betrug höher als für die Frauen. Die Ergebnisse waren statistisch signifikant ($p < 0,05$). Der arithmetische Durchschnitt des DLP für alle Patienten betrug $1425,19 \pm 277,8$ mGy.cm. Der arithmetische Durchschnitt der effektiven Dosis der koronaren CT-Angiographie für alle Patienten betrug $24,23 \pm 4,7$ mSv. Für Männer war die Strahlenexposition mehr um 14% als für Frauen ($p < 0,05$). In Abhängigkeit von dem Body Mass Index erwies es, dass die Leute, die ein Übergewicht oder Obesität leiden, waren sie um 10% mehr Strahlendosis exponiert als die Leute mit dem normalen Körpergewicht ($p < 0,05$).

Die Herz-CT-Untersuchung und ihre Modalität die „koronare-CT-Angiographie Untersuchung mit der Koronarkalk-Quantifizierung“, ausnutzende retrospektive EKG-synchronisierte Bildrekonstruktion, erwies die große Strahlenbelastung und die große Variabilität. Trotzdem dass die koronare-CT-Angiographie relative die große Strahlenbelastung hat, hat sie den unschreiblichen Beitrag für Patienten mit den koronaren Herzkrankheiten. Während der effektiven Dosis in der Abhängigkeit von dem Geschlechts unterschiedlich ist, sind die Patienten bei der koronaren CT-Angiographie mit den relativen Strahlenbelastungen exponiert.

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DEPRESSION AND QUALITY OF LIFE IN WOMEN WITH BREAST CANCER

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Key words: breast cancer, depression, quality of life, BDI, EORTC QLQ-C30, EORTC QLQ-BR23

Breast cancer is the most common type of cancer among women worldwide. Many patients with breast cancer have psychiatric morbidities, especially anxiety and depressive disorders. The prevalence of depressive disorder in breast cancer ranged from 1.5 to 57%. Some previous studies reported the clinical and psychosocial factors associated with depression in breast cancer patients. Demographic factors predicting depression in breast cancer included advanced age, postmenopausal period, and previous history of depressive disorders. Some clinical factors such as tumor size, pathological nodes, and histology were not found to predict the psychiatric morbidities. A recent meta-analysis of 31 prospective studies found a 25% higher mortality rate for patients with cancer with depressive symptoms and a 39% higher mortality rate for those with major depression, after adjusting for prognostic factors. The aim of this cross-sectional study was to determine the prevalence of depression and quality of life in patients with breast cancer.

Sixty breast cancer patients from the Clinic of Oncology, Faculty Hospital in Trnava and the Department of Oncology, Faculty Hospital in Trenčín, were recruited into the study from December 2013 to February 2014. All samples completed the questionnaires EORTC QLQ-C30 and module EORTC QLQ-BR23, and Beck Depression Inventory (BDI). The prevalence of depressive disorders was reported in percentage. The association between quality of life and depression was analyzed by ANOVA test. In this study we used the Kruskal-Wallis test and Fisher test too. A p-value of less than 0.05 was considered statistically significant.

In our study were 17 % patients without depression, 35 % of patients suffered from light depression, 27 % of patients suffered from medium depression and 22 % had severe depression. The worse quality of life in patients in this study was perceiving in functional scale of sexuality, sexual pleasure and appearance of body. In symptomatic scale breast cancer patients perceived worse quality of life in domains of exhaustion, hair loss and symptoms in armpit. We have noticed statistically lower quality of life of women with severe depression in comparison to other grades of depression ($p \leq 0,05$).

Breast cancer patients usually face many psychological difficulties. These include depression, anxiety, frustration, anger, panic, and suicidal ideation. A considerable number of reports reveal the high prevalence of symptoms of depression in cancer patients. We recommend intensive and systematic monitoring of depression and quality of life in women with breast cancer, because better quality of life contributes to successful therapy.

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ALKAPTONURIA AND OCHRONOSIS IN THE SLOVAK POPULATION HISTORY AND THE PRESENT

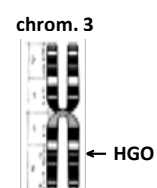
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Alkaptonuria is a rare (1:250 000) **autosomal recessive inherited disease** caused by a deficiency of homogentisic acid oxidase (HGO). **This metabolic defect is evidently the cause of ochronosis and ochronotic arthropathy.** In Slovakia, the occurrence rate of AKU is relatively high (1:19 000). The Slovak population thus provides a pertinent situation for the study of AKU, as evidenced also by the history of research into this nosological unit in Slovakia. Three institutions have been involved in this research - Research Institute of Rheumatic Diseases, Piešťany; the School of Medicine, Comenius University, Martin and the Faculty of Natural Sciences, Comenius University, Bratislava. From the historical point of view, the following years proved to be important:

- **1947** - the first case of AKU and ochronosis in Slovakia was reported (Siťaj 1947)
- **1956** - **the first monograf on AKU in the world literature** was published (Siťaj et al., 1956 – figure)
- **1950-1960** - in the Slovak population (4 million), 182 cases of AKU were detected and described. The patients came from 28 families and 43 of them had ochronosis (Urbánek et al., 1960). Worldwide, this is the largest series of patients with AKU.
- **1966** - Hüttl and coworkers described inclusions of ochronotic pigment in the cytoplasm of cells of the synovial fluid (Hüttl et al., 1966)
- **1974 –1980** - a large population study of AKU was performed in Slovakia (Sršeň et al.). **The occurrence rate of AKU was found to be relatively high – 1:19 000** (population of 417 122 newborns). The increased frequency of the allele for AKU ($q=0.007$) can result from the genetic drift – founder effect. **The highest frequency of disease was observed in the mountainous regions of Slovakia**, which until the 2nd World War were developing as isolates with a high degree of inbreeding.
- **1980-1981** - analysis of 90 families with an occurrence of AKU confirmed the autosomal recessive inheritance of AKU also in the Slovak population (Kaprálík et al., 1980,1981)
- **1984** - in Slovakia the second monograf on AKU was published (Sršeň 1984)
- **1993-1994** - **the gene determining AKU was localized on the long arm of chromosome 3** (3q21-23, figure). Slovak researchers were also involved in its localization (Janocha et al., 1994)



At present, the molecular analysis of the HGO gene is in the focus of attention. The gene has 54 363 base pairs, the coding part only 1 715.

In the HGO gene, at least 116 mutations responsible for development of AKU have been describe so far. Five of them were detected in the Slovak population – stop117, G161R, P230S, G270R and V300G (Gehring et al., 1997, Začková et al., 1998). Insight into the history of AKU research in Slovakia reveals not only the contribution of Slovak researchers to the understanding of AKU and ochronosis but it also highlights the advances in molecular genetics, advances achieved on the axis **disease → gene → therapy**.

MORTALITY DATA: WE ALL RELY ON IT, BUT HOW ACCURATE IT IS?

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Key words: death certification, death certificate, mortality reporting, mortality rate, epidemiology

Survival is the basic outcome of any illness progress or treatment course. In case of death, this is certified by a specialized physician and reported through a particular document (Death Certificate) and procedure to relevant institution and eventually to national statistics office – the procedure varies in individual EU countries. The accuracy of death and cause of death reporting is of great importance for any epidemiological (or other) analysis. Within the international project on traumatic brain injury (CENTER-TBI - Collaborative European NeuroTrauma Effectiveness Research in TBI) we explored, analyzed and described the death certification and reporting procedure in the Slovak Republic with a special emphasis on potential spots of data error, loss or misinterpretation.

We examined the procedure of death certification and reporting through the consultations with representatives of Health Surveillance Authority (HSA). Furthermore, we have explored official output of mortality statistics from the Statistical Office of the Slovak Republic for Bratislava (SOSR) region in 2013 and compared it with the data on people who had an autopsy in the same region, same year from the HSA database.

We have described the death certification and reporting process in a form of an algorithm (Figure 1):

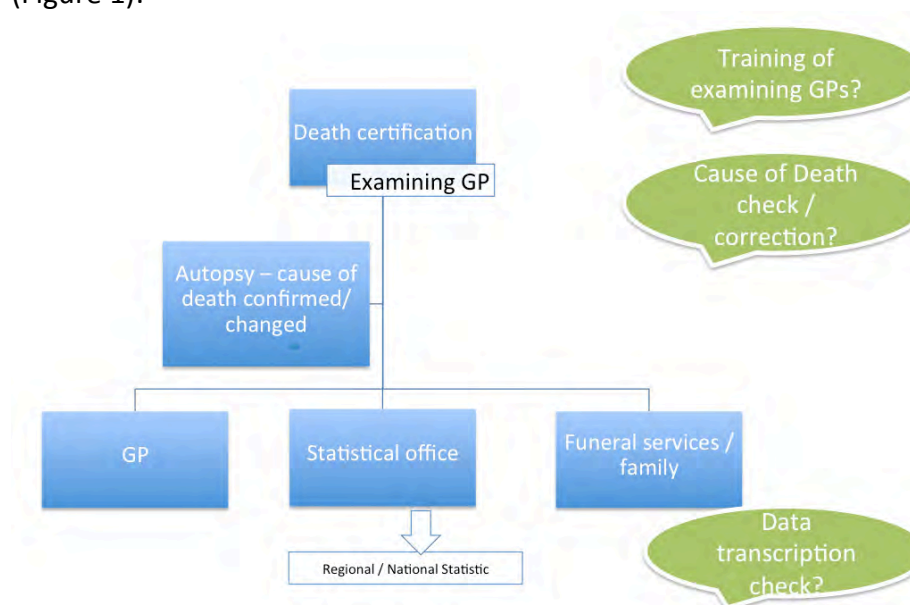


Figure 1: Death Certification and reporting procedure (left) and possible places of error (right), GP = general practitioner

We have found several 'soft spots' in the death certification and reporting process, where an error might occur. These are the following:

Death in the Slovak Republic is certified by an examining physician appointed by Health Surveillance Authority (HSA) – this is either a pathologist or a forensic pathologist if death occurs in a health care facility or any physician certified and trained by HSA for deaths occurring outside (at home, in the street, etc.). In this second case, the training of examining physicians is inadequate (8 hour theoretical course) and their performance is not monitored – they receive no feedback on how accurately they complete the Death Certificates. They also are the sole authority to decide if the deceased will have an autopsy or if the body will go directly to funeral services. Even though the law (Act no. 581/2004 on health insurance companies and supervision of health care) clearly states the deceased has to undergo autopsy "if they die in health care facility, if they die in relation to operation or if it is not certain if the death was of violent cause" we found out in reality not all such cases are sent for an autopsy. It is of particular concern as the autopsy is the only chance of an objective confirmation of cause of death.

Another possibility of an error is when the data are being transcribed from paper Death Certificates into the electronic database of the SOSR – this is being done by officers that have no guideline on how to proceed in case of differing code and narrative description of death or differing several stated causes of death in the deceased.

Furthermore, even though the autopsy is the only chance to check and correct the accuracy of cause of death entered by the examining physician, the database of autopsied patients is run by HSA and is incompatible with SOSR mortality database, so the automatic (or even manual) comparison of the two and following check and correction is impossible.

As public health experts working with mortality data we need to be aware of a certain inaccuracy of this data caused by lack of monitoring and quality control of death certification and reporting procedure.

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THE IMPACT AND EFFECTIVENESS OF POPULATION HEALTH MANAGEMENT: THE ELDERLY POPULATION IN EASTERN EUROPE

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The imminent demands from an increasing aging population presents significant challenges to health care in Eastern Europe. The lack of electronic health records (EHR) has exacerbated care coordination in the European Union (EU) member states of Central and Eastern Europe (CEE) and in some cases delays in treatment. This paper examines the influences and effectiveness of Population Health Management in Eastern Europe and the impact on the aging population.

NURSING PHENOMENON INEFFECTIVELY HEALTH PROMOTION (00099) AT ROMA ETHNICITY

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Key words: Romanies, ethnic, prevention, health promotion

It is only since 1990, emphasizes the need; especially for Roma take attention of ethnicity in our multicultural society. The economic and social situation, especially in housing and employment, together with education belongs to the main problems of most contemporary Roma communities. Social and health situation of the Roma population is dealt with the European project "Health and the Roma population" (2009), which was coordinated by the Spanish Fundación Secretariado Gitano in 7 European countries, among which the Czech Republic. The results of the research reported Nesvadbová Sander & Haberlová (2010), that 64% (of 677 respondents) Roma subjectively assessed their health as very good or good, while 15% suffer from one disease, 13% suffer from two diseases, 13 % suffer 3-4 disease and 13% suffer from 5 or more diseases.

Methods: The project IGA UP pilot survey was performed, the group consisted of Roma who fulfilled the selection criteria: actively reported to their ethnic group and fell in the age category 18 to 65 years. Selective empirical method was chosen set of characteristics that define the nursing diagnosis Ineffective Health Promotion (00099) NANDA I. For all respondents in the file have been using non-standardized structured questionnaire evaluated by selected characteristics of health promotion. To evaluate the clinical validity of selected characteristics was used Fehring clinical validation model focused on the patient. Descriptive statistics were calculated weighted score reliability (R), which categorized the characteristics of the primary, secondary and discarded.

Results: Roma showed in their approach to health inability to take responsibility for compliance with basic health practices, since the value of R was 0.96 (main character). Furthermore showed non-adaptive behavior at the ambient change because R amounted to 0.83 (the main character). Respondents were considered unnecessary preventive examinations (53.4%), their preventive health examinations neutral, and 38.6% reported health might deteriorate, 8% of respondents. Of the respondents 55.3% did not work, 17.2% were employed, but only 8.8% were satisfied with their job. Housing were satisfied, 67.1% of respondents were dissatisfied, 30% of respondents and 2.9% reported other answer. In secondary characteristics were included - lack of knowledge about basic health practices (R = 0.79), lack of interest in improving the health behavior (R = 0.75) and deterioration of cognition (R = 0.75). From the results of side characteristics showed that 78.4% of

respondents ate irregularly, with 68.8% of respondents ate only what they liked, 83.3% of respondents smoked, 48.9% said that smoking is hazardous to health, 13.7% said that occasional smoking does not endanger health. His health will not support if they did not smoke, said 67% of respondents, 73.4% of respondents said that drinking alcohol does not affect health. Alcohol consumed daily 76.4% of respondents and consumed alcohol occasionally 2.1% of respondents. Actively movement devoted 63.2% of respondents said enough sleep and 67.4% of respondents. Regularly went on preventive inspection 23.8% of respondents.

The results indicate that Roma are more instrumental access to their health. Not respect the fundamental preventive health practices do not respect the principles of a healthy lifestyle and overuse of addictive substances (tobacco, alcohol). Subjective perception of health in the Roma ethnic group is focused on disease prevention, but rather to the resulting health problems, which only lead to seeking medical attention.

Resources:

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ANTI-ANGIOGENESIS: THE FIGHT AGAINST COLORECTAL CANCER

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Cancer is currently the leading cause of death throughout the world that affects more than 1-in-3 people during their lifetime. Colorectal cancer is the third most common type of cancer worldwide; however, in the Slovak Republic, it remains first for men and second for women in frequency, defined by total number of cases. The incidence and mortality rates related to colorectal cancer in the Slovak Republic are greater than the rest of the world on average, including other Central and Eastern European countries. In the Slovak Republic, cancer represents 22.1 percent of annual deaths. This paper examines the extensive research on angiogenesis and anti-angiogenic techniques, including nutrition and lifestyle, which play a major role in the prevention and fight against colorectal cancer.

ASSESSMENT OF ANTHROPOMETRIC PARAMETERS IN HIV INFECTED CHILDREN TREATED WITH HAART

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Key words: HIV; HAART; anthropometric parameters; children.

The number of HIV positive children is raising and together with malnutrition is considered as a serious problem with impact on public health. HIV infection may lead to child's growth alternation which occurs in relations to dysfunction of immune system because of infection. The use of HAART for treating HIV infection at children significantly alters the process of disease, increases the degree of surviving and improves the quality of life.

The main aim of the thesis was to analyse anthropometric parameters at HIV positive children who are treated with HAART within period of years 2004-2013. We scored the occurrence of opportune infections as well.

The acquisition of anthropometric and laboratory parameters was done retrospectively in accordance with Helsinki declaration and international ethic documents. The total number of patient-participants was 98 HIV positive children from Phnom Penh and Sihanoukville.

In research file from 2004 the median z-score for HAZ in 2004 was: 3,3 (-4,4/-2), the median for WAZ was -3,4 (-4,1/-1,4) and the median for BAZ was -1,4 (-2,3/-0,4). In 2013 the median z-score for HAZ was -2 (-2,7/-1,5), the median for WAZ was -2,1 (-2,4/-1,5) and for BAZ the median was -0,9 (-1,8/0,2). The most occurring opportune infections were: bronchitis (16,9%), otitis media (13,5%), and tinea capilitii (3,7%).

The thesis shows the positive effects of HAART on child development at HIV positive children and occurrence of opportune infections. We point out the importance of anthropometric parameters at HIV positive children in treatment management.

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BURDEN OF BLOODSTREAM INFECTIONS DUE TO *ENTEROBACTERIACEAE* IN TRNAVA UNIVERSITY HOSPITAL

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Key words: community acquired, hospital acquired, healthcare-associated, bloodstream infections

Bloodstream infections (BSI) due to *Enterobacteriaceae* (E-BSI) are one of the most serious infections acquired in the hospital. However, a third category of healthcare-associated (HCA) BSI has been increasingly recognized. The objective of this study was to assess characteristics of BSI that occurred i) in the hospital setting (HA BSI), ii) from health-care contact outside the hospital (HAI BSI) or iii) in the community (CA BSI).

A cross-sectional study was conducted in University hospital Trnava (592-bed; approximately 25 000 patients per year). All patients with BSI caused by *Enterobacteriaceae* were included between January and December 2013. BSIs were evaluated according to the classification proposed by Friedman et al.¹

A total 105 patients with E-BSI were included (incidence 4.27 per 1,000 admissions), 62% (65) had HA-BSI, 25% (26) had HAI – BSI and 13% (14) had CA – BSI. Mean age of patients with HAI – BSI was significantly higher than patients with HA – BSI (72±16,18 vs. 62,1±15,8, p=0,006). Overall the most common species causing BSI were *Escherichia coli*, *Klebsiella spp.*, *Proteus mirabilis* and *Enterobacter spp.* The presence of ESBL strains was significantly higher for HA – BSI (71% vs. 14%, p<0,001) and for HAI – BSI (58% vs. 14%, p=0,009) as compared both to CA – BSI. Mean of Pitt bacteremia score was significantly higher for HA – BSI than patients with CA (4,06±3,28 vs. 1,9±3,26, p=0,02) and than patients with HAI (4,06±3,28 vs. 1,6±3,16, p=0,001). Hospital case-fatality rate was 38% for HAI – BSI and was significantly higher than case-fatality rate for HA – BSI - 18% or CA – BSI - 7% (p=0,04). Patients with HAI-BSI also had significantly higher mean of Charlson Comorbidity Index Score than patients with CA - BSI (4,9±2,4 vs. 2,5±2,37, p=0,003) and than patients with HA – BSI (4,9±2,4 vs. 3,1±2,58, p=0,001).

HAI - BSI represented one-quarter of all BSIs in hospitalized patients. These infections were previously considered as community-acquired. HAI - BSI are distinctly different from CA and HA infections and associated mainly with older and comorbidity population with a higher risk of mortality. Our study adds further support for the classification of these three categories for better management of patients and prevention.

¹ FRIEDMAN, N.D., et al. 2002. Health care-associated bloodstream infections in adults: a reason to change the accepted definition of community-acquired infections. In *Annals of Internal Medicine*. ISSN 0003-4819. 2002, vol. 137, no. 10, p. 791-797

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QUALITY OF LIFE OF HEALTH ADVISORY SERVICE CLIENTS OVER 55 YEARS

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Key words: seniors, quality of life, health, social involvement, health advisory services.

The demographic evolution in the world is characterized by the population ageing. There are many factors influencing the quality of life. In our study we focused on health hazards, the status and the perception of seniors.

The main aim was to analyse life of people at the age over 55 years in the regions of Banská Štiavnica, Žarnovica and Žiar nad Hronom based on the medical results of selected risk parameters and on the query sheet research.

The group from the Health advisory service was made up from 2145 clients at age of 9 – 91 yrs., who attended the advisory service in years 2008 – 2012. Among the age groups we compared the results of the selected risk parameters and its' dynamics by the persistently surveyed clients. The query sheet research group was created by 186 respondents from the regions of Žarnovica and Žiar nad Hronom at the age of 55 – 92 years, who took part in activities devoted to seniors in the senior club or social services home. In the anonymous query sheet they rated their health condition, present life and activities they apply. When analysing the results we used the Chi square test and logistics regression.

We confirmed considerable difference of the occurrence of selected risk factors between 0 – 54 years and 55 > year and between 55 – 64 years and 65 > years. By the respondents, who rated their lives as hard, was the tendency towards serious health problems higher than by respondents who rated their lives good (OR 9; CI 3 – 26). The respondents, who did not participate in any activities, had lower opportunity to evaluate their life in comparison with those ones, who took part in 1 – 3 activities (OR 2; CI 2 – 3).

The presence of the selected risk factors by the seniors was not negligible and they occurred mainly in the group at the age of 55 – 64 years. The good health condition and participating in social life helps elder people to live a satisfactory life at a higher quality.

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IMPACT OF NIGHT WORK ON SELECTED ASPECTS OF HEALTH

Hutková, J.

The aim of the lecture is to provide an essential insight into research conducted in this area to confirm the impact of night work on health. Night work is unnatural for a man, defies the circadian rhythm, which regulates chronology of the human physiology. Adaptation to night work is problematic. Risks of depression occur during the night, higher risks of injuries and require special legislative protection and practical protection at work. One of the main risk factors in terms of research is the lack of a low quality sleep at night work. Therefore a higher risk for health problems. The impact of night work on health is most often examined in relation to cancer, sleep disorders and psychological symptoms, but also in conjunction with cardiovascular diseases and disorders of the digestive system, as well as with the development of obesity. At the end of the summarized table in terms of research and studies published in the current literature.

THE USE OF SOCIAL MEDIA IN IMPROVING HEALTH LITERACY IN THE ADULT POPULATION (AGE 60+) IN THE CZECH REPUBLIC, SLOVAK REPUBLIC, AND POLAND

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Social media has become a global phenomenon in relation to how the world socially communicates and interacts. The utilization of social media has grown rapidly in various areas of personal and business social interactions but slower in the healthcare sector. This is now socially changing in healthcare. Social media usage in healthcare allows consumers to advocate for their own health through knowledge of applicable health information and by connecting with each other and health care systems.

A study by Van de Belt et al (2012) found social media to be increasingly utilized by hospitals in Western European countries. The extent of social media utilization in Central Europe is not fully known. This paper assesses the implications of current social media usage in the Czech Republic, Slovak Republic, and Poland. Social media presents opportunities and advantages to innovate and improve the healthcare environment. This presentation addresses and evaluates one particular aspect of the healthcare environment: health literacy of the adult population (age 60+).

The World Health Organization (2002) has stated that between 1970 and 2025, the adult population over 60 is expected to reach 694 million and that “measures to help older people remain healthy and active are a necessity, not a luxury.” Elderly people who have higher health literacy have the knowledge and ability to make healthy decisions.

The potential and limitations of social media use in improving health literacy of the adult population (age 60+) are examined through literature review and independent analysis. This paper focuses on two main areas for innovation: patient empowerment and care coordination/management. However, limitations do exist and include access to, knowledge of, and cognitive/functional ability to use information technologies and social media.

SATISFACTION OF SOCIAL NEEDS IN CONNECTION WITH DEPRESSION AND QUALITY OF LIFE OF THE ELDERLY IN INSTITUTIONAL SETTINGS

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Key words: Quality of life; Depression; Social need; Elderly persons, Retirement home

The authors of this article present a research following the goal to explore the area of satisfying social needs in relation to depression and quality of life of elderly persons living in a retirement home. The research was conducted on the Slovak sample of 30 elderly people, 7 of them were male and 23 female. The average age of the sample was 78,6 years (SD = 7,3) and their age range from 62 to 92 years. To measure depression The Geriatric Depression Scale was used, and quality of life was measured by the Quality of Life Enjoyment and Satisfaction Questionnaire – Short Form. In addition to descriptive statistics, the data was analyzed using the non-parametric Friedman test and correlation analysis. The results showed that increasing satisfaction of social needs of the elderly in the Retirement home is related to the reduction of depression and increasing their quality of life.

E-ROMA RESOURCE: PROJECT FOCUSED TO AWARENESS RAISING ON THE IMPORTANCE OF COLLABORATION AND EXCHANGE OF BEST PRACTICES

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Key words: Roma education, electronic resources, on-line platform

Trnava University in Trnava is involved in electronic- Roma resources project (e-RR). E-RR project is funded by the Lifelong Learning Programme of the European Union. Duration of the project is from January 2014 till December 2015. Project coordinator is Development and Education Centre Novo mesto (Slovenia) and project participants are: Trnava University in Trnava (Slovakia), The Union of Associations MULTIKULTURA (Poland), ADICE – Association pour le développement des initiatives (France), Institute For Adult Education Kočevje (Slovenia), The Croatian Employment Service in Karlovac (Croatia). Project is consisted of 6 work packages (WP), each partner is also the WP leader.

The main aim of the project is to raise the level of collaboration and communication among different training and education providers across Europe as well as other relevant structures and stakeholders in the field of Roma education.

Education and training system lacks practical activities and needs to bring into motion all the abstract and theoretical plans. The partner consortium wants to build on the experiences and already existing good practices that have been undertaken by many organizations, institutions, authorities and other stakeholders. It is useful to develop efficient communication network – online educational and informational platform, which will consist of monitoring instruments, recommendations, tools, protocols and policy interventions.

At the end of March e-RR project partners attended e-RR project kick off meeting. The main purpose of the Kick off meeting was to get to know members and organizations of the e-RR project and to plan and discuss on the main project activities

From 25th to 30th of May 2014, the members of the e-RR project team of lead partner RIC Novo mesto participated in the study visit in Krakow. The purpose of the study visit was to learn about best practices in the field of Roma issues, especially learning in the field of Roma inclusion.

Second project meeting took place on 18th and 19th of September 2014 at Trnava University in Trnava. Each partner briefly reported progress and next plan of activities of WP which they are responsible for and then discussion about methodology of current state of art and need assessment and also about proposal of the content of the e-RR platform was done.

In the current phase of the project, WP2 leader Trnava University in Trnava is preparing methodology guide and tool for the state of the art and also for need assessment. Next step is to conduct research phase in each partner country.

Main outcome of the project will be on-line platform with all needed materials for professionals working in the field of Roma education.

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TRAFFICKING AS A MULTICULTURAL PHENOMENON

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Key words : Human. Victim. Traffic. Human rights. Liberty. Cooperation.

Different understanding of the term trafficking in single countries presents problems by solving of these problems on international level. The idea of unlimited liberty is negate by term like servitude, bondage and victim of trafficking, which is giving a high quality of life for a small group of people. Worldwide income from traffickink sholud be arround 8,5 to 12,3 bilion of Euro. By this level of income is a change of values not very surprising. The nuber of victims of trafficking is groving. We do not have exact statistical number of victims, the premise is that the number of victims of trafficking is arround 2 milion victims and in Europe arround 500 thousand. Most victims, which are crossing Slovakia is comming form Russia, Ukraine, Bulgaria, Rumenia, Moldavia, former Yugolsavia, Albania and asian countries. Report from USA State Department understands Slovakia like a country of source and tranzit country, for young people, which are trafficking especialy to Austria, Netherlands, France, Spain, Switzerland, Italy, Greece, Slovenia, Bohemia and Japan first of all for sex bussines. Victims from former Soviet countries crossing Slovakia on the way to more advanced EU countries. To handle the traffiicking is a multidisciplinary cooperation the initial solution.

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VALIDATION OF NURSING DIAGNOSIS CAREGIVER ROLE STRAIN (00061) - PRELIMINARY RESEARCH

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Key words: caregiver role strain, NANDA, validation, DCV, Fehring

Family caregivers form an indispensable role in the community care as they provide the care necessities to their family members and thus reduce the costs of care in health and social institutions. In most cases, this care is provided at the expense of their physical and mental health (Hepburn et al., 2001). Therefore, the experts attention should focus on the assessment of the conditions for the care provision by family caregivers. The goal is to determine the principal and secondary characteristics of nursing diagnosis Caregiver role strain (00061) according to NANDA-I. (Herdman, 2012).

Quantitative research - Fehring model diagnostic content validity (DCV) (Fehring, 1986). Inclusion of 15 respondents from the academic staff of nursing, students of nursing and nurse-experts from the home care agency (achievement minimum of 4 points Fehring modified criteria). Respondents rated in the recording form each characteristic of the Likert scale. There the weighted score and the arithmetic mean were calculated for each characteristic. Descriptive statistics were used.

Respondents marked the 6 main characteristics. Among the main characteristics with the highest level of significance were identified - frustration and ineffective coping with a weighted score of 0.93. With a weighted score of 0.87 there were identified main characters - somatisation, stress, reports concerns about family members and family conflict. As a side characteristics with a weighted score of 0.80 for this diagnosis were identified: increased nervousness; reports feelings of depression; changes in leisure activities; reports grief regarding changed relationship with care receiver. 8 characters were excluded because they were not significant to this nursing diagnosis (reaching a weighted score of 0.5 or less). The pilot study showed that not all the characteristics of nursing diagnoses Caregiver role strain by I. NANDA classification is significant. The results of preliminary research will be used in the implementation of research focused on the validation of nursing interventions (NIC) and the results of nursing care (NOC).

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SUICIDAL BEHAVIOR IN ELDERLY POPULATION: ANALYSIS OF TRENDS AND PATTERNS IN SLOVAKIA

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Key words: suicide, suicide attempt, suicidal behavior, elderly, routine data

Suicidal behavior in the elderly is a global public health problem and complex phenomenon. The elderly population over the age of 70 has the highest suicide rates in almost all countries in the world. Many factors may explain the increased lethality of self-destructive behaviors in older people. Older people are more frail and more determined than younger adults. Life events and other factors that lead to the social isolation in the elderly are important predictors of suicidal behavior in this population. The aim of the paper is to analyze the burden and trends of suicidal behavior in elderly population in Slovakia and to identify the risk factors. Such information is necessary to design effective strategies to prevent suicidal behavior in this population group.

We analyzed routinely collected data on suicide and suicidal attempts. For international comparison of burden and trends of suicide in old people (over 65 years old) we used data from World Health Organization Health for All Database and data on causes of death from Eurostat database. Latest available data for Slovakia were for the year 2010. To identify the factors associated with suicidal behavior in Slovakia's elderly we analyze latest available data from the annual publication of National Health Information Centre: Suicides and suicide attempts in Slovak Republic, 2013.

Suicides rates in old people over 65 years are higher than in younger population in Slovakia (13,6/100 000 vs. 11,6/100 000 in 2010) and completed suicides are more common than suicides attempts. Compare to other causes of deaths, suicides accounted only for less than 1% of all deaths in old people. Suicidal mortality in Slovakia in 2010 were lower than European average (SDR =16,73/100 000) and even lower than the rates in most of the Central and Eastern European countries and is still decreasing. There were 628 suicides and 88 suicide attempts registered in Slovakia in 2013. Over 80% of suicides were committed by men, mainly by strangulation at home. Suicide attempts were most common in old women, mainly in widowed over 70 years old. Old people attempted suicide mainly by drug self-poisoning at home and the conflicts and problems in family were the main motive. Over 70% of old people who attempted suicide have been diagnosed with mental disorders, such as affective disorders, neurotic, stress-related disorders and organic mental disorders. No case of suicide or suicide attempt was reported in old people with university education. Results suggested that suicidal attempts are more lethal in older adults than in younger adults in Slovakia with higher suicide rates among men than women. National reporting system of registered suicides and suicides attempts is helpful to specify risk factors

associated with suicidal behavior. For old people these are: the presence of mental disorder, availability of drugs, psycho-social factors such as social isolation, family conflicts and low education. Such information provides evidence that the promotion of "healthy aging" is inevitable even in prevention of suicidal behavior and the vulnerability of old people need to be considered in wider social context and from life-course perspective.

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CONTRIBUTION OF OTOLARYNGOLOGIST AND HISTOPATHOLOGIST IN THE DIAGNOSIS OF SJÖGREN'S SYNDROME

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Key words : sicca syndrome, autoimmune diseases, histopathological diagnosis.

Sjögren's syndrome is a systemic autoimmune diseases which mainly affects the exocrine glands. They are created lymphocyt infiltrations in the tissue which substitute the functional tissue. Sjögren's syndrome is characterized by production of antibodies mainly anti Ro(SS-A), La (SS-B) and rheumatoid factor. Occurrence of this diseases is specifically in the form of primary Sjögren's syndrome. Clinical manifestations as sicca syndrome: dry mouth, dry mucosa of respiratory organs and vagina. In the pathogenesis to be expected genetic predisposition and virus infections. The genetic predisposition is supported by major association with antigens HLA-B8, Dw3. The importance of allele HLA-DQA1 is essential. Autoimmune process is triggered by virus – Coxsackie, EBV, Cytomegalovirus. As result of virus infection epithelial cells of major salivary glands are activated and change into apoptosis. The fragments of these cells are presented by the dendritic cells as antigens. It causes activation of T Lymphocytes production, release of cytokines and chemokines and proliferation of B Lymphocytes. In the beginning stages salivary glands epithelial and myoepithelial cells proliferate. Salivary glands are infiltrated by lymphocytes, plasma cells and macrophages which form foci. These foci adhere to the acini of salivary glands and gradually replace them. The number of foci containing more than 50 cells on 4 mm of tissue is quantified. We differentiate two clinical manifestations of Sjögren's syndrome: 1. Manifestations of exocrine glands: xerostomia, xerophthalmia.

2. Extraglandular manifestations: arthritis, vasculitis, autoimmune thyroiditis, lymphoproliferative diseases, hearing loss, glomerulonephritis.

The aim of our study was to present the contribution of Otolaryngologist and Histopathologist in diagnosis of Sjögren's syndrome. The study describes results of diagnostic methods and their algorithm in daily practice. Results of examination including histopathology are evaluated complexly and used for faster treatment by the rheumatologist.

Primary diagnosis in ENT practice, sialography, collection of tissue from the mucosa of the lower lip.

Due to the fact that research is ongoing we focused on the year 2010 – 2012.

Within the period of 3 years had been examined 91 patients suspicious of Sjögren's syndrome. In the group were 86 women and 5 men. Of the 89 women were 5 girls aged under 15 years. By all patient we collected history about xerostomy, epistaxis, swallowing disorders, dysphony and swelling of the major salivary glands. We found the sicca syndrom(xerostomie) as manifestation of Sjögren's syndrom in 40% of women and 30% of men. Epistaxis in 7% of women and 0% of men. Swelling of major salivary glands in 12% of women and 0% of men. By objectiv ENT examination we found most common dry oral mucosa and dry mucosa of mesopharynx with eschars. Endonasal approach showed dry and reddish mucosa of nasal septum with vascular ectasia. In the area of hypopharynx and entrance to the oesophagus we didn,t, find signs of atrophia.

With sialography were examined 14 women and 2 men. Positiv manifestations in terms of parenchymal atrophy were found in 50% of women and men.

Histopathological collections of tissue from mucose of lower lipp have been done in 69 women and 2 men. Positive histopathological findings which confirmed the diagnosis of Sjogren,s syndrome were found in 54 women : 72% and 1 men : 10% .In our group are only 5 men ,therefore the results can not be evaluated objectively.

Otolaryngologist offen faces patients whose symptomatology indicates systemic autoimunne diseas. Early diagnosis is therefore often his responsility beacause the saliva and tears secretion disorder followed by xerostomy , xerophtalmy, epistaxis, hoarsenes and swelling of major salivary glands often leads to the decision of the patient to visit otolaryngologist. Our presented results demonstrate that the use of ENT examination including a sialography and histopathology is a important diagnostic method of Sjögren's syndrome. Our algorithm improves the quality of diagnosis .We found that most effective method is a histopathological examination. By the correct histological tissue sampling must be found at laest one minor salivary gland which is relevent for a pathological intervention. 72% positive histopathological findings included this test to the highest degree of impotence in the ENT diagnosis.

BLOODSTREAM INFECTIONS RELATED TO USAGE OF INTRAVENOUS CATHETERS

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Keywords: Bloodstream infections, central venous catheter , nosocomial infections

Bloodstream infections (BI) arise as a result of the provided health care and they belong to the group of serious nosocomial infections (NI). They form one third of the infections which may end up with death. In Europe Union KI represents 10.5% from all NI, 52% of these was caused by the usage of catheters. 250 000 KI connected with the usage of central venous catheter (CVK) form yearly in USA. 80 000 out of these come from Intensive Care Units. Based on several analysis it has confirmed that these infections have an impact on morbidity and financial burden. Health care workers, insurance companies, lawyers and health surveillance are trying to reduce the number of these infections to reduce the costs and make patients to feel better. This effort has to be interdisciplinary. This means that it must include members, that are in contact with catheters: doctors, that made the decision to implement and remove the catheter, care workers that implemented and removed it, health management and patients that can manipulate with their CVK.

DEFINING CHARACTERISTICS AND RELATED FACTORS OF THE NURSING DIAGNOSIS INTERRUPTED FAMILY PROCESSES (00060) – PRE-RESEARCH

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Key words : validation, nursing diagnosis, interrupted family processes

Nursing diagnoses in the NANDA-International classification system contains defining characteristics and related factors, which act as a diagnostic signal which, following its evaluation, can be used to determine a nursing diagnosis (Herdman, 2011, p. 90-93). The nursing diagnosis „ Interrupted family processes (00060)“ is defined as a change in family relationships and/or functioning. The diagnosis contains 19 defining characteristics and 10 related factors (Herdman, 2013, p. 311). The nursing diagnosis classification system of NANDA-International is often in conflict with the use of nursing diagnoses in clinical practice. The reason for this is a lack of validation studies (Fehring, 1986, p.183).

The purpose of the pilot study was to achieve a contextual validation of the nursing diagnosis „ Interrupted family processes (00060)“. Fehring’s diagnostic content validity model was used. In accordance with consultation experts in the field of nursing and with respect to the understandability of characteristic features, the measuring instrument “questionnaire” was used. The questionnaire in its final version contained 29 defining characteristics (from NANDA-International), which were evaluated by the respondents by way of the Likert scale from 1 to 5 (1 – not at all characteristic or typical of the diagnosis; 5- very characteristic of the diagnosis). Those characteristics that achieved a weighted ratio of 0.80 and higher were considered to be major defining characteristics; those achieving scores between 0.50 and 0.80 were defined as minor defining characteristics. 8 university pedagogue experts in the field of nursing were the respondents. The questionnaire was distributed electronically and the results were statistically processed (an arithmetic mean, a standard deviation and a weighted ratio).

The respondents classified 8 features as major diagnostic characteristics and 21 features as minor. The characteristic demonstrating the highest weighted ratio value was *changes in satisfaction with family*; on the contrary *interaction with community* was defined as having the lowest weighted ratio.

The nursing diagnosis „Interrupted family processes (00060)“ has not been validated in the Czech Republic nor abroad yet. Thus far, only Bartek, Lindeman a Hawks, who validated the diagnosis „Altered family processes-alcoholism“, have been involved with the issue. There were 110 defining characteristics and only 27 features were considered to be characteristic for the diagnosis (e.g. loss of control of drinking). These studies used the Fehring’s diagnostic

content validity model as well as the Fehring's clinical diagnostic validation model (Bartek, Lindeman, Hawks, 1999, p.158-168).

The pilot study was done within the scope of a student research project of the Internal Grant Agency of the Palacky University IGA_FZV_2014_016 having the title „Validation of Nursing Diagnosis NANDA - International - Interrupted family processes (00060) in the field of community care“. The issue of validation of the diagnosis „ Interrupted family processes (00060)“ is difficult to grasp mainly because of the difference in comprehension of the defining characteristics within the American region and the Czech Republic, which will result in a change in topic of dissertation thesis.

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DYSPHAGIA AS A COMPLICATION OF THE FRONTAL OSTEOPHYTES IN THE CERVICAL SEGMENT

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Keywords: Dysphagia, Epidemiologic dysphagia, Dysphagia complications, Videofluoroskopia, Front osteophytes

Under dysphagia we understand failure of the swallowing. It can be manifested and affect oral preparation of food, failure of oral, pharyngeal and/or cesopharyngeal transport to the stomach.

13-15% of hospital patients suffers from dysphagia and 50-60% of the patients referred to chronic care. Depending from the location of the reasons we recognize structural and neurogenic dysphagia. This can cause complications with the main disease such as aspiration pneumonia, malnutrition and dehydration also.

In the first part the authors give basic information about epidemiology, division and the possibility to diagnose dysphagia. In the second part they describe patients casuistry with dysphagia invoked by the front osteophytes on C5 and C6 vertebrae.

EARLY OBESITY INTERVENTIONS FOCUSED ON NUTRITION IN PRIMARY SCHOOLS IN THE CZECH AND SLOVAK REPUBLICS

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The rise of obesity is a phenomenon that is happening across the globe and is quickly becoming one of the greatest public health and socio-economic challenges of our generation. With a rise in the obesity prevalence of the adult population, the risk of children being overweight, and therefore the risk associated with the diseases that stem from being overweight are significantly rising as well. The number of policies and programs available to countries to manage the nutritional intake of their residents is countless. The World Health Organization along with other European Committees aimed at nutrition management provides a framework for countries to construct nationalized nutritional programs for their population. From the control of food marketing to the reduction of unhealthy nutrients within foods, the concepts within each document can be tailored to improve the nutritional health of the nation's youth. Although a multitude of policies and programs are available, some programs work better for different countries. The objective of this paper is to outline the various policies and programs available within the Eastern European Region and compare those to the programs that are currently in place in the Slovak and Czech Republics. The intent of this paper is to spark discussion on the best programs that should be used to fight the menacing obesity epidemic.

ACTION-FOR-HEALTH PROJECT: THE SLOVAK EXPERIENCE

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Key words: cardiovascular diseases, health promotion, health inequalities, risk factors

The ACTION-FOR-HEALTH project is an international project founded by DG Sanco. The general objective of the project is to improve health of citizens by tackling health inequalities by means of health promotion. Each country prepared an action plan aimed on specific health problem identified within the process of prior needs assessment and situation analysis. The Slovak team identified cardiovascular diseases (CVD) as a major problem in the Slovak Republic and also in the Trnava city. We prepared an action plan called „Reduction of health inequalities in Trnava town using a health promotion life-course perspective“.

Generally, we implemented one objective of this action plan.

Within implementation of the objective we organized several events focused on health promotion and reduction of CVD. We covered all of age specific target groups – children, young people, working age people and also seniors. We provided them information about risk factors of CVD and suggestions how everyone could reduce risk of CVD, how they should behave. During the events called „Faculty Health Days, City Health Days and Picnic for Seniors“ we offered to all participants measurement of blood pressure, BMI, percent body fat, cholesterol, triglycerides, glucose, lung capacity and carbon monoxide in the breath. The participation in all events was high.

The main output of the project is documentary film which we prepared in cooperation with Mestská televízia Trnava. This film aroused in two languages and documents the progress of all the organized events as well as basic information about health determinants.

The content of our Action Plan is absolutely feasible in Trnava city and of course also in other cities or villages which would have interest to fight with health inequalities and at the same time improve quality of life their citizens. Action Plan is ready and suitable for requesting Structural Funds.

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EPIDEMIOLOGY AND PATTERNS OF TRANSPORT ACCIDENT RELATE FATALITIES IN AUSTRIA

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Key Words: transport accidents, road traffic accidents, mortality, epidemiology, public health

Transport accidents are among the major causes of death, especially in people 15 to 29 years old in the EU and despite their continuous decrease from 1990 they still present an important public health issue. The aim of this study was to analyze the epidemiological trends, patterns of causes and demographic structure of the victims of deaths resulting from road traffic accidents.

Data on deaths due to external causes based on death certificates was obtained from the Austrian Statistical office and fatalities caused by transport related accidents were filtered. Crude and age standardized mortalities (using direct standardization) were calculated per 100 000 population and analyzed by age, gender, seasonality major body regions injured. Potential years of life lost before age 75 (PYLL-75) were calculated to depict the public health importance of the problem.

39 709 deaths were identified for the period of 1980-2012, only 26% were women, the average age was 42.1 years (maximum of 103). We observed a decreasing trend in fatalities and mortalities per 100,000 from 26 in 1980 to 7 in 2012 and from 554 in 1980 to 26 in 2012, respectively. A total of 68 960 years before age 75 were lost due to these injuries in 1980 and 14 931 years in 2012. Prevention (such as use of seatbelts or child restraints) contributed significantly to the observed decreasing trends. Men between 16-24 years were the primary population at risk of transport related fatalities. Pedestrians were more often women and motor vehicle drivers and motorcyclists were mostly men. Most injuries happened between May and October, prevailingly in towns >20 000 inhabitants. The head was primarily injured most often in all user groups.

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KNOWLEDGE OF MEDICAL STAFF ON PROPER HAND HYGIENE PRACTICES

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Keywords: hand hygiene, nosocomial infections, medical personnel, knowledge.

Hand hygiene in health care facilities is an essential part of healthcare provided. Transmission of microorganisms from the hands of medical personnel is a proven phenomenon, therefore, hand hygiene, careful attention. Incidence of nosocomial infections, which often result from a lack of hand hygiene and the transmission of transient flora from the hands of health professionals as well as patients themselves, is increasing. Therefore, in our work we focus finding the knowledge of health workers about proper hand hygiene practices.

The aim of our study was to determine the knowledge, attitudes and habits of health workers on proper hand hygiene practices.

To collect data, we used a standardized questionnaire on the World Health Organization hand hygiene program established under the Clean care is safer care. Together we distributed 165 questionnaires. Participants were 112 medical workers of different occupation from different departments Hospital and Polyclinic St. James Bardejov. The results of our research did not confirm the positive impact of training seminars on the knowledge of health professionals on ways to prevent nosocomial infections and proper hand hygiene practices, because the level of knowledge both study groups, health workers was at 59%. Health workers who had previously participated in a seminar on hand hygiene in excess equate with the assertion that the hand hygiene shall see more if they are controlled, in comparison with the medical staff, who did not attend a seminar. Hand hygiene is considered the main and most effective tool for the prevention of nosocomial infections and should therefore be the basis for optimal health. It is therefore necessary to continue the education of health personnel on procedures for the prevention of nosocomial infections. However, given the results of our research is necessary to pay attention to the content of training seminars for health professionals, as well as in monitoring compliance with the principles of prevention of nosocomial infections.

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SEPTICAL SHOCK - CONSEQUENCE OF THE APPLIED THERAPY OR OF THE REGIME MEASURES. CASUISTIC

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Commensally commonly considered harmless can under certain conditions evocate infection. Anaerobic Gram negative stems *Prevotella* are part of the current microflora of the mucosa of the buccal cavity, of gastrointestinal and genital sections. They very often occur together with streptococci, actinomycetes and veilonellies. At the same time they possess the ability to recognise each other, to communicate with help of the signal molecules, to exchange the genetic material as well as metabolic products. In this way they create convenient environment in order to apply their abilities. In case the community of commensally stems finds its way beyond the mucous surfaces, aerobic stems create conditions for the reproduction of the anaerobic. Representatives of *Prevotella* origin raises not only gingivitis, chronic sinusitis, or otitis, they at the same time are involved in creation of infections associated with the provision of the health care. We know about the descriptions of septic arthritis, bacteremia in introduced shunt, abscesses in contiguous muscles in case of drug users, perforations of the intestines in case of the Crohn disease and a cancer of the large intestine.

The aim of this presentation is to point out the obstacles connected with the reveal of the reason of the infection occurrence connected with the provision of the health care with help of the patient casuistic. In this case the patient was suffering from exo-endogenous infection of the shoulder joint, accompanied with septic shock and absencing myositis of the shoulder girdle muscles.

Finally we would like to draw the attention to the fact that the reveal of the reason of the infection occurrence connected with the provision of the health care has usually multifactorial origin. The clarification requires cooperation of the team aimed at the collection of sufficient number of evidence to support correct diagnostics and treatment.

CHALLENGES IN IMPROVING MENTAL HEALTH IN SLOVAKIA: A CLOSE LOOK AT DEPRESSION AND MENTAL ILLNESS

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This presentation focuses on the incidence and prevalence of depression and mental illness in the Slovak Republic and the various challenges associated with improving services within the mental health sector. With a specific focus on depression, the impact that mental health has on other aspects of health are examined. There is a demand for increased identification and coordinated management of mental illness in all levels of care. Levels of depression are examined in relation to established healthcare policy. While recent economic and societal changes have impacted services in the mental health sector, the impact of other issues such as access, cost, social stigma, and the coordination of care are also explored. Issues associated with access to care are highlighted through a discussion of low resources, unreliable information, and policy decisions. Opportunities to more adequately manage mental health at the primary and community level are explained in relation to the current structure and resources of the Slovak healthcare system.

COMPARATIVE STUDY OF HEALTH PROMOTION IN SLOVAKIA, POLAND, AND CZECH REPUBLIC

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According to the World Health Organization it is expected that between 1980 and 2020 the population of the elderly worldwide will increase by 240%. This increase results from the, improvement of living conditions, new developments in medicine, expanded use of technology, and the accessibility of health services to the public. Health promotion for the elderly is increasingly important worldwide, to sustain increased longevity and quality of life.

The World Health Organization has suggested that health promotion for the elderly is the most important universal goal. The research is ongoing but many strategies and health policies have been developed and adopted in many countries. The common policies address: development of geriatric medicine, integration of health services, and social security. This paper is a comparative study of The Slovak Republic, Poland, and Czech Republic approaches to health promotion for the elderly population. Each country has its own challenges and successes. The author will compare lessons learned from each country and recommend how these health initiatives may improve the quality of life for senior citizens.

EXPLAINING THE DECLINE IN CORONARY HEART DISEASE MORTALITY RATES IN THE SLOVAK REPUBLIC BETWEEN THE YEARS 1993-2008 USING THE IMPACT MODEL

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Key words: coronary heart disease –mortality rates – treatments – risk factors

Cardiovascular diseases remain the most important cause of death in the Slovak Republic. Mortality rates from coronary heart disease (CHD), however, have decreased by approximately quarter in the last two decades in population aged 25-74 years. The aim of this modelling study was therefore to try quantify the main contributions to this mortality decline within the years 1993 and 2008.

We identified, obtained and scrutinised needed data. These data detailed trends in major population cardiovascular risk factors (smoking, blood pressure, total cholesterol, diabetes prevalence, BMI and physical activity levels), and also the uptake of all standard CHD treatments. The main data sources were official statistics (NCZI,ŠUSR) and national representative studies (AUDIT, SLOVAKS, SLOVAsEZ, CINDI, EHES, EHIS). The previously validated IMPACT policy model was then used to combine and integrate these data with effect sizes from published meta-analyses quantifying the effectiveness of specific evidence based treatments, and population-wide changes in cardiovascular risk factors. Results were expressed as deaths prevented or postponed (DPPs). Uncertainties were explored using sensitivity analyses.

Between 1993 and 2008 age-adjusted CHD mortality rates in the Slovak Republic decreased by 21% in men and 24% in women aged 25-74 years, representing 1821 fewer CHD deaths in 2008. Improvements in the uptake of evidence based treatments explained approximately 50% of the mortality fall (mainly reflecting contributions from treatments for heart failure, acute coronary syndrome and primary prevention, i.e. statins and anti-hypertensives). Changes in CHD risk factors explained approximately 41% of the total mortality decrease (resulting mainly from positive changes in total serum cholesterol). However, most other risk factors demonstrated adverse trends and thus generated approximately 743 additional deaths). Results remained relatively stable under a range of sensitivity analyses.

This analysis suggests that approximately half the CHD mortality fall recently observed in the Slovak Republic may be attributable to evidence based treatments. The adverse trends observed in all the other major cardiovascular risk factors (smoking, blood pressure, BMI, diabetes and physical inactivity) in the Slovak Republic are deeply worrying, and emphasise

the need for more energetic population-wide prevention policies. We also emphasise the urgent need for improving surveillance of non-communicable diseases in our country.

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EVIDENCE-BASED RECOMMENDATIONS IN ACUTE BRONCHITIS AND THEIR USE IN THE PEDIATRIC DEPARTMENT IN THE TEACHING HOSPITAL IN TRNAVA IN 2010

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Key words: evidence-based medicine, quality of health care, acute bronchitis, children

Respiratory tract infections are the most common infections in children. Acute bronchitis is one of the most common respiratory infections in children. The etiology is in 90-95% viral. Evidence-based medicine leads to improve the health status of the population only if it is used by most health care providers. Recommendations pay special attention to distinguish viral etiology of infection, which is mainly in pediatric practice essential for rational use of antibiotics. The aim of our study was to determine the degree of compliance to selected recommendations in the diagnostics and treatment of acute bronchitis and to analyze the impact of treatment on the health outcomes of patients.

Our study was a pilot for explaining the compliance rate for the selected recommendations from three countries (SK, GB, USA) in the Pediatric Department of Trnava Teaching Hospital in 2010. The sample consisted of 80 patients with acute bronchitis. The level of compliance with the recommendations was expressed as percentages and by a score. The impact of administered treatment was analyzed using multivariate logistic regression.

In patients with acute bronchitis main recommendations were met. Dry cough had 36% of patients, 5% productive and 59% did not further specified type of cough. We found out that administration of β 2 agonists compared with other treatments (β 2 sympathomimetic administration with corticosteroids, administration of antibiotics, continued antibiotic treatment indicated in general practices) strongly dominated. After the admission to the hospital the antibiotics were administered in 5%, and 6% of patients continued antibiotic treatment from outpatient care. The chance of long period of hospitalization (≥ 4 days) increased statistically significant ($p < 0.05$) when antibiotics were administered compared to administration of β 2 sympathomimetics.

The goals were met. We recommend to use the methodology developed in this study for continuous assessment of compliance with the evidence - based recommendations in other health care facilities and after that to compare the results.

AWARENESS OF EPIDEMIOLOGIC SITUATION, RISK FACTORS AND PREVENTION OF CHLAMYDIAL INFECTIONS AMONG STUDENTS OF THE FACULTY OF HEALTH CARE AND SOCIAL WORK, TRNAVA UNIVERSITY AND STUDENTS OF SECONDARY MEDICAL SCHOOL IN TRNAVA

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Key words: epidemiology of chlamydial infection, sexually transmitted diseases, risk factors of chlamydial infection, prevention of chlamydial infection

Nowadays, chlamydia infections are increasing among population worldwide. Sexually transmitted infections (STI) are among the most common health problems that are currently affecting the population. Disease caused by *Chlamydia trachomatis* is often referred as a "silent". It means that this infection is typically asymptomatic and it causes serious health complications in both sexes. Chlamydial infection is associated with several risk factors like promiscuity, homosexuals and prostitutes, early sex life, sex without protection, low socioeconomic status. Sexual abstinence, monogamous partnerships, protection during sex and education of the population could be an effective form of prevention.

The main aim was to compare the awareness of risk factors and prevention of chlamydial infections among students of the Faculty of Health Care and Social Work, Trnava University and students of Secondary Medical School in Trnava. Our research is a cross-sectional study with a number of 279 respondents who were divided into two research files, that is 131 secondary students and 148 university students. Data were obtained by a questionnaire survey which was conducted at high school and university in Trnava.

Almost 80% of the university students but less than 70% of the high school students have known that incidence of chlamydial infections rises. 54% of the university students have reported that the sexually transmitted chlamydial infection is one of the three most common diseases in the world. The same has been reported only by 28% of the high school students. The high school students have been better informed about risk factors of chlamydial infection. More than 90% of both groups of the students have already heard about the prevention of STI but less than 80% of these students have already heard about prevention of sexually transmitted chlamydia. The students from university have been more informed about effective prevention of the infection than the high school students.

The conclusions show to the relatively higher awareness of epidemiology and prevention of chlamydial infections among university students in comparison to high school students. High school respondents, however, had a better view of risk factors for sexually transmitted chlamydia in comparison to university students. They indicate that there is the need to highlight this issue in the future.

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AGING POPULATION IN EUROPE –MORE DEATH FROM FALL?

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Keywords: aging, falls, injuries, death, forecasting, population

Falls are prominent among the external causes of unintentional injury worldwide. The frequency of falls increases with age and frailty level. Older people who are living in nursing homes fall more often than those who are living in community. Approximately 28-35% of people aged of 65 and over fall each year.(WHO, 2007) Falls occur as a result of a complex interaction of risk factors. The main risk factors reflect the multitude of health determinants that directly or indirectly affect well-being. Those are categorized into four dimensions: biological, behavioural, environmental and socioeconomic factors. Age is the number one biological factor and its importance increases with population aging. Women are more likely than men to fall and sustain fracture, resulting in twice more hospitalizations and emergency department visits than men. However, fall-related mortality disproportionately affects men. (Tromp et al., 1998)

This paper studies the time series of deadly injuries resulting from falls in Slovakia, neighboring countries and the European Union. Using population projection it looks at prospects of the mortality from falls. Clinical interventions, such as vitamin D supplementation, exercise or physical therapy programmes, and some comprehensive multifactorial fall assessment and management interventions can reduce falls and are safe for community-dwelling older adults. Fall interventions at different settings, such as nursing homes, community, and hospitals have been developed and proven to be successful. The lack of dissemination of this knowledge into practice may explain the meagre progress that has been observed so far in falls prevention.(Alamgir et al., 2012) The paper outlines the needs for services for aging population and the perspective in countries of interest.

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PATIENT SAFETY IN AGING POPULATION

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Key Words: patient safety, culture, audit, seniors, improvement

The aim of the contribution is to discuss patient safety (PS) with the focus on senior patients and citizens. Experiences from a joint initiative of hospitals within the Trnava region and Faculty of Health and Social Work Trnava University are used as background. Internationally recommended PS tools were piloted in Slovak environment. The survey of patient safety culture (PSC) in three hospitals using AHRQ questionnaire was performed (1787 respondents in total were interviewed with 75% RR) as the first step. The results documented that 75% threshold for designation, as strength was not reached in evaluating positive responses in none of PSC dimensions. Thus the main area for improvement is hospital management and reporting of adverse events. Subsequently the WHO PS audit was piloted in two hospitals at departmental level (neurology and urology). Incidence of adverse events was 9% eventually 3,77% from the limited number (100 eventually 53) of medical records audited. Despite several limitations of the method used, age as significant risk factor was not confirmed. Adverse events relation with LOS was more critical. Falls and medication lapses next to health care associated infections were between leading causes. In spite of the fact, that active fall prevention is already recognised procedure, it is not implemented effectively. Audit as well as a study on safety indicators demonstrated that the medication safety is another target area to be improved. Recommended reconciliation of prescription is favourable in case of aging population with polymorbidity. Meaningful use of information and communication technologies has to enhance, too. Better access to information- by both - staff and chronically ill patients is to be tackled as well. Intelligent alarm tools for improving patient and senior citizens safety in their actual environment were piloted in Slovak environment (MonAmi platform), but in some HC facilities the problem is functional basic signalisation systems.

One can conclude, that for the sake of improved patient safety in hospitals especially for the group of seniors utilisation of managerial tools, access to new technologies and also continuous motivation of staff and multi professional education are equally important.

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STILL DISMAL PROGNOSIS OF PANCREATIC CANCER

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Pancreatic cancer is the fourth cause of cancer related mortality last years. Patients rarely present early and at time of diagnosis usually have advanced disease. Only 20% of patients present with resectable tumors. There are 2.201 new cases of pancreatic cancer with a projected mortality of 56, 5 % based on recent cancer statistics in Czech Republic in 2013 (data of IBA, Brno).

The only known curative treatment for pancreatic cancer is surgical resection with negative margins (R0) for T1-3, N0-1, M0. Standard treatment for advanced pancreatic cancer (T3-4, N0 – 2, M0 – 1) has had minimal impact on natural course of the disease. Current standard chemotherapy for healthy, robust patients remains FOLFIRINOX chemotherapy which showed 4-month overall survival benefit compared to gemcitabine alone. Recently MPACT study showed that adding nabpaclitaxel to gemcitabine significantly improved overall survival compared to gemcitabine. However, the combination remains more toxic compared to gemcitabine. Erlotinib is the only targeted therapy drug which has shown statistically significant but only modest improvement in median survival. Both antiangiogenic agents and epidermal growth factor receptor (EGFR) antibodies have failed to improve survival in pancreatic cancer patients. Benefit of tumor ablation (RFA, IRE) for the prolongation of overall survival was not proved.

The rationale for delivering preoperative treatment to patients with borderline resectable tumors, as defined originally by Varadhachary *et al.* in 2006, and subsequently endorsed by Americas Hepato- Pancreato-Biliary Association (AHPBA) and National Comprehensive Cancer Network (NCCN) guidelines, is based on potential downstaging to maximize R0 resections, selecting for surgery patients with stable or responding disease, early treatment of micrometastatic disease and giving therapy in a neoadjuvant setting, when it is expected to be better tolerated. Although this strategy has a sound rationale, its merits have not been demonstrated yet.

Resection is only one therapeutic procedures which (with adjuvant chemotherapy) prolongs survival significantly (T1-3,N0-1,M0), 2 - palliative treatment do not lead to significant prolongation of survival and results are comparable to non-treated patient (T3-4,N1,M0-1), 3 - patients survival is significantly better in high volume centres to compare to population data, 4 - radical resection versus palliative procedure in stage IIB leads to significant better survival in high volume centres, 5 - adjuvant CT increase survival significantly.

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MENTAL AND PHYSICAL HEALTH WITH OMEGA-3-FATTY ACID

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Key words: Atherosclerosis, Dementia, Omega-3-fatty acid, Healthy Aging

In spite of the constant improvement in medication, the number of patients who are victims of atherosclerosis, lipid disorders, hypertension, and diabetes, is growing in the Western industrial nations. After decades of deficient lifestyle, including malnutrition, lack of physical activity, smoking, overconsumption of alcohol, obesity and too much stress, we are now confronted with the dire consequences, particularly for the aged ones: In addition to the usual age-related complaints, such as rheumatism and reduction of sight and hearing, chronic diseases are on the rise and impair the human organism.

The isolation of elderly people, often common in modern society, makes the situation of these patients even more difficult. Lack of interest in intellectual or other activities, lack of interest in the daily news, hardly any hobbies or occupations or participation in social events, far and few contacts...All this accounts for their loneliness, lethargy and detachment of the reality, accelerating mental deterioration and dementia, even without genetic predisposition to such diseases.

These diseases do not only affect the patients themselves but also their families and finally our society variably, in particular the financial support. The costs of hospital treatment, the intensive medical care after a heart attack or stroke, as well as the long-term care in nursing homes, are a meaningful and highly financial burden for the society.

The far-reaching negative effects of chronic metabolic diseases and dementia can be prevented by making people seriously aware of these hard facts, by triggering aggressively motivating campaigns which will convince them to change their life styles and ensure a healthy (and happy) aging process. Not only a general healthy diet and exercise play a major role but also unsaturated fatty acids, especially the omega-3 fatty acid. It has been shown in a number of studies that a regular intake of omega-3 fatty acid not only in the form of food, but also as supplementation, can protect against these diseases or can improve symptoms of already existing diseases.

The full text also discusses the bioavailability and diverse mode of action of omega-3 fatty acid. It is interesting that Omega-3 fatty acids show not only extremely good effects on inflammatory processes, but also on brain structure and performance.

OVERVIEW OF INFECTION DISEASES IN ELDERLY: CURRENT SITUATION IN UNIVERSITY HOSPITAL TRNAVA

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Except of cardiovascular and oncological diseases, elderly population deserves also our attention for skin and soft tissue infection, serious infection associated with health care, post antibiotic diarrhea, infection of bloodstream, uroinfection and other respiratory infection. Main risk factors are physiological depression of immunity, many medical investigations and therapeutically processes, malignancies, local and iatrogenic influences and stress from social situation also. The frequent problems of health in elderly people are infection of skin and soft tissue as erysipelas, herpes zoster, chronic ulcers cruris and diabetic foot. The extended problem by age are internal diseases as disorder circulation lymphatic, arterial and venous systems of inferior extremities, accompanying with arteriosclerosis, diabetes mellitus and increasing trend of extreme obesities. Treatment and prevention of streptococcal skin infection and mycotic ragades is necessary. Not only medical, but local nursing, nutrition and attention for recent methods as vaccination are new strategy to take aim for healthy aging. Rational antibiotic therapy can help to stop great problem of multiresistant nosocomial infection.

USING A COMMUNITY BASED COALITION TO IDENTIFY AND ADDRESS DEPRESSION IN THE AGING POPULATION

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Depression is a prevalent acute and chronic disease globally. Many socially isolated elders who have experienced loss of significant others, migration of children, and other losses often are at risk for adverse behaviors and thoughts. The presenter will discuss how a community based model was used in a city with a population of under 80,000 residents to identify signs of depression and support those individuals with education and referral to available resources.

THE COMPLEX *BORRELIA BURGDORFERI SENSU LATO* CIRCULATING IN NATURAL FOCI OF *IXODES RICINUS* IN POVAŽSKÉ PODOLÍ

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Keywords: *Borrelia burgdorferi sensu lato*. *Ixodes ricinus*. Polymerase chain reaction. Relative density. Prevalence of pathogens.

The Lyme Borreliosis disease is nowadays considered the most widespread, tick-transmitted infection, primarily affecting the population in the northern hemisphere. Abiotic factors of the microclimate such as temperature, humidity, saturation or vapour pressure deficit and wind influence the survival of ticks and their questing behaviour in the habitat. New foci in the areas are associated with the spread of tick-borne pathogens. 846 cases of this disease were reported in Slovakia during 2013. The originator of this infection, the *Borrelia burgdorferi sensu lato* is a complex of 19 different genospecies, with different ecology, epidemiology and pathogenesis with different clinical forms of the disease.

The analysis of pathogens in the vector *Ixodes ricinus* is a way to estimate the risk of Lyme disease on humans in natural foci. The work in this case was focused on identifying the complex *Borrelia burgdorferi sensu lato* circulating in natural foci and assessing the relative densities of *Ixodes ricinus* in Považské Podolí for the harvest season from May to October in 2013.

495 *Ixodes ricinus* individuals were collected with the use of Flag technik. Genomic DNA from each tick was isolated by the method of alkaline-hydrolysis using 1.25% of ammonium solution. Analysis of the occurrence of Lyme borreliosis disease pathogen was performed by PCR amplification method with the intergenic spacer (IGS).

The population density of *Ixodes ricinus* individuals is represented by 46.05 per hour of collection. During one month we collected in total 73 imagoes (14.75 %), 407 nymphs (82.22 %) and 15 larvae (3.03 %). Ninety-two of the 253 examined ticks were infected with spirochetes complex *Borrelia burgdorferi sensu lato*. The infectivity of the pathogen in imagoes was around 32.00 %, nymphs with 37.79 % and larvae at 10.00 %.

The epidemiologically most important tick in Europe, *Ixodes ricinus*, transmits viral, bacterial as well as protozoan pathogens to humans and animals. The most commonly occurring in Europe and the most serious bacterial agents transmitted by this tick are spirochetes from the *Borrelia burgdorferi sensu lato* complex. They are causative agents of Lyme borreliosis, the multisystemic disorder that is maintained in natural foci in a wide spectrum of vertebrate reservoir hosts. Our data suggest that the risk of *Ixodes ricinus* transmissible Lyme borreliosis disease in Puchov district represents up to 36.36 %. Despite the high relative density of *Ixodes ricinus* in selected locations, and a high prevalence, the risk of infection is still influenced by socio-economic factors.

HEALTH PROBLEMS OF HUMAN AGING: REASONS AND SOLUTIONS.

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Key words: aging, life style, health, regenerative medicine

The aging of human population together with the life style of our generation explain the enormous increase of civilization diseases accompanied with bright complex of problems, economical, health care, social and in the first line, they influence the quality of life. In our presentation we will focus on the reasons and also the possibilities and limits of new field of medicine – the regenerative medicine (RM). The RM is using new attempts based on the use of stem cells and new biocompatible materials for the repair of damaged tissues and organs. The possibilities of RM are very promising, but they have also limits. The main limit is the age! And the aim of this medicine is to give the people new life. But the best results are obtained in young and healthy people, usually after tissue and organ damage. In elderly people are the results not so optimistic. The other limit represents the extremely high costs and the need of high-specialized centres. According to these facts, the optimal solution of present, and also much worse future situation, is the prevention, i.e. better life style and the responsibility to itself.

CARDIOVASCULAR DISEASE: COMBATING RISK FACTORS IN CZECH REPUBLIC, HUNGARY, POLAND, AND THE SLOVAK REPUBLIC

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According to the World Health Organization (WHO) every year an estimated 17 million people globally die from cardiovascular diseases (CVD). Nearly 60% of all deaths in Europe are attributed to CVD: which includes three common conditions: Ischemic heart disease, stroke (Cerebrovascular disease) and congestive heart failure (CHF). The Council of Ministers of the European Union (EU) has emphasized that CVD is the “largest cause of sickness and morbidity,” and is a “major cause of death and premature death” as well as leading to a reduced quality of life for the citizens within the European Union. Although heart attacks and strokes are major killers in all parts of the world, 80% of premature deaths from these causes could be avoided by controlling the major risk factors.

The risk factors discussed on in this presentation include smoking, diet, physical activity, and alcohol consumption as well as and the policies and mandates that are enacted by the European Commission (EC). The focus is on the Czech Republic, Hungary, Poland and the Slovak Republic and how these countries have adapted prevention programs and complied with standards set forth by the EC to reduce risk factors. The Author will explore the impact of various prevention efforts including the Multinational MONitoring of Trends and Determinants in Cardiovascular Disease (MONICA), the Countrywide Integrated Noncommunicable Disease Intervention (CINDI), and the World Heart Federations “World Heart Day”.

POPULATION HEALTH & AGING: REDESIGNING HEALTHCARE SERVICES & SYSTEMS TO IMPROVE OUTCOMES

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Throughout the world, global health management has seen new efforts initiated to improve population-based health. Reducing and effectively managing chronic disease has important financial implications and improvement in quality of life. Research suggests that use of improved technology to monitor health on an outpatient bases reduced rates of hospitalization. Wellness programs increase positive health outcomes for older adults and reduce rates of hospitalization. Improvements in health literacy have been shown to reduce utilization of healthcare resources and diagnostic testing. Having a primary care medical home (PCMH) increases coordination of care among specialists. Patient-directed care increases the involvement of adults in making significant behavioral change to sustain health, and adds value to the treatment and coordination of healthcare across the continuum of care for older adults. Implications of changing the national system of care is explored.

THE USE OF BIOMARKERS IN PATIENTS WITH MILD TRAUMATIC BRAIN INJURY

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Keywords: Biomarker, elderly Population, traumatic Brain injury, rapid Assessment

A population-based study conducted in New Zealand found a substantially higher incidence of TBI than in previous studies (790 per 100,000 person-years; 95% CI 749–832). Therefore, sensitive decision rules are essential for the use of cranial CT as a reliable imaging modality for diagnosis of intracranial traumatic lesions. The use of Biomarkers like S100b is a novel method to accurately S-100B is the most widely studied neuro-marker in traumatic brain injury (TBI). S-100B in combination with a set of clinical parameter (Glasgow Coma Scale (GCS), nausea, vomiting, unconsciousness, amnesia) was found statistically significant to indicate cranial computed tomography (CCT) in patients with minor head injury (MHI).(2) Elevated S100B serum levels are highly sensitive, but have a low specificity. For example, other injuries like fractures, soft tissue hematomas, etc. cause also elevated S100B serum levels.

We conducted a study to define a set of parameters to identify patients at risk for traumatic intracranial lesions.

Serum levels of S100B were measured in all patients with traumatic brain injury at a university based level-1 trauma center within a 13-month period. We included patients with blunt head trauma admitted to our hospital. S100B serum levels were measured within 3 hours after injury. All patients received an emergency CT scan. Patient data were acquired Prospectively.

The study included 107 head trauma patients with a mean age of 59 ± 23 years. In twenty-five patients traumatic lesions on cranial CT-scan were found. Eight patients underwent craniotomy. The analysis provided a model with good overall accuracy for discriminating cases with clinically important brain injury, including the 6 variables of S100B, NSE, nausea, amnesia, vomiting, and loss of consciousness.

The integration of the neuromarker panel as part of a diagnostic rule including the high-risk factors nausea, vomiting, amnesia, and loss of consciousness is safe and reliable in determining a diagnosis, pending the availability of more brain-specific neuromarkers.

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CARE OF OLDER REFUGEES

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Refugee is a person who has been owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is out-side his country of origin and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it (The 1951 Convention Relating to the Status of Refugees and 1967 Protocol Relating to the Status of Refugees). At the beginnig of 2013, the latest figures show that the number of refugees is around 10.4 million refugees (Refugee Figures, <http://www.unhcr.org/pages/49c3646c1d.html>). For the first half of this year the number of new asylum application is higher than the same period of a previous year (24%). It is estimated that the number of asylum claims that will be submitted in the 44 industrialized countries for the whole of 2014 may reach 700,000.

And how old people should be to be recognized as older refugees? According to UNHCR's Policy on Older Refugees (2000) the definition of an older person is a person over 60 years old. However, the application of the policy on older refugees respects factors such as life expectancy and cultural norms that differ from region to region.

From all these people, some of them are more vulnerable than others and older refugees are more vulnerable. Older refugees have specific needs that are routinely neglected in humanitarian plannig and programming. They can be particularly vulnerable during conflict or natural disasters. Lack of mobility, weakened vision and chronic illnesses such as arthritis or rheumatism can make access to support difficult, and aid services often do not take these issues into consideration. In times of displacement, older refugees are sometimes reluctant to leave their home and are therefore often the last to flee from danger. Once displaced, olders suffer great upheaval and often become both socially isolated and physically separated from their families, increasing their vulnerability (Getting on and in Need, <http://www.unhcr.org/pages/49c3646c11.html>). This article is focused on this group of refugees, we write about resons of vulnerability of older refugees and about care of them. The goal of a care is to older refugees live in dignity and security and full lifes

A

Adameková, K. · 31
Adamišín M. · 34
Avdičová M · 38

B

Bandosz P · 38
Bárdyová, Z. · 1
Benedikovičová, A. · 2, 32
Bielik, P. · 30
Bošák, V. · 25
Brazínova A. · 5, 40
Brezina M. · 40
Brnova, J. · 12
Brňová, J. · 11
Bučková V. · 43

C

Capewell S · 38
Capíková S. · 23
Cosgrove, S. · 7

D

Danosová, M. · 8
Daviničová, S. · 35
Davis, T.J. · 10
Dudáková, K. · 11

G

Galuszka J. · 21
Garabasova, M. · 12
Gonçalvesová E · 38
Gonšorová V. · 5
Grendová, K. · 11, 14

H

Hlinková, S. · 27
Horváthová, M. · 1
Hutková, J. · 15

C

Chernioglo, L. · 16

I

Ilievová, L. · 17

J

Jakobejová, J. · 17
Jakubcová, D. · 32

K

Kačmariková M. · 41
Kačmáriková, M. · 18
Kállay, A. · 20
Kállayová D. · 46
Konečná J. · 21
Konečná, J. · 28
Kostičová M. · 23
Kršáková A. · 34
Krúpa, M. · 25

L

Leitgeb J. · 53
Lesňáková, A. · 27, 30
Loudová, S. · 28

M

Madarász, Š. · 30
Mahle A.J. · 31
Machajova, M. · 32
Machajová, M. · 18
Machálková, L. · 8
Majdan, M · 33
Maniková K. · 34
Masaryk, V. · 30
Mauritz, W. · 33
Mikšová Z. · 21
Mikšová, Z. · 28
Miroslav Ryska · 45

N

Naďová K. · 44
Naďová, K. · 35
Nelson, T.P. · 36
Nikodemová, D. · 1

O

O'Flaherty M · 38

P

Pallath, S.V. · 37
Pekarčíková J · 38
Psota M · 38
Psota M. · 5
Psota, M. · 32
Pšenková M · 38

R

Rehorčíková V. · 40
Rehorčíková, V. · 33
Rehtoríková V. · 41
Rusnák M. · 43
Rusnak, M. · 33
Rusnák, R. · 27, 30
Rusnáková V. · 44
Rusnáková, V. · 35

S

Sarahrudi K. · 53
Schaffer S.R.M · 46

Staňová, Z. · 14
Streharova, A. · 12, 47
Studenčan M · 38
Szydłowski S.J. · 48

S

Šaňáková Š. · 21
Šaňáková, Š. · 28
Špajdelová, J. · 49
Štastná, V. · 32
Štiglicová, A. · 2

V

V. Bošák · 3
Vojtaššák J. · 50
Vrablová, G. · 49

W

Weiss R.M. · 51
West, D. J. · 52
Wolf H. · 53

Z

Žáková, M. · 54
Žampachová A. · 41
Žatko, M. · 25
Žitný, P. · 17