



30 years of Albanian Medical Journal (Revista Mjekësore)

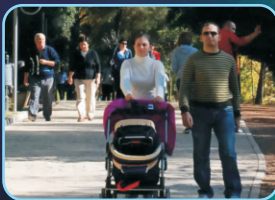


# ALBANIAN MEDICAL JOURNAL

## SUPPLEMENT

### INTERNATIONAL PUBLIC HEALTH CONFERENCE

Tirana 6-7 May 2013



INSTITUTE OF PUBLIC HEALTH





INSTITUTI I SHENDETIT PUBLIK

# ALBANIAN MEDICAL JOURNAL

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# **INTERNATIONAL PUBLIC HEALTH CONFERENCE IN TIRANA, ALBANIA**

## **Date and Conference theme**

The International Public Health Conference organized in Tirana, Albania on May 6-7 2013, "*Public health challenges related to non-communicable diseases*".

## **Conference aim**

The International Public Health Conference aims to contribute to the improvement of public health in Albania by offering a means for exchanging information and a platform for debate to researchers, policy makers, and practitioners in the field of public health and health services research as well as public health training and education in Albania.

## **Conference venue:**

Tirana International Hotel & Conference Centre  
Skanderbeg Square 8, Tirana, Albania

## **Organization**

The International Public Health Conference is organized by the Institute of Public Health (IPH) under the auspices of the Albanian Ministry of Health. Funding for this Conference was provided by UNICEF, WHO, UNFPA, UNAIDS and IPH.

The opinions expressed herein are those of the authors and do not necessarily reflect the views of UNICEF, WHO, UNFPA and UNAIDS.

## **Additional information about the**

International Public Health Conference organized in Tirana, Albania, on 6-7 May 2013 may be obtained from:

**THE INSTITUTE OF PUBLIC HEALTH**

Street Address: "Aleksander Moisiu" 80, Tirana, Albania

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# **PLENARY SESSIONS**

## **Moderators:**

**Enver Roshi, Eduard Kakarriqi, Genc Burazeri,  
Arben Luzati**

## Why a conference on non-communicable diseases in Albania?

Enver Roshi<sup>1,2</sup>, Eduard Kakarriqi<sup>1,2</sup>, Genc Burazeri<sup>1,2</sup>, Bajram Hysa<sup>3</sup>

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There is solid and consistent evidence that non-communicable diseases (NCDs) have increased in Albania in the past decade. In 2008, NCDs accounted for about 89% of the overall mortality in Albania (cardiovascular mortality accounted for 59%, whereas cancer mortality accounted for about 18%). In 2003, the share of NCDs comprised 76% of the overall mortality in Albania (cardiovascular diseases accounted for 52% and cancer mortality accounted for 14% of the overall mortality).

Overweight and obesity are major risk factors for NCDs. Findings from the Albanian Demographic and Health Survey (ADHS, 2008-09) indicate that among Albanians aged 15-49 years, 53% of men were overweight (of whom, 9% were obese) and 39% of women were overweight (of whom, 10% were obese). However, such a risk factor as obesity, takes effect since early childhood. The survey data

of the Institute of Public Health in Albania (PPKZH, 2008) indicated that 15.2% of children aged 9-10 years were overweight, of whom 3.8% were obese. Concerning the adolescents category (age-group: 15-19 years), according to ADHS 2008-09, the prevalence of overweight was higher among boys (20.5%) than among girls (7.9%). Conversely, the percentage of obese boys and girls aged 15-19 years was 1.3% and 1.4%, respectively.

This international public health conference is an important contribution to the currently available information and facts on the public health significance of NCDs in Albania and beyond. Presentations and other scientific materials from this conference will help health professionals but particularly policymakers to design and implement effective and efficient intervention programs to control and prevent NCDs in the adult populations.

**Keywords:** *Albanian Demographic and Health Survey; morbidity; mortality; non-communicable diseases.*



## ***Albanian Medical Journal: A modest endeavor for stimulating research and a culture of scientific communication in the most isolated former communist country in Europe***

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<sup>3</sup>Department of International Health, School for Public Health and Primary Care (CAPHRI),

Faculty of Health, Medicine and Life Sciences, Maastricht University, Maastricht, The Netherlands.

In post-communist Albania, there is no sufficient research directed towards gaining a clear understanding of the health effects of transition and the fluctuations in health outcomes. A general characteristic which I have previously described in the scientific literature (Burazeri et al. 2009) relates to the problems faced by Albanian scientists for engaging in research work which basically include the following features: *lack of funds, lack of expertise and, lack of "good data"*.

As a matter of fact, the current (international) public health conference in Tirana (May 6-7, 2013) is a perfect venue for dissemination and communication of research findings pertinent to surveys and other research work conducted in Albania and other countries in the Western Balkans such as, e.g., Demographic and Health Surveys which involve also a detailed assessment of a wide array of lifestyle/behavioral characteristics and pre-existing chronic conditions in nationwide representative samples of adult populations.

There is an obvious case for action to change the

“state of mind” and the scientific paradigm of medical scientists and public health researchers in Albania in terms of raising their awareness about the pressing need to present their research findings in international conferences and subsequently publish full-length papers in scientific journals in the English language. This is the only means for ensuring an adequate and prompt communication and exchange of the scientific information with the peers, scientific groups and research community at large.

The only way for a small country such as Albania to cope with the current publication scantiness is to introduce and follow the best international scientific principles and quality criteria of research methods, and increase gradually the critical mass of competent researchers.

*Albanian Medical Journal* aims to fill this void by providing a modest yet important setting for publication of research findings from studies conducted not only in Albania, but also in other countries of the Western Balkans and beyond.

**Keywords:** *Albanian Medical Journal, medical literature, research, Western Balkans.*

## Mortality patterns in Albania: An overall picture over the period 2001-2009

Eduard Kakarriqi<sup>1,2</sup>, Bajram Dedja<sup>1</sup>, Bukurie Gega<sup>1</sup>, Alban Ylli<sup>1,2</sup>,  
Ervin Toçi<sup>1</sup>, Alba Merdani<sup>1</sup>, Dorina Çanaku<sup>1</sup>, Sonela Xinxo<sup>1</sup>,  
Kozeta Filipi<sup>1</sup>, Miranda Hajdini<sup>1</sup>

<sup>1</sup>Institute of Public Health, Tirana, Albania;

<sup>2</sup>Faculty of Public Health, University of Medicine, Tirana, Albania.

**Aim:** This study aims at displaying an overall picture of mortality rates – MRs (deaths per 100,000 population) in Albania over the period 2001-2009. The huge amount of our data makes quite impossible to portray in detail such an important issue into the context of a conference presentation.

**Methods:** Mortality data (based on death certificates) are obtained by the official annual publications of the Institute of Statistics (INSTAT), whose content does not provide the desirable outputs on the matter. The available data were analyzed in order to obtain crude and standardized (world population as standard population) general (=all causes), gender-specific MRs, crude and standardized gender-specific cause-specific MRs, and crude and standardized gender-specific, age-specific and cause-specific MRs, all of them at district, regional (prefecture) and country level over the period from 2001 to 2009 (the last annual INSTAT publication on mortality in Albania).

**Keywords:** *INSTAT, mortality patterns, mortality rate*

**Results:** Main findings include the following: (i) the trends over the period 2001-2009 of the crude and age-standardized gender-specific general (=all causes) MRs at prefecture and country level; (ii) the proportion of crude gender-specific cause-specific MRs towards the crude general gender-specific MRs at country level; (iii) the trends over the period 2001-2009 of the crude gender-specific cause-specific MRs at country level.

**Conclusion:** The access of the Institute of Public Health (IPH), namely its National Epidemiological Observatory, to the INSTAT database as regards mortality data (=individual death certificates), is the only solution towards the production by the IPH of the detailed mortality indicators according to the requirements of the WHO, Eurostat, and ECDC. Otherwise, following the current *modus operandi* on the matter, we will continue to fail.

## Strategies for prevention of non-communicable diseases

Doncho Donev<sup>1</sup>

<sup>1</sup>Institute of Social Medicine, Faculty of Medicine Ss Cyril and Methodius University in Skopje, Republic of Macedonia.

**Aim:** To present two basic strategies for prevention of non-communicable diseases (NCDs) and their strengths and weaknesses.

**Methods:** Starting from the WHO European Strategy and Action Plan for prevention and control of NCDs in the period of 2011-2015, an analysis of the relevant literature on experiences in many countries in prevention of NCDs was conducted.

**Results:** There are two basic strategies for prevention of NCDs: population strategy and strategy for high-risk individuals. *Population strategy* is aimed at reducing the level of risk factors in all individuals in the general population through creating conducive environment that enables the adoption of healthy lifestyles and appropriate legislation, taxation and financial incentives from the government. Although the effect is small at the individual level, the strategy has a large impact on population level,

in particular it does not require behavioral changes and can give quick effects. Such strategies are often very cost effective and can even generate profit. It offers achieving good for all. *Strategy for high-risk individuals* is aimed at detection and treatment of high-risk individuals through screening (e.g. for high blood pressure) and treatment before complications occur. It offers achieving large effects in a few people, but has little impact on population level. It requires behavioral changes at the individual level (cooperation). Often the costs are high (drugs for years for many patients), and it is possible to achieve good for some.

**Conclusion:** The population strategy has several advantages, but in practice it is necessary to use a combined approach for the detection and treatment of high-risk individuals, too. It is necessary for the implementation of the strategies to be followed by appropriate action plans for communication of the effects to the overall population.

**Keywords:** *non-communicable diseases, high-risk individuals, population strategy, prevention.*

## The burden of disease from non-communicable diseases in the Republic of Macedonia in 2011

Azis Pollozhani<sup>1</sup>, Shaban Memeti<sup>1</sup>, Vladimir Rechica<sup>1</sup>

<sup>1</sup>Institute of Public Health of the Republic of Macedonia.

**Aim:** With the majority of the population living into old age and so increasingly at risk of chronic disease and disability, the need for information on quality as well as quantity of life in the Republic of Macedonia has become more pressing. We analyzed cardiovascular diseases, malignant neoplasms, diabetes mellitus, respiratory and urinary diseases that were responsible for approximately >80% of male and female mortality in 2000 and 2011.

**Methods:** The Macedonia burden of disease study (BoD) is largely based on the methods developed for the Global BoD Study. The method allows the quantification of all states of ill-health into a common indicator that is disability-adjusted life years (DALY). The reference year for the analysis was 2011 compared with 2000.

**Results:** The increase of DALYs (per 1000 population) in 2011 compared with 2000 was 10.4% for all cause mortality. In particular, we noticed an increase of 10.8% for circulatory mortality, 4.3% for malignant neoplasm and diabetes, and 2.3% for urinary infections. According to our estimations, a total of 18641 DALYs in the country will be saved under the assumption that the selected risk factors would decrease by 5% in a given time frame.

**Conclusion:** The results coming from the BoD analysis in the Republic of Macedonia are not only of relevance for the decision-makers in the government, but also for all key institutions related to health. The DALYs measure is a promising tool to improve the capacity of public health professionals to assess population health and establish evidence-based decision-making in public health.

**Keywords:** *burden of disease, disability-adjusted life years, mortality, Republic of Macedonia.*

## Assessment of risk factors for chronic diseases in Kosova- STEPSwise approach

Sanije Gashi<sup>1,2</sup>, Naser Ramadani<sup>1,2</sup>, Merita Berisha<sup>1,2</sup>, Silvije Vuletić<sup>3</sup>

<sup>1</sup>National Institute of Public Health, Pristine, Kosovo;

<sup>2</sup>Medical Faculty, University of Pristine, Pristine, Kosovo;

<sup>3</sup>School of Medicine, University of Zagreb, Zagreb, Croatia.

**Aim:** In 2005, the major chronic, non-communicable diseases accounted for 60% of all deaths and 47% of the global burden of disease. About 80% of chronic disease mortality is already occurring in low and middle income countries. The aim of this study was to carry out an epidemiological survey on risk factors for chronic diseases in Kosovo, according to the protocol of WHO: “*STEPSwise approach to chronic disease risk factor surveillance*”.

**Methods:** According to the STEPS methodology, 6117 people aged 15-64 years were included in this survey: 3028 (49.5%) males and 3089 (50.5%) females. This survey was conducted for the first time in Kosovo in 2010-2011.

**Results:** Currently, 28.4% of responders smoke cigarettes, males more often than females (37.4% vs. 19.7%, respectively). According to the survey

findings, the prevalence of alcohol consumption is not high in Kosovo. Lifetime abstainers of alcohol constitute 75.5% among the males and 93.1% among the females (overall prevalence: 84.4%). In a typical week, more than half of the responders (55.5%) declare that they eat fruits every day. The mean number of fruit servings consumed per day is 1.6, with no evidence for a sex-difference. Only 11.5% of the responders declare that they make vigorous physical activities and 19.2% of the population 15-64 years old is obese.

**Conclusion:** Our findings indicate that the main risk factors for development of chronic diseases in Kosovo are high prevalent at a population level. Such factors include smoking, physical inactivity and obesity. Conversely, alcohol intake is quite low in the adult population of Kosovo.

**Keywords:** *chronic diseases, non-communicable diseases, Kosova, risk factors, STEPS methodology*

## The prevalence of adverse childhood experiences and their relationship with behavioral factors in the Albanian young population

Gentiana Qirjako<sup>1,2</sup>, Genc Burazeri<sup>1,2</sup>, Bajram Hysa<sup>3</sup>, Erka Amursi<sup>2</sup>, Alban Ylli<sup>1,2</sup>, Gazmend Bejtja<sup>4</sup>, Vasil Miho<sup>5</sup>, Dinesh Sethi<sup>6</sup>

<sup>1</sup>Faculty of Public Health, University of Medicine, Tirana, Albania;

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<sup>5</sup>WHO Country Office, Tirana, Albania;

<sup>6</sup>WHO Regional Office for Europe, Copenhagen, Denmark.

**Aim:** In the past decade, several international studies have reported on the links between child maltreatment, risky behaviors and various chronic diseases. Our survey aimed to describe the magnitude of Adverse Childhood Experiences (ACE) in the Albanian young population and their associations with risky behaviors.

**Methods:** This survey was conducted in a representative sample of young adults (N=1437) selected from public universities [971 females (67.6%) and 466 males (32.4%); mean age: 21.2±2.3 years]. The data collection consisted of an anonymous and self-administered structured questionnaire.

**Results:** Results showed that the prevalence of child maltreatment in this student population was high: sexual abuse 6%, physical abuse 42%, and emotional

abuse 51%. Overall, 14% of the students reported at least four ACEs and almost half of them reported two or more ACEs. As for the lifestyle/behavioral factors, ACEs were positively associated with smoking, alcohol consumption, early lifetime sexual intercourse, number of sexual partners (>3) and unwanted pregnancies.

**Conclusion:** Of particular importance, the findings of this study conducted in Albania show that the odds of developing health risk behaviors such as smoking, alcohol abuse, illicit drug use, multiple sexual partners and suicide attempts increase with the ACE score, implying a causal relationship. Appropriate strategies are needed for the prevention of child maltreatment in Albania.

**Keywords:** *adverse childhood experiences, alcohol abuse, behavioral factors, drug use, lifestyle factors, smoking.*

# **PARALLEL SESSIONS**

## **Session 1: Chronic Diseases**

**Moderator: Genc Burazeri**

## Depression and self reported mobility among older people in five countries: IMIAS study

Alban Ylli<sup>1,2</sup>, Gentiana Qirjako<sup>1,2</sup>, Genc Burazeri<sup>1,2</sup>, Eduard Kakarriqi<sup>1,2</sup>

<sup>1</sup>Institute of Public Health, Tirana, Albania;

<sup>2</sup>Faculty of Public Health, University of Medicine, Tirana, Albania.

**Aim:** The objective of this study was to assess the association of depression and self-reported mobility controlling for socio-demographic characteristics among older people.

**Methods:** The data for this presentation are based on a pooled sample of 1993 older people from Brazil (Natal), Canada (st. Hyacinte and Kingston), Columbia (Manizales) and Albania (Tirana). In all five sites, all older people aged 65-74 years from a selected community were invited to participate. A structured questionnaire and standard measurements were used, including CES-D scale for depression, SPPB for physical performance, life space assessment instrument and Nagi's functional limitation questionnaire.

**Results:** overall, 27% of participants were classified as having a score of 16 or over in CES-D scale. There were significant variations between sites, with Tirana exhibiting the highest proportion (39%) and

Kingston the lowest one (10%). Depression was significantly higher among females (33%), among those with lower education (31%) and among the poor (37%). As it is documented elsewhere, depression was particularly higher – with prevalence rates of over 70% – among older people with poor physical performance. Depression was significantly higher (42%) among people with lower mobility that is difficulty walking 400 m or climbing stairs. Poor mobility keeps predicting significantly well depression even after controlling for sex, education, income, study site and physical performance (OR 2.2, 95%CI=1.7-2.9). Upon multivariable adjustment, only Tirana and st. Hyacinte display higher odds of depression compared to Kingston.

**Conclusion:** People who feel difficulty in walking or climbing stairs are likely to feel depressed, regardless of their measured physical performance and socio-demographic characteristics.

**Keywords:** *aging, IMIA S study, mobility, older people*



## A primary health care based model for risk factors of non-communicable diseases in Albania

Jeta Lakrori<sup>1</sup>, Sonela Xinxo<sup>1</sup>, Alban Ylli<sup>1,2</sup>

<sup>1</sup>Institute of Public Health, Tirana, Albania;

<sup>2</sup>Faculty of Public Health, University of Medicine, Tirana, Albania.

**Context:** Currently, non-communicable diseases – NCDs (cardiovascular, cancers and chronic obstructive pulmonary disease) account for 89% of deaths in Albania. Risk factors such as tobacco and alcohol use and poor diet are widespread in both urban and rural settings in Albania. Metabolic conditions such as hypertension and diabetes affect the population, but people are often unaware of their condition which may also be poorly managed. Under these circumstances, the prevention and early detection of the NCD risk factors is considered a crucial intervention. Primary Health Care (PHC) in Albania has a traditionally good coverage of the population.

**Methods:** The Albanian Institute of Public Health has started an NCD prevention model based on the standardization of simple techniques to identify higher risk persons and training of PHC staff. Selection of risk factors screening methods is based

in the review of the best practices recommended by GRADE working group. Risk factors included in the standard manual include smoking, sedentary life, alcohol abuse, obesity, high blood pressure, high total cholesterol, poor diet, and poor stress management. In addition, standardized strategies for dealing with positively classified cases are recommended.

**Results:** A two-day course on screening for NCD risk factors is already accredited and four courses are provided in Tirana and Durrës. This model of prevention of NCD risk factors, applied in the primary health care settings, is considered a low-cost approach for identifying the high risk groups for developing NCDs.

**Conclusion:** The continuous capacity building of the primary health care providers, and the systematic monitoring and supervision of the program will be crucial for the long-term success of this model in Albania.

**Keywords:** *non-communicable diseases, prevention, primary health care*

## Hypertension as a major chronic condition in the adult population of Kosovo

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<sup>2</sup>Institute of Public Health, Tirana, Albania;

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In the recent decade, hypertension has attracted even more attention from researchers and policy makers. Hypertension is considered as one of the most widespread medical conditions affecting people worldwide. The main concern is attributed to the morbidity and mortality rate associated with hypertension, a condition which nevertheless can be controlled and prevented at a population level.

Hypertension is also confirmed as an important predictor of coronary heart disease in the Kosovo adult population in both sexes. It is well-documented that hypertension is an important risk factor for ischemic heart disease and this has been confirmed by the Global Burden of Disease Study update for 2004. The particularly rapid pace of transition in Kosovo and its inherent association with hypertension, including also reduced energy

expenditure and resultant overweight and obesity, bear important implications for both the health care and health promotion sectors in post-war Kosovo. The prevalence of diabetes has also increased in Kosovo since 1990 along with a steady increase in the prevalence of hypertension. Therefore, as elsewhere, the increase in the prevalence rates of diabetes and hypertension, consequent to increased obesity and reduced energy expenditure, is another issue of concern in Kosovo and bears important health policy implications, similar to the situation in other populations undergoing rapid transition and social change.

In conclusion, hypertension is ranked high in public health policy agenda in most of the countries including developed/industrialized societies, as well as developing/transitional countries such as Kosovo.

**Keywords:** *hypertension, high blood pressure, Kosovo, transitional countries.*

## Mortality from cerebrovascular diseases in Kosovo for the period 2006-2011

Merita Berisha<sup>1</sup>, Valbona Zhjeqi<sup>1</sup>, Rina Hoxha<sup>1</sup>, Sanije Gashi<sup>1</sup>, Valbona Govori<sup>1</sup>, Naser Ramadani<sup>1</sup>, Drita Zajmi<sup>1</sup>, Ilir Begolli<sup>1</sup>

<sup>1</sup>Institute of Public Health, Pristine, Kosovo.

**Aim:** Cardiovascular diseases (CVD) are the main cause of mortality globally; by 2030, almost 25 million people will die from CVDs, mainly from heart disease and stroke. Most CVDs can be prevented by addressing the risk factors. Heart attacks and stroke are usually acute events. In Kosovo, CVDs are number one causes of deaths too. The aim of this study was to analyze the trend of deaths from cerebrovascular disease (I60-I69) from 2006 to 2011, according to several modalities, as well as age group and gender.

**Methods:** Retrospective data analyses was done, using reports for “*Causes of death in Kosova from 2006-2011*”. Data were presented through tables and graphs; statistical parameters calculated such as relative numbers, trends, and assessed with chi-square test for the statistical significance level set at  $p < 0.05$  and  $p < 0.01$ .

**Results:** In Kosovo, for the period 2006-2011, there were reported 42831 cases of death, of which

30765 or 71.8% were coded according to the “*International Classification of Diseases, revision 3 (ICD-10)*”. Of all deaths, CVDs were ranked as the first cause of mortality with 17642 cases (57.3%). It is worrying that deaths from cerebrovascular diseases (I60-I69) constitute a high percentage (15.5%) in the overall number of deaths coded. According to the years, cerebrovascular diseases tend to increase, and we found statistical significance for this:  $X^2=17.2$ ,  $DF=5$ ,  $P < 0.01$ . Gender proportion was the same, 50.03% for males and 49.97% for females, with no statistical significant difference ( $P > 0.05$ ).

**Conclusion:** In Kosovo, health professionals should work towards addressing, reducing and eliminating risk factors for this group of diseases, with special focus in raising awareness of the population for a healthy lifestyle.

**Keywords:** *cerebrovascular diseases, death, Kosovo, mortality.*

## Prevention of cardiovascular diseases in the Republic of Macedonia

Elena Kosevska<sup>1</sup>, Doncho Donev<sup>2</sup>, Aziz Pollozhani<sup>1</sup>, Shaban Memeti<sup>1</sup>

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<sup>2</sup>Institute for Social Medicine, Medical Faculty, University "Ss. Cyril and Methodius", Skopje, Republic of Macedonia.

**Aim:** The aim of this study is to present the current status of cardiovascular diseases (CVD) in the Republic of Macedonia and preventive measures that are undertaken in order to reduce its related morbidity and mortality.

**Methods:** Statistical data for morbidity and mortality were analyzed. Furthermore, research studies and professional materials from domestic and foreign literature were scrutinized.

**Results:** 57.9% (approximately, 11000 people) died from CVD in the Republic of Macedonia. There is no trend of reducing deaths from these diseases (in 1990: 7113 deaths, or 48.6% of the overall number of deaths). One fifth of deaths were due to ischemic heart diseases (IHD) and 90% of deaths were due to acute heart attack. The rate of hospital morbidity by CVD in the Republic of Macedonia is equal to approximately 172.2/ 10000, with an

average of 35000 patients, mostly men. CVD accounted for 14.3% of the total number of hospital diseases. The most common disease was CHD that mostly occurs after 40 years of life and is more common in men.

**Conclusion:** The Republic of Macedonia follows the WHO recommendations for a comprehensive approach for CVD prevention as a successful public health measure. Thus, in 2013, the Macedonian government adopted a national program for CVD prevention, as it was proposed in the National Strategy for NCD Prevention and Control. A holistic approach in implementation including health promotion and screening is part of the program with more active involvement of primary health care doctors. Main stakeholders include the Ministry of Health, the Institute of Public Health, ten Public Health Centres, and the University Clinic for Cardiology.

**Keywords:** *cardiovascular disease, non-communicable diseases, prevention, Republic of Macedonia.*

## Association of particulate air pollution with hospital admissions in pediatric clinics in Pristine, Kosovo

Antigona Ukëhaxhaj<sup>1</sup>, Naser Ramadani<sup>1</sup>, Dragan Gjorgjev<sup>2</sup>,  
Selvete Krasniqi<sup>1</sup>, Tahire Maloku<sup>1</sup>, Drita Zogaj<sup>1</sup>, Sanije Gashi<sup>1</sup>,  
Arbresha Loxha<sup>1</sup>

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<sup>2</sup>Medical Faculty, University of Skopje "Krij i Metodij", Skopje, FYROM.

**Aim:** Air pollution is a critical environmental problem in urban areas in Kosovo. Ambient air quality is particularly poor in Pristine, the Obiliq area, and the Drenas area. The principal sources of contaminants are sulfur dioxide (SO<sub>2</sub>), nitrogen oxides NO and NO<sub>2</sub> (NO<sub>x</sub>), ozone (O<sub>3</sub>), lead (Pb), carbon dioxide (CO<sub>2</sub>), particulate matter (PM or dust). The objective of this study was to investigate and define the current burden of acute and chronic effects of particulate matters air pollution through specific mortality data and respiratory hospital admissions in UCCK – Pristine, as well as to estimate potential benefits of decreasing of daily PM<sub>10</sub> levels.

**Methods:** The analytical research has predicted the potential benefit of decreasing of daily average for concentrations of O<sub>3</sub>, Pm<sub>10</sub> and PM<sub>2.5</sub> and the impact on human health in Pristine and Drenas for the years 2010, 2011 and 2012. The study population consisted of all hospitalized patients in pediatric clinics for the period 2010-2012. Air pollution measurements was used by KHMI data for the period 2010-2012 for the municipality of Pristine in the measurements point in: KHMI-MESP which is equipped with automatic analyzer sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>) carbon monoxide

(CO), O<sub>3</sub>, suspended particle analyzer PM<sub>10</sub>/PM<sub>2.5</sub> with air pointer Automatic Air Compact Monitoring System (Version 2.2) recordum MESSTECHNIK GmbH. Poisson regression models were used to assess the association of air pollutant concentrations with hospitalization rates.

**Results:** The air quality data from KHMI show that PM, notably, exceeds the European Union limit value of an average annual concentration of 40 µg/m<sup>3</sup> for PM<sub>10</sub>, both in the city center and in the suburban area and often exceeds the one-day limit value (not to be exceeded more than 35 times a year) of 50 µg/m<sup>3</sup>. The overall number of deaths in children for the period 2010-2012 was 4880. Overall morbidity in children was 2389: among children aged 0-4 years there were 1871 (78.3%) cases with respiratory diseases, whereas in children aged 5-14 years there were 518 (21.7%) cases with respiratory diseases.

**Conclusion:** This study has shown strong and consistent associations between children hospital admissions from respiratory diseases and air pollution in Pristine, Obiliq and Drenas. These findings provide evidence that air pollution continues to have a significant adverse effect on population health in Kosovo.

**Keywords:** *Air pollution, airborne particles, children respiratory diseases, hospital admission, mortality*

## Haemoglobinopathies in Albania: A public health challenge

**Manika Kreka<sup>1,2</sup>, Gentiana Qirjako<sup>3</sup>, Eleni Nastas<sup>2</sup>, Anila Godo<sup>2</sup>, Bledi Kreka<sup>4</sup>**

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Haemoglobinopathies are part of a considerable group of chronic genetic diseases, which are always in focus of public health and are at a greater importance. About 7% of the world's population is considered to be carrier of abnormal and pathological gene of hemoglobin.

Our aim was to describe the register of haemoglobinopathic patients' data in the National Center of Haemoglobinopathies in Albania.

The mean age of individuals with haemoglobinopathies patients studied was 17.3 years for females and 16.4 years for males. The mean age of our patients is younger than in other countries. 65 patients belong to the youngest age-group (1-10 years old). About 97% of our patients were born

and live in the west area of Albania and only 3% live in North Albania (Fier: 68 patients; Tirana: 55 patients; Kavaja: 40 patients; Vlora: 36 patients; Durrës: 23 patients; in cities of North Albania: 15 patients).

Patients diagnosed with Beta Thalassaemia and Intermedia constitute 84.5% of the total, and patients with Sickle Cell Disease constitute 15.5%. Patients over 18 years of age have a higher frequency of thalassaemia compared to the Sickle Cell Disease. Haemoglobinopathies are a great public health problem in Albania. Prevention policies related to birth control of individuals with Haemoglobinopathies is a serious challenge.

**Keywords:** *Haemoglobinopathies, Sickle Cell Disease, thalasemia.*

## Self-reported health and type 2 diabetes mellitus in a representative sample of Albanian adults: a cross-sectional study

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**Aim:** Type 2 diabetes mellitus (DM) is an incurable chronic disease. Full collaboration and participation of individual patients is required to successfully manage and control DM. This could affect patients' perception of their health status. In this context, our aim was to assess the association of self-rated health and DM.

**Methods:** A cross-sectional survey was carried out in a representative sample of adults aged  $\geq 18$  years old in Tirana, during April-November 2012. 845 randomly selected individuals accepted to participate (response rate: 84.5%). Participants were asked whether they had been ever told by a doctor that they had diabetes and to rate their own health status. Basic socio-demographic data were also collected.

**Results:** Mean age of participants was 50.4 years old (51.3 years in men and 49.7% in women). The overall prevalence of diabetes in this sample of

adults was 11.5%. Approximately 7% of participants rated their own health status as "poor" (7.0% of men and 7.4% of women). The overall prevalence of diabetes was 11.5%. DM prevalence was significantly higher among those self-perceiving their health status as "poor" (35.2%) and "average" (23.0%) compared to 5.1% of diabetics with "good" health status. In multivariable adjusted analysis, self-perceived poor health was strongly associated with diabetes (OR=6.5, 95% CI=2.9-14.7).

**Conclusion:** DM might be associated with significantly worse quality of life even after controlling for a number of socio-demographic factors. There is need for urgent patient education interventions in order to reduce the stress related to DM among Albanian patients.

**Keywords:** *adults, Albania, diabetes mellitus, self-perceived health.*

## Type 2 diabetes mellitus and the genetic component: opportunities for early prevention

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**Aim:** Type 2 diabetes mellitus (DM) is reported to have a genetic component. Changes in life-style characteristics of Albanian population point toward an increasing prevalence of DM in the future. Any preventive option could help to alleviate DM burden. Our aim was to determine the association of family history of diabetes with the presence of DM among Albanian adults.

**Methods:** During April-November 2012, 845 randomly selected urban Tirana individuals aged  $\geq 18$  years old were interviewed. Participants were asked to report if they had ever been diagnosed with diabetes by a doctor or other medical staff and whether they had any diabetic close relatives. Binary logistic regression was used to assess the association of family history with type 2 DM.

**Results:** Mean age of participants was 50.4 years old (51.3 years in men and 49.7% in women). The overall prevalence of diabetes in this sample of adults was 11.5% (no significant sex difference). Almost one third of respondents (32.4%) had at least one close relative with diabetes. The likelihood of having DM was 4.6 time higher among those with a positive family history for diabetes compared to those having no diabetic relatives (OR=4.6, 95% CI:2.7-7.9) after multivariable adjustment analysis.

**Conclusion:** Type 2 DM has a strong genetic component among Albanian adult population. Educating the general population about this aspect could raise the awareness of diabetic individuals' close relatives to regularly monitor their blood sugar levels and avoid diabetes risk factors.

**Keywords:** *adults, diabetes mellitus, diabetes family history.*



## Stress Reduction in the Secondary Prevention of Cardiovascular Disease Randomized, Controlled Trial of Transcendental Meditation and Health Education in Black individuals

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**Context:** Blacks have disproportionately high rates of cardiovascular disease. Psychosocial stress may contribute to this disparity. Previous trials on stress reduction with the Transcendental Meditation (TM) program have reported improvements in cardiovascular disease risk factors, surrogate end points, and mortality in blacks and other populations.

**Methods:** This was a randomized, controlled trial of 201 black men and women with coronary heart disease who were randomized to the TM program or health education. The primary end point was the composite of all-cause mortality, myocardial infarction, or stroke. Secondary end points included the composite of cardiovascular mortality, revascularizations, and cardiovascular hospitalizations; blood pressure; psychosocial stress factors; and lifestyle behaviors.

**Results:** During an average follow-up of 5.4 years,

there was a 48% risk reduction in the primary end point in the TM group (hazard ratio, 0.52; 95% confidence interval, 0.29–0.92;  $P=0.025$ ). The TM group also showed a 24% risk reduction in the secondary end point (hazard ratio, 0.76; 95% confidence interval, 0.51–1.13;  $P=0.17$ ). There were reductions of 4.9 mm Hg in systolic blood pressure (95% confidence interval -8.3 to -1.5 mm Hg;  $P=0.01$ ) and anger expression ( $P<0.05$  for all scales). Adherence was associated with survival.

**Conclusion:** A selected mind–body intervention, the TM program, significantly reduced risk for mortality, myocardial infarction, and stroke in coronary heart disease patients. These changes were associated with lower blood pressure and psychosocial stress factors. Therefore, this practice may be clinically useful in the secondary prevention of cardiovascular disease.

**Keywords:** *Black men and women, cardiovascular disease, stress reduction*

## Does moderate alcohol use reduce the incidence of coronary heart disease?

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Excessive alcohol intake has been associated with an elevated risk of liver disease, heart failure, cancer, and accidental injury. Excessive alcohol consumption is a leading cause of death in industrialized countries. However, research suggests that moderate alcohol intake is associated with some health benefits including a decreased risk of cardiovascular disease. Public awareness of the “French paradox” in the early 1990s stimulated an increased interest in the subject of alcohol and heart disease. Given the epidemiological evidence that moderate drinking reduces heart disease, it becomes important to examine pathways from which alcohol might confer its cardiovascular benefits. Research suggests that moderate alcohol consumption improves cardiovascular health in a number of ways, including the following:

- i. Alcohol improves blood lipid profile:
  - a. It increases HDL cholesterol.
  - b. It decreases LDL cholesterol.
  - c. It improves cholesterol (both HDL and LDL) particle size.
- ii. Alcohol decreases thrombosis (blood clotting):
  - a. It reduces platelet aggregation.

- b. It reduces fibrinogen (a blood clotter).
- c. It increases fibrinolysis (the process by which clots dissolve).
- iii. Alcohol acts through additional ways:
  - a. It reduces coronary artery spasm in response to stress.
  - b. It increases coronary blood flow.
  - c. It reduces blood pressure.
  - d. It reduces blood insulin level.
  - e. It increases estrogen levels.

There is a lack of medical consensus about whether moderate consumption of beer, wine, or distilled spirits has a stronger association with heart disease. Studies suggest that each drink is beneficial, with none having a clear advantage. Most researchers now believe that the most important ingredient is the alcohol itself.

The American Heart Association has recently reported that *“More than a dozen prospective studies have demonstrated a consistent, strong, dose-response relation between increasing alcohol consumption and decreasing incidence of coronary heart disease. The data are similar in men and women in a number of different geographic and ethnic groups. Consumption of one or two drinks per day is associated with a reduction in risk of approximately 30% to 50%.”*

**Keywords:** *excessive alcohol intake, coronary heart disease, moderate alcohol intake*

## Correlation of uric renal stones with hypertension and body mass index

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**Aim:** The aim of the study was to assess the prevalence of hypertension in patients with uric acid stones and compare it with the hypertensive population without renal stones. We also aimed to assess the correlations between renal stone disease with age and obesity.

**Methods:** In this study, there were examined 40 patients. Patients with uric acid stones were 25 versus 15 patients with no renal stones.

**Results:** The prevalence of hypertension was similar in both groups. The patients with renal stones, however, had a higher level of mean systolic and diastolic blood pressure compared with patients without stones (155±12 mmHg vs. 145±8 mmHg,

and 100±0.9 mmHg vs. 100±0.2 mmHg, respectively). Patients with renal stones were older (47±15 vs. 38±5 years), had a higher prevalence of obesity (mean BMI: 28±0.4 vs. 25.7±0.6), had higher levels of total cholesterol level (220±5mg/dl vs. 203±4 mg/dl) as well as triglyceride levels (160±9mg/dl vs. 126±4mg/dl), compared with no renal stone individuals.

**Conclusion:** Patients with renal stones in our study had a higher mean level of systolic and diastolic blood pressure, BMI and cholesterol and triglycerides levels compared with individuals without renal stones. Future studies in Albania should include larger population-representative samples.

**Keywords:** *age, body mass index, hypertension, uric renal stones.*

## Chronic cholecystitis without gallstones in a sample of Albanian patients

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**Aim:** Chronic cholecystitis without gallstones is a clinical condition characterized by gallbladder symptoms in the absence of cholelithiasis. Our aim was to describe chronic cholecystitis without gallstones among overweight patients in Albania, a transitional country in Southeast Europe.

**Methods:** A study was conducted in Tirana, the Albanian capital city, in 2012 including a sample of 51 patients diagnosed with chronic cholecystitis without gallstones. All patients underwent a detailed and comprehensive ultrasound examination.

**Results:** Overall, there were 31 (61%) male patients and 20 (39%) female patients. Median age was 55 years (interquartile range: 31 years; range: 21-83 years). Overall, there were 43 (84%) obese (BMI>30) individuals, of whom 12 (28%) were very obese (BMI>40). Three female participants were

pregnant, two individuals had heart failure, one patient had myocardial infarction, and one further participant had liver cirrhosis. In this sample of Albanian patients, the ultrasound characteristics consisted of gallbladder wall thickening, gallbladder enlargement, striated gallbladder wall, pericholecystic fluid, and coffee ground gallbladder.

**Conclusion:** This is one of the few reports describing the distribution of chronic cholecystitis in the absence of gallstones in Albanian patients. Currently, the diagnosis and treatment of chronic cholecystitis without gallstones is controversial. Recently, laparoscopic cholecystectomy has been considered the most suitable intervention for this clinical condition. Future studies in Albania should assess the main determinants of chronic cholecystitis without gallstones.

**Keywords:** *Albania, chronic cholecystitis without gallstones, gallbladder.*

## Polyethylene glycol conjugates with proteins: concept, design and therapeutical applications at the University Hospital Center “Mother Teresa” in Tirana

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**Aim:** This study aims to describe the fundamental technological and scientific principles of advanced drug delivery/targeting and to analyze the application of polyethylene glycol (PEG) conjugates with proteins by the Clinics of University Hospital Center (UHC) “Mother Teresa” in Tirana, Albania.

**Methods:** A broad overview (from the beginning of 2000s until now) of advanced drug delivery/targeting recent papers is collected and provided in order to introduce the terminology and various key concepts pertinent to this subject and in particular emphasizing the PEG conjugates with proteins. The clinical use over time by the clinics of UHC “Mother Teresa” of these new products is analyzed and pharmaceutical, economical and therapeutic considerations are provided.

**Results:** Recently, it has been proved that end-functionalized PEG can modify biologically active proteins. This interaction can cause a reduction of immunogenicity, but also an alteration of pharmacokinetics. The modification of a protein by PEG is the so-called “PEGylation”. Therapeutical advantages of PEGylation are also an increased retention time in the body and an increased stability towards metabolic enzymes. In addition, PEGylation of proteins can also impart sustained clinical response with minimal dosing, leading to improved

quality of life and reduced treatment cost. Despite their biopharmaceutical advantages the use of conjugates is still limited in UHC “Mother Teresa”. The products in use are mainly PEG conjugates of interferon used in the treatment of chronic hepatitis B and C and PEG conjugates of erythropoietin used in the treatment of patients with anaemia associated with chronic kidney disease. The number of the dosage forms units of Pegasys used is 1833 per year and the price is 240 euro. The number of the dosage forms units of PegINTRON used is 100 per year and the price is 361 euro. The treatment per patient is of one year with a frequency of one application per week. The number of the dosage forms units of MirCera used is approximately 275 and the price varies on the dosage used. The proper dosage is prescribed depending on the patient’s Hb level and also, duration of the treatment depends on the patient’s hemoglobin level.

**Conclusion:** The use of biotechnological products is in expansion and of great interest from the pharmaceutical and therapeutic point of view. The use of these products remains still limited in Albania. Advice is given on the benefits of use of these products such as increased efficiency, convenience and the potential market expansion.

**Keywords:** *biotechnological products, polyethylene glycol conjugates, proteins*

## Correlation between AAN, anti DNA, C3 and C4 with disease activity in Systemic Lupus Erythematosus

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**Aim:** The aim of this study was to determine the correlations between antinucleosome antibodies (ANA) and anti-double-stranded (ds) DNA antibodies, complement (C) 3 and 4 levels, and clinical activities in Systemic Lupus Erythematosus (SLE) patients.

**Methods:** Antinucleosome antibodies and anti-dsDNA antibodies were detected by enzyme-linked immunosorbent assays (ELISA). The levels of C3 and C4 were measured by nephelometry. Clinical activities were determined by SLE clinical and laboratory test in collaboration with Disease Activity Index.

**Results:** Among 96 SLE patients, the prevalence of AAN was 54.1% (n=52 patients), higher than 38.5% (n=37 patients) [p<0.05] of anti-ds DNA antibodies. In 35 patients with SLE who were complicated with Lupus Nephritis, there was

evidence of similar results, 70.1% for AAN and 49.3% for anti-ds DNA antibodies. Overall, 21% of the patients had both AAN and anti-dsDNA positive. The activity of the disease, the involvement of different organs, especially the kidneys, were significantly correlated with the higher levels of AAN and anti-ds-DNA and inversely correlated with C3 levels.

**Conclusion:** Antinucleosome antibodies and anti-ds DNA are the earliest and the most sensitive immunologic markers in the diagnosis of SLE. In relation to the disease activity, with the level of C3 and other biochemical laboratory tests, the AAN antibodies play the most important role in the diagnosis of SLE in negative anti-ds-DNA antibodies patients and are the first signs that indicate the severity of the disease and the probability of kidneys' involvement.

**Keywords:** *AAN antibodies, antinucleosome, kidney, Systemic Lupus Erythematosus.*

## Retrospective study of cerebral infarction cases diagnosed with carotid angio-CT

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**Aim:** Carotid CTA is a useful examination for the management of ischemic stroke and atherosclerosis linked with vascular risk factors. Age and gender are independent factors for stroke. Lacunar stroke seems to be attributed to chronic HTA, diabetes mellitus, while non-lacunar infarction to CAS and AF. Our aim was to describe cases of cerebral infarction diagnosed with carotid angio-CT in Albania.

**Methods:** A retrospective case review study of patients that performed carotid CTA (527 cases) in Tirana was conducted in 2012. The study sample was retrieved from in-hospital admissions as well as outpatients. Cerebral non-lacunar and lacunar infarction patients who performed CT scanning and/or magnetic resonance imaging were examined and compared with regard to CAS.

**Results:** There was a significant association

between age and the grade of carotid artery stenosis ( $P=0.001$ ). Furthermore, there was a statistically significant male predominance ( $P=0.001$ ). Also, there was evidence of a significant correlation between grade of CAS and smoking ( $P=0.001$ ), CAS and HTA ( $P=0.001$ ), CAS and diabetes ( $P=0.001$ ), CAS and high cholesterol ( $P=0.001$ ). Finally, there was evidence of significant difference between CA atherosclerotic plaques in non-lacunar (54%) versus lacunar infarction (36%) [ $P<0.001$ ].

**Conclusion:** In our study, there was a significant relationship between gender and the grade of carotid artery stenosis, with a clear male predominance. Age, smoking, hypertension, cholesterol and diabetes were all significant risk factors for CAS. The carotid stenosis was more evident in non-lacunar compared to the lacunar cerebral infarction.

**Keywords:** *angio-CT, carotid artery stenosis, cerebral infarction.*

## Urticaria in our clinic during a period from January 2012-December 2012

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**Aim:** Urticaria affects about 15%-20% of the population in Kosovo. The main cause of this condition is still unknown, although food protein and several drugs are considered as putative risk factors for urticaria. In some cases, urticaria may be a warning sign of selected autoimmune diseases of the thyroid gland, malignant diseases, and systemic diseases. The aim of our study was to describe the prevalence of urticaria referred to our clinic from January to December 2012.

**Methods:** This study presents results of a retrospective study of male patients referred to the Clinic of Dermato-Venerology in Pristine suffering from different forms of urticaria during 2012. The age of the patients was 18 years and older. Data

on potential risk factors for urticaria (food and drugs) were included in this study.

**Results:** We had 196 hospitalized male patients in our clinic during 2012. Based on our records, urticaria was present in 33 cases (17%). Thirty patients had acute urticaria (90%), whereas 3 (11%) patients had urticaria recidivans. In 85% of the cases we identified the following risk factors for urticaria: 60% were food-related, 25% were drug-related, whereas for the remaining 25% of the cases the cause of the disease was unknown.

**Conclusion:** Acute urticaria was quite prevalent in this male population in Pristina, the capital city of Kosovo. Our findings indicate that the main cause of urticaria involved food proteins (60%) followed by drug use (25%).

**Keywords:** *Dermato-Venerology; Pristine, urticaria.*



## Dermoid cyst in a patient with operated congenital glaucoma-case report

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**Aim:** Dermoid cyst is a pathological condition and it needs surgical treatment, while bleb is a consequence of a surgical treatment for glaucoma. Our aim was to describe a case study distinguishing dermoid cyst from the bleb in a congenital glaucoma.

**Methods:** A female patient aged 18 years presented complains of a whitish mass positioned in the upper nasal side of the right eye, growing since two years. The mass started to interfere with her vision and her appearance. She had glaucoma surgery when she was six months old. Her eye exam showed the following characteristics:

- RE: BCVA 2/ 10, IOP 12mmHg, Conj. - diffuse bleb at 12-13 o'clock. Cornea-Haab's striae present.
- Whitish- dermoid like cyst-positioned superonasally occupying ¼ of the cornea, AC -quiet and very deep, Pupil -round and reactive.

- Lens-clear, Fo. 0.85c/ d
- LE: Unremarkable, normal.

The patient underwent surgery. We dissected the cyst from the stromal cornea, limbus and conjunctiva, avoiding perforation of the cornea. Suture of the conjunctiva was performed trying to save the bleb.

**Results:** We followed the patient for four weeks. The sutures were removed day days after the surgery. The cornea healed well and bleb had the same structure as before surgery. BCVA and IOP remained both unchanged and the patient was satisfied with her appearance.

**Conclusion:** Dermoid cyst is not related to congenital glaucoma but it can occur in glaucomatous patients as in any normal or other eye-diseased patient. This case study indicates that ophthalmologists should distinguish dermoid cyst from blebs in order to surgically treat the cyst and preserve the bleb from erroneous manipulations.

**Keywords:** *bleb, congenital glaucoma, dermoid cyst.*

## Clinical blood use in patients undergoing coronary artery bypass surgery

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**Aim:** To assess the frequency of Red Blood Cells (RBC) transfusion and the impact of selected major factors on hemotransfusion rate, in patients undergoing Coronary Artery Bypass Surgery (CABG) surgery over a period of two years in Tirana, Albania.

**Methods:** A prospective study of patients, in the Cardiovascular Surgery Service of the American Hospital who underwent isolated CABG or in combination with other cardiac interventions. The impact of the CardioPulmonary Bypass Pump (CPB), gender, BMI  $\geq 25$ , age  $\geq 62.5$  years, and preoperative hematocrit  $< 35\%$ , (using median values as cutoff points) on RBC transfusion were examined using logistic regression models.

**Results:** A total of 164 patients were recruited (138 males and 26 females; overall mean age: 61.8 years). There were 116 On-Pump patients (101 males/15 females) and 48 Off-Pump ones (37 males/ 11 females). About 80% (131/ 164) of patients used PRBC. The total number of transfused RBC was 334 units. The average number of units per patient

was 2.036 (0.8) units. The transfusion rates were 87.06 % for the On-Pump group and 62.50 % for the Off-Pump patients. For patients with BMI  $\geq 25$  there were used 2.357 units against 1.870 units were used in patients with BMI  $> 25$  ( $P < 0.003$ ). For age  $\geq 62.5$  years was used 2.325 PRBC units compared to 1.740 units that were used for age  $< 62.5$  years ( $P < 0.001$ ). For interventions with 4-6 grafts were used 2.518 units, compared with 1.588 units for interventions with 1-3 grafts ( $P < 0.001$ ).

**Conclusion:** 80% of patients used hemotransfusion and the average of PRBC used for any intervention was about two units. Six variables were important factors in the use of PRBC to patients undergoing CABG: use of CPB, BMI  $\geq 25$ , age  $\geq 62.5$  years, increase of the number of grafts and of the other cardiac surgical interventions, and preoperative hematocrit  $< 35\%$ . Knowledge of these risk factors provides a better identification of the patients with increased probability in the use of blood, a better distribution of blood used for CABG procedures by Transfusion Bank and an evaluation of the cost-effectiveness in the use of blood products.

**Keywords:** *blood transfusion, clinical blood use, coronary artery bypass surgery.*

## Obesity in the adult population of Albania

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**Aim:** The aim of this study was to assess the prevalence and distribution of overweight and obesity in the adult population of Albania, a transitional country in Southeast Europe.

**Methods:** A cross-sectional study was conducted in 2007-2009 in Tirana, the Albanian capital city, including a sex-stratified random sample of 997 Tirana residents aged 25-65 years (response rate: 83%). Physical examination included measurement of height and weight (for calculation of the body mass index [BMI]), and hips and waist circumferences (for calculation of the waist-to-hip ratio). In addition, a structured questionnaire was administered to all participants including information on demographic and socioeconomic characteristics and lifestyle/behavioral factors. Binary logistic regression was used to assess the association of overweight (BMI>25) and obesity (BMI≥30) with covariates.

**Results:** In this representative sample of Albanian adults, the prevalence of overweight was about 50%, whereas the prevalence of obesity was about 30%. Women were significantly more obese than men. Regardless of the gender, overweight and obesity were both positively and significantly associated with age, fat intake and carbohydrate intake.

**Conclusion:** We obtained important evidence on the prevalence and distribution of overweight and obesity in transitional Albania. Our findings indicate that overweight and, particularly obesity, pose a serious public health challenge for the Albanian health care system. Therefore, health care professionals and policy makers should focus particularly on the modifiable risk factors such as unhealthy dietary patterns and lack of physical exercise as an effective means for controlling the burden of obesity and its related morbidity and mortality in the Albanian adult population.

**Keywords:** *Albania, behavioral factors, lifestyle, obesity, overweight.*

## $\beta$ thalassemia, a big public health problem in Vlorë, Albania

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**Aim:** Thalassemia is a group of inherited diseases, which is characterized by a genetic defect of haemoglobin synthesis. The aim of this study was to determine the number of patients with  $\beta$  Thalassemia receiving health care services in Vlorë Regional Hospital in order to define effective prevention programs for this disease with large impact.

**Methods:** This was a descriptive study conducted in Vlorë Hospital. The study population consisted of all patients with  $\beta$  Thalassemia diagnosed and suspected, presented in this hospital in the period from 2010 to 2012. All data regarding socio-demographic profile of individuals and the status of Thalassemia were obtained from medical records of patients and registers of Vlorë's Thalassemia Centre.

**Keywords:** *prevention, Thalassemia, Vlorë.*

**Results:** During the period 2010-2012, there were 216 patients overall who were diagnosed with  $\beta$  major Thalassemia in Vlorë. Of these, 55.1% were females and 44.9% were males. About 45% of the patients resided in rural areas of Vlorë and 55% resided in the city of Vlorë. About 56% of the patients were from 5 to 14 years of age, whereas only 1.3% (three patients) were 65 years or older.

**Conclusion**  $\beta$  major Thalassemia exhibited a high prevalence in Vlorë Regional Hospital representing a serious public health challenge for this region of Albania. Prevention of Thalassemia can only be realized through a careful preliminary diagnosis of adults who may be carriers of  $\beta$  Thalassemia in order to control birth events of sick children with  $\beta$  Thalassemia.

# **PARALLEL SESSIONS**

## **Session 2: Cancers**

**Moderator: Alban Ylli**

## A new model of screening for breast cancer in Albania

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In Albania, an organized breast screening program does not yet exist. More than half of cancers are diagnosed in III/IV stage. Nevertheless, the level of awareness among women about breast screening and cervical screening is increasing during last decade; 80% of women had heard about mammogram.

A team at Institute of Public Health (IPH) after two years analyses and assessments has proposed a screening model based on Clinical Breast Examination (CBE) provided by PHC providers with referral to the secondary care level for mammography when CBE abnormalities are detected. PHC providers should also teach women to do BSE with all BSE abnormalities checked by CBE before referral to Mammography service. Abnormalities should be followed-up by biopsy at the secondary care level with referral to tertiary care when cancer is suspected/ diagnosed. During 2012 IPH in collaboration with University Hospital Center (UHC)

developed curricula and materials for in-country training of general primary health care (PHC) practitioners on CBE, risk evaluation and referral for mammogram and specialist. More than 180 doctors are already trained, covering almost half of Albanian health centers with at least one trained practitioner. A complete practical guideline for GPs is planned to be approved soon by Minister of Health. Trainings will continue through 2013 to complete trainings for GPs and start trainings for nurses.

In addition to the continuation of these activities, during the next 2-3 years more efforts should be directed to setting up an organized and sustainable model for comprehensive breast cancer control in Albania, focusing first on three major regions of central Albania (Tirana, Durres and Elbasan). Activities should be directed at establishment of a quality assurance system for breast imaging and improving the responsiveness of the health system in breast cancer care.

**Keywords:** *breast cancer, early detection, screening*

## Epidemiology of breast cancer in Albania

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**Context:** Worldwide, it is estimated that more than 1,38 milion women were diagnosed with breast cancer in 2008, and in Europe more than 332,000 new cases of breast cancer were diagnosed at the same time. Female breast cancer incidence rates vary considerably, with the highest rates in Europe and the lowest rates in Africa and Asia. Breast cancer incidence rates generally increase with age, supporting a link with hormonal status. The incidence of breast cancer has been increasing for many years in economically developed countries.

**Methods:** We used the data of inter-hospital cancer registry. University Hospital Center in Tirana is the only national center which makes diagnosis and treatment of cancer.

**Results:** The breast cancer is the most frequent cancer in Albania, with a high mortality rate. The mean age at diagnosis for breast cancer is  $51.3 \pm 10.4$  years old. The majority of the cases with breast cancer reside in urban areas (78%), especially in Tirana city, but there are cases of breast cancer all over Albania.

**Conclusions:** A lot of efforts have been made to establish cancer screening programs in Albania in the past few years. Early detection is the key to succesful treatment of cancer. Albania should definitely build a national cancer register, which will provide valid and reliable information about the incidence, survival, mortality rate, risk factors, and will serve as a reference point for future screening and treatment programs.

**Keywords:** *breast cancer; epidemiology; risk factors.*

## Policies and models adopted for breast and cervical cancer screening in Albania

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In Albania, there is no organized breast and cervix screening program. More than half of cancer cases are diagnosed in the third or the fourth stage of the disease. During the past five years, there has been a sharp increase in the availability of mammography centers, but the utilization rates remains low. Last year, a detailed analyses (supported by UNFPA) which provided precise recommendations on screening techniques and organizational models appropriate for Albania was followed by introduction of clinical breast examination (CBE) among performance indicators of primary health care (PHC) providers by the Institute of Health Insurance.

The analyses and assessments have concluded in the following screening algorithms to be adopted in Albania in the short to medium terms:

i. Breast screening will be undertaken using CBE provided by PHC providers with referral to the secondary care level for mammography when

CBE abnormalities are detected. Mammography abnormalities should be followed-up by biopsy at the secondary care level with referral to tertiary care when cancer is suspected/diagnosed.

ii. Cervical screening will be developed by using the conventional Pap-test with cervical samples collected and prepared by PHC providers for subsequent delivery to the cytology laboratory. When Pap abnormalities are detected, women should be referred to secondary health care for colposcopy and biopsy. Women with confirmed CIN should be treated by LEEP, etc. at the secondary care level while those with suspected/diagnosed invasive cancer should be referred to tertiary care.

Further international collaboration would consist in providing training opportunities on different levels of screening system. Supporting participation of Albanian cancer specialists in forums and networks, where best practices are shared, is vital.

**Keywords:** *screening, breast cancer, cervical cancer, Albania*



## Psychosocial impact of oncologic palliative care in Albania

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Treatment of individuals with cancer is a rather challenging endeavor in the Albanian context. The information about palliative care is quite limited and cancer patients and their relatives are unfamiliar with the necessary procedures and techniques of receiving palliative care in Albania. The principles of service development, methods and models of palliative care are rapidly evolving in developed countries, though. Originally, palliative care was delivered in hospices where careful and ongoing efforts were made to control pain at all time that patients were suffering from various diseases, as well as controlling and stabilizing all the other symptoms, exhibited by individuals.

Currently, an important part of the treatment in this regard pertains to the information with the latest data on the number of patients and type of services offered in oncology, palliative care specific centers in Tirana and, at the same time, the main goal is to

provide information about methods of psychotherapeutic treatment of patients receiving these services, implementation and their effectiveness. The objectives of palliative care would be to recognize and inform the category of patients receiving medical treatment and psychotherapy, and evaluate the effectiveness of these services. Furthermore, the aim would be to inform and specify the most effective psychotherapeutic treatments in oncology, palliative care as it affects patients and their family members.

For any kind of disease, no matter how advanced, regardless of treatment that can be given, there is always something to obtain in terms of improvement of the quality of life of palliative patients. The palliative care as a modern medical discipline is relatively new, but it is one of the core disciplines in the industrialized societies where aging issues are of paramount importance.

**Keywords:** *cancer, oncology, palliative care*

## Reducing the barriers on pain management in Albania – results from educational seminars with family doctors

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**Aim:** Palliative care (PC) is a very limited service in Albania, provided mainly from non-for-profit sector (NGOs) covering about 30% of the overall demands. There are very few doctors and nurses qualified on PC and Pain. Training and education programs on opioids are quite inexistent and the patients cannot access opioids easily in Albania. This study evaluated the attitudes of family doctors on pain assessment, management and opioid usage before and after seminars on opioids pain management.

**Methods:** The Barrier Questionnaire II was used to evaluate attitudes towards pain management in 227 family doctors (GP) working in the public primary health care system in both urban and rural areas from six cities in Albania (response rate was 83.3%). The data collection process was done

before and after six seminars on opioids with family doctors in different cities covering all regions of the country.

**Results:** Barriers were high among the participating physicians with mean scores of 3 or above for 10 of 27 items. The danger of addiction to pain medicines as well as the fear that many people with cancer get addicted to pain medicine received the highest scores. At the end of the seminar, barriers were significantly lower with the total mean scores reduced from  $2.4 \pm 0.6$  to  $1.6 \pm 0.7$ .

**Conclusion:** High barriers on the use of opioids among family physicians in Albania were reduced significantly following one-day training course, demonstrating the effectiveness of this intervention. However, more research on the sustainability of the training effect is needed in order to draw appropriate conclusions.

**Keywords:** *Barrier Questionnaire, non-governmental organizations, palliative care*

## Patient understanding of moles and skin cancer: factors influencing presentation in primary care

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**Aim:** Cutaneous melanoma (CM) and non-melanoma skin cancer (NMSC) incidence has increased rapidly in past two decades. CM and NMSC have a high chance for cure if detected in an early phase of development. Our aim was to explore patient understanding of pigmented skin lesions (moles) and skin cancer and factors which influence care-seeking behaviour. The ultimate goal would be to introduce preventive measures and early detection means for skin cancers.

**Method:** Semi-structured interviews with all patients undergoing skin examination and skin cancer treatment in Tirana, Albania in 2012.

**Results:** Patient understanding and awareness was influenced by family and friends' experiences of moles, skin cancer and other cancers, knowledge of risk factors (that is poor) and the media. The reasons and factors that influence the delay of the patients for seeking advice include lack of knowledge of the

patients; mentality regarding the changing moles, poor medical knowledge either by GPs regarding the excision of the suspicion mole and correct examination of the moles through the dermatoscopy. Deciding to seek help was often prompted by another person or triggered by rapid or multiple changes in a mole. Three of four people subsequently diagnosed with melanoma did not seek help; instead, the dermatologist or rarely GP opportunistically noticed the lesion.

**Conclusion:** Changing moles are often perceived as non probable skin cancer lesions. Even when the cancer is evident on a clinical basis, the mentality of the people in Albania delays the treatment. This presentation will have a modest contribute to current national strategies to improve medical and patients' awareness for earlier diagnosis of cancer by highlighting factors that can trigger or act as barriers for care-seeking behaviors.

**Keywords:** *dermatoscopy, melanoma, skin cancer.*

## Evaluation of cervical cytological abnormalities in the Albanian population

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**Aim:** Cervical cancer is one of the most common female malignancies with high mortality rates in developing countries. Our purpose was to determine the prevalence of cervical cytologic abnormalities in the Albanian population and the detection rate of epithelial abnormalities by cervical cytology (CC).

**Methods:** A total of 5532 conventional pap-smear tests collected between January 2010 and January 2013 from hospitals and private clinics were retrospectively analyzed.

**Results:** A total of 258 (4.8%) cases had epithelial abnormalities. The numbers and rates of epithelial

abnormalities were as follows: atypical squamous cell of undetermined significance (ASCUS; n=159 [61.6%]); atypical glandular cell of undetermined significance (AGUS; n=15 [5.8%]); low-grade squamous intraepithelial lesion (LSIL; n=71 [27.5%]); high-grade squamous intraepithelial lesion (HSIL; n=10 [3.8%]); and squamous cell carcinoma (SCC; n=3 [1.1%]).

**Conclusion:** The prevalence of cervical cytological abnormality in our study was 4.8%. Recently, some conflicting results from the same population were published. More prospective studies with larger numbers are needed in Albania.

**Keywords:** *cancer; cervical cancer; cytological abnormalities.*

## The treatment response in metastatic pancreatic cancer patients

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**Aim:** Treatment of pancreatic cancer remains a huge challenge in Oncology. Chemotherapy is the main and the only treatment in many cases, but especially in the metastatic cancer of pancreas. The aim of our study was to assess the role of patient performance status (PS) in the understanding the success of treatment of progressed pancreatic cancer disease.

**Methods:** There were 50 patients treated during a 3-year period (2010-2012) at the Chemotherapy Unit, Service of Oncology, at the public hospital in Tirana. All the patients were diagnosed with metastatic cancer since initiation or they had relapse after surgery. We did an evaluation for the performance status according to ECOG. The patients were divided into two groups (each with 25 patients): one group for interval PS: 0-1 and the

second group for the PS interval: 2-3). The treatment was based on use of 5 Fu, every 21-28 days. The evaluation was done after the first three cycles. There were excluded patients with very low performance status (those who could not use treatment); patients with organ dysfunction; or patients above 70 years of age.

**Results:** In the first group, the patients had 90 cycles of treatment, whereas in the second group there were 130 cycles of treatment. In the first group, the partial response was achieved in 8 patients, whereas in the second group it was achieved in one patient only (P=0.03).

**Conclusion:** The evaluation of performance status is an important parameter in the decision for treatment of very progressed metastatic cancer. Our findings are compatible with previous reports on this matter.

**Keywords:** *cancer patients, pancreatic cancer, performance status.*

## Vincristine-induced neurotoxicity in childhood cancers in Albania

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**Aim:** Neurotoxicity is a known adverse effect of several chemotherapeutic drugs such as vincristine, cisplatin, oxaliplatin, docetaxel, paclitaxel, and bortezomib. Of these, vincristine is commonly used in pediatric cancer patients. Vincristine causes axonal degeneration due to microtubular disruption, and the consequent decreased axonal transport. In this article, we intend to discuss the neurological course of these patients, along with a brief review of the literature on the subject.

**Methods:** We studied the clinical records of all pediatric cancer patients who received vincristine during their treatment at our hospital during the period January 2009 to December 2012. We conducted a retrospective review of patient's age, sex, weight, clinical diagnosis, appearance of neurotoxic symptoms, number of doses and total dose of vincristine received, interventions performed, progression of neurological symptoms, and time to recovery of neurotoxic symptoms.

Children with acute lymphoblastic leukemia, and lymphoblastic non-hodgkin's lymphoma were put on AIEOP protocol and those with Hodgkin's disease were started on monthly cycles of ABVD (adriamycin, bleomycin, vinblastine, dacarbazine)

alternated with COPP (cyclophosphamide, vincristine, prednisolone, procarbazine).

**Results:** Most of the children treated with the usual doses of vincristine for various types of childhood cancers developed neurotoxicity during treatment. Peripheral neurotoxicity was seen in the form of weakness of lower limbs, areflexia, neuropathic pain, or sensory loss. Autonomic neuropathies were manifested as constipation and urinary retention. In children with severe neuropathy, vincristine administration was withheld/ dose reduced until clinical improvement started, which took about 2-3 weeks time. We found a relatively higher incidence of vincristine-induced neuropathy in Albanian children, which was probably due to the coexistence of malnutrition among them.

**Conclusion:** Our results show a surprising higher incidence of vincristine-induced neurotoxicity, compared to earlier estimates by a few authors, which range between 3 and 13%. This may be partly explained by the fact that all of our patients who developed neurotoxicity were severely malnourished with the weight for age as well as body mass indices being below the 3<sup>rd</sup> percentile for age for all children, using standards recommended by the World Health Organization.

**Keywords:** *children, childhood cancers, vincristine-induced neurotoxicity.*

## Craniopharyngioma surgical treatment: Results from Albania

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**Aim:** Surgical treatment of craniopharyngiomas has been historically challenging and, despite advancements in microsurgical and skull base techniques, it continues to pose a significant challenge to modern day surgeons. The aim of our study was to analyze the characteristics of the patients operated for craniopharyngioma between 2002 and 2007 in the Service of Neurosurgery, University Hospital Centre (UHC) "Mother Theresa", Tirana, and to evaluate the surgical results and long follow-up outcomes.

**Methods:** In this retrospective study were included all new cases operated in the Service of Neurosurgery, UHC "Mother Theresa", Tirana, from January 2002 to December 2007.

**Results:** There were 38 patients operated for a craniopharyngioma, of whom 12 were children.

50% of tumors were 4-6 cm in diameter. In 42% of the cases it was achieved a total removal. Tumor diameter, composition, calcification and hydrocephalus, all influenced the removal quality. During follow-up, 36.8% of the patients exhibited a recurrence. The removal quality was the only variable influencing the recurrence. The results of recurrence surgery were worse than those of primary surgery. At the last follow-up visit, 76.3% of the patients were independent in their daily activities.

**Conclusion:** Our study provides useful evidence about the surgical results of the craniopharyngioma surgery in the Service of Neurosurgery, UHC "Mother Theresa", Tirana. Our surgical strategy attempting complete removal, but refraining from damaging for the sake of total removal, yields good immediate and long-term results.

**Keywords:** *craniopharyngioma, functional outcome, surgery.*





# **PARALLEL SESSIONS**

## **Session 3: Health Information**

**Moderator: Enver Roshi**

## Infant mortality in Albania: A detailed picture over the period 2001-2011

Eduard Kakarriqi<sup>1,2</sup>, Bukurie Gega<sup>1</sup>, Bajram Dedja<sup>1</sup>, Alba Merdani<sup>1</sup>, Dorina Çanaku<sup>1</sup>, Miranda Hajdini<sup>1</sup>, Gazmend Bejtja<sup>3</sup>

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**Aim:** The study aims at displaying a detailed picture of infant mortality in Albania, giving the proper answers to the respective issues such as ‘place’ (infant mortality rates – IMRs according to prefecture and country level), ‘time’ (respective IMRs trends over the period 2001-2011), ‘age-groups’ (early neonatal, late neonatal and post-neonatal mortality rates), and ‘causality’ as well.

**Methods:** Two are the main data sources, namely the IMR data obtained by the Institute of Statistics – INSTAT (based on death certificates), and IMR operative data obtained by the Ministry of Health – MoH (data based on timely respective death notification by health centres all over the country). As regards the causality, the study was based on a scrutinized analysis of death certificates (available from INSTAT) of all infant deaths in 2001 and 2003.

**Results:** (i) there is a significant difference between IMRs provided by INSTAT data and IMRS provided by the MoH operative data, the former being always (far) lowest than the latter; (ii) there is a significant exponential decreasing trend of IMRs at both prefecture and country level over the period

2001-2011 in Albania: from a country rate of 17.5/1000 at 2001 to country rates of 9.7/1000 and 8.7/1000 in 2010 and 2011, respectively; (iii) nevertheless, there exist (large) differences of IMRs between country prefectures (regions): though annual oscillations, regions with the highest IMRs and those with the lowest ones over years might be pointed out; (iv) the burden of early neonatal mortality rate on the total IMR is increasing over time; (v) the death causality patterns of the three age-groups of the first year of age are different: while the main death causes in early neonatal period include Neonatal Diseases and Congenital Malformations, in the late neonatal period and post-neonatal period the mortality patterns attempt to be the same with those of infant mortality (0-1 year) in total, with the Acute Respiratory Infections as the main cause of death; (vi) there are no significant gender-specific (male-female) differences in IMRs; (vii) there are no significant differences over time (2001-2011) in the IMRs according to place of residence (urban vs. rural areas).

**Conclusion:** The afore-mentioned results pave the way to draw the respective study conclusions.

**Keywords:** *infant mortality, INSTAT, trends over time*

## Under-5 mortality in Albania: A detailed picture for the period 2001-2009

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**Aim:** This study aims at displaying a detailed picture of under-5 (=child, =1-4 years) mortality in Albania, giving the proper answers to the respective issues such as 'place' (under-5 mortality rates – U-5MRs according to prefecture and country level), 'time' (respective IMRs trends over the period 2001-2009), and 'causality' as well.

**Methods:** The data (based on death certificates) are obtained by the official annual publications of the Institute of Statistics (INSTAT), whose content does not provide all required outputs on the matter. The available data were analyzed in order to obtain the U-5 MRs at both regional (prefecture) and country level over the period from 2001 to 2009 (the last annual INSTAT publication on mortality in Albania).

**Results:** Salient findings consist of the following: (i) there is a significant exponential decreasing trend of U-5 MRs at both prefecture and country level

over the period 2001-2009 in Albania: from a country rates of 6.9/ 1000 – 6.7/ 1000 in 2001-2002 to country rates of 2.5/ 1000 – 2.7/ 1000 in 2007-2009; (ii) nevertheless, there exist (large) differences of U-5 MRs between country prefectures (regions) though annual oscillations; (iii) the causality patterns present a significant descending burden ranking being portrayed by circulatory system diseases, followed by injuries/accidents and respiratory system diseases; (iv) there are no significant differences between gender-specific (male-female) U-5 MRs; (v) there is no significant difference over time (2001-2009) in the U-5 MRs according to place of residence (urban vs. rural areas).

**Conclusion:** The afore-mentioned results pave the way to draw the respective study conclusions, which are important for policy formulation in Albania.

**Keywords:** *child mortality, INSTAT, under-5 mortality.*

## The structure of under-5 mortality rate over the period 2008-2012 in Albania on the basis of the operative data of the Ministry of Health

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**Context:** The primary causes of childhood mortality change as children grow. A large component of early infant mortality consists on congenital diseases and other biological factors related to conditions in early infancy. As under-five mortality declines over time, it is often observed that child mortality declines to a greater degree than infant mortality.

**Methods:** The data are obtained by the database of the Ministry of Health, consisting on operative data as regards U-5 MRs at both district and country level over the period from 2008 to 2012, whose content does provide all but required outputs on the matter.

**Results:** For the most recent five years, the level of under-five mortality is less than 4-5 deaths per 1,000 live births. Such data do not equalize with those obtained by the Institute of Statistics (based on death certificates), implying a more precise and accurate nature of operative data of the Ministry of Health.

**Conclusion:** The findings suggest that under-five mortality has decreased over the period 2008-2012 in Albania. This phenomenon is mainly due to improvements in children's environments brought about by public health interventions or improvements in living conditions.

**Keywords:** *childhood mortality, mortality, obstetrical activity, under-five.*

## Morbidity in the districts of Saranda and Delvina for the period 2003-2010

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The study is based on the data gathered from 39,175 clinical files of “Petro Nako” Saranda Hospital for the period 2003-2010. The data on population are drawn by Vlora County Council: *Population 01.01.2010*. Hospital morbidity data are gathered and assorted in accordance with the requirements and the new international standards classifications of WHO and the International Classification of Diseases (ICD-9).

Based on Final Diagnosis and the ICD-9 classification, 36618 hospitalization cases were registered in the population of Saranda and Delvina districts for the period 2003-2010, for which cases are presented with epidemiological characteristics such as: geography, period, prevalence, sex, and age. This study provides a quantitative view of the health situation for the population of Saranda and Delvina districts, notwithstanding a major limitation as

Saranda and Delvina districts are characterized by higher rates of intensive emigration – a factor that should be considered for any further analysis. Nevertheless, this study provides reliable statistical data, which are also comparable to the national data. Morbidity survey results are important to those who are willing to understand the current situation, to adopt policies and plan to intervene in order to improve health care services at population level.

This study is important since the obtained information is valuable to many actors for planning purposes, especially governmental actors, non-governmental organizations, donors and international organizations.

Analysis and interpretation of these data is a crucial point for the design and implementation of suitable policies and interventions in order to improve population's health indicators.

**Keywords:** *Delvina, epidemiology, prevalence, population, Saranda.*

## Would policies and strategies for targeted population-groups impact the access to health services in Albania?

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**Aim:** This study engages on the importance of knowing the difference, if evident, among geographical areas and population groups, building up ad-hoc and limited special interventions, but not transferring the difference among populations groups at the strategy and policy level. The research highlights the question if the access to health services differs among Roma and the general population. The research seeks to explore determinants of health and the qualitative dimensions of availability, accessibility and quality of health care services used by them.

**Methods:** A qualitative approach was chosen for this study due to the exploratory nature of the topic. Qualitative research helps to better understand attitudes, behaviours, culture or lifestyle by offering an opportunity to discuss topics in depth. The results of a qualitative approach are compared with quantitative findings of DHS 2008-2009, BIO-BSS

2009 and 2011, UNDP and UNICEF study on need assessment among Roma.

**Results:** The findings of the qualitative study among Roma population regarding the determinants of access to health care services do not show a difference with similar quintiles of the population. Issues like late access, or preventive services are equally lacking among poor Albanians, or people living in rural or peri-urban areas. Lack of resources, lack of trust and the realization of the need for preventive services are the main causes of poor health among the Albanian population.

**Conclusion:** There are no data showing that differentiating policies and strategies at the highest level will solve the health issue of the targeted population. There is a recognition that the community needs to improve its educational level in order to improve the physical, mental and social well-being of its members for both, the general population, or the Roma community.

**Keywords:** *access to health services, Roma population, vulnerable groups.*

## Current challenges of the health care system in Albania

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There have been several efforts to reconstruct the Albanian health sector along with economic recovery in the past decade. Thus, a National Strategy for Socioeconomic Development came into force in 2002 as the frame for sustainable development. Subsequently, it was changed in 2005 to the National Strategy for Development and Integration and aligned with the European Union (EU) agenda and the Millennium Development Goals.

A Long-Term Strategy on the Development of the Health System was approved and endorsed in 2004 and is focused on the core functions of the health system. In the past few years, health legislation is being thoroughly revised with focus on the laws related to financing of health services. The Health Insurance Fund established in 1995 is growing

rapidly in terms of service packages provided. However, the Albanian Ministry of Health recognizes the need to reorganize health services on a cost-efficiency basis.

Furthermore, there are several challenges for the Albanian health care system which should be taken into consideration: (i) poor health infrastructure and scarce resources caused by several major crises in the past couple of decades; (ii) fragmented subsidization of the health needs of the population (funds are divided between the Ministry of Health, the Health Insurance Fund and the Ministry of Labor); (iii) outdated, weak and inefficient public health services, which are still unable to meet the challenges of the (double) burden of diseases related to socioeconomic, lifestyle and environmental determinants and risks.

**Keywords:** *Albania, health reform, health system, ministry of health.*

## A new ethos: Clinical psychology in the context of the Albanian Public Health

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For the last two years, I have been involved in efforts to develop and evaluate information-based and value-based systems of social care for children and young people with serious mental and health challenges. Having received my scientific studies in clinical psychology in 2010, this effort to work with these persons introduced me with the implementation of an effective system of social and health care as an important part of a multi-disciplinary effort to enhance the social and emotional well-being of children and young individuals. This approach has really attracted me to expand on the competencies and knowledge that I have gained through my studies. Thus, I do mind a call for a new ethos not to diminish the contribution

that clinical psychology has made. It is to indicate that the contribution of clinical psychology should address social needs in the context of Public Health. Therefore, the aim would be to suggest a value-based system of care to Mental Health Services as an important movement for clinical psychology in the context of the Albanian Public Health addressing the society needs including non-communicable diseases, too. This, I suggest to be one of the most suitable keys to clinical psychologists understanding the clinical practice in the core definition of the profession's competencies. On the other hand, this would increase the number of persons who will be helped by psychological interventions investigating their inner world.

**Keywords:** *clinical psychology; ethos; public health.*



## Reforms and challenges of post-conflict Kosovo health system

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Before its collapse, Kosovo's healthcare system was an integrated part of the Former Yugoslav Republics System (known for its relatively well-advanced system for at that time). Standstill had begun in the last decade of the twentieth Century as a result of political disintegration of the former state. The enthusiasm of the healthcare professionals and people of Kosovo that at the end of the conflict healthcare services would consolidate did not prove just right. Although one can claim that reorganization of Kosovo healthcare was a serious push (especially in the first years after the conflict), the intensity of development begun to fall at the latter stages. While the basic legislation for the operation of the current healthcare system in Kosovo does exist, the main reason for the reform stagnation is the lack of proper implementation of the laws and measures are not set as to a meaningful system of accountability.

Twelve years have passed by since the 1999 war-conflict and, although Kosovo has made progress in many areas, it has not yet consolidated a health system comparable to those of other European countries. Intending to get out of difficult situation, several healthcare strategic plans have been developed in the past decade in Kosovo, but attempts in this direction have not been particularly fruitful.

This paper describes the actual healthcare complexity of a situation in Kosovo, 12 years after the end of the 1999 war-conflict. Interconnection and historical background is also looked upon and is described in the flow of events. Finally, the description of transfer competencies from international administrators to the local authorities as well as the flow of strategic planning that took place since 1999 is also critically analyzed.

**Keywords:** *challenges, conflict, Kosovo, reform, reorganization, results.*

## Psychosocial determinants of health in Kosovo

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In industrialized countries, psychosocial factors have been linked to non-communicable diseases and their related mortality, particularly for cardiovascular diseases. Many psychosocial traits have been reported as predisposing factors for coronary heart disease and diabetes. From this point of view, many studies conducted especially in developed countries have reported that psychosocial factors are associated with increased risk of cardiovascular outcomes and all-cause mortality.

The evidence from Albania and Kosovo is scarce, notwithstanding recent reports from Burazeri et al. which have convincingly linked psychosocial factors with an increased risk for acute coronary syndrome. The psychosocial factors which were explored in a population-based case-control study conducted in Tirana by Burazeri et al. included hostility (alias cynical distrust scale), the attitudes towards the socioeconomic and political transition, anger

expression, degree of religiosity and degree of traditionalism. All these important psychosocial factors were linked to poor coronary health in this study conducted in Albania. Overall stress, an additionally important psychosocial variable, has been also arguably and consistently linked to unfavourable health outcomes in western countries, but available evidence about this psychosocial factor is scarce for Albania and Kosovo.

There is an obvious need to conduct similar studies in Kosovo in order to assess the deleterious effect of psychosocial factors on health status of the population at large, which is also coupled with the difficult socioeconomic and political circumstances of transitional Kosovo. In conclusion, the relationship of health status with psychosocial factors should be explored in detail in population-representative samples of adult individuals in Kosovo.

**Keywords:** *health, hostility, Kosovo, psychosocial factors, stress.*

## Competencies of family physicians from practitioners 'and policymakers' perspective in transitional Kosovo

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We have already reported on the design and development of a questionnaire on self-assessment level of skills, abilities and competencies of family physicians which has been aligned with the Quality Improvement Competency Framework (QICF). As discussed earlier, the QICF was developed in the course of a systematic and vigorous research work involving well-known European primary care experts dealing with issues pertinent to quality improvement.

On the face of it, the international tool validated in Kosovo, exhibited a good internal consistency for both the test and the retest procedures in a representative sample of policymakers and in a representative sample of primary care physicians in Kosovo. Particularly for the policymakers, we have reported a remarkably high internal consistency in both rounds of application of the questionnaire.

In general, the instrument behaved adequately showing a reasonable stability over time, as indicated

by the test-retest reliability coefficients calculated in the sample of policymakers and primary care physicians.

The overall internal consistency of the instrument in this Kosovo sample of family physicians was comparable with a prior report from Albania, which provided a similar cross-cultural adaptation process of the same instrument in a representative sample of family physicians operating in primary health care services in Tirana. Therefore, our work in Kosovo expands further the evidence of validation of this international instrument in Albanian speaking countries.

Currently, we are trying to validate this very same instrument in Albanian speaking regions of the Republic of Macedonia. At the same time, this instrument is currently being administered to a large nationally representative sample of family physicians and to a representative sample of policymakers in Kosovo.

**Keywords:** *competencies, cross-cultural adaptation, family physician, general practitioner, Kosovo, policymakers, primary health care, validation.*

## Evaluation of the immunization program through Measles, Tetanus and Hepatitis B vaccination

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**Aim:** Vaccines are the most cost-effective public health intervention. Albania has a very well established immunization program nationwide. Vaccination coverage is very high for all antigens included in the national immunization schedule. Vaccination rates are frequently considered a surrogate measure of protection. Serum levels of protective antibody are a more objective measure. The aim of this study was to evaluate the Immunization Program with Measles, Tetanus and Hepatitis B vaccinations in order to prove program efficacy, increase public confidence in immunizations and advocate for sustainable immunization programs.

**Methods:** There were three main components used in the methodology of this study, such as immunization coverage surveys, serologic surveys and surveillance for acute cases of Measles, Tetanus and Hepatitis B.

**Results:** This study showed that vaccination coverage is really high, more than 95% and in the basal vaccination doses it reaches more than 98%. Drop-out rates between doses and vaccines resulted less than 10% which indicates that children who started the vaccination schedule continued to receive the following doses without interruption. Antibodies level for each antigen showed to be higher in immunized children than in the unimmunized ones. Antibodies for viral antigens, such as Measles and Hepatitis B, remain for the whole life, instead the ones responsible for Tetanus protection decrease over the years. Incidences of these vaccine-preventable diseases are really low and they are reduced every year in Albania.

**Conclusion:** These findings indicate that vaccination with Measles, Tetanus and Hepatitis B are the most fruitful strategies for the long-term control of such diseases in Albania.

**Keywords:** *Hepatitis B, immunization, Measles, Tetanus, vaccination.*

## Vaccination of “hard-to-reach” population in Tirana district

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**Aim:** During the last decades, the migration within the country has become a common phenomenon in Albania. Tirana, the major district in Albania, has the highest percentage of new comers from other regions of the country and, consequently, the highest number of children aged 0-14 years. Identification of these children, keeping track and continuation of the vaccination schedule, is considered one of the challenges of the health sector, especially for the health workers dealing with vaccination in this district. The main aim of this study was to identify, register and vaccinate children belonging to the “hard-to-reach” population subgroup.

**Methods:** Screening door-to-door and analysis of all immunization activities related to hard-to-reach population.

**Results:** Through the door-to-door screening process, it was possible to identify and check around

589 children 0-14 years old, of whom 219 (37%) were not registered. From a close monitoring and supervision of the screening process, it was found that 169 (76%) of these unregistered children did not have a regular vaccination schedule.

**Conclusion:** A well-planned strategy based on standardized procedures of transferring the vaccination data, demographic and social conditions as well as local needs is the key to the success. It is important to define the capacity of the vaccination health workers, borders and the monitoring process throughout the study. Door-to-door screening combined with follow-up and with interactive communication and collaboration between health workers and parents can help to identify, register and vaccinate more new children as well as keeping track of the registered ones.

**Keywords:** *hard-to-reach population, Tirana, vaccination.*

## Quality improvement efforts at the National Institute of Public Health of Kosovo

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**Aim:** The aim of this research work was to assess users' satisfaction with the quality of health services provided at the National Institute of Public Health (NIPH) and the Regional Institutes of Public Health (RIPH) in Kosovo.

**Methods:** This was a cross-sectional survey. Study population consisted of clients/users of the IPHs at both regional and national level. An anonymous questionnaire (ten items organized in three domains) was administered to all participants.

**Results:** The study involved 397 individuals: 217 (55%) women and 180 (45%) men. Mean age of the respondents was 38.3 years. Access to the IPH was not identified as a problem since only 28 (7.1%) individuals reported "not so easy access". A problem which was identified, concerns the fact that users do not know where to do a complaint against the IPH. Of the 397 users, only 45.8% considered

positively the overall quality of services provided at the IPHs. Clients in Pristine remain the most critical users: 91% of them stated that they do not know where to complain, followed by the RPH in Ferizaj (64%). Among quality components, 12 of them were evaluated and scored with an average mark of 3.7. Comparing average marks of the RIPH, Ferizaj RIPH was graded with the lowest mark (3.2), whereas Gjilan RIPH was rated with the highest grade (4.3).

**Conclusion:** Patients were generally satisfied with access to IPH. A problem, however, was the fact that patients did not know where to submit a complaint, mostly in Pristine and Ferizaj. Patients evaluated the quality of health services with an average mark (3.7). Conversely, the courtesy of the staff was rated with the highest grade (4.5) whereas hygiene with the lowest grade (3.3).

**Keywords:** *evaluation, institute of public health, Kosovo, quality, satisfaction.*

## Leadership communication styles: A descriptive analysis of health care professionals leading in Albanian healthcare settings

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**Context:** The study of leadership in health care is captivating for many reasons. Health care leaders will inevitably have an impact on the lives of many people, as individuals rely on physicians and nurses during some of the most critical moments in their lives. Furthermore, cost constraints and innovations within organizational structure impose a greater attention to leaders. A new leadership style is needed in which leaders engage staff, patients and partner organizations to improve patient care and health system outcomes. There is a growing trend for leaders to break the old autocratic model of leadership to newer models using the concepts of shared and participatory leadership. Yet, sparse literature exists on leadership traits or communication styles in Albanian healthcare settings.

**Objective:** To investigate and assess the leadership styles of leaders in health care settings in Albania.

**Methods:** Research is reported on open-ended questionnaire from a large sample of leaders and managers (n=612) from a range of public healthcare organizations. A style score was calculated and then related to data on respondents' biographical – age

and gender. In order to compare the results, the same questionnaire was administered to the staff of the setting to evaluate their leaders' communication style.

**Preliminary Results:** Interesting findings on leadership styles: according to self-evaluation, leaders' perception on their communication style resulted as "democratic", compared to workers perceptions on their leaders as "autocratic".

**Added value/Originality:** The relevant literature shows that health workforce' leadership is an under-researched area particularly in the public sector institutions within health sector settings. Thus, the current investigation has contributed to improve the understanding of leaders' trait on this significant issue. Furthermore, the study findings are discussed in perspective of practical implications of health management system regarding workforce issues, contra party perspectives. Overall, this study provides new support to previous international research (especially to eastern European countries) about leadership's communication style as a crucial driver for organizational effectiveness and performance.

**Keywords:** *communication, health care, leadership, organizational structure.*

## Cross-cultural adaptation of a questionnaire about competencies of family physicians in Kosovo from practitioners' and policymakers' perspective

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Competencies in quality improvement are important for family physicians in order to foster patient care. In Kosovo, we validated an instrument developed with the support of the EC Lifelong Learning Program addressing family physicians' competency level from the primary health care users' perspective. The instrument was administered to a representative sample of primary health care users in Kosovo aged e"18 years in December 2012. All individuals included in this validation exercise were asked to assess, from their perspective, the level of competency of their respective family physicians, or general practitioners regarding several key domains of primary health care services including: patient care and safety (8 questions), effectiveness and efficiency (7 questions), equity and ethical practice (8 questions), methods and tools (5 questions), leadership and management (4 questions), and continuing professional development (5 questions). Answers for each question of the instrument ranged

from 1 ("novice"=physicians have little or no knowledge/ ability, or no previous experience of the competency described and need close supervision or instruction) to 5 ("expert"=physicians are the primary sources of knowledge and information in the medical field). An overall summary score (including 37 questions; range: 37-185) and a subscale summary score for each domain were calculated for all participants. Socioeconomic data were also collected (age, sex, educational level, employment status and income level).

Thus, we validated an international instrument in the Kosovo context which aims to capture primary health care users self-perceived level of competency of their family physicians regarding different domains of health care services. Currently, this questionnaire is being administered on a nationwide scale including a large representative sample of primary health care users in different regions of Kosovo.

**Keywords:** *competencies, cross-cultural adaptation, family physician, general practitioner, Kosovo, primary health care validation.*



## Exploring possibilities to implement distance learning in Albania

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**Aim:** Distance learning, or distance education, is an alternative way to deliver education and instruction to students who are not physically present in a traditional setting such as the classroom. Distance learning could be a good possibility to provide continuous education to health professionals. The continuous education is already a ‘must’ for all health professionals in Albania and the Faculty of Medicine tends to be deeply involved in this process.

**Methods:** The Faculty of Medicine tried to explore all possibilities to provide the best education strategies to the health professionals in collaboration with the other involved partners (Ministry of Health, and professional organizations).

**Results:** After a review of the existing education

delivering systems and the international experience, we explored deeply into the distance education system, as it appeared suitable for the Albanian context. For this purpose, many of our staff members went on study tours and received training in countries where this system is developed in order to better understand the functioning of this system and to get instructions on how the distance courses could be prepared and delivered in Albania.

**Conclusion:** Distance learning could be a promising possibility to provide continuous education for health professionals in Albania and the Faculty of Medicine can play a crucial role in this process. Further efforts are required from the Faculty of Medicine and from other interested institutions to establish and implement such a system in Albania.

**Keywords:** *distance learning, education, faculty of medicine*

## The situation of children with autism in Shkodra city

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**Aim:** Autism is a group of developmental brain disorders, collectively called autism spectrum disorder (ASD). The term "spectrum" refers to the wide range of symptoms, skills, and levels of impairment or disability that children with ASD may exhibit. We conducted a review of the autism cases in Shkodra city. We aimed to describe the distribution of this condition according to gender, area of residence, and age-groups of these children in two institutions in Shkodra city.

**Methods:** A survey was conducted including all children in two institutions that provide services for children with autism. More specifically, the information was collected from the following two institutions: "Development Center of Children" and the "Special School" in Shkodra city. A descriptive method was used and the data was analyzed in Microsoft Excel 2007.

**Results:** There were 49 cases in total diagnosed with autism that attend studies in these two institutions (34 of the children attend the "Development Center of Children", whereas the remaining 15 children attend the "Special School"). This study has evidenced that males are more affected than females (79% male and 21% female). The vast majority of the diagnosed cases were from urban areas of Shkodra (86%).

**Conclusion:** Even though autism is not well-studied in Albania, our findings indicate that this condition has serious implications for the children who are affected and for their respective families. Social services and health care system in Albania should be prepared to tackle autism in terms of early diagnosis and provision of appropriate social services and health care services for the affected children.

**Keywords:** *autism, children, mental health, Shkodra.*

## Health risks from water and new challenges for the future

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Water is a very important element for the human existence, as a necessity for the economy, industry and agriculture. Water sources occupy 71% of the land surface and only 1% of this amount, located underground, consists of drinking water, while the rest is salt water. The main water reserves are represented by: i) surface waters including waters of the oceans, seas, rivers, lakes and pools; ii) groundwater including natural groundwater resources, hydro-geological, individual or collective water wells, and; iii) free water, which is constantly present in the air (water vapour).

Albania is one of the first countries in Europe for possession of abundant water resources, which vary from 5-1500 L/ sec. Although the quantities are sufficient to meet current needs, water quality is often problematic due to pollution, especially in lowland areas, where most of the Albanian population resides currently. Also, in these areas take place most of the urban and agricultural industrial activities. Water pollution implies the presence of microorganisms and chemical substances, toxic and radioactive substances that are classified as harmful for humans.

Water pollution may be bacteriological, physical-chemical, toxic and radioactive. Bacteriological pollution of water is caused by bacteria, viruses, parasites' eggs, which cause serious diseases such as typhoid, cholera, hepatitis A, salmonella, etc. Chemical pollution is caused by waste water chlorides, nitrates, nitrites, ammonia, sulphates and phosphates. Toxic pollution is due to the presence of heavy metals such as nickel, lead, cadmium, mercury, arsenic, zinc, and the presence of polycyclic

aromatic hydrocarbons, artificial chemical fertilizers, pesticides, or oil products with high sulphur concentration. The main means of radioactive pollution consist of nuclear explosions resulting in radioactive precipitations, which may contaminate natural water sources. The radiation causes an ionizing action to living cells, leading to different changes in the molecular structure that are associated with subsequently somatic and genetic consequences. The monitoring of drinking water still remains an irreplaceable activity in providing information on water quality. Monitoring activities can also be enriched with innovative tools, such as genotyping and bio-molecular methods, particularly useful during incident and outbreak investigations in attributing sources and establishing correct interventions.

In most of the developed countries, but also in transitional countries such as Albania, there are no surveillance systems on water-borne diseases probably reflecting the belief that these diseases belong to the past.

A fairly recent argument of public concern is due to the awareness of the possible simultaneous occurrence in water of a wide variety of substances such as pharmaceuticals, pesticides in non-agricultural areas, chemical substances that interact with the endocrine system, personal care products, surfactants, etc. New challenges are also posed from the expansion of potentially harmful microalgae and cyanobacteria in "new" ecosystems as a consequence of intensification of intercontinental traffic and climate change.

**Keywords:** *drinking water, pollution, risk assessment, water.*

## The microbiological quality of the drinking water in rural areas of Kamëz and Vora

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**Aim:** Access to safe drinking water is an important issue of health and development at national, regional and local levels. The aim of this study was to assess the bacteriological quality of the drinking water in rural areas of Kamëz and Vora (peri-urban areas of Tirana).

**Methods:** In total, there were tested 385 samples (points of control) in rural areas of Kamëz and Vora (from January to December 2012). The bacterial load of the examined samples was estimated by use of the multiple pipes method. Estimation of the microbiological pollution was based on the Albanian Legislation, the decision Nr. 145, date 26.02.1998 for drinking water quality. The data analysis was done in SPSS, version 16.0.

**Results:** The examined samples define the bacterial pollution indicators: Total Coliform, Faecal

Coliform, Faecal Streptococci. The results of the microbiologic tests indicated that: 27.6% of the examined samples were higher than the normal value in Kamëz, and 32% of the examined samples were higher than the normal values in Vora. Our data indicated a relationship between the pollution level and the residual level of chlorine ( $P < 0.001$ ). There were significant relations between the level of water pollution and the raining season ( $P < 0.001$ ).

**Conclusion:** We found that the bacteriological quality of drinking water was jeopardized during the distribution process. This is because of the corrosion of the old pipelines, the illegal interventions in the system, the intersections with sewage system and because of the negative pressure created in the system during the intermittent supply.

**Keywords:** *drinking water quality of rural areas, pollution indicators, residual chlorine.*

## Microbial contamination and identification of new strains in the surgery clinics during September 2012 – March 2013 in Albania

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**Aim:** Hospital environment plays an important role in being a reservoir for pathogenic microbe resistant microorganisms and a suitable environment for the transmission and spread of infections to the health personnel and the community of visitors. The aim of this study was to evaluate and highlight microbial contamination and new strains in surgical environments, and to identify “reservoirs” of microbes that may play a role in the emergence of nosocomial infectious episodes.

**Methods:** This study was conducted during the period September 2012 - March 2013 and included several surgical clinics of the University Hospital Center in Tirana (General Surgery Clinic, Pediatrics, Oncology, Ophthalmology, Maxillofacial Surgery, and Otolaryngology), as well as Surgical Clinics in Kukes and Shkodra districts (north Albania). Air pollution examinations were performed with standard methods recommended by WHO with RCS (Reuter centrifugal sampler) Rodak plate in

stage blood agar, Sabouraud, with values 500-1000 microbe/ 1m<sup>3</sup>air. Surface contamination examinations were performed by the standard method Rodak dishes TSA terrain (trypticase soy agar) and Bujon plain with values 1000-2500 microbe/100cm<sup>2</sup>.

**Results:** From the total of 225 tested samples, there were identified and isolated 41 microbial strains, or 18.2% nosocomial episodes. Microbes which were pathogens had the following distribution : 41.4% E. Coli, 39.1% Staphylococcus Aureus, 7.3% Pseudomonas, 2.4% Clebsiella, 4.8% Aspergylus, 2.4% fungi Penicillium, and 2.4% Pantoea (a class strain of Enterobacteries which is linked to the transmission of hospital infections).

**Conclusion:** Application and rigorous implementation of all elements of the clinical protocols for the control and prevention of hospital infections should be a top-priority for the Albanian health sector.

**Keywords:** *microbes, nosocomial contamination, pathogens, strains.*

## Solar energy and public health

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With climate change and global warming at the forefront of environmental concerns, the demand for alternative energy sources is stronger than ever. One of the most alternative power sources is solar energy. Solar energy can be used to provide heat and electricity to homes, schools or other buildings. The conditions of Albania are favorable for development of solar energy due to its climate and the high intensity of solar radiation.

The solar radiation of Albania is calculated at more than 1,500 kWh/ m<sup>2</sup>/ yr. The average daily solar radiation is about 4.1kWh/m<sup>2</sup>, reaching more than 4.6kWh/m<sup>2</sup> in the south-western part of Albania. Albania has on average about 2,400 hours of sunshine per year, 2500 hours in the western part and a record of about 2,850 hours in certain locations. Solar energy is being increasingly used for

heating purposes. Based on a survey of National Agency of Energy, the number of the installed solar heating panels in 2003 has increased with 35% compared to 2002.

Solar energy benefits the environment and public health in terms of resource conservation, reduced pollution and greenhouse gas emissions and energy conservation. According to some studies, the use of solar power in residential settings can reduce energy consumption by up to 50%. Solar energy produces no air pollution or greenhouse gas emissions. There are advantages and disadvantages of solar energy use, but advantages appear to outnumber the disadvantages and, therefore, solar energy is deemed an important tool for conservation of the environment and public health improvement.

**Keywords:** *environment, public health, solar energy.*

## Incidence of Group-A Beta Hemolytic Streptococcal (GABHS) Carriers in ENT Practice

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**Aim:** To evaluate the role of GABHS in acute and chronic throat infections in children from 5 to 15 years old, and to identify a way for the eradication of the infection.

**Methods:** We have collected data from patients visited in our ENT department from 2009 to 2013. Several groups of patients have been selected for this study:

- Patients without any symptoms of pharyngitis, who are routinely examined at our clinic for other problems (Group I, Number of patients n=60);
- Patients diagnosed with Tonsillopharyngitis without any current treatment (Group II, n= 85);
- Patients who had completed a full antibiotic treatment for GABHS throat infection (Group III, n=70);
- Patients who had been removed tonsils with or without adenoidectomy (Group IV, n=60). Throat swabs for bacterial isolation were cultured

in a private laboratory. This approach was considered as the best means for determining the presence of GABHS in the throat.

**Results:** The incidence of GABHS carriers among the first group of children was 1.5%. Patients diagnosed with tonsillopharyngitis regardless of the etiology (viral or bacterial) of the second group had an incidence of 6%. In patients who had received 10 days of oral cephalosporin for acute GABHS infection, the culture was positive in 20% of them. Only two patients (3.3%) in the fourth group were still carriers of GABHS.

**Conclusion:** The role of GABHS in acute throat infection in children is often overrated, and the immediate use of antibiotics without any further investigation is not justifiable. The best approach for eradication of the streptococcal throat infection remains tonsillectomy. It would be interesting for further studies to determine if the positive effect of surgery is not limited over time.

**Keywords:** *carrier, ENT, Group-A Beta Hemolytic Streptococcal (GABHS).*

## Safety in schools pertinent to the hygienic-sanitary aspect

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**Context:** Recently, there exists a common opinion that safety in schools is a problematic matter which is being heatedly debated every day, thus challenging the education system to deal more seriously with this problem. When tackling safety in schools, usually one considers different forms of violence between students, as well as teacher-student relations. However, safety in schools should also consider the hygienic-sanitary conditions because of the possibility of serious endanger threatening students and the personnel. The research conducted in the schools of Gjakova Municipality shows and proves a reasonable concern coming from students, parents and the school personnel.

**Methods:** The data extracted from the inspection conducted in the schools of Gjakova Municipality.

**Keywords:** *hygiene, safety, sanitary, schools.*

This research study employed the descriptive method.

**Results:** The analysis of hygienic-sanitary condition in schools found that, in this region, the majority of the schools do not reflect genuine safety in the hygienic-sanitary aspect for students and teachers.

**Conclusion:** Lack of necessary hygienic-sanitary conditions in schools, jeopardizes safety of students and the personnel in schools. Besides that, the actual hygienic-sanitary conditions in schools have a negative impact on the epidemiologic situation which at the same time endangers the students' safety as well. A higher persistence of the regional and central IPHs is needed towards local and central relevant authorities for fulfilling optimal hygienic-sanitary conditions in schools in Kosovo.



## Blood cultures in the Prizren area in 2011

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**Aim:** Blood cultures allow the isolation of a large number of different microorganisms that are present in the blood. We analyzed microbiological characteristics of all blood cultures delivered at the microbiological laboratory of the National Institute of Public Health of Kosova in the Branch of Prizren.

**Methods:** All blood cultures there were received and analyzed in 2011 at the microbiological laboratory in Prizren were included in this study.

**Results:** Overall, there were 558 blood cultures analyzed in 2011 in the Prizren microbiological laboratory. Of these, 223 (39.96%) resulted in

positive growth, while 335 (60.04%) were negative. The largest number of isolates consisted of *Staphylococcus aureus* and gram-negative bacteria isolates of *Klebsiella pneumoniae*.

**Conclusion:** Based on our results, we can conclude that the most frequent causes of bacteremia are such microorganisms as *Staphylococcus*, *Klebsiella pneumoniae* and *Escherichia coli*. Despite limiting factors (such as duration, time of incubation, and contamination), blood cultures remain the only method of identification of the causes of bacteremia and sepsis.

**Keywords:** *bacteremia, blood cultures, microorganisms, sepsis.*



# **PARALLEL SESSIONS**

**Session 4: Lifestyle factors**

**Moderator: Gentiana Qirjako**

## Health Behaviour in School-Aged Children Survey in Albania

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**Context:** The Health Behavior in School-Aged Children (HBSC) is a cross-national research study of the health behavior and health of adolescents across a large number of countries in Europe and North America. It aims to gain new insight into, and increase understanding of adolescent health behavior, health and lifestyle in their social context. The study is conducted every four years in all countries that are members of HBSC network.

Albania is part this network since 2009. This year, HBSC Study in Albania is proposed to be carried out as part of the activities of the National Action Plan for Food and Nutrition, 2013-2020, and will be supported by the WHO and UNICEF.

**Methods:** HBSC is a school-based survey with data collected through self-completion questionnaires administered in the classroom. The international

standard questionnaire enables the collection of common data across participating countries and thus enables the quantification of patterns of key health behaviors, health indicators and contextual variables. These data allow cross-national comparisons to be made and, with successive surveys, trend data analysis is also possible. The study will be conducted in twelve districts (prefectures) of Albania, which will cover all geographical areas of the country. The focus will be on children 11 years, 13 years and 15 years. The field work will be carried out during April 2013.

**Relevance:** Findings from the HBSC survey will help policymakers, health sector professionals and especially health promotion specialists to improve their work towards specific topics that influence the health of the Albanian children.

**Keywords:** *cross-sectional study, Health Behavior in School-Aged Children (HBSC), school-based survey.*

## Substance use among 15-16 year old adolescents in Tirana – Findings from the 2011 ESPAD study

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**Aim:** During the last two decades, Albania has experienced vast population displacements and Tirana, the capital, welcomed a good proportion of the newcomers. In this context of demographic transition and economic instability, our aim was to assess substance use prevalence among Tirana adolescents living with the uncontrolled urbanization process.

**Methods:** In 2011, the European School Survey Project on Alcohol and Other Drugs (ESPAD) was carried out for the first time in Albania using a standardized methodology. We used a two-stage stratified sample of 9<sup>th</sup> and 10<sup>th</sup> graders in Albania. The detailed questionnaire enquired about alcohol, tobacco and illicit drug use.

**Keywords:** *adolescents, ESPAD, substance use, Tirana.*

**Results:** Life-time, last year, last month and last week prevalence of alcohol, tobacco and other illicit drug use were higher among Tirana adolescents compared with the rest of the country. Higher proportions of Tirana pupils engage in more frequent, higher quantity and more dangerous use of psychoactive substances. Furthermore, higher proportions of Tirana school adolescents consider it easy or very easy to find alcohol, tobacco or illicit drugs compared with their counterparts living elsewhere.

**Conclusion:** The prevalence of substance use is higher among Tirana adolescents than in other districts of Albania. Future studies are needed in order to understand the mechanisms and risk factors of substance use among Albanian adolescents.

## Smoking prevalence and its association with socio-demographic factors among students of the University of Tirana and the Polytechnic University

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**Aim:** The aim of this study was to assess the prevalence of smoking and its association with socio-demographic factors among students of the University of Tirana and the Polytechnic University.

**Methods:** A cross-sectional study was conducted in January-October 2012 including a sample of 665 students (55% females) at the University of Tirana and 798 students at the Polytechnic University (40% females). All participants completed an anonymous questionnaire on smoking habits aiming to assess students' level of knowledge about the damages that smoking causes, the organs and systems that are mostly affected and the sources of information about smoking (written media, electronic media, school, or other sources). The questionnaire also included socio-demographic data. Logistic regression was used to assess the association between smoking and socio-demographic characteristics. Chi-square test was used to compare the group of students of the University of Tirana with the students of the Polytechnic University.

**Results:** Boys had a higher smoking prevalence than girls (39% vs. 24%,  $P < 0.01$ ). Students whose parents had a middle level of education (8-12 years of education) had a higher prevalence of smoking ( $OR = 2.21$ , 95%  $CI = 1.14-4.70$ ,  $P < 0.01$ ). Students who had a higher economic level had the highest level of smoking and this findings was statistically significant ( $OR = 2.31$ , 95%  $CI = 2.34-7.56$ ). Smoking rate of students of the University of Tirana was higher than those of the Polytechnic University ( $P < 0.05$ ). About 90% of all students surveyed were aware of the smoking damages. There was no difference in the levels of knowledge obtained from various sources of information and different channels of communication.

**Conclusion:** Parental education and a higher economical level were important "predictors" of smoking in this sample of university students in Tirana. Prevention programs in Albania should pay special attention to students, a group particularly vulnerable group which is prone to unhealthy behaviors.

**Keywords:** *education, smoking, Tirana, university students.*

## Knowledge, attitudes and practices on drug use among students in Prizren, Kosovo, in 2013

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**Aim:** To assess the level of knowledge, attitudes and practices regarding drug use among students in Prizren, Kosovo.

**Method:** This was a cross-sectional research study. An anonymous self-administered questionnaire consisting of 20 items was used in this survey. The survey was conducted during March 2013. Approval for research was obtained from the Municipal Education Directorate of Prizren. In the research participated 465 students from grades X, XI, XII and XIII (age range: 15-19 years).

**Results:** Mean age of the students was 17.0 years. There were 51% males and 49% females. Students from urban areas were 57.4%. About 65% of the students reported that they read sufficiently about

drugs, whereas 28% of the students felt that the school taught them quite little about drug-related issues. However, students reported that the key source of information about drug-related information was television advertising. About 86.3% of the students have never taken part in activities discussing about drug effects.

**Conclusion:** The level of knowledge about drug-related issues is not satisfactory among students in this region of Kosovo. The main source of information appears to be television viewing. Multi-sectoral actions and effective measures should be undertaken in Prizren in order to control and prevent the drug use among students.

**Keywords:** *drugs, public health, schools, student knowledge.*

## Global Youth Tobacco Survey (GYTS) in Albania

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<sup>3</sup>For Tobacco Free Albania.

**Aim:** The purpose of this study was to collect data on young people's smoking prevalence, knowledge and attitudes related to tobacco use, exposure to media messages on smoking and to environmental tobacco smoke, and the inclusion of health education about tobacco use in school curricula in Albania.

**Methods:** Target group were pupils from elementary schools attending the seventh, the eighth and the ninth grades in Albania. Overall, 59 representative schools were included in the survey, with 4771 pupils in the age of 13-15 years.

**Results:** According to the survey findings, 11.5 % of schoolchildren were current smokers (17.6% boys and 6.3% girls). More than three out of ten ever smokers initiated smoking before the age of 10 years. Four out of ten pupils lived at homes where other people smoked. A large proportion of

pupils had experimented with tobacco, more than five out of ten of pupils in the overall sample. About 65% of schoolchildren reported exposure to second-hand smoke in places outside their homes. About 83% of schoolchildren were not refused when buying tobacco products despite their young age.

**Conclusion:** Awareness campaigns on the dangers of cigarette smoking need to be intensified in Albania. Our data suggest a decreasing age of initiation of cigarette use among Albanian adolescents. Therefore, measures on tobacco control and prevention should be implemented and include the following elements: schools-based programs on smoking cessation and prevention, restriction of exposure to second-hand smoke, media campaigns, and prohibition of availability of tobacco products to minors.

**Keywords:** *global youth tobacco survey; pupils, smoking*



## Global Health Professional Student Survey (GHPSS) among Albanian medical students

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**Aim:** To determine the tobacco use and cessation counseling among health-professional students.

**Methods:** The GHPSS was a school-based survey with a focus on third-year medical students.

**Results:** The prevalence of ever-smoked cigarettes for medical students was 65.0%. About 23% of the students currently smoked cigarettes, but 52 % of them wanted to quit smoking. ETS exposure was over 5 in 10 students live in homes where others smoke in their presence and over 8 in 10 were exposed to smoke in enclosed public places in the past week. The data showed that 88.7% of medical students recognized that they are role models in society. Over 97.2% of medical students considered they should receive training on counseling and

treating patients to quit using tobacco. However, 21.1% of medical students have received formal training.

**Conclusion:** The GHPSS has shown significant needs for cessation assistance among health profession students as well as gaps in professional training to provide similar effective assistance to their future patients. The GHPSS is helpful in evaluating the behavior and attitudes regarding tobacco among health professional students, but additional research is necessary to improve the evidence base for effective tobacco-related curricula, especially materials that are appropriate for a range of cultural and economic circumstances pretinent to Albania.

**Keywords:** *Global Health Professional Student Survey, smoking, students, tobacco*

## HIV Risk Behaviors Among Injecting Drug Users in Albania

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**Aim:** To explore the sexual risk behaviors among injecting drug users (IDUs) in order to inform the development of sexual risk reduction interventions for IDUs.

**Methods:** A cross-sectional study was conducted among a sample of 200 IDUs in capital city, Tirana. The Respondent Driven Sampling (RDS) methodology was used and the sample is representative of Tirana city. The study collected information on demographics; drug use history; sexual risk behavior; HIV/ AIDS knowledge, attitudes, and other psychosocial variables; and HIV and HCV seroprevalence.

**Results:** Population estimates reveal that about 32 % of IDU are younger than 25 years old. The median age at first injection is 21 years, with about 18.5% of IDU estimated to have injected before the age of 19. 43.5 % of the population injected drugs multiple times daily. The most commonly used injectable and non-injectable drugs in the past

month were heroin (93.2%), diazepam (33.4%), marijuana (48%), and cocaine (30%). Population estimates show that half of IDU clean their needles or syringes every time (20.6%) or almost every time (30.7%). The cleaning agents are predominantly cold or hot water (56.5% and 7.1%, respectively), with a low percentage of IDU using alcohol or boiling water, and none of the IDU participants in the study reported using bleach. Only one of the IDU respondents tested positive for HIV, and the RDS software was unable to estimate the proportion of the Tirana IDU network that may be living with HIV. 29.8 % are estimated to be infected with hepatitis C, an infection that is transmitted the same way as HIV.

**Conclusion:** Sexual risk behavioral, unsafe injecting practices, coupled with high rates of hepatitis C, illustrate the vulnerability of IDU to HIV. While HIV prevalence is low, IDU injection and sexual behavioral risks warrant immediate attention.

**Keywords:** *HIV, Knowledge, Prevention, Risk behavior, Roma*

## HIV- Related Risk Behaviors Among Roma Population: Results of a Bio-Behavioral Survey

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**Aim:** To provide updated measurements of key behavioral and biological indicators, including correlations between risk behaviors and exposure to specific STIs, among Roma population, and enhance capacities to maintain surveillance as part of the National AIDS Monitoring Plan.

**Methods:** A cross-sectional study was conducted among a sample of 620 individuals (aged 18-49) in capital city, Tirana. Standard household cluster sampling techniques were used and the sample is representative of urban Tirana. The study explored HIV-related knowledge and risky sexual behaviors, health-seeking behaviors, and seroprevalence of HIV, and syphilis among Roma.

**Results:** The weighted Roma study sample was young, with thirty percent of participants being less than 24 years of age, and a median age of 30. In terms of education, 38.5 % had received no

education, a very low percentage given the fact that primary education is compulsory in Albania. 94% of the Roma reported ever having had sexual intercourse (defined as vaginal or anal intercourse). The median age at first sex was 16 years of age. The vast majority of Roma (about 84%) had sex before the age of 18, with 23.5 % having first sexual intercourse between the ages of 10 and 14 years. This early age of sexual initiation is more common among females, almost twice than males. Biological prevalence rates of disease were low, none of the Roma, sample tested positive for the HIV. H while syphilis rates were 0.3%.

**Conclusion:** The current prevalence of HIV and syphilis among Roma population is low; however, the high prevalence of reported risky behaviors suggests that Roma are at high risk of contracting sexually transmitted infections.

**Keywords:** *HIV, Knowledge, Prevention, Risk behavior, Roma*

## Nutritional status in a representative sample of school-children living in rural and urban areas of Albania

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**Aim:** To assess the prevalence of overweight and obesity in Albanian children living in rural and urban areas, and to analyze determinants and indicators of risk of overweight with the specific scope modification of the wrong eating habits and behaviors.

**Methods:** A cross-sectional study including a representative sample of children attending the fourth grade of elementary schools were the target group (1000 children aged 9-10 years were enrolled in this study from three districts of Albania: Tirana, Shkodra and Vlora). This study was designed for evaluation of the anthropometric parameters, based on the body mass index (BMI) and assessment of children's dietary preferences and habits.

**Results:** The prevalence of overweight among the children in rural areas was 9.7%, of whom 0.3 %

of them were obese. The number of the overweight children in urban areas was twice higher than in rural areas (19%). For each obese child in villages there were more than 10 obese children in the cities. The overweight children engaged in an average of 2 h of active motor exercise and as much as 4 h of sedentary activity (watching television, playing video games, or reading). Most of the overweight children had low-educated parents (63% in rural areas and 88% in urban areas).

**Conclusion:** The childhood overweight and obesity is a big problem for public health in Albania, especially in urban areas. Unhealthy behaviors are a major risk factor for childhood overweight. These data, coupled with the analysis of the dietary preferences and food habits, will allow the introduction of specific measures aimed at preventing childhood obesity.

**Keywords:** *obesity, overweight, school children.*

## Obesity creates problems with individual performance

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**Background:** Obesity under many circumstances causes a number of problems in a person's life, which may include health problems, social problems, and psychological problems. In most cases, obese persons face prejudices and in some cases discrimination, which may stumble their functionality.

**Methods:** This study is designed in the form of a qualitative survey. For the purpose of this study, there were conducted 16 in-depth interviews with obese persons. Also, there were conducted two focus-group discussions, and inspection of personal files.

**Keywords:** *health problems, obesity, psychological problems, work.*

There have been several meetings for an interview.

**Results:** The study found that obese persons have problems with performance in school, at work, and social integration – all because of prejudices towards them. Thus, obese people find it difficult to get a job, keeping a job they already have, to be active in social activities, as well as in other social roles.

**Conclusion:** Being obese affects the individual performance, which deteriorates in most cases. On the other hand, these performance problems can create stress, which in itself may be an incentive to eat, causing many times a vicious circle: eating, prejudices, stress, eating.

## Iodine status among school-children in Albania

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**Aim:** Iodine deficiency disorders (IDDs) are currently one of the major worldwide public health problems. IDDs remain a public health concern in Albania too. This survey was undertaken to determine median urinary iodine concentration among school children, and assess the level of iodine in salt samples at the household level, after the introduction of the use of iodized salt at national level in Albania.

**Methods:** A cross-sectional study was conducted including a representative sample of school-children (N=1060) aged 6-13 years. Urine and salt samples were examined for iodine concentration levels.

**Results:** Overall, median urinary iodine concentration was 100.4 mg/l, indicating non iodine

deficiency; also, 49.6% of the urine samples examined showed iodine insufficiency (2.4% severe IDD, 13.4% moderate IDD and 33.7% mild IDD, respectively). Iodine content was found to be adequate in 62.1% of the salt samples. The median iodine concentration of salt samples was 18.5 mg/ l.

**Conclusion:** Compared to the results of previous surveys, the IDDs rates have declined in the last few years in Albania. However, IDDs continue to be an important public health problem in Albania. These findings call for identification of factors to strengthen the National IDD Control Program: the need to ban production, trading and use of the non-iodized salt in Albania, and the need for repeated surveys to monitor the progress in eliminating IDDs in Albania.

**Keywords:** *iodine, iodine deficiency disorders, school-children.*

## Social determinants of poor nutrition outcomes among children 0-59 months in Albania

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**Aim:** This paper analyses the associations between socioeconomic characteristics and various measures of malnutrition among children 0-59 months of age in Albania in order to improve the targeting of interventions and to monitor and evaluate achievements towards attaining the MDGs.

**Methods:** The anthropometric indicators, height-for-age, weight-for-height, and weight-for-age, are combined with variables measuring micronutrient deficiencies through biomarkers for anaemia status. The analysis uses data from the Albanian Demographic and Health Survey 2008-2009, based on cross-sectional data collected from a sample of 1,616 children aged 0-59 months. For stunting, anaemia and underweight, binary logistic regression was used and for wasting and overweight, multinomial logistic regression was employed to measure the relative risk of all confounding factors.

**Results:** Age of the child, age of the mother,

educational level of the mother, household wealth index, region and place of residence were all significantly related to anaemia (all  $p < 0.05$ ). Age of the child, birth order, wealth index and region were strong predictors of stunting (all  $p < 0.05$ ). Wasting was significantly related to age of the child, sex of the child, and urban/ rural residence (all  $p < 0.01$ ). Birth order, wealth index and region were significantly related to overweight (all  $p < 0.01$ ).

**Conclusion:** Findings of this study emphasize the importance of social determinants in child malnutrition (under nutrition and overweight) in Albania and contribute to identify profiles of children most at risk that could help decide the best mix of intervention strategies. Preparation of multi-sectoral strategies that aim improvement of social determinants should be a priority of policy makers and public health experts in order to contribute to improved nutrition outcomes for young children in Albania.

**Keywords:** *anaemia, malnutrition, overweight, social determinants, stunting, wasting*

## Dietary patterns in the Albanian adult population

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**Context:** Albania has preserved the use of traditional foods and dishes similar to other countries of the Mediterranean region and thus may benefit from a healthy diet which is not high in saturated fats and salt – typical for processed foods of the non-Mediterranean prototype.

**Methods:** A desk review of the available evidence from Albania for the period 1990-2011 was conducted in order to assess the dietary patterns and calorie intake including macronutrients pertinent to the Albanian adult population.

**Results:** Many Albanians eat the internationally recommended minimum intake of over 400 g of fruits and vegetables (in addition to potatoes) per day, which prevent deficiencies of micronutrients and help to prevent non-communicable diseases. But,

most Albanians do not reach the recommended 600 g. per day threshold. In the past decade vegetable production has not improved as much as livestock output, partly because only about half of the greenhouses built during the communist period are in use.

**Conclusion:** Several components of traditional Mediterranean diet in Albania are being replaced by processed, “western” foods which are higher in salt and saturated fats. However, no individually-based nutritional surveys have been conducted to estimate the quantity and quality of food intake in the adult population in Albania. Consequently, valid and accurate information on macronutrients and micronutrients for the Albanian adult population remains scant.

**Keywords:** *macronutrients, Mediterranean diet, micronutrients, processed foods, saturated fats, traditional diet, western foods.*



## Levels and distribution of physical activity in the adult population of Tirana, Albania

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**Aim:** In developed/ industrialized countries, the protective association of leisure-time physical exercise with coronary heart disease (CHD) is well-established. However, population-based data on physical exercise in transitional countries of the Western Balkans are scarce, especially for Albania. In this context, our aim was to assess the levels of physical exercise in the adult population of Tirana, Albania, a country undergoing significant changes in behavioral characteristics including physical activity.

**Methods:** In 2012, we conducted a cross-sectional survey in Tirana including a representative sample of 850 adults aged  $\geq 18$  years (500 women, mean age:  $49.7 \pm 18.8$  years; 345 men, mean age:  $51.3 \pm 18.4$  years). A semi-structured questionnaire was administered to all participants inquiring about levels of involvement in physical activities (which was categorized in the analysis into: low, moderate, and high). Information about demographic characteristics and socioeconomic factors was also collected.

**Results:** Overall, about 22% of survey participants reported high levels of physical activity, whereas 18% of individuals reported low levels of physical exercise. There were no sex-differences in the levels of physical activity. Regardless of the gender, high levels of physical exercise were positively associated with younger age, a lower body mass index, and a lower abdominal obesity index.

**Conclusion:** Our findings inform about the levels and distribution of physical activity in a representative sample of the adult population in Albania. We conclude that the levels of physical activity in this sample of Albanian adults were low and this fact should raise serious concerns to public health professionals and particularly policymakers. There is an obvious need for health campaigns in order to promote physical activity in the adult population of Albania.

**Keywords:** *energy expenditure, physical activity, physical exercise, physical inactivity.*

## Participation of adolescents in physical activity in Albania in 2009

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**Aim:** of the Youth Risk Behavior Surveillance System among adolescents was to monitor six (priority) categories of health risk behaviors among youth in Albania. One of these categories was the participation of adolescents in physical activity.

**Methods:** This was a quantitative study with participation of high school students, aged 16-18 years. The sample size was 3200 students, drawn on a multistage cluster sampling technique with probability proportional to size (for the 12 districts of Albania). The instrument of the study was a standardized questionnaire adapted from the Center for Disease Control and Prevention, USA. The data analysis was conducted in SPSS.

**Results:** About 40% of the students did not perform any physical activity during a week, while 37% reported to have had physical activities with a

duration of 30 minutes without sweating or having difficulties in breathing 1-2 days per week. 23% of students have performed a physical activity of 20 minutes which had made them sweating in 3 or more days per week (37.5% male and 12.9% female students). About 70% of students participated in an hour of physical education and 8% of them in two or more hours. 37% of the students had watched TV for 3-4 hours per day.

**Conclusion:** Participation of the adolescents in physical activities has decreased over the years in Albania. There is an urgent need for active promotion of physical activity, efficient health education, and greater focus on health education in school curricula, as well as involvement of health professionals in promotional campaigns related to youth participation in different physical activities.

**Keywords:** *adolescent, sedentary lifestyle, physical activity.*

## Mental Health Counseling

**Redona Dudushi<sup>1</sup>, Roland Bani<sup>1</sup>, Marjeta Dervishi<sup>1</sup>, Elina Mukaj<sup>1</sup>,  
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Mental health is an integral part of our overall life. Mental Health Counseling has to do with many aspects of our lives including: how we feel about ourselves, how we feel about others, how we are able to meet the demands of life. Mental health counseling has been in practice for a considerable time in various forms, and has often been a function of religious or other community organizations intent on supporting the overall health and prosperity of citizens.

The mental health counseling has the goal of establishment individual's balance between all aspects of life (social, physical, spiritual and emotional). Counseling helps to bring change and clarity in thought, emotion, and in behavior. The counseling in itself has different goals as facilitating behavioral change, enhancing one's coping skills, promoting decision making, and improving relationships. The mental health counseling has important role in treatment of persons living with HIV/ AIDS.

The Counseling process is becoming a core element in a holistic model of health care, in which psychological issues are recognized as integral to patient management. HIV counseling has two major objectives: the prevention of HIV transmission and the support of those affected directly and indirectly

by HIV/AIDS. It is important that HIV counseling should have these dual aims because the spread of HIV can be prevented by changes in behavior. The counseling has a particular contribution in that it enables frank discussion of sensitive aspects of an individual's life. Also, when patients know that they have HIV infection they may suffer great psychosocial and psychological stresses through a fear of rejection, social stigma, disease progression, and the uncertainties associated with future management of HIV. Good clinical management requires that such issues be managed with consistency and professionalism, and counseling can both minimize morbidity and reduce its occurrence. A very important indicator to gauge the specific sound HIV/AIDS remains a number of voluntary testing for HIV.

Functioning of voluntary counseling and testing centers in each prefecture currently allows Albania to perform testing in these prefectures. Around 2137 voluntary tests are carried out on voluntary counseling and testing centers in Tirana and in all regions of the country, a figure that has undergone a slight increase compared to last year, when the 1677 voluntary tests were conducted. Empowering these centers should be an ongoing process.

**Keywords:** *counseling, HIV / AIDS, mental health.*

## Mental health promotion in the curricula of the 9<sup>th</sup> grade and the higher education system in Albania

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**Aim:** Mental well-being is one of the most important components of health. Mental health problems have a high prevalence in Albania, as well as anywhere in the world, with an increasing incidence. For these reasons, the increasing of people's knowledge and skills in order to control their mental health is a priority. This study aims to analyze the extent of involvement of the aspects of mental health promotion in the current curricula of the 9<sup>th</sup> grade and the higher education system in Albania.

**Methods:** In this qualitative study the current curricula of the 9<sup>th</sup> grade and higher education system were reviewed regarding the issues related to mental health promotion.

**Results:** Mental health problems are addressed in

the 9<sup>th</sup> grade in the subject "Biology and Health Education", in a chapter about stress. Also, life skills issues, which have an indirect impact in mental health promotion, are covered in the 10<sup>th</sup> grade, in the subject "Life skills". In the 11<sup>th</sup> grade, in the subject of Psychology, these issues are addressed in more detail. But, it is an elective discipline, which is not attended by all students.

**Conclusion:** Although mental health issues are actually addressed in the current 9<sup>th</sup> grade and higher education system curricula, the extent of the knowledge and skills acquired by the students are insufficient compared to the magnitude and impact of these problems in the general population. Therefore, a more extensive coverage of these issues in the school curricula is needed for Albania.

**Keywords:** *curricula, mental health, health promotion.*

## The impact of television violence among young people

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Nowadays, the power of media is growing gradually. Such a problem is accompanied by another disturbing phenomenon: the explosion of violent crime. Modern society is exposed to a massive dose of violence that occurs daily in the media. Meanwhile, a large number of studies on violence in the media have been undertaken in the past forty years using different research methods. This paper aims to show the factors affecting the appearance of aggressive behavior in young people, what effect (if any) creates violence exposure on youth and what measures can be taken to reduce this phenomenon.

Different studies, conducted mainly in the field of communication and psychology are introduced. These studies have found out that television (TV) violence has multiple effects on children's behavior of all ages. These effects include: imitation of violence and crimes watched on TV, reduction of susceptibility to aggressive behavior, explosion of impulsive acts of aggression, replacing of socialization activities with peers as well as the reduction of interaction with adults.

Youth exposure to TV violence is associated with emotional effects on young people, who may become desensitized to violence in real life and see the world as a scary place, where people use violent methods to resolve conflicts. Scientific evidences from a group of studies on media-related aggression are summarized in literature reviews and

have come to the conclusion that watching violent movies increases aggression.

Theories and data suggest that social factors may moderate the effect of media violence on aggression if they change the chances for a child to be identified with aggressive characters, previously seen violence.

These factors may be cultural, social including family, or environmental. For example, cultural environments, with strong sanctions against violence in the group reduce the expression of aggressive behavior learned through media. Parents, as social key factors have the potential to become moderators of the effects of media violence on children. Children and teenagers form their attitudes, beliefs and act as a result of exposure to media content, but they can discuss what they can see with others - especially with parents and friends. When parents take an active role in mediating - including regular and critical comments - children are less likely to be adversely affected by media content.

Researchers of communication sciences suggest that any interference made by parents can reduce the importance given to the television violence by children and can also reduce children's aggressive attitudes. Apparently, young people need the presence of adults to create a more realistic idea of the world in which they live, and this cannot be limited within the events of the TV screen.

**Keywords:** *media, television, violence, youth.*

## Communication for behavior change for improved health and nutrition outcomes of children in Albania

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**Aim:** Design and implementation of a communication campaign to promote sustainable change in the behavior of families and communities for improved care and feeding practices for mothers and children.

**Methods:** Communication Strategy to Reduce Malnutrition in Children in Albania was prepared in 2011 as one of the main components of Nutrition Joint Program. It was developed collaboratively by a Group of National Experts, and an international communication consultant, supported by UNICEF office in Albania. This Strategy was developed using a systematic Audience-Centered Communication Planning Process. It was based on Diffusion of Innovations, and the change model was based in the 7 Steps of Change: awareness, knowledge, attitudes favoring the new behavior, decision to try, trial, confirmation and advocacy. Development of communication products was based on formative research and pretesting.

**Results:** An exciting, colorful campaign, targeting women, new and future mothers and mothers-in-

law was developed, promoting and modeling a coherent package of infant and young child feeding practices. This campaign uses a variety of mass media and interpersonal channels, and is unified by central character, a logo, a tagline and a musical theme. This is a behavior change campaign, making effective use of information, evidence, attitude and image change messages, and modeling to promote change. Health professionals were also targeted to improve their communication and nutrition counseling skills.

**Conclusion:** Communication for behavior change is a new culture for Albania, and requires adequate budget allocations and experts trained in social and behavior change communication for health and nutrition. Spreading information does not necessarily bring changes in attitudes and behaviors. It is important to find the right balance between mass media communication and interpersonal communication activities especially in view of budget restrictions and limited social responsibility from media.

**Keywords:** *communication strategy, healthy nutrition social and behavioral change.*

## Potentially inappropriate prescribing among older people

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Older people often experience multiple diseases and, therefore, this is inevitably associated with multiple drug use. This phenomenon, being referred to as *polypharmacy*, is related to the concurrent use of at least five different medications. It has been convincingly demonstrated that multiple usage of medications may lead to inappropriate prescribing and a decrease in the therapeutic response. According to the vast international literature on this matter, potentially inappropriate prescribing in older people are considered those drugs which do not have evidence-based indications for use, those which bear a high risk for side effects in older people compared with younger adults, or those drugs which have not been shown to be cost-effective in clinical settings, but particularly in epidemiological (population-based) studies.

From this perspective, inappropriate prescribing in older people is a common and serious healthcare problem in most of the countries worldwide, but especially so in transitional countries of the Western Balkans including Kosovo and Albania where there are no clear and strict regulations related to prescriptions of medications. Therefore, similar to

other countries, the polypharmacy phenomenon is supposedly linked to an increased risk of adverse drug reactions and inappropriate prescribing in Kosovo and Albania too.

Although inappropriate prescribing is a vast phenomenon in many countries, this condition is almost fully preventable and, thus, there have been developed specific screening instruments for inappropriate prescriptions including Beers' Criteria and the Inappropriate Prescribing in the Elderly Tool (IPET).

In the international literature, Beers' Criteria consist of the most frequently reported screening instrument for inappropriate prescribing notwithstanding some major criticism which has been evoked mostly due to the fact that several drugs are rarely prescribed currently, there exists a lack of structure in the presentation of the criteria and omission of several important and common inappropriate prescribing instances.

These internationally validated instruments are currently being cross-culturally adapted and subsequently will be administered to a nationwide representative sample of older people in Kosovo.

**Keywords:** *Beers' Criteria, inappropriate prescribing, Inappropriate Prescribing in the Elderly Tool (IPET), older people, polypharmacy.*

## Demographic and socioeconomic factors associated with inadequate functional health literacy among primary health care users in Kosovo

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**Aim:** Functional health literacy (FHL), which encompasses comprehensive reading and numerical skills, is a prerequisite for taking sound health decisions. Thus, inadequate FHL may pose a serious barrier towards achieving optimal health. Our aim was to determine the factors associated with inadequate FHL among adult primary care patients in Kosovo.

**Methods:** During November 2012 – February 2013, 1035 primary health care patients aged  $\geq 18$  years old were interviewed in the premises of the Principal Family Medicine Centers of Pristine, Gjakova and Prizren municipalities in Kosovo (response rate: 86.3%). FHL was assessed using the validated Albanian version of the TOFHLA test which measures reading comprehension and numerical skills. TOFHLA scores range between 0-100 with higher scores implying better functional health literacy. Chi-square test was used to determine

the factors associated with inadequate FHL in this study sample.

**Results:** Mean age of participants was 44.3 years  $\pm$  17.3 years. Almost two thirds (60.2%) of participants were females. Inadequate FHL was significantly higher among individuals aged  $>50$  years old compared to their youngest counterparts (64.9% vs. 20.2%, respectively), those with low education compared to highly educated participants (79.7% vs. 8.1%, respectively), rural compared to urban residents (48.2% vs. 40.4%, respectively) and among individuals with poor economic status compared to those with high economic status (72.9% vs. 37.3%, respectively).

**Conclusion:** Inadequate FHL varies significantly according to selected demographic and socioeconomic factors of Kosovo primary health care users. Interventions targeting high-risk groups could help strengthen FHL and subsequently improve individual health decision making.

**Keywords:** *functional health literacy, Kosovo, primary care users, socioeconomic status.*



## Menopause and quality of life in women

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The importance of female sexual fulfillment is increasingly recognized in today's society. Women's sexual lives continue well into the menopausal years and beyond; however, the impact of menopause on the quality of the sexual life has not been comprehensively studied in the medical literature. This review attempts to clarify the impact of the physiological, psychological and psychosocial changes occurring at midlife that may affect women's quality of sexual life. Pharmaceutical and psychological interventions that may assist in improving the quality of sexual life of menopausal women are discussed.

Female sexuality is complex and not fully understood and, consequently, controversy frequently arises in the discussion of female sexual problems and their treatment. A future perspective on how the impact of menopause on the quality of sexual life may be more cohesively investigated.

Menopause is defined as *"the permanent cessation of menstruation resulting from loss of ovarian follicular activity"*.

In the majority of women, menopause is a natural event occurring, on average, at the age of 51.3 years. An earlier menopause may be induced surgically by oophorectomy, often accompanied with hysterectomy, or as a consequence of premature ovarian failure. The time at which natural menopause is said to have occurred for an individual is a retrospective clinical diagnosis based on 12 months of amenorrhea from the woman's last menstrual period. Natural menopause is not a singular event but a transition lasting on average 3.8 years. The transition begins with the peri-menopause and this period, often referred to as the climacteric, commences at a mean age of 47.5 years. The menopause transition can be divided into early transition and late transition (also known as early and late peri-menopause); early postmenopause and late postmenopause, with each stage marked by changes in hormonal status producing patterns of "menopausal" symptoms.

**Keywords:** *menopause, peri-menopause, postmenopause.*

## Psychosocial intervention in combination with pharmacotherapy and treatment response among patients with alcohol addiction in Tirana, Albania

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**Aim:** Alcohol abuse and alcoholism represent a world-wide problem, both from a medical and a social point of view. Psychiatric disorders occur more often among alcoholics than among the general population. The aim of this study was to investigate the treatment response and the pattern of psychiatric, neurologic and internal co-morbidities which may affect the organization of the treatment.

**Methods:** This study included 51 patients, who started psychosocial treatment at alcohol treatment inpatient clinic over the period September 2010 – September 2011. Socio-demographic and socio-economic characteristics included marital status, educational level, employment status, and income level. Treatment stages followed the HUDOLIN scheme.

**Results:** Mean age of the patients was 47.3± 9.8 years (range: 31-72 years). There were 49 (96%) males and only 2 (3.9%) females. The most frequent

disorders in this group of patients were the psychiatric disorders (n=41, 80%), followed by internal disorders (n=36, 70%) and neurological disorders (n= 15, 30%). A significant positive association was found between psychiatric disorders (generalized anxiety, or mayor depressive disorders) with the civil status “divorced” (P=0.006); unemployment (P<0.001); low economic status (P=0.02) and low educational level (P=0.03). Patient with moderate dependence were 1.5 times more likely to manifest anxiety and general depressive disorders than patients with low dependence.

**Conclusion:** The high rates of associated psychiatric disorders in patients with alcohol-abuse disorders require that alcoholic patients undergo careful psychiatric evaluation. The pharmacotherapy should not be considered as the only form of treatment but as an integrated part of a multimodal approach including psychological and social support.

**Keywords:** *alcohol, behavioral and mental disorders, dependence, psychotherapy.*

## Safety and health in the waters of the swimming pools

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**Aim:** The increase in the number of swimming pools as recreational places has brought the necessity of their sanitary evaluation. This study is based on the WHO recommendations for safe and healthy pools.

**Methods:** This study included several outdoor pools in Tirana. These pools have different structural characteristics (surface, volume) and disinfection means. The study was conducted within a period of three years. Sampling was conducted in various days over the weekend. Analytical methods in accordance with the Albanian standards ISO, EN were employed. Quality control of the analysis was carried out through the participation in laboratory test, IPA 2011. The main physical and chemical indicators used to assess the quality of pool waters included the following: free chlorine, suspended matter, pH, and ammonia. Conversely, microbiological indicators included total coliform, faecal coliform, faecal, streptococcus, and pseudomonas aeruginosa. Maintenance indicators included the area

available per each sunbather, the usage of annexes as public environments, and sanitation services.

**Results:** This study demonstrated that several indicators in the swimming pools of Tirana are quite poor. Free chlorine in 49.6% of the analyzed samples was below the recommended values. Furthermore, ammonia in 50.6 % of the analyzed samples was above the recommended values. Total coliform number in 70% of the analyzed samples was above the recommended values. The report of the area per each sunbather in all pools was not managed by their keepers.

**Conclusion:** In Tirana, the factors which influence the safety of the swimming pools include the microbiological (fecal) indicators, the chemical (by-product of the chlorination: chloramines) indices and contamination by the users of the pools (ammonia). Proper management of the microbiological, chemical and maintenance indicators are a basic prerequisite for healthy and safe swimming pools in Albania.

**Keywords:** *free chlorine, recreational places, swimming pool, water safety.*

## Level of hand hygiene in health care services in Vlorë

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**Aim:** Hand hygiene is an important element of the quality of health care services. Our aim was to describe the level of hand hygiene in Vlorë Regional Hospital.

**Methods:** This was a descriptive study undertaken between December 2012 and January 2013 including a representative sample of the personnel (n=200). A standardized WHO-recommended questionnaire was administered to all participants. Epi-Info was used for data analysis.

**Results:**

- 97% (95%CI=94.6%-99.3%) of participants reported there is non-stop running (safe) water in the hospital.
- Conversely, 93.5% (95%CI=90.0%-96.8%) of individuals reported that there were no paper napkins of single usage.
- 69.3% (95%CI=63.0%-75.6%) of interviewees reported that the institution has no real plan for

improving the infrastructure for hand hygiene.

- 90% (95%CI=85.0%-94.0%) of individuals reported that there is no monitoring mechanism of the compliance of hand hygiene within the hospital.

- Only 6% (95% CI 3.3% -9.9%) of the interviewed personnel reported washing “always” their hands before visiting/treating patients.

- The hand hygiene compliance rate for the item: “before visiting/ treating the patient” was 3%.

**Conclusions:** Our findings point to the urgent need for implementation of the program for hand hygiene, according to WHO guidelines. Furthermore, there is a need for prioritization of possible interventions concerning: infrastructure; continuous training of personnel; promotional campaigns; evaluation and feedback of information on hand hygiene; establishment of a positive institutional climate about the issue of hand hygiene by engaging the leading staff of the hospital.

**Keywords:** *hand hygiene, health care services, Vlorë.*

# **PARALLEL SESSIONS**

**Session 5: Reproductive Health**

**Moderator: Eduard Kakarriqi**

## National Contraceptive Security Strategy in Albania, 2012-2016

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Albania has made significant progress in the area of family planning in the last 10 years. The Ministry of Health (MoH) of Albania has taken the lead in strengthening contraceptive security (CS) to ensure a lifetime supply of contraceptives for all Albanians who need them. By 2010, Albania has been completely self-reliant and independent of outside donor support for contraceptives by providing 100% financial coverage for the public sector. In 2008-2009 a Demographic and Health Survey was conducted (ADHS 2008-2009), where the modern contraceptive prevalence rate was reported at only 11%, and total fertility rate 1.6.

The two key principles of the Albanian National Contraceptive Security Strategy are contraceptive security and contraceptive independence. Contraceptive security involves guaranteed, reliable, long-term supply of quality contraceptives for every Albanian who wants them. Contraceptive independence is defined as complete self-reliance in maintaining contraceptive security, with no need for external donors to fund contraceptives or related logistics technical assistance

The overarching goal of the Albanian National

Contraceptive Security Strategy 2012-2016 (ANCSS 2012-2016) is to ensure that Albanian men and women can choose, obtain, and use high-quality family planning services and contraceptives, whenever they want them, for planning their families.

The Albanian National Contraceptive Security Strategy 2012-2016 has two phases:

- First phase (2012-2013): This phase will be characterized by maintaining the 2011 policy of providing contraceptives free-of-charge for all the population in-need. Also, a study to identify the costs of providing family planning services in the public sector will be conducted during the first phase, allowing quantification of all service and program costs related to provision of family planning by the public sector. This phase will be used also to improve the national logistical information system on contraceptives by attempting to include information from the private sector (pharmacies and other selling points for condoms), social marketing and NGO sectors.

- Second phase (2014-2016): During this phase, free-of-charge contraceptives provided by the public sector will be targeted to most vulnerable population subgroups.

**Keywords:** *contraceptives, health education, security strategy.*

## Abortion indicators in Albania for the period 2009 - 2011

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**Context:** In Albania, before the legalization of abortion (1994), the mortality rate was ranked among the highest in the European region: almost 50% of all pregnancies resulted in miscarriage, most of them self-induced or not performed in safe conditions. Despite uncertainty about the actual number of abortions before 1990 in Albania, after the legalization of abortion the trend has been towards fewer abortions.

Since 2007, the Institute of Public Health has established abortion surveillance in order to document the number and characteristics of the women obtaining abortions.

**Methods:** Abortion surveillance is the main source of data, because it is based on the abortion forms coming from all the maternity wards as well as the private clinics licensed to perform abortions in Albania. For the purpose of trend analysis, data are

evaluated from 48 areas that provide data every year regarding the period 2009-2011. Abortion ratios (abortion per 1,000 live births) are calculated using nativity data from the Ministry of Health.

**Results:** The national abortion ratio declined gradually from 270.2 per 1,000 live births in 2009 to 242.2 per 1,000 live births in 2011. Women aged 20-34 years were accounted for the majority of abortions during the entire period of the analysis (around 65.5%). Abortions performed in public sector in 2011 constituted 88.8% of the total number of abortions, with an increase on the private sector, which constituted 11.2% of abortions, compared to 8.4% in 2009.

**Conclusions:** Ongoing abortion system is important in order to evaluate the programs aimed at preventing unintended pregnancies and foster access to family planning.

**Keywords:** *abortion, indicators, surveillance*

## Do the socio demographic characteristics of mothers affect the preterm birth in Tirana?

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**Aim:** Preterm delivery is associated with increased risk for infant mortality and morbidity, as well as long-term morbidity (in particular, chronic disease) and high economic costs for both families and the society. The aim of this study was to describe the effect of different social and demographic characteristics of mothers on preterm birth (less than 37 weeks of gestation).

**Methods:** This case-control study examined socio demographic risk factors for preterm birth, at University Obstetric Hospitals of Tirana during March-December 2012. A total of 140 preterm infants' mothers and 280 in term infants' mothers were included in the study. The odds ratio (OR) calculated by logistic regression analysis was used as a measure of association between the preterm birth and the socio demographic variables such as age

(below vs. above 35 years), residence, education, employment, and marital status.

**Results:** The highest significant ORs of preterm were found in mothers living in rural areas (OR=2.1, 95%CI=1.2-4.7), low-educated mothers (OR=1.4, 95%CI=1.1-2.6) and mothers who worked during their pregnancy (OR=4.2, 95%CI=1.2-7.3). The ORs of preterm birth were found non-significant regarding the marital status and age of the mothers.

**Conclusion:** Women residing in rural areas, those with a low educational level and those working during their pregnancy are more likely to have a preterm birth. Our findings indicate that preterm birth should be considered as a pregnancy outcome which is affected by the socio-demographic characteristics of mothers.

**Keywords:** *mothers, preterm birth, socio-demographic factors.*



## The prevalence of congenital malformations in Tirana, during 2010 and 2011

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**Background:** Congenital malformations (CM) and preterm births are important causes of childhood death, chronic illness, and disability in many countries. Congenital malformations may have a genetic, infectious or environmental origin; yet, in most of the cases it is difficult to identify their cause. Congenital malformations can be defined as structural or functional anomalies, which are present at the time of birth.

**Methods:** This is a cross-sectional study. Congenital malformations data are extracted from the congenital malformations surveillance system in Albania and the data about live births are collected from the Ministry of Health.

**Results:** Congenital malformations affect approximately 14 in 1000 infants in Albania. Approximately 1 in 100,000 inhabitants in Albania die every year from congenital malformations. The most common major congenital malformations in Tirana

are heart defects, gastro-intestinal defects, musculo-skeletal and neural tube defects. Approximately 80% of CM cases identified in Tirana are residents of this district. Approximately 70% of CM cases are of rural residence and around 60% of them are males. About 60% of their mothers are unemployed. 17% of CM cases are born preterm (before 37 completed weeks of pregnancy). The annual prevalence of congenital malformations in Tirana in 2010 and 2011 was approximately 24 per 1000 live births.

**Conclusion:** Congenital malformations may result in long-term disability, which may have significant impacts on individuals, families, health-care systems and societies. Many congenital malformations can be prevented and treated. An adequate intake of folic acid, iodine, vaccination, and adequate antenatal care are key preventive tools.

**Keywords:** *congenital malformations, epidemiology, surveillance, Tirana.*

## Feeding and care practices of children in target interventions areas of the Nutrition Program in Albania

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**Aim:** To generate baseline information on knowledge, attitudes and practices about infant and young child feeding and care practices in order to plan nutrition interventions and help prepare the new Food and Nutrition Action Plan for Albania.

**Methods:** The survey was designed to provide information on a representative sample of households in the target intervention areas of the Nutrition Program (Kukes and Shkodra prefectures and two peri-urban municipalities of Tirana: Kamëz and Paskuqan). A stratified two-stage cluster sample was designed selecting 1,584 households with women between the ages of 15-49 years, school-children aged 5-14 years, and children under 5 years. The data were collected through personal, face to face interviews.

**Results:** Forty two percent of infants under 6 months were exclusive breastfed. Among children

6-23 months, only 38% of were fed with the minimum acceptable diet that includes combination of food groups and adequate number of meals per day. Using the dietary diversity score, 51% of infants were not fed with the minimum acceptable number of food groups in a day. 88% of children 5-15 years had a diet that meets the minimum acceptable level of dietary diversity. Only 50% of mothers felt they have enough information about adequate child feeding.

**Conclusion:** The 1000 days from pregnancy to the end of the second year of child's life represent a period of vulnerability but also a window of opportunity for effective interventions. Interventions should be implemented early in child's life in order to yield the highest returns in terms of reduced child mortality, improved child health, physical growth and mental development and prevention of non-communicable diseases later in life.

**Keywords:** *children, feeding and care practices, nutritional program.*

## Iodine status among pregnant women in Albania

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**Aim:** Adequate iodine intake is required for the synthesis of thyroid hormones that are important for normal fetal and infant neurodevelopment. IDD remains a public health problem in Albania. In the recent past, Albania had severe iodine deficiency disorders, as shown by severe data. This study aims to describe urinary iodine excretion during pregnancy in women living in of the Central - South East area of Albania that resulted with middle and severe IDD prevalence, and low level of iodine content in salt (National IDD survey 2006).

**Methods:** This was a cross-sectional study including a representative sample of 137 pregnant women from first to second trimesters, attending mother and child health care centers. Urinary iodine excretion and the iodine in salt in household level were measured in all participating women.

**Results:** The median urinary iodine concentration was 159.4 µg/l indicating non-iodine deficiency. Yet, 48.5 % of the urine samples examined showed iodine insufficiency, 29.4% sufficient iodine and 22.0% excessive iodine. Iodine content was found to be adequate in 73.7 per cent of salt samples. The median iodine concentration of salt samples was 29.6 mg/l.

**Conclusion:** The data showed a good progress, but Albanian pregnant women are still iodine insufficient. Findings of this study call for further attention to iodine intake during pregnancy. The currently recommended intake of iodine through universal salt iodization may not be adequate for pregnant and lactating women, and supplementation during pregnancy and lactation should be further considered in light of the latest recommendations.

**Keywords:** *iodine, iodine deficiency disorders, pregnant women.*

## Assessment of iron status in Albanian children and women through biochemical iron indicators

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**Aim:** To assess the iron status among Albanian children aged 6 months to 14 years and women 15-49 years in a cross-sectional study conducted in the prefectures of Shkodër, Kukës and periurban areas of Tirana.

**Methods:** A total of 443 children 6-59 months, 530 children 5-14 years, and 418 women 15-49 years were included in this study. Iron status was defined utilizing biochemical indicators. Iron depletion was defined as low serum ferritin ( $SF < 12 \frac{1}{4} \mu\text{g/l}$ ). Iron deficiency (ID) was defined as high soluble transferrin receptor ( $sTfR > 28 \text{ nmol/l}$ ) plus iron depletion. Iron deficiency anemia (IDA) was defined as ID with hemoglobin (Hb) below the WHO cutoff value for age and sex: 11.0 g/dl for children 6-59 months, 11.5 gr/dl for children 5-11 years old, 12.0g/ dl for children 12-14 years old and (nonpregnant) women 15-49 years old. Individuals

with indication of inflammation ( $CRP > 10 \text{ mg/l}$ ) were excluded from the analyses.

**Results:** The prevalence of iron depletion among children 6-59 months, children 5-14 years and women 15-49 years were 28.4%, 10.9% and 23.6%, respectively. The overall prevalence of ID and IDA among children 6-59 months was: 9.1% and 7.5%, respectively; among children 5-14 years: 6.1% and 3.4%, respectively; and among women 15-49 years: 8.1% and 7.1%, respectively.

**Conclusion:** Findings of this study indicate that specific attention should be given in Albania to ensure that the dietary intake of iron is adequate for children, adolescent girls and women through implementation of integrated strategies that include improvement of dietary intake through education, food fortification and use of iron supplements.

**Keywords:** *anemia, deficiency, dietary intake, iron depletion.*

## Significance of HPV tests in women with cervical smears exhibiting squamous cells of uncertain significance (ASCUS)

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**Aim:** In Albania, cervical cancer cases are diagnosed in advanced stages. The aim of our study was to assess the relationship between the human papillomavirus (HPV) tests and the cytological findings.

**Methods:** Overall, 1321 women participating in the opportunistic cytological screening in the Maternity of Tirana, Albania and 52 showing atypical squamous cells of uncertain significance (ASCUS) in their cervical smears were identified during the year 2012. All women were invited for a repeated examination about three months later. At that occasion, a smear sample was collected and used for cytological examination and a concomitant HPV test. HPV detection and typing were carried out by polymerase chain reaction and HPV deoxyribonucleoside acid (DNA) sequence analysis.

**Results:** Women with an ASCUS diagnosis showed a normal cytology and a negative HPV test in 13.5%

of the cases, abnormal cytology and a positive HPV test in 48% of the cases; in 21% of the women, the HPV test was positive, whereas cytology was normal; and in 17% of the women, the HPV test was negative, whereas cytology was abnormal (ASCUS or more). HPV test was positive in 70% of ASCUS cases. HPV high-risk was detected in 28% of HPV test positive and in 100% of cases diagnosed in CIN 3. Oncogenic types detected were 33, 16, 18, 52, 68, 51, 31, and 56.

**Conclusion:** Our findings indicate that HPV tests identify a larger group of women at risk to develop cervical cancer in comparison with cytological examination. As the HPV tests have a higher sensitivity than the cytological screening, it is suggested that a HPV test in conjunction with a diagnosis of ASCUS can be employed more efficiently to selected women for whom further follow-up is recommended.

**Keywords:** *cervical cancer; HPV, smear.*

## Logistic Management of Information Systems for Contraceptive Distribution

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**Context:** In Albania, family planning services are offered in all 36 districts and in 427 public sector family planning clinics, or service delivery points. National Logistic Management of Information Systems for Contraceptive Distribution (LMIS) has been set up in order to ensure the supply for each product, the necessary quantity, and monitoring & evaluation of family planning services.

**Methods:** Reviewed data reported every trimester from LMIS focal points in 36 District Public Health directorates. This system collects service statistics – first visit, revisits, counseling visits, total visits, and Couple Years of Protection (CYP).

**Results:** LMIS figures from 2006-2012 indicate a stable consumption of contraceptives, but a decrease of 5% in the number of new visits and a slight reduction in the number of injections and IUDs provided. Total CYP/GMR was estimated at 5.2%

and 4.3% in 2006 and 2012, respectively. CYP was estimated at 20729 in 2006, combined oral contraceptives, and IUD accounting respectively for 27%, 41% and 16% condom and injections of the total CYP. CYP was estimated at 18433 and 17060 in 2010 and 2012 respectively, combined oral contraceptives, and IUD accounting respectively for 27%-26%, 33-31% and injections and condoms 20%-22% of the total CYP.

**Conclusion:** In Albania, family planning services at primary health care are now part of the package of services provided in the health centers. LMIS should be a continuous supply of types of modern contraceptives that are offered free of charge. The fact that contraceptive prevalence rate is increasing slowly, points to the need for more contraceptive education and health promotion campaigns in Albania.

**Keywords:** *Albania, Logistic Management of Information Systems for Contraceptive Distribution (LMIS).*

## Assessment of knowledge level about sexually transmitted infections among university students in Albania

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**Aim:** Sexually Transmitted Infections (STIs) among young people are becoming a public health problem and one of the major determinants of human development. They cause physical, psychological, social and economic problems, as well as other consequences. Therefore, STIs among young people deserve a special attention. Our aim was to assess the current level of knowledge at Albanian university students on STIs in order to design appropriate health Information-Education-Communication programs and to create a database for their monitoring and evaluation.

**Methods:** A descriptive quantitative study was conducted at national level during the period March-May 2013, collecting information from a sample of 2000 students, selected randomly and proportional to size from the overall number of the university students (sampling frame). Data collection instrument consisted of a self-administered, structured and anonymous questionnaire, which was previously pre-

tested in a small group of students. Data analysis was done in SPSS, version 16.0.

**Result:** The results showed good levels of students' knowledge concerning STIs in general, HIV/AIDS (97.6%), hepatitis B (85.2%), and syphilis (64.7%). However, students were not informed about some specific STIs and had several misconceptions about these infections. Almost all students were aware of the major transmission routes, but their knowledge of signs and means of prevention was not satisfactory. A significant association was found between students' level of knowledge and their residence, parental education and income level.

**Conclusion:** Our findings indicate that students in Albania have not sufficient knowledge about STIs and considerable misconceptions about these infections. Residence, parental education and income level are associated with students' level of knowledge and may have a significant impact on the health information-education-communication programs.

**Keywords:** *knowledge, sexually transmitted infections, young people.*

## Sexual disclosure and HIV-related risky behaviors among young men who have sex with men in Albania

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**Aim:** Using data of Bio-BSS 2011, it is explored the link among the coming-out process, specifically its dimension of self-disclosure of sexual identity to others, with HIV-related risky behaviors – unprotected sexual behavior, multiple partners, injecting drug use – among sexually active young age (18-24 years old) men who have sex with men (MSM) in Albania.

**Methods:** This quantitative study consisted of respondent driven sampling (RDS) for recruitment of MSMs. Data were entered in SPSS, version 19.0. Double entry was performed for quality control. RDS Analysis Tool, version 6.0.1 was used for data analysis.

**Results:** Participants under 24 years were divided regarding self-disclosure component into: category

1 – MSM disclosed to MSM community only (71.8%); category 2 - MSM disclosed to family and/or friends (28.2%):

- 80% of MSM who reported two or more partners in the last six months, belonged to category 1.
- 76.9% of MSM who had never used condom belonged to category 1, and all who had not used condom in the last sexual intercourse belonged again to category 1.
- 87.5% of MSMs reporting to have injected drugs in the last month belonged to category 1.

**Conclusion:** The MSM community in Tirana is a ‘closed’ group. This fact, based on the study results, has a negative impact on their involvement in HIV-risky behaviors. HIV preventive approaches in the country targeting MSMs need to include psychological and social components.

**Keywords:** *Bio-BSS, HIV, risky behaviors, sexual disclosure*



## Relationship of childhood abuse and household dysfunction with the leading causes of death in adults

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The relationship of risky behaviors and diseases in adulthood to the breadth of exposure to childhood emotional, physical, or sexual abuse, and household dysfunction during childhood has not been previously described in Albania.

The current evidence pertains mainly to industrialized societies, USA in particular. Although studies of clinical samples in USA have identified links between childhood abuse, especially sexual abuse, and adult risky behaviors, the generalizability of these findings to the overall population and the relative importance of different types of abuse in men and women are not known. A questionnaire about adverse childhood experiences was mailed to 13,494 adults by the Department of Preventive Medicine, Southern California (1998), who had completed a standardized medical evaluation at a large HMO; overall, 9,508 (70.5%) individuals responded. Seven categories of adverse childhood experiences were studied: psychological, physical, or sexual abuse; violence against mother; or living with household members who were substance abusers, mentally ill or suicidal, or ever imprisoned. The number of categories of these adverse childhood experiences was then compared to measures of adult risk behavior, health status, and disease. Logistic regression was used to adjust for effects of demographic factors on the association between the cumulative number of categories of childhood exposures (range: 0-7) and risk factors for the

leading causes of death in adult life.

More than half of respondents reported at least one, and one-fourth reported e"2 categories of childhood exposures. This study reported a graded relationship between the number of categories of childhood exposure and each of the adult health risk behaviors and diseases that were studied ( $P < 0.001$ ). Persons who had experienced four or more categories of childhood exposure, compared to those who had experienced none, had four to 12-fold increased health risks for alcoholism, drug abuse, depression, and suicide attempt; a two to 4-fold increase in smoking, poor self-rated health, significantly more sexual intercourse partners, and sexually transmitted disease; and 1.4- to 1.6-fold increase in physical inactivity and severe obesity. The number of categories of adverse childhood exposures showed a graded relationship to the presence of adult diseases including ischemic heart disease, cancer, chronic lung disease, skeletal fractures, and liver disease. The seven categories of adverse childhood experiences were strongly interrelated and persons with multiple categories of childhood exposure were likely to have multiple health risk factors later in life. This study indicated a strong graded relationship between the breadth of exposure to abuse or household dysfunction during childhood and multiple risk factors for several of the leading causes of death in adults.

**Keywords:** *abuse, adverse childhood experiences, violence.*

## Home visits to promote health and development of Roma children in Tirana and Durrës

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**Context:** The psychosocial development of children 0-6 years old can be considered as a neglected part of growth and development of the health system in Albania. Little emphasis on this issue has been made from the health staff. Nurses and other specialists have received only limited training on this topic while the development milestones and tool for their assessment are lacking in the well-baby clinics. The situation is even worse for Roma children. The aim of the project was to provide psychosocial support and at home health care for mothers and children of Roma community in Durrës and Tirana while setting up a practice for the health sector to provide support to the psychosocial development of children.

**Methods:** Based on the findings from a rapid assessment, two documents for home visits were developed: a manual for parents regarding the growth and development aspects for children aged 0-6 years; and practical “how to” “guidelines for nurses and social workers involved in home visits. The manual for parents includes all the basic information necessary for an appropriate development of the children (development milestones according to age, nutrition, hygiene, safety, positive parenting, etc), which can be used from all parents in the population, including Roma community as being developed based on the needs of the most vulnerable groups. Check lists for the psychosocial development of the children, checklists for the evaluation of the security at home environment and

checklists for evaluation of the parent-child communication as well as for the mental wellbeing of the parents were produced to be used from the home visits specialists. The home visits were carried out by the working groups each consisting of two specialists (psychologists/social workers and health professionals – pediatricians) and one Roma community leader, who facilitated the process.

**Results:** A more comprehensive approach to early life of children was developed, building on existing child survival programmes and extending interventions in early life to include social/emotional and language/cognitive development. The home visits interventions have showcased of how the universal model of home visits can be upgraded for targeting vulnerable communities. A modeling and practice of behaviors have been created (there were visited 240 families and 295 children, a series of assessments and how to guides developed) and is being shared among well baby clinics. In 93% of the cases, the home visits have involved parents (mainly mothers) who have acquired better skills on healthy nutritional habits, development of their children, immunization, effective health care-seeking behavior, psychosocial and social problems, and prevention of domestic violence.

**Conclusion:** Interventions for holistic development of the early age and targeting vulnerable groups are most effective when they are conducted by a specialized multidisciplinary team including both health professionals and social workers.

**Keywords:** *children growth and development, home visits, multidisciplinary team, Roma children.*

## The cost of illness and administrative dataset as an essential source – A case study of diarrhoea in Albanian children

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**Aim:** Estimation of Cost-of-Illness (CoI) is an essential indicator for measuring the economic burden of disease and enables in-depth studies of cost-effectiveness, cost-utility, or cost benefit. CoI studies can estimate in monetary terms the cost of the disease from health services prospective as well as the economic consequences of illness in terms of lost productivity to society. There are very few studies related the CoI for various diseases in Albania. Here we aim to describe the most important cost components of CoI for diarrhea in children, using the administrative data as one of the essential sources.

**Methods:** We mined and used the administrative records of Ministry of Health, Health Insurance Institute and the main health service providers. Also, data from the National Institute of Statistics were incorporated within the study.

**Results:** After analyzing diarrhoea data we found out that the mean inpatient cost per case of severe diarrhea is estimated at US\$ 233.39. The mean outpatient cost per case is estimated at \$7.37 (95%CI=\$2.37-\$14.87) while the mean cost per case in emergency room was \$15.97 (95%CI=\$11.4-\$29.33). The mean indirect cost per case of diarrhea cases, as social productivity loss, was estimated at \$46 (95%CI=\$30-\$121).

**Conclusion:** The estimation of CoI for diarrhoea cases in children and especially the type of costs can help to make further economic analysis about cost-effectiveness of an intervention and better estimates of the intervention strategies. The advantage of using the administrative data is the low cost and the quick follow-up of patient records, but there are several limitations such as enrolment not based on diagnoses or disease protocols.

**Keywords:** *cost-benefit analysis, cost-effectiveness analysis, cost of illness, economic analysis, cost-utility analysis.*

## Quality of vaccination program in Vlora

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**Aim:** This study aimed to assess the quality of the vaccination program in primary health care (PHC) services in Vlora city.

**Methods:** This was a descriptive study carried out from December 2012 to February 2013. All PHC centers of Vlora city (n=19) were targeted with an overall nursing personnel of 42 individuals. A structured questionnaire was administered to all participants, which was developed by the experts of the Institute of Public Health in Tirana. EPI-INFO was used for the statistical analysis.

### Results:

- In Vlora city, the ratio for one vaccination nurse is 415 children of 0-14 years of age.
- The average period of time for the first visit of a newborn child in pediatric consulatory clinic is 28.6 days (95%CI=24.5-32.7 days).
- 94% (95%CI=86.8%-100%) of the personnel has received training only for the introduction of the new vaccines of the national vaccination program.
- 92% (95%CI=84.6%-100%) of participants knew the vaccines that must be stored at +4<sup>o</sup> C to +8<sup>o</sup> C.

- 62% (95%CI=47.4%-76.6%) of the personnel were not familiar with the sensitive vaccines against freezing.

- 81% (95%CI=69.2%-92.8%) of individuals were able to recognize VVM.

- 14.5% (95%CI=3.9%-25.0%) of individuals performed recap of the needle after injection.

- 80.5% (95%CI=68.5%-92.4%) of the personnel used alcohol 70<sup>o</sup> for disinfection.

- In 17% (95%CI=5.7%-28.3%) of the cases, there were found disposed syringes/needles in an unsecured container.

- 73.2% (95%CI=59.8%-86.5%) of the hospital waste of PHC is disposed in urban waste containers.

**Conclusions:** There is an obvious need to improve the knowledge of the population with the package of services provided by primary health care services, in particular concerning vaccination issues. Furthermore, continuous training of the personnel about all elements of the vaccination program is required. Cold chain is one of the components of the vaccination program which functions quite well. Yet, vaccination personnel must strictly apply all the elements of work safety.

**Keywords:** *primary health care, vaccination, Vlora.*

## Quality of health services for women in Vlora region

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**Aim:** The aim of this study was to assess the level and quality of health services for women in the district of Vlora during the period 2000-2010 and drawing conclusions for planning and reviewing programs and policies which aim at reducing health problems of women in this region of Albania.

**Methods:** This was a descriptive study covering the period 2001-2010. The study population consisted of the overall inhabitants of Vlora region. Source of data was the District's Health Service. Data analysis was undertaken in Excel.

**Results:** Gynecologist coverage for the period under study was 1/ 5500 women. The number of women's clinics was four for the city of Vlora and 95 for the overall villages. Anemia was the predominant pathology during pregnancy in 2010 (151.2/1000 live births). The number of births with C-section has increased over the years, reaching 385

in 2010. There was evidence of a decrease in the number of abortions from 681.5 (in 2001) to 424 (in 2010). The specific weight of spontaneous abortion has increased in the recent years, reaching 46.3% in 2010. Use of KOC in family planning has increased up to 12.3% (15-49 years). Infant mortality has fallen from 9.7 (in 2001) to 6.2 (in 2010). Finally, the level of Pap-testing has increased.

**Conclusions:** In Vlora region, family planning services and mother and child care services should establish priorities for the entire community, as well as for the high-risk groups. Regarding the morbidity during pregnancy, anemia exhibited the highest share bearing the risk of miscarriage. Our findings indicate that the number of cytological examinations and the use of family planning methods are gradually increasing in Vlora region.

**Keywords:** *mother and child, quality of health care, Vlora, women.*

## Early detection of hearing impairment in newborns and infants

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Globally, it is reported that 1-2 out of 1000 newborns have markedly impaired hearing. The current scientific evidence suggests the need for universal neonatal hearing screening (UNHS) for the early detection of hearing impairment. UNHS is best performed in two stages: first measurement of otoacoustic emissions and then automated assessment of the brainstem auditory evoked response. To be effective, UNHS programs must have a high

coverage rate, high sensitivity and specificity, and proper tracking with a low rate of loss to follow-up. Children with positive screening tests for hearing impairment should undergo confirmatory testing as soon as possible and then receive the appropriate treatment. Early intervention is particularly critical for speech acquisition. The early detection and treatment of hearing impairment in newborns and infants has a beneficial effect on language acquisition.

**Keywords:** *hearing impairment, infant, newborn.*

## The results of a three-year project on neonatal hearing screening in Albania

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**Aim:** Deafness is the most common anomaly among newborns. Hearing impairment in children constitutes a serious obstacle to their optimal development and education including language acquisition. Early detection and intervention can prevent its consequences. Neonatal Hearing Screening (NHS) in Albania started in 2009 in four maternity centers (two in Tirana, one in Shkodra, and one in Fier).

**Methods:** NHS is carried out in two phases: Phase 1 - TEOAE testing of all newborns within the first month. Stage 2 - ABR testing of FAIL and REFER cases, and children with risk factors.

**Results:** Total number of newborns tested during the three-year program was 44341. The prevalence of ipoacoustic babies was 2,5 newborns per 1,000

live births, which is two times higher than in developed countries. Main risk factors among diagnosed infants included preterm births, cranial-facial anomalies, syndromes, asphyxia at birth, or family history of deafness.

**Conclusion:** Based on the number of births and the observed prevalence, each year we would expect approximately 80-90 newborns with significant hearing impairment in Albania. Universal NHS is widely recommended by WHO as a new strategy for prevention and, in most developed countries, this approach is mandatory. There is a need for in-depth analysis of the causes and extension of this strategy across Albania as a public health tool that enables the early diagnosis and minimizes the magnitude of this negative condition in the Albanian population.

**Keywords:** *deafness, neonatal hearing screening, prevalence*

## Patient-centered approach, we need it – can we afford it? The example of Diabetes mellitus

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Person-oriented medicine requires a supportive environment which has to be created as person-oriented health care through a competent health care management. The group of diabetic patients poses specific problems because of its size, lifelong perspective, and costs.

The management system has to permanently consider total quality improvement by Continuing Medical Education, updated clinical guidelines,

regulated referral based on gate-keeping, health literacy and self management including main risk factors, and cost-effectiveness. In order to reach full coverage of the patient population adequate IT provision, free of charge access (incl. under the table payments), elimination of waiting lists, accreditation and certification are essential elements of success. However, nothing can replace our empathy with the patient.



**LIST OF AUTHORS**

<b>A</b>		<b>D</b>	
Agalliu Elona	100, 116	Daja Rovena	90, 113
Agolli Besim	99	Daka Afërdita	32
Ahmeti Albana	76, 115	Daka Albana	34
Ahmeti Nazif	73, 79	Davis Philip	40
Akshija Ilir	39	Dedja Bajram	10, 50, 51, 52
Amursi Erka	14, 76, 92, 114	Dervishi Marjeta	83, 91
<b>B</b>		Dika Qamil	55
Backa Teuta	30	Doksani Shpëtim	26, 98
Bajrami Valbona	27, 30	Donev Doncho	11, 20
Balilaj Gëzime	117	Draçini Xheladin	65
Balla Flora	91	Dudushi Redona	91
Bani Roland	54, 77, 82, 83, 91, 112	Duka Ana	116
Bara Valbona	67	Dula Nexhat	72
Barbullushi Myftar	30	Duli Marsida	78
Bashllari Agron	100, 116, 117	Duraku Artenida	81
Basho Mimoza	83		
Begolli Ilir	19, 32, 62, 79	<b>DH</b>	
Bejtja Gazmend	14, 50, 76, 114	Dhame Dhimitraq	53
Beqiri Edlira	118		
Berisha Merita	13, 19, 62	<b>E</b>	
Bino Silva	60, 61, 83, 114, 115	Emini Violeta	73
Boçari Donika	99	Erindi Entela	69
Boci Arian	82		
Bojaj Gazmend	59, 64	<b>F</b>	
Bregu Arjan	23, 35, 89	Fejzo Marsela	116
Bukli Mariana	76, 87, 94, 106	Ferizi Mybera	32
Bulo Anyla	88	Fida Monika	43
Burazeri Genc 8, 9, 14, 16, 55, 59, 64, 76, 77, 108, 114		Filipi Kozeta	10, 38, 40, 44, 109
Bushati Mirlinda	114		
Bushi Entela	84, 107	<b>G</b>	
<b>C</b>		Gabrani Jonila	63
Coraj Emiljana	36	Gabrani Adriatik	63
Czabanowska Katarzyna	59, 64	Gashi Sanije	13, 19, 21, 62
		Gecaj Lulzime	68
<b>Ç</b>		Gecaj Mhill	68
Çanaku Dorina	10, 50, 102, 103, 105	Gega Bukurie	10, 50, 51, 52
Çela Lulzim	35, 58, 89	Genovese Elisabetta	119
Çela Enriketa	68	Gera Rina	66
Çerçizaj Rudina	36	Gerqari Antigona	32
Çoku Anjeza	67	Grelda Arjeta	33
Çumashi Rudina	90	Godo Anila	22
		Golemi Sonila	36
		Govori Valbona	19

<b>GJ</b>		Ktona Ergeta	30
Gjorgjev Dragan	21	Kuneshka Loreta	78
<b>H</b>		Kurti Afërdita	73
Hajdini Miranda	10, 50, 97, 102, 110	Kurti Floreta	45
Halimi Sadije	32	<b>L</b>	
Hallkaj Elda	82, 112	Laaser Ulrich	120
Hasani Vitori	35, 36	Lako Sotiraq	34
Hashani Lebibe	73, 79	Lakrori Jeta	17, 38, 94
Hashani Valdet	18	Lika Mirela	60
Haxhiu Jonida	23, 85	Likmeta Mirlinda	29, 46
Hoti Ela	29	Loxha Arbresha	21
Hoti Bujana	54	Luzati Arben	67, 99
Hoxha Rina	19, 62	Luzati Mimoza	67
Hoxha Agron	79	<b>M</b>	
Hoxha Ledina	80, 81	Majko Eliverta	26
Hoxha Arben	66	Malaj Ledjan	29
Hoxhaj Astrit	31	Maliqari Numila	78
Hulaj Nurishahe	73, 79	Maloku Tahire	21
Hysa Bajram	8, 14, 65	Mema Drita	99
Hyska Jolanda	23, 84, 86, 107	Memeti Shaban	12, 20
<b>I</b>		Memishaj Sabjan	34
Idrizi Alma	27, 30	Merdani Alba	10, 50, 103, 105
<b>J</b>		Mërkuri Lumturi	111
Jaupaj Luljeta	33	Mersini Ehadu	76, 108
Jerliu Naim	96	Mihali Engjëll	76
Jorgoni Ferdinand	39	Miho Vasil	14
Jucja Besnik	95	Mitrushi Arben	28
<b>K</b>		Mone Iris	71, 86, 88
Kadiu Enkeleda	84, 107	Mone Sonil	71
Kakarriqi Eduard	8, 10, 16, 38, 40, 50, 51, 52, 77, 103, 104, 105	Muja Herion	24, 35, 58, 89, 96
Kallajxhi Fjedor	102	Mukaj Elina	91
Kamberi Haxhi	96	Mybera Mustafa	57
Këllici Suela	65	Myftiu Sokol	26, 98
Kiçaj Emirjona	36	<b>N</b>	
Koja Gjergj	69	Naqi Donika	114
Kokali Anilda	67	Nastas Eleni	22
Kollcaku Rabushe	98	Ndoja Suela	56
Kosevska Elena	20	Ndrio Marina	114
Krasniqi Selvete	21	Nelaj Erida	60, 61
Kreka Bledi	22, 45	Nika Daniela	94, 106, 119
Kreka Manika	22, 45	Nurka Tatjana	34
Kocani Krist	80	<b>P</b>	
Kryeziu Violeta	73, 79	Pampuri Orjola	41
Kryeziu Fadil	79	Pano Irida	23, 58
		Pashaj Valentina	99

Pelinku Kujtim 66	Shkoza Artan 29, 46
Petrela Elizana 39, 59, 63, 106	Shuperka Roland 80
Petrela Mentor 47	Shuperka Redona 80, 81
Petri Olta 67, 99	<b>T</b>
Pipero Pëllumb 111	Tahiri Zejdush 58, 64, 95
Pirraçi Afrim 23, 28, 96	Tarifa Dhurata 45
Poga Zaira 70	Toçi Ervin 10, 23, 77, 96, 105, 111
Pollozhani Azis 12, 20	<b>TH</b>
Poshi Klodiana 31	Themeli Yllka 27
Preza Iria 60, 61, 115	<b>U</b>
<b>Q</b>	Ukëhaxhaj Antigona 21
Qazimi Musa 58	<b>V</b>
Qirjako Gentiana 14, 16, 22, 23, 45, 76, 94, 111, 113, 114	Vadahi Fatmir 66
Qyra Shpëtim 83	Vasili Adela 34
<b>R</b>	Vasili Ermira 43
Radbruch Lukas 42	Vuletic Silvije 13
Rama Rudina 42	<b>X</b>
Ramadani Naser 13, 19, 21, 62, 79	Xinxo Sonela 10, 17, 104
Rechica Vladimir 12	<b>XH</b>
Rexhepi Myrvete 73, 79	Xhaferi Altina 31
Rjepaj Gentiana 82	Xhaferi Medien 31
Roshi Enver 8, 18, 27, 30, 76, 87, 105	Xhani Anila 44, 109
Rusta Meriglana 81	Xhani Blerta 91
<b>Rr</b>	Xhixha Ali 42
Rrumbullaku Llukan 23	Xhumari Artur 47
<b>S</b>	<b>Y</b>
Salihu Drita 62	Ylli Alban 10, 14, 16, 17, 38, 40, 77
Sallaku Agim 39	<b>Z</b>
Schneider Robert H. 25	Zajmi Drita 19
Sethi Dinesh 14	Zejno Marinela 100
Simaku Artan 98, 115	Zogaj Drita 21
Simaku Ermal 33	Zotaj Henrik 41
Sinani Leonard 117	Zotaj Aulona 93
Skeraj Fitim 59, 64	Zekja Ilirjana 31
Spahija Bujar 35, 58, 89	<b>ZH</b>
Sokoli Tone 68	Zhjeqi Valbona 19, 62
Sulejmani Zahide 69	
<b>SH</b>	
Shabani Driton 95	
Shabani Zamira 66	
Shena Dhurata 36	





