

## 5. MODERATED POSTER SESSIONS

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### A.2. PUBLIC HEALTH AND DIFFERENT DIAGNOSES

#### Increasing anti-pneumococcal vaccination coverage rate: barriers and strategies

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#### Background

Anti-pneumococcal vaccination is an important public health strategy addressed to children, at risk adults and elderly people. Health professionals, particularly General Practitioners (GPs), play a key role in spreading and conveying information among target population, addressing services demand and administering vaccination. This study has been aimed to investigate the main barriers to anti-pneumococcal vaccination, mainly in adult and elderly population, in order to identify the possible future public health strategies to increase vaccine coverage levels.

#### Methods

A scientific literature review was performed by using the following electronic databases: PubMed, Cochrane Library and Embase. Italian institutional websites were also examined and grey literature was consulted through the search engine “Google Scholar” and other general purpose search engines. Specific key words and MeSH terms were used.

#### Results

The main barriers to anti-pneumococcal vaccination are: the lack of knowledge among population or health professionals and the lack of information received from GPs/specialists/pharmacists. In a survey on a sample of 400 subjects aged  $\geq 65$  years only 13% of respondents said that they were aware of anti-pneumococcal vaccination and 49% said that they would agree to be vaccinated if it had been recommended. A study carried out on a sample of 500 GPs showed that only 17.1% of them give correct information to their patients about the population groups to which anti-pneumococcal vaccination is recommended. A survey on a sample of GPs and specialists showed that 81% of the former and 64% of the latter strongly recommend pneumococcal vaccination in the elderly. Other evidences showed that physicians considered the increase in vaccination coverage rate depending on an outpatient management of vaccination and the promotion of vaccination efficient campaigns.

#### Conclusions

Several public health strategies to increase coverage vaccination levels could be implemented, such as: appropriate training programs for GPs and all health professionals involved in the vaccination process; the empowerment of the patient/citizen through specific training and education programs, the strengthening of the planning process and the effective delivery of vaccines in Primary Care.

#### Differences in treatment and outcomes of patients with acute coronary syndrome with ST segment elevation

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#### Background

Percutaneous coronary intervention (PCI) and fibrinolysis are the two different reperfusion treatments for patients with acute coronary syndrome with ST segment elevation (STE-ACS). We seek to ascertain epidemiologic differences, related to care and results, of patients with STE-ACS depending on whether or not the hospital has a hemodynamic unit (HU).

#### Methods

This is a retrospective cohort study with an analysed population of 11,122 patients with STE-ACS attended in Andalusian public hospitals and included in ARIAM Register during the period 2005–2009. A descriptive analysis was carried out, along with a bivariate analysis and a logistic multivariate regression analysis. Variables analysed were epidemiologic characteristics of patients, type of hospital, reperfusion strategy, complications during hospitalisation, and mortality rate.

#### Results

Of the total registered patients, 5,728 (51.5%) were attended in hospitals with HU, compared to 5,394 (48.5%) in hospitals without it. From the first group, 1,891 (33.02%) patients underwent some type of PCI, while 2,052 (35.84%) were treated with fibrinolytic drugs. Regarding patients attended in hospitals without HU, 349 (6.5%) were given PCI and 2,665 (44.81%) ( $p < 0.001$ ) received thrombolytic treatment. Concerning complications, statistically significant differences were found in post-infarction angina, heart failure, and number of hospital readmissions being higher in hospitals without HU. Nevertheless, we found a higher percentage of metabolic and infectious complications in patients treated in hospitals with HU. The multivariate analysis showed that factors associated with an increased risk of mortality are age OR 1.063 [1.053–1.074], female sex 1.462 [1.187–1.800], diabetes OR 1.2 [0.985–1.463] and Killip class III-IV OR 9.042 [7.320–11.169]. Patients with anterior location also have greater risk of death OR 1.421 [1.173–1.721] and the extension Q, OR 2.685 [1.896–3.801] as well. The hemodynamic unit acts as a protective factor OR 0.748 [0.619–0.904]; the risk of death of patients treated at hospitals without HU is 1.33 times higher.

## Trends in abortion rates in Albania

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### Background

Following the legalization of abortion in 1994 in Albania, a substantial increase in the number of induced abortions was noted and for the first six months of 1998 it was reported 1 abortion for every 2.5 live births. The legalization of abortion and low fertility levels had their impact on the position of Albanian women in family and community. In spite of the drop in abortion figures during the recent years, the Ministry of Health considers that abortion rate remains high, leading to unnecessary costs on women's health and health system. Since May 2007 the Institute of Public Health (IPH) has started to build up the abortion surveillance system, which constituted an urgent need to improve not only the quality of the collected statistics but also the effectiveness of programs to promote family planning.

### Methods

The data are collected based on the abortion surveillance system (abortion reporting form) which is the main source for estimating the differences of abortions among age-groups, marital status, education level, employment, previous pregnancies and current number of children in urban and rural women. Ministry of Health and INSTAT provides the data on live births and total number of abortions. The results of this information allow a depth analysis of the phenomenon on its various aspects and different periods of time.

### Results

National abortion ratio decreased gradually since 2000 from 419.2 per 1,000 live births to 238.8 per 1,000 live births in 2010. In 1996 (immediately after the legalization of abortion) spontaneous abortions constituted about 18.2% of all abortions reported, while for 2010 they constituted 60% of all the reported abortions. In 1996 abortions performed by women who lived in the village constitute about 44.3% of the total number of abortions, while in 2010 they constitute 31.4% of them, this mainly due to internal migration from rural to urban.

### Conclusions

In Albania, following the availability of family planning methods, the rates of abortion started to decline rapidly. Data of abortion incidence and trends are important for policymakers to monitor progress toward improvement of maternal health and access to family planning.

## Comparing health status in Belarus between 2001 and 2010: a novel method for surveys with different response categories

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### Background

Two European Union funded population surveys were conducted in Belarus: The Living Conditions, Lifestyle and Health (LLH) in 2001 (n = 2000), and The Health in Times of Transition (HITT) in 2010 (n = 1800). Each survey included a question on self-reported health status. The LLH survey provided a 4-point verbal response scale and the HITT survey used a 5-point scale. When translated into Russian, only two response categories had identical wording. The

options "bad" from the LLH and "poor" from the HITT were translated as "Плохое", and "good" from both surveys as "Хорошее". These differences make a direct comparison of self-reported health status between 2001 and 2010 difficult.

### Methods

We conducted a further Health Category Response Scale (HCRS) survey of Russian speakers in Belarus, 2010 (n = 570). Two questionnaires were developed to correspond to the 4-point LLH and 5-point HITT categories. A 100th graduated Visual Analogue Scale (VAS) was designed and included in both questionnaires to understand how the different verbal response categories were perceived. Respondents were randomly allocated one of the questionnaires and asked to assess the strength of the Russian categories. The mean score of each health response category from our HCRS was utilised to calculate the weighted health status (WHS) for the LLH and HITT surveys. This allowed us to compare self-reported health status in Belarus between 2001 and 2010.

### Results

A small statistically significant increase of 2.9 points on a 0–100 scale ( $p < 0.001$ ) in the WHS in Belarus was found between 2001 (56.2, 95% CI = 54.8–57.1) and 2010 (59.1, 95% CI = 58.2–59.9). Identical response categories were perceived differently on a 4-point and 5-point VAS depending on whether more extreme categories were available. The category "good" ("Хорошее") measured approximately 12 points higher, and the category "bad/poor" ("Плохое") measured approximately 16 points lower, on the 4-point compared to the 5-point VAS.

### Conclusion

Our HCRS survey and method, when applied to the LLH and HITT surveys, concluded that health status in Belarus has improved between 2001 and 2010. This type of method based on a VAS is useful for comparing similar questions with different response category scales and surveys conducted in different languages.

## Magnitude and Trends of injuries in occupational settings between 2001 and 2011 in Cluj-Napoca, Romania

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### Background

Work-related injuries have been of interest for a long time, but due to a lack of proper recording and notification systems, the official numbers are missing from many middle-income countries. In Romania, the occupational injury database is not appropriately developed, and recorded cases differ across Romanian counties, most of them being underreported. Therefore, there is a need for a comprehensive detailed database that will give a better understanding of this phenomenon.

### Methods

A retrospective, descriptive study was piloted in Cluj-Napoca, Romania. At the time of abstract submission data is being collected. This study is part of a research grant and the reported findings are only preliminary. A database will be developed using secondary data for the period 2001–2011 that will compile information about occupational morbidity and mortality rates among the population from Cluj-Napoca, Romania. The dataset will include statistics on the main occupational injuries at county level, by employment status, occupation, and type of industry, leading causes of death on occupational sites, injury characteristics, risk factors, age category and gender.

### Result

The trend of occupational accidents fluctuated across the past 10 years. In the first part of 2011 the number of injuries

occurring at work sites in Cluj County was around 80 persons, of which 4 were fatally injured and 76 were temporally disabled. In previous years, in terms of rates, a slightly higher trend was observed in both fatal and nonfatal accidents: in 2009, 168 work-related injuries were reported, but in 2010 the number decreased by 23 cases. A sharp fall was observed in injuries in the coal mining and preparation industry, pushing the construction industry into first place. A higher prevalence of work related injuries and deaths was observed for men than for women and risk has also been found to be much higher for older workers (40–50 age category).

### Conclusions

Statistical data is necessary for injury prevention and it represents a starting point in occupational health research by trying to understand the causal mechanisms underlying workplace injuries and by designing safer working conditions.

## Healthy diet and self-rated health: a cross-sectional population-based analysis

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### Background

Self-rated health is a reflection of an individual's perception of his or her own health status and can be influenced by a variety of factors, including diet. Research has shown that optimal nutrition and healthy dietary choices can positively affect the perceived health of adults. The objective of this study is to assess whether fruit and vegetable consumption has an

influence on the self-rated health of both adults and adolescents living in Merseyside, United Kingdom.

### Methods

As part of the European Urban Health Indicators System Part 2 (EURO-URHIS 2) study, 2231 adults and 1220 adolescents from randomly selected populations across Merseyside completed standardised urban health questionnaires. Information pertaining to fruit and vegetable consumption was compared with self perceived health status using logistic regression analysis, adjusting for potential demographic (age, sex and deprivation) and lifestyle confounders.

### Results

Amongst adults who reported eating fruit and vegetables frequently (>5 portions per day), 68.4% rated their health as good/very good compared to 61.1% who did not consume these foods as frequently. These people had a 50% increase in the likelihood of reporting good/very good health of OR = 1.51; 95%CI = 1.22, 1.87:  $p < 0.005$ ) after adjusting for age, sex, deprivation, physical activity and other covariates. In adolescents the association was stronger with a more than two-fold increase in the likelihood of reporting good/very good health associated with consumption of fruit and vegetables on most days (adjusted OR = 2.35; 95%CI = 1.15, 4.82;  $p = 0.02$ ).

### Conclusions

The findings from this population based cross-sectional study suggest that there is a positive association between consumption of fruit and vegetables and self-perceived health. The analysis demonstrates the importance fruit and vegetable consumption might have in improving self-perceived health. These findings are consistent with observations from other epidemiological health surveys.

## S.2. HEALTH WORKFORCE

### Translation of attained knowledge and skills for planning the health workforce requirements into practice

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### Background

In settings with health workforce excess or shortages an evaluation of the training on human resource planning and development should go beyond standard evaluation form that provides evidences of students' achievements of the learning objectives and that teaching standards were maintained.

### Objective

To evaluate applying of specified knowledge and skills about health workforce planning into public healthcare services of Serbia.

### Methods

In the course of the EU funded project "Training in Health Service Management in Serbia", at Medical Faculty University of Belgrade, within the scope of the Master of Health Management study programme, the Human Resources Planning (HRP) module was established. The questionnaire about on the job application of HRP knowledge and skills was disseminated four months after each of three HRP courses delivered during 2009–2011. Of 100 students, 54% (22 males and 32 females) voluntary completed a not-anonymous questionnaire about current management position, years of managerial experience, time devoted to performing general managerial tasks and usage of attained HR knowledge, skills and tools.

### Results

Most respondents (75%) were health managers in public sector with 1–13 years of managerial experience. Respondents spent most of the working time in leading (2–32 hours/week),

operational planning (4–12 hours/week) and administrative work (2–8 hours/week). They have contemplated or have applied at least one or more HRP tools (performance measurement, workload indicators of staffing needs -WISN, needs-, demand- and targets-based HRP, reprofiling and interventions for reducing staff excess and shortage). The WISN was most often used, while most difficult to implement were interventions on staffing numbers and reprofiling.

### Conclusion

In public sector with centralized healthcare financing and planning (like Serbia), HRP knowledge and skills may remain separate from the health manager's tasks due to extensive file of procedures that guides their decisions and actions, inappropriately related or rigid HRP regulations and detachment of top management. Furthermore, the respondent's perception of low authority and power makes very uncertain the integration of strategic HRP knowledge into public health practice, and change management generally.

### E-learning and open access strategy in Spanish training courses of Health Management

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### Background

In 1996 the Spanish National School of Public Health (Escuela Nacional de Sanidad-ENS-) began to cooperate with the Spanish National University for Distance Learning (Universidad Nacional de Educación a Distancia -UNED-). A year course in Clinical Management was launched in 1999 using distance learning, with written study units and quarterly sessions. In 2003 it was upgraded as Master Degree in Medical and Clinical Management. Study units were published in 8 books. In 2008 another course, the Master in Health