

contact with other partners resulting from the implementation of the INPC.

### **Conclusion**

Network partners perceive intersectoral collaboration as important in addressing childhood overweight. However, improvements in the involvement of and communication with partners are necessary.

### **Statement**

Improvements in the collaboration between network partners from the medical, social and public domain are required to reach effective intersectoral collaboration in an integrated network approach of preventive care for children with overweight.

## **PPC21**

### **Health issues of international students at University of Zagreb**

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### **Background and aims**

There are 400 to 1100 (average 700) international students per year at University of Zagreb. To meet their health needs, multidisciplinary counseling service for international students was established in 2014 at University of Zagreb, School of Medicine. School medicine specialist, family medicine specialists, psychiatrist, and general practitioner work in counseling service. The aim of this study was to give an insight of health issues of international students at University of Zagreb.

### **Methods**

For the purpose of this study, we analyzed 3665 medical records of international students at University of Zagreb, visiting counselling service from 2014 to 2018, in order to extract the data of reasons for utilization of counselling service.

### **Results**

From 2014 to 2018 counseling service visited 1992 international students, 827 (43%) males. The most common reasons for utilization of counselling service for 1471 (73.8%) students (548 males), according to the Diseases and Related Health Problems 10th Revision, were factors influencing health status and contact with health mostly because of specific counselling, general counseling and general medical examination. In the group of acute diseases were diseases of the respiratory system, predominantly common cold as first cause of visit. On the second place were learning difficulties as cause of visiting for 676 (33.9%) students (312) males. On the third place, were chronic diseases as cause of visiting for 616 (30.9%) students (241 males). On the fourth place, mental and behavioral disorders as cause of visiting for 435 (28.9%) students (165 males), with predominantly neurotic, stress-related and somatoform disorders.

### **Conclusion**

Students are considered as the healthiest part of population, and therefore often neglect by health care system, especially international students, whose usage of health care depend on health insurance policy. This data highlighted the importance of accessible, comprehensive counseling health services for international students.

### **Statement**

Multidisciplinary counseling service at School of Medicine University of Zagreb, with holistic approach addresses the health needs of international students, and it is a model of good practice.

## **PPC22**

### **Triage in Preventive Child Healthcare: A novel triage protocol to identify health problems in primary school children**

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### **Background**

A triage approach to routine health assessments was recently introduced to improve the efficiency of Preventive Child Healthcare (PCH) in the Netherlands: PCH assistants carry out pre-assessments of all children and send the children with suspected health problems to follow-up assessments conducted by a physician or nurse. This two-step approach differs from the usual approach, in which physicians or nurses assess all children. Previously, each PCH service that employs a triage method used their own criteria (i.e. protocol) to determine whether a follow-up assessment is needed. Health themes such as visual disorders, sleeping problems and psychosocial problems are generally included in the protocol. This study aimed to improve the quality of detection of health problems in primary school children by PCH by developing a standardized triage protocol, and by investigating the quality of detection of health problems of this novel protocol.

### **Methods**

A systematic approach was used to develop the standardized triage protocol, e.g. by making use of an assessment framework and an expert group. Data was gathered by PCH services, using both parent-reported child problems and PCH registry data. After each routine assessment PCH professionals reported whether they had identified any problems in the child and carried out additional actions (e.g., additional assessments, referral). We will assess the validity of the protocol (sensitivity and specificity), with problems identified by PCH professionals as well as additional actions by the professional as criteria (gold standard). Next, the satisfaction with the novel protocol will be investigated among parents and PCH professionals; the answers of parents on a questionnaire will be analyzed and PCH professionals will be interviewed.

### **Results**

We included 670 primary school children undergoing routine health assessments in 4 PCH services across the

Netherlands. Validity of the protocol and satisfaction with the novel protocol of parents and PCH professionals will be assessed in the spring, and presented at the EUSUHM congress.

### **Conclusions**

Conclusions will be drawn about whether the novel triage protocol is a valid method to identify health problems in a PCH setting. Recommendations about necessary adaptations of the protocol and the need of future research will be made.

### **PPC23**

#### **Health treats for children and youth today**

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The conditions and possibilities for ensuring a healthy way of life for children, youth and families are minimizing. The opening hours of schools and kindergartens do not match the working hours of parents and the modern technology started to lower the quality of the socialization processes, sleep, movement, nourishment, etc. (the results of testing Slovene 14 and 15 year olds at randomly selected schools). Health and educational programs provide knowledge but it is rarely used by adolescents. There are many who rather take upon, today very accessible, psychopharmaceuticals, alcohol, tobacco and other kinds of the so-called means of relaxation. Hence, next to being exposed to health risks, they grow up with a negative influence on their own identity.

Children and youth can experience, even though for a short period of time, the healthy way of life when attending an organized school holiday or other colonies. Slovenia provides all conditions for preventive activities at the Youth and health resort Debeli rtič. Good climate conditions close to the sea encourage health strengthening of chronically ill and a successful rehabilitation in health care. The resort also runs other programs, financed by the Ministry of Health. Currently the resort runs a program for addressing over-fed children and adolescents: *An interdisciplinary approach to addressing over-fed children and adolescents in Youth health and resort Debeli rtič.*

### **PPC24**

#### **Who is thicker - nutritional status of children in Continental versus children in Mediterranean Croatia**

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**Aim:** To present the state of nutrition in two different areas of Croatia, which apart from geographic location, also differ in dietary habits. High-calorie food prevails in Continental, while low-calorie food prevails in Mediterranean Croatia. According to some research higher influence on the appearance of obesity has the state of metabolic activity than eating habits. The hypothesis of this longitudinal research was that the children in the age of 11 and 14 years from the Continental would be thicker than the children of the same age group from Mediterranean Croatia.

A study was conducted on 1011 children. 648 children were from Osijek (Continental Croatia) and 363 were from Zadar (Mediterranean Croatia). Data from medical charts were used in the research after the systematic examination of students when they were 11 and 14 years old. For the assessment, the Croatian reference values of body mass, height and body mass index (BMI) for girls and boys aged 6.5 to 18.5 were used.

At the age of 11, respondents from Continental Croatia were underweight and normal in body weight, while students from Mediterranean Croatia were overweight and obese. At the age of 14, the same respondents from Zadar were heavier and with higher BMI ( $p < 0,001$ ). Respondents at the same age from Osijek were usually underweight or normal body weight. There was a significant increase in the number of underweight and obese at the age of 11 compared to the same respondents at the age of 14, while the number of subjects with normal body weight and overweight decreased. In Osijek, there was a bigger increase in underweight and decrease of overweight at the age of 14 compared to respondents at the age of 11 ( $p < 0,001$ ). In Zadar, there was an increase in overweight and obese at the age of 14 compared to respondents at the age of 11 ( $p = 0,01$ ).

The research has shown that the hypothesis of the greater body mass of children in Continental compared to children in Mediterranean Croatia is incorrect and that there are certainly other factors that contribute significantly to the development of children in both regions.

### **PPC25**

#### **The impact of health education on adolescent's knowledge of menstrual cycle**

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**Background and aims:** Health education in schools is the foundation of health promotion and preventive programs. The aim of the study was to determine the impact of health education on adolescent's knowledge of menstrual cycle and menstruation.

**Methods:** Study included 761 female students of a first grade of secondary school in 2008, and 1103 in 2010 who undergone health education about menstrual cycle in City of Zagreb and Zagreb County. Lecture about menstrual cycle and hygiene were taught in the schools by school medicine specialists. Knowledge of reproductive health, hygiene and protection during menstruation was assessed by anonymous questioner before, immediately after, and 3 to 6 month after the lecture. For the purpose of this study, we analysed questions about menstrual cycle and menstruation. Data were analysed by descriptive statistics.