

# EUROMEDITERRANEAN BIOMEDICAL JOURNAL

## ABSTRACT BOOKS

### Special Issue



**BOLOGNA, 25-27 MAGGIO 2017**  
*University of Bologna*  
Department of Biomedical and Neuromotor Sciences



**National Conference of Public Health Medical Residents  
of the Italian Society of Hygiene, Preventive Medicine,  
and Public Health (S.It.I.)**

4th Edition

*New GenerActions for Public Health*

*Bologna, 25-27 May 2017*

### ABSTRACT BOOK

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## The National Conference of Medical Residents in Public Health

This Edition of the Italian National Conference of the Italian MRPHs (*Giornate degli Specializzandi in Igiene e Medicina Preventiva S.It.I.*) - the fourth - has been conceived with a new format. The aim of the conference is to represent a constructive opportunity for Public Health Medical Residents to improve their education and knowledge through oral and poster sessions, as well as through interactive discussions with Public Health experts, workshops, and opportunities dedicated to developing relationships and cooperation among Public Health Residents across Europe, thanks to the presence of members of the European Network of Medical Residents in Public Health (EuroNet MRPH) and European Public Health Association (EUPHANxt Project). The topics are linked by a central theme designed to achieve a highly valuable exchange of scientific knowledge in the MRPH community.

This **Abstract Book** contains all the contributions of the oral and poster sessions. Conference topics are detailed below:

- The role of Public Health in the Hospital
- The role of Public Health in Community Health
- Public Health and Health Policies
- The role of Public Health in the Academy

The contributions were collected and arranged by Pietro Ferrara.

### The Consulta

The "Consulta dei Medici in Formazione Specialistica S.It.I." (commonly "Consulta") is a part of the Società Italiana di Igiene, Medicina Preventiva e Sanità Pubblica (S.It.I.), the Italian Society of Public Health. It is composed of two delegates from each of the 34 Italian Schools of Specialization in Public Health.

Consulta's aims are to endorse and to stimulate professional and educational development of Italian Medical Residents in Public Health, encouraging cooperation between the Italian Public Health Schools and to inspire scientific comparisons on issues related to Hygiene, Preventive

Medicine, and Public Health.

In the full awareness of the importance of building strong relationships and productive forms of cooperation among Public Health Residents across Europe, Consulta is also a proud founder of EuroNet MRPH, the Network of Medical Residents in Public Health: [euronetmrph.org](http://euronetmrph.org). Furthermore, Consulta shares with its European counterparts the aim of an enhanced integration of Public Health expertises, being, as it is, also a supporter of the EUPHANxt Project:

[eupha.org](http://eupha.org).

For more information about Consulta, please see the website:

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## ORAL SESSIONS CONTRIBUTIONS

### The role of Public Health in Hospitals

#### H01. Task Shifting from physicians to nurses in an Umbrian hospital

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Introduction: According WHO, task shifting is a rational redistribution of tasks among health workforce teams. Epidemiologic and demographic transition, chronic pathologies and multimorbidity have increased health care demands. On May 4th 2015, a nursing hospitalisation unit (UDI) was opened at the AOPG. The aim of the current study was to describe the UDI outcomes.

**Material and Methods:** The data were extracted from the 2015 Hospital Discharge Registers (SDO). We analyzed the discharge outcomes of UDI versus the same patients in other units of AOPG.

**Results:** In the observed period, 331 complex patients were assisted, with 340 admissions to UDI versus 625 admissions to other units. 56,2 % were women. The patients mean age was 75,95 years old  $\pm$  14,76 std. The modalities of discharge are reported in the table.

D i s c h a r g e m o d a l i t y		UDI (%)	Other (%)
	Home	63.5	76.7
	Nursing home care (RSA)	14.7	5.5
	Institute of medical rehabilitation	12.1	2.1
	Transferred to another unit in the same Hospital	9.4	3.1

The average length of stay in hospitals (ALOS) of the patients discharged from UDI, also considering previous admissions was  $10,2 \pm 10,6$  compared to  $11,6 \pm 11,6$  days for other admissions not transferred to UDI. Instead, in UDI, the ALOS was  $6,8 \pm 5,9$  days and the daily cost was 154 euro.

**Conclusions:** Task shifting from physicians to nurses has attracted interest among policymakers as a strategy to respond to shortages, increase access in primary care, and reduce costs.

**Keywords:** *Task Shifting; Nursing self-management; Complex patients; Chronic diseases; Length of stay; Nursing hospitalization unit; Daily cost.*

####

## H02. Monitoring compliance with hospital guidelines for perioperative antimicrobial prophylaxis (July 2013 - December 2016)

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**Introduction:** Perioperative antimicrobial prophylaxis is a key practice to prevent surgical site infection. The Udine Healthcare and University Integrated Trust has defined its features in a specific procedure, available on the hospital Intranet. Compliance with the procedure has been monitored on a semi-annual basis.

**Methods:** Between July 2013 and December 2016, 1680 clinical records (15 per semester for each one of the 16 surgical units) were randomly extracted, including ordinary admissions with clean or clean/contaminated surgery. The procedure was considered compliant with the protocol if it adhered to the guidelines for all items considered: drug, dosage, timing of administration, redosing and duration of prophylaxis. To evaluate the presence of a linear trend, the Cochran-Armitage Trend Test was performed.

**Results:** A clear increase in overall compliance between second semester of 2013 (57.9%, CI 95% 51.7-64.2) and second semester of 2016 (67.5%, CI 95% 61.6-73.4) emerged; the trend of this increase was linear ( $p < 0.03$ ).

In the same time interval, a significant linear trend ( $p < 0.01$ ) for the increased compliance with guidelines both for the type of drug -from 78.3% (CI 95% 73.1-83.5) to 86.3% (CI 95% 81.9-90.6)- and timing of administration -from 90.4% (CI 95% 86.7-94.1) to 92.9% (CI 95% 89.7-96.2)- was recorded. Overall compliance increased in 11 of the 16 monitored surgical units (68.8%).

**Conclusions:** Compliance with hospital procedure has substantially improved over time, with a stabilisation slightly below 70%. Semi-annual monitoring was

essential to assess the evolution of clinical practice, to identify warning situations and to orient improvement actions.

*Keywords: Antimicrobial prophylaxis, compliance with guidelines, infection control*

####

### **H03. Analysis of weekend effect on 30-day mortality among emergency admissions**

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**Introduction:** Weekend effect is defined as the increased risk of death among patients admitted to the emergency department at weekends, as well as the increased risk of death at weekends independent of the admission date. In order to assess whether this effect exists in one of the major hospitals in Southern Italy, we conducted a retrospective observational survivorship study on a sample of 24.114 emergency patients > 15 years old, over a year (January-December 2016).

**Methods:** We used the discharge cards for data collection; the primary outcome of interest was in-hospital death within 30 days of admission. Analysis was conducted considering age, gender, primary and secondary diagnosis, hospital procedures, diagnosis related groups (DRG) and discharge procedures.

**Results:** More than half of the admitted patients were male, the mean age was 61.6 years (SD ±19.2; range 16-104). The most frequent DRGs were number 87 (pulmonary edema and respiratory failure) and number 127 (heart failure and shock), with frequencies respectively of 4.1% and 2.8%. Cox proportional hazards model was constructed to estimate hazard ratios (HRs) of post-admission mortality, adjusted for gender, age, and type of DRG. There was no significant mortality difference for patients admitted

at the weekend in adjusted Cox model (HR=1; 95% CI = 0.9-1.2). There was a significantly higher mortality at weekends independent of the admission date (HR = 2.4; 95% CI = 2.1-2.7).

**Conclusions:** These results are in accordance with similar studies conducted worldwide. Further insights are needed to investigate factors associated with increasing mortality over the weekend.

*Keywords: Week-end effect, mortality, survivorship study, hazard ratio, emergency, discharge cards*

####

### **H04. A three year population-based study of hospitalized patients with major trauma in Piedmont: the role of trauma system evaluation.**

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**Background:** Our study aims to perform an analysis of patients hospitalized with severe trauma in Piedmont in order to describe the management of trauma and potential critical issues of the regional trauma system (SIAT).

**Methods:** The regional Hospital Discharge Registries (HDRs) were consulted to retrieve data on severe traumas in all patients hospitalized in Piedmont from 2011 to 2013. All the admissions within 7 days of the date of discharge for trauma from other trauma centres were considered as secondary transfers.

**Results:** Hospitalized severe traumas for the 3 year period were 6137 (61% M), 46.6 per 100,000/year, with a mortality of 30% (13% M vs 17% F) and an annual mortality rate of 13.9/100,000 (p<0,001). About 94% of patients who died after a severe trauma were > 45 years old (p<0,001). The cause of trauma was not identified or classified as "other" in 10% and 50% of patients respectively. Severe injuries were most frequently caused by road accidents (26%), domestic accidents (18%) and

accidents at work (4.5%) ( $p < 0,001$ ). In our sample, about 70% of patients had no secondary transfers, 9% were transferred from Hub to non-Hub non-Spoke facilities and 5% from Hub to Hub ( $p = 0.2$ ).

Conclusions: In the period under consideration, we identified a decrease of trauma incidence but an increase of mortality, especially for domestic trauma occurring in older people. Many HDRs are not properly completed with regard to the cause of trauma. Moreover, potentially inappropriate secondary transfers should be monitored in order to improve the efficiency of the system.

*Keywords: Population-based study, Trauma system, SIAT, trauma epidemiology, secondary transfers*

####

#### **H05. Adherence to Surgical Antibiotic Prophylaxis Guidelines in pediatric surgery in Italy**

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Background: Appropriate use of surgical antibiotic prophylaxis (SAP) reduces intraoperative wound contamination in pediatric surgery thus minimizing the risk of surgical site infection (SSIs). Our aims were to describe SAP administration and analyze factors associated with non-adherence in pediatric patients.

Methods: We evaluated adherence to SAP international guidelines in surgical procedures performed in children <18 years, from January 2015 to December 2015, in four randomly selected hospitals in Calabria (Italy). Patient clinical records were retrospectively reviewed.

Results: A total of 717 pediatric patients underwent 800 surgical procedures. Patient mean age was  $8.5 \pm 5.6$  years; 72.9% of the procedures were performed in male patients, 74.7% in day-surgery

and 85.6% in election. SAP was administered in 87.9% of 272 procedures with indication. At univariate analysis, appropriate timing of SAP administration was significantly more likely in procedures performed in females, in older children/adolescents, in day-surgery, in elective surgery, in clean surgical wounds, and in those with prosthesis implant ( $p < 0.05$ ). Multivariate stepwise logistic regression analysis results underlined those of the univariate analysis, except for weight, type of admission and surgical wound classification.

Conclusions: There are discrepancies between SAP guidelines and actual practice behavior, more frequently oriented to excessive use of antibiotics than to underuse. Preliminary results show the need to undertake educational interventions aimed at implementing knowledge of PAP recommendations in pediatric patients. Further analysis will be made to evaluate possible factors that may influence the administration of antibiotics in cases without PAP indication.

*Keywords: Surgical Antibiotic Prophylaxis, Pediatric Surgery, Appropriateness, Adherence, Guidelines, Children*

####

#### **H06. Epidemiology and etiology of bloodstream infections caused by Candida species in a large teaching hospital in Northern Italy: a 9-year retrospective study**

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Introduction: Bloodstream infections (BSI) are one of the most common types of healthcare-associated infections (HAI). BSI caused by Candida species are an emerging threat, especially in high risk settings.

Objectives: The aims of the study were

to investigate the epidemiology and to describe the etiologic fraction of BSI sustained by different candida species.

**Methods:** We performed a retrospective analysis in Policlinico San Martino-IRCCS, a 1,300-bed tertiary teaching hospital in Genoa. Data of the first episode of BSI and patient-days were obtained for the period 1 January 2008 - 31 December 2016. Annual incidences of candidaemia by candida species were calculated as the number of events per 10,000 patient-days.

**Results:** During the study period, we identified 1,240 candidaemia, 600 caused by *Candida albicans* (48.4%), 352 (28.4%) by *Candida parapsilosis*, 122 (9.8%) by *Candida glabrata* and 166 (13.4%) by other *Candida* species. Incidence of *Candida albicans* candidaemia increased significantly from 1.09 to 2.28 episodes per 10,000 patient-days (p-value < 0.05). A marked increase in the incidence of *Candida parapsilosis* BSI was registered between 2014 and 2016, when this specie became the most common cause of candidaemia. Incidences of candidaemia sustained by *Candida glabrata* and other species remained constant. The highest incidence of candidaemia was registered in intensive care units (17.06 episodes per 10,000 patient-days).

**Conclusion:** During the study period, we observed a marked increase in the incidence of candidaemia sustained by *Candida albicans* and *parapsilosis* in our hospital. Further efforts are needed to contain this alarming diffusion.

**Keywords:** *Candidaemia, epidemiology, Candida parapsilosis, retrospective study, bloodstream infections, healthcare-associated infection.*

### The role of Public Health in the Community Health

#### C01. Vaccine and pharmacovigilance: results of "SVEVAPLUS" study in 2015/2016 Influenza vaccination campaign in Ferrara

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**Introduction:** Vaccines available on the market are safe and tolerated. Safety is also guaranteed by postmarketing pharmacovigilance. The National Institute of Health promoted a multicenter survey ("SVEVAPLUS"), concerning the flu vaccine's active surveillance during the 2015/2016 Influenza Vaccination Campaign in Italy. Data from Ferrara are reported.

**Methods:** The cohort was recruited among people vaccinated for influenza at the Public Health Department of Ferrara, during the 2015/2016 Influenza Vaccination Campaign.

Vaccinated people were asked to monitor any potential adverse reactions during the 7 days following vaccination. Later, they were called for a telephone interview. People who developed adverse reactions were recontacted after 60 days to monitor the clinical evolution. **Results:** In total, 267 vaccinated people were monitored (155 subjects <65 years old and 137 females). Inactivated Influenza Vaccine and Adjuvanted Influenza Vaccine were administered to 138 and 129 subjects, respectively; 140 subjects were affected by chronic diseases and 61 by allergic diseases. The majority (89.5%) of the sample had been vaccinated in the previous year.

Sixty-eight people (25.5%) had at least one adverse reaction, but none of them reported symptoms after 60 days. Most were local reactions and resolved within 3 days.

Conclusions: Overall, adverse reactions were reported in about 25% of the cohort, but there were no serious reactions and no hospitalizations. Moreover, temporal association between vaccines and adverse reactions does not necessarily correspond with a causal association. There are no statistically significant differences for age, type of vaccine and health conditions. The survey confirms the safety of both Influenza vaccines.

*Keywords: Pharmacovigilance, vaccines, influenza*

####

### **C02. Frailty screening and assessment tools. A review of characteristics and use in Public Health**

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Introduction: Improving the health of an ageing population is related to the prevention and management of frailty at community level. Frailty is characterized by an increased risk of the occurrence of negative outcomes like death or a higher rate of institutionalization and/or hospitalizations and/or a worsening of Quality of Life. Therefore, the screening and the assessment of frailty are crucial in Public Health for planning both care services and prevention programs.

Methods: Through a review of the literature and employing the INSA Tool, this study aims to develop an up-to-date framework for the main procedures and measurement tools available to assess frailty in older adults, paying attention to their use in the primary care setting.

Results: The study selected 10 reviews published between January 2010 and December 2016 that define the characteristics of the main tools used to measure frailty. Within the selected reviews only 5 proposed a specific tool as the most appropriate to screen frailty in community-dwelling older adults. However, of the analyzed tools, only one of them covers all the criteria

(multidimensionality, quick and easy administration, predictivity, high sensitivity and specificity) necessary for a screening tool.

Conclusions: Predictivity of negative outcomes could be the appropriate and sufficient criterion to assess a tool aimed to detect frailty in the community-dwelling elderly population. The multidimensionality of frailty needs a validated tool able to explore social, functional and health dimensions of individuals in order to address the planning of prevention and care services at community level.

*Keywords: Frailty, older adults, aging of the population, screening and assessment tools of frail people*

####

### **C03. Comparison of questionnaire exposure data and land cover map from geographical information system to assess passive exposure to pesticides: a methodological study.**

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Background: Exposure assessment based on questionnaires is frequently implemented in case-control studies, but possible information and recall bias could lead to misclassification of exposure.

Methods: We evaluated passive exposure to pesticides as possible environmental risk factors for amyotrophic lateral sclerosis (ALS) using a questionnaire mailed

to participants in a case-control study in Emilia Romagna and Sicily. Results from questionnaire assessment were compared with a remote sensing methodology based on geographical information system, i.e. the land use within a circular 100-meter area around subjects' residence. Since land cover maps were made available only about once every ten years, we used the 2003 and 2009 maps for Emilia-Romagna and Sicily, respectively. Thus, we estimated the percentage of 'recent' total crop density close to each participant's home, setting positive exposure above 10% of land use.

Finally, we calculated the agreement between the two different methodologies using Cohen's kappa coefficients for all subjects, cases and controls.

**Results and Conclusions:** Cohen's kappa was 0.364 (95% CI 0.158-0.569) in total population, 0.378 (0.056-0.700) in cases and 0.354 (0.090-0.618) in controls using the most recent land use map available close to year of case diagnosis. Although a moderate-to-low agreement could be seen between two exposure methods, similar results were found in both cases and controls, suggesting that no recall bias occurred in the most recent period.

In the future, we plan to compare such agreement using historical residence over the 20-30 years prior to diagnosis, in order to validate the long-term exposure to pesticides in subjects.

*Keywords: Exposure assessment, questionnaire, geographical information system, epidemiology, information bias, case-control study, Cohen's kappa coefficient*

####

#### **C04. Colon cancer: more fiber more protection. Systematic review and meta-analysis**

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**Introduction:** Colorectal cancer is the 3rd most common cancer worldwide. It represents 10% of all cancers excluding non-melanoma skin cancer. 54% of all cases occur in more developed countries, in particular Oceania and Europe. Growing evidence shows that about 47% of cases of colorectal cancer can be prevented by eating and drinking healthy, being physically active and maintaining an ideal weight. Although it is not easy to write about colon cancer alone, we performed a systematic review and meta-analysis aimed at evaluating the association between dietary fibre intake and incidence of colon cancer.

**Methods:** A structured computer search on PubMed was performed for epidemiological studies reporting results of primary research evaluating dietary fibre intake in women and men and risk of colon cancer. This meta-analysis followed PRISMA recommendations. We compared subjects exposed to the highest concentration with those exposed to the lowest one. To perform the meta-analysis we used the software Prometa3®.

**Results:** The search strategy identified 376 papers, after a screening, 25 studies were included in our meta-analysis. Results suggest a protective effect of the dietary fibre intake on colon cancer ES=0.74 (95% CI=0.67 -0.82), p-value=0.000, no statistical heterogeneity (Chi2=42.73, p-value=0.011) was found. **Conclusion:** Colorectal cancer is still one of the leading causes of cancer mortality all over the world. Moreover, there are concurrent or sequential actions involved in the aetiology. These are the reasons why it is important to identify preventive efforts, especially following a healthy life style, such as a healthy diet.

*Keywords: Fibre, dietary intake, cancer risk, colon cancer, meta-analysis*

####

**C05. Breastfeeding in Sicily: prevalence, context inequalities and other associated risk factors**

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**Objectives:** The objectives of the study are to describe the prevalence of breastfeeding in Sicily and to analyze socioeconomic status and other major risk factors with regard to the attitudes towards exclusive breastfeeding.

**Design:** Information on the practice of breastfeeding in Sicily has been collected from a regional survey on Sudden Infant Death Syndrome (SIDS). An index of socio-economic position was created by using data from the 2011 Istat Census.

**Setting and Participants:** In May 2015, a questionnaire was distributed to all mothers accessing immunization services in Sicily for the first vaccination of their children. Two hundred and seventy-three vaccination centres were involved, and 2,692 questionnaires were administered.

**Main Outcome Measures:** We identified five socio-economic levels, and for each of them we described the prevalence of breastfeeding, and the risk factors for non adherence to exclusive breastfeeding.

**Results:** The prevalence of exclusive breastfeeding was 30.6%, unevenly distributed in the region, the lowest being in the Province of Messina (21.4%). Non adherence to exclusive breastfeeding was associated with the disadvantage of the low context culture ( $\text{Chi}^2 = 14.9$ ), and was more common in areas with a higher socioeconomic deprivation index (OR 1.81). Among other determinants investigated, being premature was revealed as a risk factor for not being breastfed (OR 1.59).

**Conclusions:** The study confirms a low prevalence of breastfeeding in Sicily, and

its association with socioeconomic level, being lower among women living in more disadvantaged areas. The study suggests the need for appropriate interventions focusing on specific high risk population groups.

**Keywords:** *Breastfeeding, exclusive breastfeeding, socioeconomic level, Sicily, disadvantage areas.*

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## Public Health and Health Policies

### **P01. Institutional Accreditation: technical modes to implement complex verifications and analysis. The experience of internal accreditation audit system in Modena Hospital.**

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The Health System is responsible for its performance and accountability towards its citizens. Law defines accreditation as the instrument used to verify and guarantee quality health care and patients' safety and to provide evidence which confirms a higher level of care in those accredited services. At a regional level organizational, structural and technological requirements and expected behaviors in a technical and professional context are defined and the region conducts periodic audits on their maintenance in local healthcare systems. However, in 2014, the Emilia-Romagna Region interrupted the regional accreditation process due to an organic revision of the organizational accreditation model and redefining of the requirements. For that reason, local health authorities had to develop strategies to maintain and comply with the accreditation requirements until 2018 on their own. The aim of this study is to explain the "hidden work" developed to achieve the goal. The choice of methods

and tools has been quite difficult, but research has been implemented and the first evidence of the effectiveness of the organizational process was the ability to complete the planned commitments. This study presents the experience of the operational model of the internal accreditation audit system in Modena Hospital. The criteria determining the departments to be audited, inspection planning, unit operational support, data collection, critical aspects encountered, current activities and developments with professionals that allow process implementation are described. The internal accreditation audit system is proceeding successfully and Modena Hospital will be ready in 2018 for reinstitution of the regional institutional accreditation audit.

*Keywords: Institutional accreditation, Audit, Quality, health management.*

####

**P02. Characteristics of STP migrants admitted to the University Hospital G. Martino in Messina in the 2013-2017 period**

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**Introduction:** Italy has, for many years, been the destination for many migratory flows. These journeys affect the health of migrants, who sometimes need healthcare and hospital admittance. In Italy, health care for a foreign citizen is ensured by Article 32 of the Constitution and, since 2013, by the State-Regions Agreement.

**Study Design:** The purpose of our work was to determine the main causes of the admission of an STP (temporarily present foreigner) immigrant at the University Hospital "G. Martino" of Messina and the related costs for assistance.

**Methods:** The study was conducted through the consultation of computerized medical records and the SDOs (hospital

discharge records) of 156 STP migrants, during the March 2013 - April 2017 period. Both demographic and health information were thus collected.

**Results.** The elaborated data showed that the most commonly occurring diseases were medical (62.8%), specifically respiratory and gastrointestinal disorders, probably due to climatic conditions and the hygiene-health conditions endured during the journey. Furthermore, it was found that the average length of stay was 13.3 days, with a total DRG-based cost of €708,588.93 for the period considered.

**Conclusions:** Migratory flows affect a multitude of populations and categories of people, each with health determinants, different needs and levels of vulnerability. One of the challenges of public health is to be able to provide access to the services and pathways of protection for all those people who, for various reasons, are in a state of social vulnerability.

*Keywords: Migrants, migratory flows, STP, admissions, DRG*

####

**P03. The Italian perspective concerning guideline development and implementation: a Public Health view of the national Medical Liability Reform of 2017**

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Clinical Practice Guidelines, as tools of Evidence-based Healthcare, play an important role in the continuous improvement of Clinical Governance and Health Services quality. As is well known, guideline production is entrusted to national or international health agencies, as well as to scientific societies, whose tasks are to gather, evaluate, and appraise the available medical evidence.

In Italy, the new Medical Liability Reform, originating from Law 8 March 2017 n. 24, gave rise to substantial implications in clinical practice and health-service or-

ganizations, strengthening the guideline role itself. This regulation states that recommendations have to be developed by deputy national health agencies or scientific societies and included in the National Guideline System (SNLG), managed by the National Institute of Health, a platform already in operation and collecting national and regional evidence-based guidelines.

The aim of this work was to analyze the viability of the new law, considering the current possibilities provided by Italian Public Health. Guidelines available on the SNLG were studied. The first issue with regard to the data was the scarceness of documents available for professionals. The Appraisal of Guidelines for Research and Evaluation (AGREE) Instrument was subsequently employed to evaluate a sample of SNLG guidelines, which were scored according to the tool's methodology. Cohen's Kappa coefficient was calculated to evaluate agreement between the observers. Results highlight the complexities of guideline production, as well as call for efforts to effectuate systematic standards to ensure both methodological rigour and transparency for guideline development and the correct use of the resulting recommendations, given the Medical Liability Reform of 2017.

*Keywords: Guidelines, Medical Liability Reform, Evidence-based Healthcare, AGREE, Clinical Governance, Italian Public Health*

####

**P04. Social safeguard to protect maternity: Law n.194/1978 in Umbria**

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Introduction: The introduction of law n. 194/1978 aimed at promoting informed and conscious procreation, protecting women's health, avoiding illegal abortion

and regulating induced abortion, in order to prevent unintended pregnancies and discourage pregnancy termination as a method of birth control. Art.9 regulates conscientious objection to abortion.

Objectives: We evaluated the enactment of law n.194/1978 in the period 2014-2016 in Umbria.

Methods: We analysed abortion data collected from Umbria concerning reproductive healthcare counselling, abortion and the phenomenon of conscientious objection. Hospital discharge records and ISTAT Models represented the main information sources.

Results: In 2016, 1295 induced abortions were performed in Umbria (-12.40% compared to 2014); repeated terminations were 351 (27.10%). Abortivity rate was 6.36 in 2014, 6.15 in 2015 and 5.75 in 2016. Abortivity ratio was 176.23 in 2014 and 179.22 in 2015. Conscientious objection to induced abortion in Umbria concerned 65.50% of obstetricians/gynaecologists in 2014 (vs 70.70% in Italy). Nevertheless, waiting time lengthened: in 2014, in Umbria, 17.50% of terminations occurred within 22-28 days of certification (vs 9.20% in Italy), while 43.00% within 14 days (vs 64.80% in Italy). Non-objecting gynaecologists performed a mean of 1.2 induced abortions per week in 2014. In Umbria, 12 of 13 Gynaecology services perform voluntary termination of pregnancy (6,30 centres performing induced abortion centres per 100.000 women aged 15-49 years) and reproductive healthcare counselling centres number 48 (1.08 per 20.000 inhabitants).

Conclusions: The health care system should promote women's health and prevent unintended pregnancies and unsafe abortion, taking into consideration conscientious objection.

*Keywords: Law 194/1978, abortion, conscientious objection, women's health, reproductive healthcare counselling*

####

**P05. Connections between job instability and mental health, smoking, alcohol and drug abuse**Vogolino G.<sup>1</sup>, Bert F.<sup>2</sup>, Gualano MR.<sup>2</sup>, Thomas R.<sup>1</sup>, Siliquini R.<sup>2</sup>*1. School of Specialization in Hygiene and Preventive Medicine, University of Turin**2. Department of Public Health, University of Turin*

Background: Socio-economical changes in Europe are pushing health professionals to face new issues with regard to the labour market and the health of young workers. Job insecurity is a phenomenon which is studied widely across various fields and nations. Since it involves an increasing amount of young workers all around the world, we assessed its impact on mental health and hazardous behaviours. Methods: 504 subjects aged between 18 and 40 were interviewed in this cross-sectional study. STROBE guidelines were used. Socio-economical factors were evaluated. Adapted forms of validated scales were used to assess mental health, alcohol and drug abuse and smoking. Univariate and multivariate analyses were performed to evaluate the impact of different socio-economical determinants as predictive factors. Results: Job insecurity appeared to be partially connected with the type of employment. The majority of respondents with a permanent contract felt their situation to be secure (91.3%;  $p < 0.001$ ), while this proportion was reduced when referring to temporary jobs (45.6% feels secure;  $p < 0.001$ ) and other kinds of contract (41.7% feels secure;  $p < 0.001$ ). Both personal income and family status and structure seemed to be predictors of poor job security perception ( $p < 0.001$ ). Job security perception was associated with depression, anxiety, alcohol abuse and smoking ( $p < 0.001$ ).

Conclusion: Job security perception appears to be the most important predictive factor for the presence of depression and anxiety symptoms, alcohol consumption and smoking. Female gender seems to be a risk factor for poor mental health and a protective factor for hazardous behaviours.

*Keywords: Depression, Anxiety, Drug Abuse, Alcohol Abuse, Smoking, Job Insecurity*

**The role of Public Health in the Academy****A01. Residents in public health: one-year experience in the Clinical Risk Management Group (CRMG) at Udine Healthcare and University Integrated Trust (ASUIUD)**Celotto D.<sup>1</sup>, Battistella C.<sup>1</sup>, Grillone L.<sup>1</sup>, Lesa L.<sup>1</sup>, Furtuna R.<sup>1</sup>, Tricarico P.<sup>1</sup>, Degan S.<sup>2</sup>, De Corti D.<sup>2</sup>, Bellomo F.<sup>2</sup>, Farneti F.<sup>2</sup>, Brusaferrero S.<sup>2,3</sup>*1. School of Specialization in Hygiene and Preventive Medicine, University of Udine**2. Udine Healthcare and University Integrated Trust**3. Department of Medicine, University of Udine*

Introduction: According to Italian Law 208/2015 clinical risk management is a primary interest for the National Health System and a mandatory activity for healthcare facilities. In ASUIUD incident reports (IR), anonymous forms describing near-misses and adverse events, are managed by the multidisciplinary CRMG: physicians, nurses, technicians and residents in public health. Residents participation in safety improvement activities represents an opportunity to learn essential management skills in public health. The aim of this study is to describe residents activities and skills developed in 2016.

Methods: IR details, investigations, and the professional in charge of every event were collected in a Database (DB) and analyzed. The number of IRs received, proportion of events managed by residents and actions they performed were extracted. Residents' records and job descriptions were also examined.

Results: In 2016, 1661 IRs were collected, 391 (23,5%) in charge of 5 residents. Besides, residents collaborated in 27 audits, 15 Root-Cause-Analyses, 14 Safety-Walk-Arounds, 1 Healthcare-Failure-Modes-and-Effects-Analysis, per-

formed by the CRMG.

Residents took part as speakers in a quality and safety residential course, mandatory for all healthcare professionals of ASUIUD. They also acted as peer educators in practical training on risk management for medical students attending the 5th year at University of Udine.

Residents in CRMG acquired higher levels of autonomy in their job descriptions for risk management skills.

Conclusions: Attending CRMG allows residents in public health to develop technical risk management skills. Performed activities might also be helpful to improve non-technical skills such as organization and relationship facilitation, team building and decision making.

*Keywords: Residents in Public Health, Clinical Risk Management, Job description*

####

#### **A02. Human papillomavirus knowledge among students: results of a survey at the University of Catania**

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Introduction: Cervical cancer is the fourth most common cancer in women in the world; thus the prevention of human papillomavirus (HPV) has become an important health priority worldwide. To effectively target prevention actions it is advisable to investigate the population's knowledge of HPV related diseases. The aim of the study was to assess knowledge on HPV infection in a sample of university students.

Materials and methods: Based on the scientific literature, a specific questionnaire on knowledge of HPV infection, HPV vaccine and information received

over the course of life was designed and administered to the students before a conference on HPV epidemiology and prevention.

Results: We recruited 173 university students (38% males, 62% females). The majority of them were medical students (75.1%), 19.7% were obstetrics students and 5.2% biology students. Only 52% of the participants was aware that HPV lesions regress spontaneously and only 37.8% of the participants were aware that HPV vaccine can be administered to women who already have an HPV infection. The majority of the students (72.8%) thinks that vaccine protects from HPV infection. The information sources were: university (84.4%), internet (37%), gynaecologists (23.7%) and family (22%). Despite the low level of knowledge ascertained, in a 1-to-10 scale, for most of the students (64.2%) the perceived importance of HPV vaccine is 10.

Conclusions: It is essential to put a major effort into information campaigns about HPV vaccine to raise awareness not only among the general population but especially among the younger people involved in the biomedical field.

*Keywords: Vaccination, prevention, HPV, awareness, health promotion*

####

#### **A03. Migrants and health: a training project for Public Health residents**

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Background: Despite being widely recognized as key elements in the education of health professionals, Global Health themes still struggle to be properly addressed in the training programs of Public Health Schools. The School of Bologna, with the full support of the University,

local health departments, and institutions, tried to fill this gap in the resident curriculum by developing a training program on migrant health, a critical issue for the Italian National and Regional Health Systems.

**Objectives:** To improve Public Health Resident competencies on migrant health through a systematic, collaborative and multidisciplinary approach.

**Methods:** A small focus group performed a preliminary research of the literature for articles and guidelines on migrant health management. A few topic areas were selected, and knowledge gaps were identified through a consensus procedure. To expand knowledge on these topics, from January to March 2017 interdisciplinary seminars on the regulatory framework and healthcare pathways for migrants in Emilia-Romagna were organized together with local authorities and organizations. In April, Public Health Residents started a training collaboration on epidemic surveillance for migrant populations with the Unit of Infectious and Tropical Diseases. Additional internships at the regional hub for migrants in Bologna (where welcome and medical examinations are provided) are expected to start by June.

**Conclusions:** Training on Global Health issues is necessary for Public Health Residents. The experience of Bologna on migrant health suggests that through a systematic and collaborative approach training gaps can be efficiently filled. An evaluation of the project is planned for the end of the year.

*Keywords: training, migrants, global health, education, asylum seekers*

####

**A04. How a School of Medicine can work with the Regional Health System: Preliminary introduction to the new memorandum of understanding (Protocollo di Intesa ex D.Lgs. n. 517/1999) signed in Emilia Romagna Region in 2016.**

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**Background:** Collaboration between Universities and city Hospitals has been documented in Italy since the middle ages. It was only in 1940 that their relationship was institutionalized through the introduction of agreements modelled by national Ministries and then, since 1972, also approved under the supervision of the Regions; administrative centres of the Italian territory.

**Objectives:** To evaluate the conceptual frameworks, laws and regulations about integration between university and regional health systems with a focus on Emilia-Romagna and on the potential impact of the new regional memorandum of understanding (MoU), approved in 2016.

**Methods:** A preliminary review of literature and regional documentation from 2010 to 2016 was carried out. A qualitative analysis of the documents was then conducted and key elements of the documents were identified and summarized through a consensus procedure.

**Conclusion:** The newly adopted MoU states that regions and universities should cooperate synergically within three different operational areas: training, medical research and healthcare. Global governance is entrusted to a management committee responsible for guidelines on regional health planning and structural requirements of the training network. Two of the keys innovations of the agreement are the redefinition of the ratio between medical students and hospital beds and the criteria for identifying university leadership units. Although evaluation tools will be necessary to assess actual developments in each area, the integrated model between the Region and University has the potential to be a significant improvement for both the training of doctors and the quality of the healthcare provided.

*Keywords: Integrations, teaching hospital, regional health plan, medical education*

####

**A05. Causality assessment between vaccines and adverse events: a study on 2013-2016 data in Puglia Region**

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Causality assessment is an algorithm proposed by WHO to identify a causal relationship between vaccines and adverse events, mostly for serious adverse events.

Several criteria are relevant: temporal relationship, strength of association, evidence of alternative causes. The association vaccine/AEFI (Adverse Event Following Immunization) can be considered consistent, inconsistent, indeterminate or unclassifiable.

Italian Authority for Drug (AIFA) recommends that causality assessment should be performed only according to information from the AEFI case-report even if inadequate information could mislead the classification of event. This study describes AEFIs notified in Puglia from 2013 to 2016 and analyses differences between causality assessment performed according to information from the AEFI case-report and causality performed after clinical documentation examination. In Puglia from 2013 to 2016, 292 AEFI were notified: 191(65,4%) non serious, 59(20,2%) serious and 42(14,4%) undefined. The majority of serious AEFIs was related to viral vaccine while vaccine against B Meningococcal is related most frequently to non serious AEFIs. The higher percentage of AEFI was noted among children > 6 years of age ( $X^2=33,4$ ;  $p=0,000$ ). Causality assessment performed only according to AEFI case-report information allowed for the classification of 59,2% ( $n=29/59$ ) serious AEFIs as consistent while assessment performed after clinical folder view revealed 30,6% ( $n=15/59$ ) of serious AEFIs were consistent ( $X^2=65,0$ ;  $p=0,000$ ). Inconsistent serious AEFIs were in the first instance 18,6% ( $n=11/59$ ) and became 45,8% ( $n=27/59$ ) after examination of clinical documentation; indeterminate serious AEFIs were at first 6,8%

( $n=4$ ) and then 3,4% ( $n=2$ ); unclassifiables did not change. It is necessary to improve the performance of the AEFI reporting system in terms of responsiveness, effectiveness and quality of investigations and reports. It should be essential to enclose a clinical folder to allow an unequivocal AEFI causality assessment.

*Keywords: Causality assessment; adverse events; Vaccines; clinical documentation*

####

**A06. A systematic review of the long-term effects of bibliotherapy on patients suffering from depression.**

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Purpose: Evidence shows how bibliotherapy may be helpful for people suffering from mild depression and who do not necessarily require medication. However, demonstrations of durable bibliotherapy effects have not been systematically reviewed yet. Thus, the purpose of this review is to provide evidence on the long-term maintenance of bibliotherapy treatment effects for depressed people.

Methods: We conducted a systematic review observing Preferred Reporting Items for Systematic Review and Meta-analysis (PRISMA) guidelines.

Results: We collected 10 articles. All the considered studies were RCTs which showed a good quality assessment at the Jadad Scale evaluation. Four studies evaluated the effects of bibliotherapy after a three month term, one paper investigated results after a follow-up of six months, four articles described the maintenance of the effects after two years, while one paper analysed the effects of bibliotherapy three years from the completion of the programme. Six studies, which included adults and elders, reported a decrease in depression severity. Four studies, involving young people, showed a significant decrease in depres-

sive symptoms after a short observation period, but these improvements were not confirmed by a longer follow-up evaluation.

Conclusions: Bibliotherapy could be considered a useful intervention because it is readily available and it reduces the need for other medication. These results could be important in assessing the role of such a cost-effective intervention when addressed to the numerous patients suffering from mental health problems, and in the implementation of public health policies aiming for the development of a population-targeted therapy.

*Keywords: cognitive therapy; depressive symptoms; depression; bibliotherapy; cost-effectiveness; population-targeted therapy*

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## POSTER SESSIONS CONTRIBUTIONS

### X01. Breastfeeding monitoring in Catania

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Introduction: The benefits of exclusive breastfeeding for the first 6 months are recognized and it is recommended by WHO. There is no national monitoring of breastfeeding prevalence in Italy. According to data from an Istat survey of 2013, the average number of exclusive breastfeeding months is 4.1, the lowest in Sicily (3.5). According to the WHO, trying to breastfeed the baby immediately after delivery is an important factor in breastfeeding and early hours after delivery are

often crucial for a positive outcome.

Materials and Methods: From September 2016, breastfeeding prevalence monitoring was active, it is done through the use of an on-line questionnaire given to the mother at the time of discharge from the birth center. Three birth centers were involved in monitoring (1 private clinic and 2 hospitals) in Catania.

Results: 745 questionnaires were examined, not all completed. 91.7% (683) of mothers nursed their baby before discharge from the birth clinic, but only 34.4% (253) breastfed exclusively. 81.9% (506/618) of the mothers stated that the baby had stuck to the breast within the first 3 hours. Only 28.2% (209/741) followed accompanying courses at birth, but 80.8% (599/741) received information on breastfeeding mainly from midwifery, family and the internet.

Conclusions: Better organization of prenatal courses could increase the number of breastfeeding mothers. The practice of exclusive breastfeeding should also be encouraged at birth centers and the reasons for the frequent renunciation of exclusive breastfeeding should be investigated.

*Keywords: Breastfeeding, Birth-Hospital*

####

### X02. Monitoring the Cesarean Section Rate according to Robson's Classification: a pre-audit experience in a Birth Unit of Campania Region

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As is well known, the elevated rate of Cesarean sections (CS) constitutes a relevant public health issue, accordingly, the WHO fixed a percentage of 15% as an ideal value of CSs, as reported in the WHO Statement on Caesarean Section Rates.

Referring to national and local contexts, the overall CS rate is 34% in Italy and 62% in the Campania Region (y.2015); given these high percentages, Regional

Health Authorities and Healthcare facilities are adopting several strategies to reduce the inappropriate use of this procedure.

The presented work analyses a limited case series of a Birth Unit in a local hospital in Campania, as a preliminary phase of the CS rate reduction plan to be carried out by the responsible Healthcare Agency.

A pilot pre-audit was conducted, in May 2017, to register data regarding deliveries and CS, as well as to critically appraise the clinical records of a sample of cesarean cases, according to Robson's 10-group classification, a mutually exclusive obstetric system of classification. In the studied hospital unit, with respect to the total number of births, 51.5% were performed as CS in 2016 and 50.0% in the first quarter of 2017. The analysis of the systematically selected records showed that the majority of the cases (75.0%) was in 1<sup>st</sup> and 2<sup>nd</sup> Robson classes, the obstetric categories supposed to comprise the lowest rate for appropriate CS.

Since results suggest the need for a local audit based on Robson classification to evaluate the indications of CS, authors suggest evidence-based plans and efforts to reduce the CS rate.

*Keywords: Cesarean sections; Gynecology; Robson classification; Caesarean Section Rates; Birth Unit*

####

### **X03. Improving quality of epidemiological survey in the field? Experience of an evaluation of a cross-sectional study on cervical screening "Save Eve in Sicily" (SES)**

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Background: During a two-year Master Program entitled "Population Health Pro-

motion and Preventive Epidemiology" (PROSPECT), a telephone cross-sectional survey on cervical screening knowledge, perceptions and adherence among Sicilian women ("Save Eve in Sicily") was conducted in order to promote evidence-based Public Health strategies for screening implementation. Starting from the data collection process, a SWOT analysis was carried out with the aim of identifying the most critical methodological aspects, particularly with regard to specific population groups documenting a low level of health literacy.

Methods: The SWOT analysis was performed ex post by interviewers. Elements emerging during the telephone interviews were considered according to the following 4 categories: internal strengths and weaknesses, external opportunities and threats (SWOT). The contents of the 11 SWOT forms underwent a categorical, inductive and deductive qualitative analysis.

Results: The areas of evaluation and the results are described in Table 1. The socio-cultural context has proved to be an important factor both for understanding the questions and for the acceptability of the topics dealt with such as cancer, death and the sexual sphere. In some cases a family member was a facilitating element, while in some others it presented an obstacle to the interview ("These are not questions to be asked for by telephone").

Conclusions: Our experience documented how, when performing a cross-sectional survey, the role of a trusted GP is crucial both in the enrolment phase and in the possibility of personalizing the language according to the interviewee's needs. Cultural taboos or other aspects may influence the non-adherence to the survey and the role of the interviewer was decisive in increasing compliance and limiting selection bias. In conclusion, training interviewers is one of the key elements to ensure the quality of a survey.

*Keywords: Cross-sectional study, SWOT analysis, cervical screening, public health, health promotion.*

####

#### **X04. Occupational surveillance of Latent Tuberculosis Infection on Health Care Workers: the experience of the Bari Policlinico General Hospital**

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**Objective:** To calculate the tuberculin index among healthcare workers (HCWs) of the Bari Policlinico General Hospital.

**Methods:** In Bari Policlinico General Hospital, the Hygiene Department deals with the screening of latent TB among HCWs, both through periodical screening and extraordinary screening for those exposed to patients affected by pulmonary tuberculosis. Checks are carried out by TST (Tuberculin Skin Test) and the QuantiFERON-TB Gold (QT) test is performed on cutipositive HCWs. We analysed data with regard to screening of HCWs from January 2012 to December 2016. For the purpose of the analysis, the HCWs were divided into periodic or extraordinary control groups and job-type groups: MD and paramedics.

**Results and Conclusions:** In 2012-2016, 937 HCWs were screened, 281 (30.0%) extraordinary controls and 656 (70.0%) periodic controls; 212 (22.6%) were MDs and 725 (77.4%) were paramedics. Out of 937 HCWs enrolled, 911 were submitted to TST and 352 (38.6%) had a positive test; 343 (36.6%) underwent the QT and 77 (8.2%) tested positive (13 MD and 64 paramedics).

The proportion of positive QuantiFERON-TB Gold test subjects was 9.6% (27/281) in the extraordinary control group vs 9.3% (61/656) in the periodic control group ( $X^2 = 0.0$ ,  $p = 0.882$ ), 6.6% (14/212) among MDs vs 10.2% (74/725) among other healthcare workers ( $X^2 = 2.5$ ,  $p = 0.114$ ), this is probably due to close contact with patients, lack of DPIs and lack of protection and prevention measures. The multivariate logistic regression model showed that the outcome of QT was associated with the age of workers (aOR = 1.1,  $z = 5.5$ ,  $p = 0.000$ , IC 95% 1.1 - 1.2).

The tuberculin index calculated was 37.6% for the Mantoux test and

9.4% for the QT.

*Keywords: Tuberculin index, TB screening, TB prevention, risk assessment*

####

#### **X05. Surveillance of Klebsiellapneumoniae carbapenemase-producing (KPC) in an Italian teaching hospital**

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We report the principal data and data analysis regarding a KPC incidence in Pisa teaching hospital between October 2015 and March 2017. In addition, we detail a selection of interventions carried out in the most critical units. On an alert message originating in the microbiology laboratory, the infection control unit is informed of the presence of a patient with either a colonisation or infection by KPC. The data are collected in a database, allowing for immediate visual recognition of new cases and clusters with individualward details. Phone contact, followed, and when required, an in-person visit, who updates the infection control unit which proceeds to verify the operating isolation measures enacted by the ward staff, reinforces their specific knowledge, and gives any information required to limit the spread of KPC. After an eighteen month monitoring period we have identified the main KPC carriers, but interrupting the transmission has proved to be difficult for several reasons. Among them the most frequent are: poor hand hygiene compliance, lack of personnel dedicated to the infection control, and high bed-occupancy rates.

*Keywords: KPC, infection control, alert surveillance*

####

#### **X06. Evaluation of lifestyle and cancer events in long term survivor women with breast cancer: a preliminary study**

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This study aims to evaluate lifestyle, tumor recurrence, metastasis and new cancer in a sample of 248 patients who received a diagnosis of breast cancer from 1973 to 2011.

The cross-sectional study was conducted from November 2015 to March 2017 on 248 women who attended the oncologist outpatient department of a Health District of a local healthcare agency in Naples, Italy. Patient socio demographic and clinical information were collected through the examination of clinical records; telephone interviews were carried out to investigate lifestyle habits.

Examining food habits, 83.5% declared consuming fruit and/or vegetables at least five times per day, 91.9% reported scarce or no use of red meat over the month, 86.6% and 89.9% reported consuming fish and vegetables at least once a week, respectively.

Regarding physical activity, 53.2% declared practising moderate or intense activity; while 44.1% and 18.4% of women were overweight and obese, respectively.

As regards the daily voluptuary habits, 81.0% of the sample were non-smokers, 99.2% reported drinking less than two glasses of wine and/or beer and 84.5% declared not drinking spirits.

Breast cancer events' assessment evaluated the development of remote metastases in 8.1% of the sample, recurrences in 4.0% and second tumors in 13.3%.

In conclusion, data showed that the long-term survivors tend to adopt a healthier lifestyle, especially with regard to eating habits. In spite of this, awareness-raising efforts are needed to motivate the women to do appropriate physical activity.

*Keywords: Lifestyle, long-term survivors, breast cancer, food habits, physical activity*

####

**X07. Health promotion perceptions and attitudes among medical doctors resident in public health: a nationwide survey**

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Background: The Ottawa Charter and the 2016 Vienna Declaration have placed a high priority on reorienting health services to health promotion (HP). Responsibility for this is shared among individuals, community groups, health professionals, health service institutions and governments. Despite this, medical doctors (MDs) do not necessarily have the knowledge, interest or willingness to put HP principles into practice. The aim of the current study is to examine the variables affecting the health perceptions and attitudes towards HP among MDs resident in Public Health in Italy.

Methods: We performed a mixed (qualitative) method approach, developing a structured survey -with both open and closed-ended questions - investigating knowledge of HP, attitudes towards HP, perceived barriers and possible solutions among MDs. All Italian MDs resident in Public Health from 36 universities all over the country have been invited to participate through an online procedure.

Results: Our study is still on going. The anticipated completion date is July 2017. A complete description of the features of the results will be provided as soon as possible.

Conclusions: Although medical education encompasses HP training program, Ital-

ian MDs often perceive HP only as a theoretical concept. For this reason, a key strategy to improve HP knowledge and skills in both medical students and residents would be implementing HP program with an operational and pragmatic approach during medical educational courses. Furthermore, we are planning to apply this survey to other context of HP and to widen the survey to other European countries in order to compare the results.

*Keywords: Health promotion; medical education; survey; mixed (qualitative-quantitative) approach; knowledge, attitudes and beliefs*

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