

# EUROMEDITERRANEAN BIOMEDICAL JOURNAL

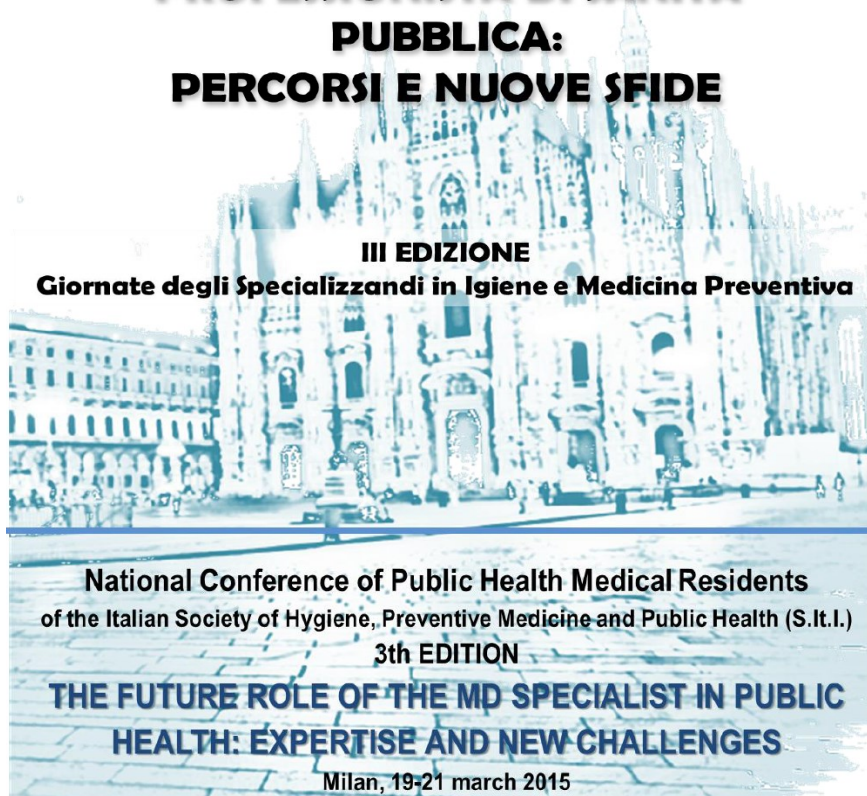
for young doctors

Special Issue



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## LE COMPETENZE DEL FUTURO PROFESSIONISTA DI SANITÀ PUBBLICA: PERCORSI E NUOVE SFIDE



### ABSTRACT BOOK

National Conference of Public Health Medical Residents  
of the Italian Society of Hygiene, Preventive Medicine and  
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The future role of the MD specialist in Public Health:  
expertise and new challenges

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for children in this age group, such as the definition of passive smoking and free radicals, showed an improved understanding following the lesson (passive smoking: 61% vs. 80%, free radicals: 31% vs. 40%, before and after lesson, respectively).

During the lesson, the children paid attention and participated with enthusiasm. The use of video games as a challenge and educational play instrument allowed to further enforce the knowledge acquired by the children.

#### *Conclusions*

This environmental education intervention has been proven to be very useful to both well-informed children and to those with a poor prior knowledge on these issues.

Both children and teachers enjoyed the activity as evidenced by the satisfaction questionnaires.

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#### **E04. The GIS methodology and its application in exposure assessment – Experience of the University of Modena and Reggio Emilia**

Filippini T.<sup>1,2</sup>, Iacuzio L.<sup>1,2</sup>, Arcolin E.<sup>1,2</sup>, Violi F.<sup>1,2</sup>, Storani S.<sup>1</sup>, Costanzini S.<sup>3</sup>, Fabbi S.<sup>3</sup>, Malagoli C.<sup>1</sup>, Vinceti M.<sup>1</sup>

*1 CREAGEN – Center of Research in Environmental, Genetic and Nutritional Epidemiology, Reggio Emilia, Italy; 2 School of Specialization in Hygiene and Preventive Medicine, University of Modena and Reggio Emilia, Italy; 3 DIEF – Department of Engineering "Enzo Ferrari", University of Modena and Reggio Emilia, Italy*

#### *Introduction*

The need for simultaneously assessing multiple exposures is being increasingly acknowledged in the field of environmental epidemiology. Geographic Information System (GIS) is a new computer-based system designed to collect, integrate, analyze and display multiple different data in a spatially referenced environment. GIS can be viewed in several different layers, where each layer holds specific environment-based data. This study focused on multiple environmental

exposures and risk of amyotrophic lateral sclerosis (ALS).

#### *Methods*

With a case-control population-based study approach, the first step was the identification of suitable cases through the Regional Disease Registry, Hospital Discharged Records, death certificates, etc. For each case, we randomly selected four population controls matched for age, sex, and province of residence. Data collection included residential address at time of diagnosis and, where possible, residential history, in order to link each case with individualized geographic coordinates in the Gauss-Boaga reference system using the ARCGIS-10 software. The GIS database was also enriched with data on potential environmental risk factors including the following: type and proportion of different crops/cultivations associated with the use of pesticides (through the Land Use Regression Model); location of water bodies to link contamination by cyanobacteria; distribution of air pollutants using a monitoring data network for air quality control and a validated dispersion model; and location of high-voltage power lines associated with exposure to magnetic fields.

#### *Results*

We identified 499 cases of ALS and 1932 controls in the three provinces of Modena, Reggio Emilia and Parma in the 1998-2011 time period. Using a logistic regression analysis model, odds ratios (ORs) were calculated for the ALS, including in the model, in addition to matching variables, the potential multiple risk factors.

#### *Discussion*

Using GIS and other methods not requiring direct involvement of the subjects makes it possible to minimize exposure misclassification and selection bias. Moreover, GIS may expand the horizons of environmental exposure assessment by allowing the simultaneous evaluation of numerous confounding and risk factors in a regression model to quantify their weight, while offering an improved statistical stability of risk estimates, identification of independent risk factors and implementation of public health interventions. In conclusion, GIS-based assessment and analysis could be applied to

several other non-infectious and infectious diseases.

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**E05. Continuing medical education for occupational health physicians according to the Legislative degree 81/08, art. 38, and occupational safety training. Experience of the Public Health Department of the Federico II University Hospital, Naples**

Grimaldi N.<sup>1</sup>, Porciello M.E.<sup>1</sup>, Bellopede R.<sup>1</sup>, Palladino R.<sup>1</sup>, Imperato O.C.M.\*<sup>1</sup>, Bogdanović L.<sup>1</sup>, Fioretti A.<sup>1</sup>, Di Silverio P.<sup>1</sup>, De Rosa M.<sup>1</sup>, Mazzone G.<sup>1</sup>, Novi C.<sup>1</sup>, De Pascale T.<sup>2</sup>, Schiavone D.<sup>3</sup>, Caporale O.<sup>2</sup>, Triassi M.<sup>2</sup>  
*1 School of Specialization in Hygiene and Preventive Medicine - Department of Public Health, Federico II University, Naples, Italy; 2 Department of Public Health, Federico II University, Naples, Italy; 3 Health Administration, University Hospital Federico II, Naples, Italy*

*Introduction*

Training has a central role in the development of occupational safety awareness. It is important to train workers on safety, in order to enable them to adopt the necessary skills to minimize the risks and to protect personal safety.

*Methods*

The Public Health Department of the Federico II University Hospital developed two continuing medical education models for occupational health physicians and one training model for all hospital staff. The first model was carried out in collaboration with the Company Training Department as a traditional training course. The course was divided in 6 modules, with a 24-day total duration and accredited with 138 credits. 18 occupational health physicians participated to the course.

The second model was organized in collaboration with the Public Health Department and Italian Society of Hygiene as two distance learning courses. The first one titled "Regulations development and safety actors. Risk evaluation document and biological risk in healthcare setting"

was accredited with 50 credits and the second one "Chemical risk and surveillance report" with 24 credits.

The third model, also carried out in collaboration with the Company Training Department, was a distance learning course on occupational safety for all hospital staff, including residents.

All training methods, devised by the Public Health Department, were conceived based on an approach involving a process with four basic training steps: 1) planning and development of the training program, 2) delivery of the training program 3) evaluation of the results of the training program, and 4) documenting the training program. In the first phase, the Training Plan was formulated. The Training Plan was structured in sessions, which addressed subjects of great importance for healthcare worker training, including practical examples. The second training phase was organized as a traditional course, which included theory and practical examples. The third training phase of the course was reserved for questionnaire compilation at the end of each training day. The fourth training phase of the occupational health physicians' course, was aimed at producing specific guidelines based on the procedures addressed during the course, while in the other two courses, this phase was used to compile a set of regulations related to the course subjects in order to create an archive which will be available for all hospital staff.

*Conclusions*

Continuing education acts on workers' behavior. It directs them towards more effective personal health monitoring and prevention practices, and offers concrete support for ensuring occupational safety. The residents of Hygiene and Prevention Medicine had central role in the organization of the courses. In addition to the organization and preparation of the materials for the course, they acted as tutors during the traditional course, gaining experience and competence in process management.

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