Spreading information for primary, secondary and tertiary prevention

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Introduction

This issue of the *Journal of Public Health* presents articles relating to different fields in public health research, from the organization of humanitarian aid action to the prevention of infectious diseases, the diffusion of problematic behaviors, and the management of chronic conditions. Most of the contributors underline the importance of the diffusion of knowledge and information among the general population for the primary prevention of diseases, and the role of communication and patient education in the management of chronic conditions.

Human behavior can in fact influence the spread of infectious diseases, and it is based on the individuals' knowledge as well as on the information received about such conditions (Funk et al. 2010). In turn, a correct evaluation of the benefits obtained from immunization, and of the risks and the adverse effects related to the vaccines would facilitate a wider diffusion of vaccinations (Baejens

2010). Some of the papers in this issue are in line with the afore-mentioned hypotheses: Al-lela et al., who developed a questionnaire on knowledge, attitude and practice about immunization among Iraqi parents, suggest that parents who have adequate information on this field also have a positive attitude and practices towards immunization; Kamal et al. assessed the knowledge, attitude and practice towards the pandemic H1N1 influenza virus among El-Minia University students in Egypt, and maintain that adequate acquaintance with the problem is associated with a better willingness to comply with preventive measures; Naing and Tan focused on the knowledge of pandemic influenza A and on the willingness to be vaccinated among a sample of 264 medical students in Kuala Lumpur, Malaysia, and underline the necessity to strengthen evidence-based health education in order to help people adopting effective preventive behaviors and vaccination.

One of the main factors contributing to the spread of bacterial resistance is the misuse of antibiotics. Educational programs for both health professionals and the general population are strongly needed: reducing misconceptions about the utility of antibiotics in minor ailments and improving the general public awareness of the risks correlated with their improper use would be a key component on politics aimed to control the diffusion of antibiotic resistance (Grigoryan et al. 2010). Two studies focus respectively on the topic of the diffusion of antibiotic-resistant bacteria and on the knowledge of MRSA in both medical students and the general population: Sathiamoorthi et al. describe the prevalence of multidrug-resistant *Salmonella enterica typhi* and *paratyphi* among 368 human cases of typhoid and paratyphoid fever from the Tiruchirappalli district in India, while De Giusti et al. report a survey conducted on a sample of students attending an Italian Faculty of Medicine and on their cohabitants, focusing on their knowledge on MRSA, its

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mechanisms of transmission, risk determinants and preventive measures. Poor awareness on this subject could cause future diagnostic and therapeutic errors among health professionals and the spreading of the infection in the general population. Therefore, authors suggest implementing educational programs on this issue for both the general population and medical students.

Two studies focus on the diffusion of unhealthy and problematic behaviors such as smoking and behavioral addictions: Heikkinen et al. describe low smoking rates at the University of Tartu, Estonia, which are lower compared to those reported in the rest of the country, and suggest that university communities should recognize their role of innovation centers and promote the diffusion of healthier behaviors in the general population; Martinotti et al. studied the prevalence of problematic mobile phone use, and its association with behavioral addictions, in a population of Italian adolescents and young adults. Both studies underline the necessity to encourage the general population's awareness of the consequences of unwholesome behaviors, in accordance with Njekela et al., who describe the prevalence of cardiovascular disease risk factors in a sample of men living in the urban area of Mwanza, Tanzania. Spreading information among the majority of the population is important, as the disease incidence can be reduced only by decreasing the mean level of risk factors among a large proportion of the population, and even interventions with a modest effect can largely impact the incidence rates when such interventions reach the entire population; clinicians, in turn, must reinforce the messages brought by prevention campaigns (Jordan et al. 2008).

Patient education is the cornerstone of all disease management programs (Krumholz et al. 2006). Patient education programs have a positive effect on some chronic diseases (Warsi et al. 2004). Köberlein et al. evidenced how, in a chronic condition like allergic rhinitis, patient compliance is one of the most important determinants for the therapeutic success. Ming et al. demonstrated in their qualitative analysis on the experiences of hospitalized patients that those affected by heart failure identified

limited communication with health practitioners and a lack of correct information on heart failure and medications as among the main obstacles to the adherence of treatment. The paper by Reinhold et al., who studied the costs of myocardial infarction from the perspective of a German statutory health insurance, laid further stress on the importance of effective prevention and efficient management of this condition.

Finally, Stumpfenhorst et al. carried out a qualitative study interviewing experts from a non-governmental organization operating in Haiti. The authors claim that the cluster approach followed by the United Nations Office for the Coordination of Humanitarian Affairs has reached its limits in the humanitarian crisis after the Earthquake in Haiti, with the necessity to coordinate too many independent NGOs. These, in turn, should educate donors to fund projects that are designed according to locally defined needs, and give them a feedback on the objectives they reach, in order to maintain their accountability.

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