

Editorial

Surveillance of vaccine-preventable diseases

by

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This is the third issue of the Archives of Public Health in the last decade, which is entirely devoted to the surveillance of infectious diseases, more specifically to the surveillance of vaccine-preventable diseases and to vaccine coverage surveillance. Public health surveillance can be defined as the ongoing systematic collection, analysis and interpretation of outcome-specific data for use in planning, implementation and evaluation of public health practice (1). Surveillance has become a major tool in the control and elimination efforts of vaccine-preventable diseases, such as measles and poliomyelitis. The purpose of infectious disease surveillance has evolved from the level of individual control to risk control, with emphasis on guidance for health interventions, trend estimation, high-risk group identification, transmission pattern changes and prevention strategies (2). Nowadays, infectious disease surveillance is high on the political agenda in Europe. Through a decision of the European Parliament and Council, the Community Network for the Epidemiological Surveillance and Control of communicable Diseases was set up (3). It has organised the coordination of national surveillance systems and gave a boost to surveillance in the European Union (4). Surveillance schemes and networks developed throughout Europe in

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various domains, human gastrointestinal infections, tuberculosis, HIV/AIDS, influenza, legionella infections, nosocomial infections etc. In September 2004, the start-up event for the European Centre for Disease Prevention and Control took place in Stockholm. The launch of the European Centre for Disease Prevention and Control in September 2004 marked, in terms of surveillance and control of infectious diseases in the European Union, the beginning of a new era (5). To build an effective surveillance system, the ECDC tries to gather the experience from as many countries and networks as possible. By using the best practices in the Member States and the knowledge gained in the present European Surveillance Networks, Europe hopes to come to a strong effective disease surveillance in order to analyse disease trends, to rapidly identify outbreaks, to spot emerging and re-emerging diseases and to use the data for intervention and prevention.

In Belgium, various types of surveillance systems for infectious diseases exist (2,4): compulsory and voluntary, comprehensive and sentinel, active and passive surveillance systems. Some of them are illustrated and commented in this issue.

Leuridan E. et al. focuses on the surveillance of Hepatitis A and B in a European scope (7). Viral hepatitis A and B are on the list of the communicable diseases to be progressively covered by the Community Network (4). The Eurohep.net concerted action financed through the European Commission looked into the existing surveillance systems for hepatitis A and B throughout Europe. Even if in the vast majority of investigated countries both infectious diseases fall under the national mandatory surveillance system, the study reveals considerable inter-country differences in case definitions and in functioning of the compulsory systems. These differences hamper the comparison of epidemiological data at European level and illustrate the need for further efforts to harmonise the existing surveillance methods.

Lernout T. describes a surveillance system used in Belgium in the framework of an elimination and eradication goal (8). The European Region of WHO has been certified polio-free in June 2002. In the frame of an eradication goal, surveillance of acute flaccid paralysis (AFP) in children aged less than 15 years old is crucial in monitoring possible cases of paralytic poliomyelitis. Poliomyelitis is included in the mandatory surveillance system in Belgium, but up to 2002, no surveillance system existed for AFP. Therefore a new surveillance scheme was set up. In view of the elimination of measles in the European Region by 2010, a high performance surveillance system is needed. Measles was never covered by the mandatory surveillance system in Belgium and

was monitored during many years (1982-2000) by a sentinel surveillance network of general practitioners (9). With decreasing incidence of measles, the sentinel surveillance system was inappropriate to further monitor this disease up to its elimination. Measles was added to the list of infectious diseases under surveillance of a new system started up in October 2002. Evaluation of 2 years of functioning of this system reveals that there is need for further improvement of the surveillance in terms of coverage and of quality of the data.

The third contribution in this issue deals with a sentinel network of general practitioners involved in vaccine coverage surveillance, namely surveillance of pneumococcal vaccination (10). This sentinel surveillance system is the only data source on pneumococcal vaccination in Belgium. Despite discussed drawbacks in this sentinel surveillance system, it enables to state that pneumococcal vaccination practice is still far from the objective of the Belgian Superior Health Council.

To conclude, this issue illustrates that different surveillance systems are used to meet specific goals and that there is room for improvement of the performance in the described systems.

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