

# Editorial

## **Work, occupation and epidemiology**

During a long time, epidemiology has focused on the hospital, because it is here that persons with disease are to be found. It was thus logical that the search for the causes of disease be centered around hospitals.

Increasingly, however, epidemiologists started to study exposed persons rather than diseased persons. The long-term effects of exposure to some substance are clearly as important as the antecedents of some disease. Persons working in industry have daily contact with large numbers of exposures – chemical, noise, dust, heat, trauma, physical exertion, radiation. Some of these exposures are known to cause disease in humans; others are known to be harmful to animals if given in high doses; still others have no known adverse effect.

It is logical that epidemiologists evaluate the effects of exposures on the health of workers in the workplace itself. However, how should these evaluations proceed? Conducting case-control studies in a hospital population is logical because that is where persons with diseases congregate. Conducting cohort studies in industrial populations is also logical because that is where persons with exposures congregate. However, as illustrated by the cohort study of British physicians, 35 years or more may be needed to assess the long-term effects of some exposure.

For this reason, epidemiologists in occupational settings have a great concern with the availability and the quality of records on exposure. If one can find records on industrial populations dating back 30 to 50 years, one can define cohorts based in the past rather than in the present. Follow-up needs not to take 35 years. Also, today's occupational epidemiologists must be concerned about the future. The records and data of today must be maintained for the epidemiologists of tomorrow. In this way, any adverse

effects of occupational exposures can be more readily detected and prevented (1).

Occupational epidemiology is the study of the effects of workplace exposure on the frequency and distribution of diseases and injuries in the (former) occupational population (2). However, some overlap exists with other subdisciplines. For example, life-style and behavioural risk factors are important determinants of some diseases that also have occupational etiologies and therefore require consideration in occupational epidemiology research. On the other hand, there are some specific features of occupational epidemiology that differ from other areas of general epidemiology. The study of the health of worker populations requires an appreciation of the peculiarities of occupational groups, such as generally favourable health profile of workers relative to those of the population at large.

The large scope of occupational epidemiology is very well illustrated by the contributions to this special issue. It provides a broad mix from psychosocial factors and work ability to methods of exposure assessment, the role of genetic factors, specific toxic effects of exposure and the epidemiology of relatively new syndromes.

They show the relative importance of occupational epidemiology in both epidemiological practice and occupational health practice in Belgium. We hope that this special issue can encourage researchers to continue their efforts in occupational epidemiology, as the occupational health setting is one of the most suitable environments to carry out epidemiological research in Belgium.

We would like to thank all authors who contributed to this issue for both their effort and their patience in answering to the comments of the editors.

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