

As part of the 50th birthday celebration, we are arranging to reprint 12 papers, *the Editor's Choice*, which have appeared in previous issues of the *Journal*. They have been chosen partly to illustrate the range and scope of the *Journal* over the years and partly because they are or were important in their day. More significantly, they have been chosen because they exemplify some of the best in scientific writing and can all be read with great pleasure and all who wish to communicate their observations, their ideas, or their enthusiasms would do well to study them and learn from them.

We will publish one paper each month through the year and they will appear in the order in which they were originally published.

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## *Editor's Choice*

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# Death rates of miners and ex-miners with and without coalworkers' pneumoconiosis in South Wales

by R G Carpenter, A L Cochrane, W G Clarke, G Jonathan, F Moore

(*British Journal of Industrial Medicine* 1956;13:102-9)

I once heard someone who knew Archie Cochrane say of him that he was always going about doing good. I never knew him so I can't confirm that opinion from personal experience but his many publications bear this statement out, however. He is remembered by occupational physicians for his outstanding work among the Welsh coal miners for whom he had a great admiration and affection. With others at the MRC Pneumoconiosis Research Unit he set up epidemiological studies of chest diseases in miners which he pursued almost to the end of his life. He was a meticulous, almost obsessive worker, but his attention to detail showed that results from epidemiological studies could be achieved with the precision of those obtained in the laboratory if only one tried hard enough. He knew the problems of imperfect data as well as anyone but stressed that if "the problem is important, one is forced to see what can be deduced from the best material that is available."

Among epidemiologists, Cochrane will probably be remembered best for his campaigning on behalf of the randomised clinical trial and for his evaluation of health services that were published as *Effectiveness and efficiency: random reflections on health services*. This little book published in 1971 became an international best seller, much to his surprise and delight.

Cochrane's writings are always a pleasure to read and this paper is no exception. In it he examines the relation in miners between age, radiological category of pneumoconiosis, and expectation of life, concluding that simple pneumoconiosis is not associated with a decreased expectation of life at any age. At the time he was working this was a somewhat surprising observation.

Cochrane wrote his own obituary concluding that "He was a man with severe porphyria who smoked too much and was without the consolation of a wife, a religious belief, or a merit award but he didn't do too badly." We would concur with that.

Thus once the rates  $v_1$ ,  $v_2$  and  $v_3$  have been derived we obtain the expected number of deaths in each age, sex, or occupation group by multiplication of the population by a factor. Adding the observed and the expected number of deaths for several age groups we can obtain the standardized mortality ratios (S.M.R.) for the inter-survey period for any age range.

#### Standard Errors

By assuming that the number of deaths each year in England and Wales is a Poisson variable we can compute the standard error of the expected number of deaths in any age group, or for the total number of deaths expected in any population. These expected numbers will be a weighted sum of Poisson variables. For the total female population in the Rhondda Fach, the standard error of the estimate of the expected number of deaths, 293.0, is less than  $\pm 0.6$  and will be smaller for smaller groups. This is assumed to be negligible.

On the other hand, if we regard the numbers of deaths in each of the age groups that are observed as Poisson variables, the total number of deaths observed for any combination of groups will still be a Poisson variable. Hence we can deduce that the standard error of an S.M.R. will be

$$\pm \frac{\sqrt{(\text{No. of deaths observed})}}{\text{No. of deaths expected}}$$

and by using tables for the Poisson distribution we could

test whether the S.M.R. is significantly different from 100.

The assumption that the number of deaths has a Poisson distribution gives an overestimate of the variance of the S.M.R., but is sufficiently accurate to show the orders of magnitude involved, if deaths occur in a random manner, with a given expectation. The validity of this hypothesis is discussed with reference to Table 6, where an alternative treatment of departure from expectation is given.

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#### Destruction of manuscripts

From 1 July 1985 articles submitted for publication will not be returned. Authors whose papers are rejected will be advised of the decision and the manuscripts will be kept under security for three months to deal with any inquiries and then destroyed.

- 29 Vigliani EC, Mottura G. Diatomaceous earth silicosis. *Br J Ind Med* 1948;5:148-60.
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## Correspondence and editorials

The *British Journal of Industrial Medicine* welcomes correspondence relating to any of the material appearing in the journal. Results from preliminary or small scale studies may also be published in the correspondence column if this seems appropriate. Letters should be not more than 500 words in length and contain a minimum of references. Table and figures should be kept to an absolute minimum. Letters are

accepted on the understanding that they may be subject to editorial revision and shortening.

The journal now also publishes editorials which are normally specially commissioned. The Editor welcomes suggestions regarding suitable topics; those wishing to submit an editorial, however, should do so only after discussion with the Editor.

- 9 Hill MJ, Hawksworth GM, Tattersall G. Bacteria, nitrosamines and cancer of the stomach. *B J Cancer* 1973; 28:562-7.
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- 21 Heldaas S, Langård S, Andersen A. Incidence of cancer in a cohort of magnesium production workers. *B J Ind Med* 1989;46:617-23.

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## Vancouver style

All manuscripts submitted to the *Br J Ind Med* should conform to the uniform requirements for manuscripts submitted to biomedical journals (known as the Vancouver style.)

The *Br J Ind Med*, together with many other international biomedical journals, has agreed to accept articles prepared in accordance with the Vancouver style. The style (described in full in *Br Med J*, 24 February 1979, p 532) is intended to standardise requirements for authors.

References should be numbered consecutively in the order in which they are first mentioned in the text by Arabic numerals above the line on each occasion the reference is cited (Manson<sup>1</sup> confirmed other reports<sup>2-5</sup> . . .). In future references to papers submitted to the *Br J Ind Med* should include:

the names of all authors if there are six or less or, if there are more, the first three followed by *et al*; the title of journal articles or book chapters; the titles of journals abbreviated according to the style of *Index Medicus*; and the first and final page numbers of the article or chapter.

Examples of common forms of references are:

- 1 International Steering Committee of Medical Editors, Uniform requirements for manuscripts submitted to biomedical journals. *Br J Ind Med* 1979;1:532-5.
- 2 Soter NA, Wasserman SI, Austen KF. Cold urticaria: release into the circulation of histamine and eosino-phil chemotactic factor of anaphylaxis during cold challenge. *N Engl J Med* 1976;294:687-90.
- 3 Weinstein L, Swartz MN. Pathogenic properties of invading micro-organisms. In: Soderman WA Jr, Soderman WA, eds. *Pathologic physiology, mechanisms of disease*. Philadelphia: W B Saunders, 1974:457-72.

### Asbestos and cancer: history and public policy

Sir,—As early as the 1890s there were publications linking asbestos with disease. For example, in the annual report of 1898 of women inspectors of factories, the microscopical appearance of “sharp, glass-like, jagged” asbestos fibres was described and “the effects have been found to be injurious, as might have been expected”. Auribault reported on numerous deaths in a French asbestos spinning and weaving mill between 1890 and 1895, publishing his findings in the *Bulletin of Work Inspectors*. And there were many others.

By 1938 government departments in Britain, the United States, and Germany, and the International Labour Office acknowledged the necessity to control and suppress asbestos dust.

Abstracts by Gloyne (1943, 1944) linking asbestos with pleural cancer as well as lung cancer were reprinted alongside others making similar points in the *American Journal of Industrial Hygiene and Toxicology and the Industrial Hygiene Digest*, and the latter was circulated to Johns-Manville and other asbestos companies who were members of the Industrial Hygiene Foundation.

By 1945 the links between lung cancer and asbestos had been acknowledged by the Chief Inspector of Factories, and the results of several large scale reviews of asbestos showed considerable progressive lung problems. Despite this, there was still a prevailing view that “as long as a man is not disabled he should not be told of his condition so that he can live and work in peace and the company can benefit by his many years of experience” (Smith, 1949). Even after the link between lung cancer was confirmed epidemiologically in Britain by Doll in 1955 manufacturers still chose not to publish relevant data.

A 1970 senate report on the Occupational Safety and Health act stated that “Because nothing has been done about the hazards of asbestos. . . 20 000 out of 50 000 workers who have entered one asbestos trade alone—insulation work—are likely to die of asbestosis, lung cancer, or mesothelioma. Nor is the potential hazard confined to these

workers as it is estimated that as many as 3.5 million workers are exposed to some extent to asbestos fibres, as are many more in the general population.”

One of the criticisms made by the appeal judges in *Borel v Fiberboard et al* (1973) was that manufacturers did not research into the hazard, “no manufacturer ever tested the effect of their products on the workers using them. . .”

It would seem that their behaviour was more reprehensible than this, and that they actually sponsored research, and then suppressed publication of the (unfavourable) outcome (Brodeur 1985; Castleman 1990). “In the light of information obtained through legal discovery proceedings in hundreds of asbestos lawsuits it is undeniable that leaders of the asbestos industry conspired to misinform both the public and the scientific community about the dangers of asbestos” (Huncharek 1990).

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A detailed set of relevant legal and other references is available from Dr Weller.

Correspondence on this subject is now closed—Editor.

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## NOTICE

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### Conference on retrospective assessment of occupational exposures in epidemiology. 13–15 April 1994, International Agency for Research on Cancer, Lyon, France.

This conference is organised by the International Agency for Research on Cancer (IARC) and the World Health Organisation, in collaboration with the US National Institute for Occupational Safety and Health (NIOSH) and the US National Cancer Institute (NCI), and with the support of the Commission of the European Communities, Directorate-General XII (BIOMED Research Programme).

The conference will review current and new methods for retrospective exposure assessment in occupational epidemiology. Special attention will be given to the development and implementation of new methods. The conference is a follow up of a similar meeting held in Leesburg VA, USA, on 27–30 March 1990. Since then, a number of new approaches have been explored.

The workshop will provide a forum for discussion between industrial hygienists, epidemiologists, occupational physicians, toxicologists, and laboratory workers. It will cover the whole range of experiences, from theoretical approaches to practical examples based on ongoing studies.

The conference will cover the following topics: use of external exposure measurements; use of occupational titles; self-reported exposure; job exposure matrices; questionnaires and expert evaluation of questionnaires; evaluation of dermal exposure; multiple routes of exposure; assessment of physical and ergonomic hazard; use of biological indicators of exposures or internal dose; epidemiological indices of exposure; validation of occupational exposure assessment; variability of current exposure, sampling strategies; exposure modelling, exposure ranking; statistical analysis of exposure data in epidemiology; cost efficiency issues; and ethical implications.

Invited speakers include, Dr Hans Kromhout, Agricultural University, Wageningen, The Netherlands; Dr Harvey Checkoway, University of Washington, Seattle, WA, USA; Dr Jack Siemiatycki, Institut Armand-Frappier, Université du Québec, Laval des rapides, Québec, Canada; and Dr Thomas Schneider, Danish National Institute of Occupational Health, Copenhagen, Denmark.

On 15 April 1994, several simultaneous workshops will be organised. They should include an informal discussion on current projects of participants. Participants are expected to actively contribute to the workshops. Four topics are proposed—namely, expert evaluation of questionnaires, biological indicators of exposure, exposure misclassification, and job exposure matrices. Further suggestions are welcome. The final list of topics and the allocation of participants will be decided at a later stage.

In each session, in addition to the invited speakers, relevant proffered papers from participants will be included, and poster sessions will be organized. All papers at the workshop will be presented in English. Abstracts are invited on topics listed in this announcement. These should be sent to the International Agency for Research on Cancer before 15 August 1993. Authors will be notified on the decision of acceptance of the abstracts by 1 November 1993. Registration forms and fees of US\$300 must be sent to the International Agency for Research on Cancer no later than 30 November 1993. Authors invited to make oral presentations will be asked to provide an extended abstract at the time of

the Conference. Projects dealing only with epidemiology (for example, results of a cohort study) or with industrial hygiene (for example, results of workplace sampling) will not be accepted. Abstracts describing methods applied to ongoing studies are welcome.

The Conference will start with an opening reception on the evening of 12 April, and will last two full days (13–14 April 1994). The workshops will last one full day (15 April 1994).

The registration fee covers the cost of the opening reception on 12 April, three lunches, and one social dinner.

The book of abstracts will be available at the conference. The invited lectures and selected extended abstracts will be published in the

international literature.

Address for abstract forms and other details: Organising Secretary, International Agency for Research on Cancer, 150 cours Albert Thomas, F-69372 Lyon Cédex 08, France. Tel (33) 72.73.74.85; Fax (33) 72.73.85.75

**Amendment**  
**Occupational asthma and extrinsic alveolitis due to isocyanates: current status and perspectives (1993;50:213–28).**

Dr M Saetta and Dr CE Mapp wish it to be known that they work at the Istituto di Medicina del Lavoro, Università degli Studi di Padova, Padova, Italy.