CORRESPONDENCE

Non-neoplastic mortality of European workers who produce man made vitreous fibres

In a very well written and interesting study Sali *et al* found an increased mortality due to ischaemic heart disease (IHD) among European workers producing rock or slag wool and continuous filament after 30 years since first employment.¹ These types of fibres belong to a group called man made vitreous fibres (MMVF). Other types in this group are ceramic fibres and glass fibres.

These groups of European workers have been compared with the national death rates of the respective countries.¹ This comparison is most often regarded as an underestimation of the true risk as the general population includes sick and disabled people unable to work. This underestimation is well known as the healthy worker effect.²

During the past decade fibrinogen has emerged as an important risk factor for IHD.³ Fibrinogen is a general indicator of inflammation in the human body.

European workers from the United Kingdom, France, and Germany exposed to ceramic fibres were investigated for respiratory function.⁴ Workers who currently or formerly smoked had a significant decrease of forced expiratory volume in 1 second (FEV₁) which was related to cumulative exposure. There was also a decrease of vital capacity (VC), which was not significant. A relation between decreased lung function (VC and FEV₁) and increased concentrations of fibrinogen has been found in a study of 788 Swedish men.⁵ Several studies have found a relation between a decreased lung function expressed as VC⁶ or FEV₁⁷ and IHD.

Among the European workers exposed to ceramic fibres there was a relation between increasing exposure to respirable fibres and two degrees of breathlessness from the MRC respiratory questionnaire.⁴ Some studies have found significant associations between breathlessness and cardiovascular mortality.⁸⁻⁹

An increased prevalence of chronic bronchitis has been found among United States workers exposed to fibreglass after adjustment for exposure to asbestos and smoking (relative risk (RR) 2.3, 95% confidence interval (95% CI) 1.1 to 4.9).¹⁰ A Finnish study has shown that people with chronic bronchitis have an increased risk of coronary disease and coronary deaths.¹¹

A general hypothesis about exposure to inhaled particles and the occurrence of IHD can be expressed in the following way. Long term inhalation of particles retained in the lungs will create a low grade inflammation associated with an increase in plasma fibrinogen. The high concentrations of fibrinogen will increase the likelihood for blood clotting and thereby the risk for myocardial infarction and IHD.^{12,13} Possible indicators of some inflammatory process in the lungs could be decreased lung function, breathlessness, and chronic bronchitis. This hypothesis will be supported if workers exposed to MMVF have a higher concentration of plasma fibrinogen than non-exposed workers with control for other possible confounders such as smoking habits.¹⁴ Sali *et al* suggested further investiga-

tions on the relation between an increased mortality from IHD and exposure to rock or slag wool and ceramic fibres¹ and this is one way of performing such further studies.

BENGT SJÖGREN

Toxicology and Risk Assessment, National Institute for Working Life, S-112 79 Stockholm, Sweden

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Karo jisatsu (suicide from overwork): a spreading occupational threat

It has often been said that Japanese people have an attitude to work that resembles a worker bee. This working style may, however, be a cause of mental and physical health problems, such as depression, burn out syndrome, and chronic fatigue. Among these, karoshi, which is sudden death from overwork, has been reported as the most serious consequence.¹⁻³ Overwork can kill employees especially if combined with high demand, low control, and poor social support.⁴ At the present time, we should consider another serious consequence, which is "karo jisatsu (suicide from overwork)". Currently in Japan, which is undergoing a long recession and restructuring of work practices,⁵ the incidence of karo jisatsu is rapidly increasing.⁶ There is, therefore, an urgent need to develop countermeasures to cope with the situation.

The Work Accident Insurance Act of Japan has prescribed that insurance can not be provided in the case of suicide. Karo jisatsu has been recognised as a work related accident by the law only when the work is the cause of mental disorder and the worker loses the rational ability to evaluate suicide.⁷ However, there has been no standard for its recognition, and in some cases it has taken around 5 years from submission of an application about a work related accident until a conclusion is reached, as the applications are assessed at an expert meeting of the Ministry of Labour on a one by one basis.⁸ Also, the difficulty of gaining recognition of karo jisatsu is indicated by the fact that only four cases out of the last 108 applications have been assessed as work related accidents. Recently, a special review meeting in the Ministry of Labour issued a report recommending easing the requirements which recognise mental disorder and karo jisatsu as work related accidents.⁹ Based on the international classification of diseases, the report extended the range of mental disorders that can be evaluated as work related accidents. Also, a list of 31 items including "error in work" and "non-achievement of the norm" was produced to evaluate stress at work.

Recognition of karo jisatsu as a work related accident is, however, the final remedy. The first measure should be to improve the working environment that causes the mental disorder and eventual suicide of industrial workers. There is still room for improvement when the work environment in Japan is evaluated from this viewpoint. The system for counselling employees and referral to psychiatric specialists in Japan has lagged considerably behind other developed countries. Also, the social prejudice associated with having a psychiatric medical examination remains ingrained. Therefore, people are being driven to attempt suicide because of physical and mental failure even when they are aware that they could be counselled or referred to a psychiatric specialist. There were over 40 applications for recognition of karo jisatsu as an industrial accident in 1997 and 1998.⁸ It is expected that these applications represent only "the tip of an iceberg",⁷ and reports of mental disorders and karo jisatsu will continue to increase once the condition becomes socially accepted. The prejudice against psychiatric disorders should be eliminated from society, and overworked people should be able to consult psychiatric specialists more light-heartedly. Therefore, the basis for preventing karo jisatsu is to change the attitude of the workplace and society toward occupational mental illnesses.

KAZUO INOUE

MASATOSHI MATSUMOTO

Frigihasi Clinic, Department of Community and Family Medicine, Jichi Medical School, 644-10 Higashi-Yokoyana, Frigihashi, Ibi, Gifu, SO1-0801, Japan

Correspondence to: Dr Masatoshi Matsumoto, Frigihashi Clinic, Department of Community and Family Medicine, Jichi Medical School, 644-10 Higashi-Yokoyana, Frigihashi, Ibi, Gifu, SO1-0801, Japan

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The industrial athlete?

Due to the tremendous addition of work related injuries attributing to lost productivity and workdays, billions of dollars are being spent for treatment of these problems that result in less than optimal outcomes. Clinicians who care for injured workers continually search for enhanced innovative approaches to treatment that will result in improved outcomes, reduced time away from work, and improved patient satisfaction.

Unfortunately, patients are still being treated with conventional methods developed 20–30 years ago. These methods are often shown to be ineffective in terms of returning the injured workers to their original jobs without restrictions. Despite what is considered to be the definitive treatment, workers are often left with considerable impairment, and are unable to return to their original job.

It is time for a conceptual shift in the treatment of these debilitating, and often frustrating injuries. Many similarities can be drawn between the athletic and industrial population. A considerable percentage of injuries in sports or musculoskeletal medicine are related to overuse, caused by the repetitive nature of skills for a specific sport. These injuries are often the same types of injuries that occur in workers because of the repetitive nature of their jobs; however, the treatment approaches by the medical community can be markedly different.

Athletes and employees use their musculoskeletal system to perform their sport or job. If an athlete is injured, one goal of the medical team is to return the athlete as quickly as possible without risk of further injury. The contribution by a worker on the production line is not any less valuable than the athlete. Therefore, the employee deserves the same commitment and attention from the medical team as the athlete.

Some physicians assume that patients with work related injuries have less motivation to get better than injured athletes. However, with more practical experience, most have changed their perspective because persistent pain is a tremendous demotivator. Most workers will gladly perform their job (a) if they do not have pain and (b) if after working a full day they are able to pursue outside interests without disabling pain. Although there are exceptions to the rule, most of the cases support this perception. Most physicians of sports medicine rely on the same model or protocol that they use in their practice to treat patients for workers' compensation. This model requires patients to be active participants in the process, which can be particularly useful when treating patients who seem to lack motivation, or have encountered chronic pain.

There are four key elements in the sports medicine model that contribute to the success of this approach:

(1) Prevention: use of preventive and protective equipment while working or performing the event. The least expensive injury is the one you never have to treat.

(2) Conditioning: training that strengthens potential areas of weakness and enhances performance at work. Better adaptation to handle the demands of the job or activity.

(3) Early intervention or identification: diagnose the injury as quickly as possible and initiate measures to decrease the severity of disability.

(4) Progressive treatment: rehabilitation that improves flexibility, muscular balance, and other factors that may have contributed to the injury and may prevent future injury.

Finally, it is important to treat industrial athletes as comprehensively and intensely as you would any competitive athlete, providing guidance in safety practices, appropriate prevention, and conditioning practices, as well as facilitating access to innovative approaches to treatment that carry the greatest opportunity to yield positive outcomes.

Bringing the sports medicine model to the industrial setting can reduce the medical and non-medical expenditures related to repetitive stress injuries. To have the greatest impact, the medical team needs to have the same level of understanding about the demands of a specific job, just as a sports medicine team physician understands the demands of a specific sport or position. The goal of returning competitive athletes to their functional status before their injuries should be just as aggressively pursued for industrial athletes. In a competitive business environment, it is crucial to have a healthy, strong, highly motivated team to get the job done.

THOMAS L SEVIER

Medical Director of Performance Dynamics, 3713 South Madison Street, Muncie, Indiana, USA 47302

Correspondence to: Dr J K Wilson, Performance Dynamics, 3713 South Jackson Street, Muncie, Indiana, USA 47302

BOOK REVIEWS

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Key Topics in Respiratory Medicine W KINNERA, I JOHNSTON, I HALL. (Pp 169; £18.95) 1999. Oxford: BIOS. ISBN 185 996 2718.

Key topics in respiratory medicine is a welcome addition to the literature available to candidates for membership of the Royal College of Physicians and physicians with an interest in respiratory medicine alike. The authors' aim was to provide a reference which concisely covers the major topics in respiratory practice in the United Kingdom. They have achieved this aim by creating a book which is not only contemporary, but has been designed with hands on respiratory practice in mind. Thus there are very useful sections

on cough, transplantation, unusual respiratory infections, and respiratory disease in pregnancy, as well as well written and up to date information on common respiratory problems. Insight is given into respiratory disease from a different, more clinically based, perspective than is gained with standard texts.

Only minor criticisms can be made. Readers who prefer information presented in bullet lists may find the format verbose. Unfortunately, there is no use of diagrams or clinical photographs to aid in the presentation of ideas.

Overall, however, *Key topics in respiratory medicine* will be a welcome addition to the home libraries of many physicians and physicians to be and at £18.95 is good value for money.

DANIEL CHAMBERS

Acute respiratory distress syndrome: a comprehensive clinical approach. Edited by: JAMES A RUSSELL, KEITH R WALLEY. (£29.95 (paperback)) 1999. Cambridge: Cambridge University Press. ISBN 0 521 65410 6.

The editors of this book have assembled a distinguished group of (almost entirely North American) experts, to produce a well organised and elegant account of acute respiratory distress syndrome (ARDS).

Their aim is to cover all aspects of this challenging critical care problem, for an audience including students, doctors in training, critical care specialists, physicians and surgeons. They have succeeded in this, so that there is something for everyone; and very few of their readers will come away without learning something new.

In the editors' own introduction, the chapters are briefly and accurately summarised, without listing objectives or keywords and phrases which might be expected in a textbook.

It works better as an academic review than as a clinical handbook. It is certainly comprehensive, and in particular has chapters on lung pathology, pathophysiology, clinical management, complications, infection, recovery, and outcome, which are accurate and excellent. Here, the authors (including the editors themselves) have concentrated on the specific matter in hand. For example, the discussions of artificial ventilation (and weaning therefrom) are apposite and clear. Where the attention changes to more general aspects of critical care, the context of the book does not allow the authors to be either as didactic or as discursive as in other works. For instance, the discussions on management of sepsis and general trauma, although appropriate to the authors' aims, will add little to many readers' own knowledge.

As in any book with multiple authors, there is inevitably some duplication and repetition—for instance on the subjects of artificial airways, gastric tonometry, and cytokines. However, although the emphasis may be different from the various authors, there is no contradiction or disagreement between them.

For examination purposes, the book would easily suit postgraduate study, although the student would be wise to select those aspects specific to their relevant curriculum. The book is well indexed, making this task straightforward. Also, each chapter has an extensive and fairly contemporary reference list.

The illustrations and tables are economic and clear; and they are well positioned in the text. The book is very nicely designed and laid out.

It is a pleasure to read this book; and as a summary of recent thinking in a complex field, it is good value for money.

It should be read soon, however, because in the world of critical care medicine, time is unforgiving.

MARTIN R HAMILTON-FARRELL

Microbiology in clinical practice, 3rd edition By: D C SHANSON. (Pp 500; £39.99 (paperback)) 1999. Oxford: Butterworth and Heinemann. ISBN 0 7506 3110 4.

In an age in which the former elegance of scientific writing has given way to ill formed prose, check lists, and dreary tomes, this book is a welcome change. It is well written and cleverly structured, with a comprehensive index to guide one to the needed section in a hurry. These advantages will be appreciated by the target readership of junior hospital doctors and medical students; and also by hard pressed microbiologists, consultants in communicable disease control, and infection control nurses. It meets the demands of integrated training and clinical application, now an essential approach in the field of infection: I suspect that more senior practitioners will also place this volume in a readily accessible part of their bookshelves. Weighing in at 1.3 kg, it is sadly too large to be carried around in the pocket, but Shanson has wisely avoided the pitfalls of oversimplistic brevity. For those students daunted by the length, there is a guide to priority reading, picking out the essential sections that will help them through undergraduate and probably also postgraduate examinations.

The author has succeeded in producing a new edition—the last was in 1989—that reflects the many changes in emerging infection and research. Common and vexing topics are easily tracked down from index headings, but I was disappointed that the topic of water borne pathogens is covered only under “infections of the gastrointestinal tract”, although organisms associated with water, such as *Legionella pneumophila* and *Mycobacterium marinum*, are mentioned elsewhere. Public health and epidemiological aspects are reasonably well covered, but understandably take second place to microbiological investigation and treatment. For example, there is no attempt to resolve the current debate about the policy for prophylaxis and exclusion from food or nursery work in typhoid carriers and contacts. The introduction of routine vaccination against meningococcal infection in the United Kingdom is also too recent to have been included. The limited public health coverage is balanced by frequent references to the need for discussion between consultants in communicable disease control and microbiologists about both investigation and control of episodes of infection, which lays the basis for the shared approach involved in contemporary management of infection. I also liked the way the book concentrates on United Kingdom practice and the infection problems that practitioners are likely to meet, including the wide range of tropical and imported infections in returning travellers. Although more illustrations might be expected from the substantial price, the book is still excellent value

for money in comparison with other comprehensive microbiology texts. The summaries give a good grounding for further forays into history and research and will be a boon for lecture preparation. The need to cover both the advances and the clinical dilemmas in microbiology has inevitably meant the sacrifice of the anecdote and historical detail that made earlier applied microbiology writing so inspiring, as exemplified by Christie in his editions of *Infectious diseases: epidemiology and clinical practice*. Nevertheless, Christie and other fine authors are included in the list of further reading. Meanwhile, many will find that Shanson's text amply satisfies most needs. A book which chooses as its only quotation the charming lines from Swift—

*“So, naturalists observe, a flea
Hath smaller fleas that on him prey;
And these have smaller fleas to bite 'em,
And so proceed an infinitum.”*

—neatly bridges the gap between scholarly detail and practical modernity: and yes, fleas are also in the index and succinctly covered in the text.

ROSALIND STANWELL-SMITH

Air pollutants and the respiratory tract Edited by: DAVID L SWIFT, W MICHAEL FOSTER. (Pp 374; \$175.00) 1999. New York: Marcel Dekker. ISBN 0-8247-9521-0.

This three part book was in the process of preparation when the untimely death of David Swift occurred. The first part is an overview of air pollution with four general essays on the nature of air pollution, respiratory exposure to air pollutants, bioavailability of particle adsorbed air pollutants, and the detection of respiratory responses to air pollutants. The second part deals with individual pollutants and specific responses, with five essays on irritant air pollutants, the effects of oxidants, lung cancer, fibre aerosols, and biological pollutants; and the third part is a long and detailed discussion of health risk assessments and regulatory considerations. There are 15 contributors in all, with six based at the Johns Hopkins Medical School.

Most of the essays include acceptable summaries of existing knowledge, and in some of them, interesting and important points are made. What is disappointing is that many of the current critical issues are not discussed in detail. Thus there is no critical description of time series analyses and the inherent limitations of attributing effects to highly correlated but very different pollutants, such as oxides of nitrogen and particles; nor is there an up to date discussion of the strengths and limitations of epidemiological data as a whole. Time series studies have shown their strength in avoiding many of the confounders of cross sectional comparisons. Indeed by their consistency in many different regions and by their coherence in terms of different health outcomes, they have served to illustrate the weakness of the more traditional methods of community comparison.

It is also unfortunately true that one can discuss the nature of pollutants in exhaustive detail, and describe such issues as particle deposition in the lung under different conditions, without providing any guidance as to why inhaled particles of a certain size range might aggravate asthma or provide a stress

for a person with cardiovascular disease. With the exception of more recent epidemiological studies, the book is generally well referenced, and many of the individual essays are useful summaries of existing information. The last section will be valuable to those unfamiliar with the philosophy and politics that underlie the regulation process in the United States.

D V BATES

Rheumatic Diseases and the Environment Editors: LD KAUFMAN, J VARGA. (Pp xiv+253; £) 1999. London: Arnold. ISBN 0-412-07911-9.

Popular belief associates “the rheumatism” with a poor environment, especially oncoming wet weather. This very readable book discusses just about every other form of environmental factor and more formally defined rheumatic diseases but has difficulty in crystallising belief into fact or even well supported possibility. The problem often is what a recent British politician unblushingly termed “economy of the actualité”.

The editors have provided us with a very good and quite multinational set of authors, some of whom have been critical of their own and their colleagues' ideas and data, but others have been content just to reproduce popular reports, even conflicting ones, without attempting to analyse, criticise, and decide on the validity and the value of the claimed associations. If I want unrestricted and unconsidered information I can go to the Internet and be swamped. If I read a book I want learned opinion and justified criticism.

The initial chapter is a concise but effective account of epidemiology, which explains what environmental exposures may amount to and then describes various forms of ecological and epidemiological survey that might be useful in investigating links between such exposures and rheumatic diseases. It is good in itself, but why spend six and a half pages on a general account of a subject as large as epidemiology when there are large and inevitably more effective monographs in print? Its companion chapter deals briefly and tritely with the laboratory diagnosis of selected rheumatic diseases.

The next section covers mechanisms and the genetics of autoimmunity and environmentally associated disorders. Here you will find the ever popular lists of drugs and a few chemicals, much about HLA and MHC in human and in animal models, and the common intention of the cellular geneticists soon to have explained everything. They have yet to do so but one can learn from their travels.

There is more meat in the accounts of proved disorders and their associations, notably, the toxic oil, eosinophilic myalgia and other fibrosing syndromes, followed by descriptions of drug induced systemic lupus erythematosus and pulmonary hypertension, the silicone catastrophes, smoking, and a duet of the peculiar chronic fatigue and multiple chemical sensitivity syndromes. Where there are physical disorders to consider, there are good accounts of what is known and a valiant attempt to note general environmental factors (diet, work, etc) possibly associated with the disorder. The uncertain conditions, such as the silicone, chronic fatigue, and multiple chemical sensitivity claims, are described but not critically assessed. They lack firm deci-

sions about their real existence, their true nature, and possible causal factors.

Workplace related conditions get three competent chapters covering upper limb disorders, osteoarthritis, and low back pain. The last section, also of three chapters, may hint why so much of the writing is tentative and expresses indecision in a way not normally associated with writers of such calibre. It comprises carefully written material on the surveillance of adverse reactions to food and drugs by the United States Federal Drug Administration, with almost no hint that the rest of the world can also do a good and sometimes better job, a lengthy, almost philosophical and very defensive piece on differences in causation as understood by science and medicine in general and United States legal practices in particular, and a retrospective view of some of the problems associated with attempts to survey the eosinophilia-myalgia syndrome.

It is soon apparent that what may be regarded as association or causation in medical practice is often totally subverted by the forensic skills of fluent lawyers and prolix self professed experts. The legal system in the United States has long encouraged the growth of bizarre beliefs and only recently have attempts begun to restore the intellectual health of its expert witness system by distinguishing objective science from frank nonsense.

There is a lot in this book and it is all very readable, but it would have benefited from greater certainty about its goal and encouragement of more of its authors to give and justify opinions rather than bland reviews of the available, often contradictory views. It could usefully have given more space to the real problems of occupationally associated rheumatic disorders and to a critical review of the claims of causal links between the diet and a wide range of chemicals encountered in everyday life and diverse common disorders. Every reader will learn something from it, especially if they have ambitions to make a career in the courts, but it is not the type of book to which you are likely to return several times for wisdom and understanding.

A D DAYAN

Indoor air pollution and health Edited by: E J BARDANA JR, A MONTANARO. (Pp 506; £129.00) 1997. New York: Marcel Dekker. ISBN 0 8247 9479 6.

Indoor air pollution has received less attention than outdoor air pollution. This is explained, in part, by the clearly visible coal smoke smogs of 50 years ago and the photochemical smogs of today, and also, by the perception that outdoor air pollution is the Government's business whereas indoor air is not. Great strides have been made in improving outdoor air: that indoor air has improved in parallel may be doubted. All occupational and environmental physicians know that sick building syndrome, legionnaire's disease, and multiple chemical sensitivity are conditions that have come to prominence recently. Dealing with sick building syndrome and multiple chemical sensitivity is not easy and an authoritative source of advice has long been needed. Readers will also be aware that the use of litigation to obtain redress for real or imagined injury is increasing rapidly, and again, a source of advice is needed. This book provides both.

The editors have drawn together a series of contributions that deal with all aspects of indoor air including assessment, key pollutants, syndromes (sick building syndrome and multiple chemical sensitivity), control measures, the litigative framework (United States), clinical assessment of patients and methods of building construction that avoid problems. The book thus offers an unusually wide range of information.

Seltzer has provided a long (50 pages) chapter on sources, concentrations, and assessment of indoor air pollution. This is an excellent and detailed review. There is little to argue with although the United States obsession with non-SI units leads to some confusion in the equations that explain conversion of ppm to mg/m³. The equation should read:

$$\text{ppm} = \text{mg/m}^3 \times 22.45/\text{MW}$$

The detailed blank forms provided for assessing indoor air quality are a most useful contribution. Environmental tobacco smoke and pollutants generated by combustion are well dealt with by Rands *et al* and Lambert, respectively. In both chapters, the information is up to date and is reviewed in an even handed way. Indoor air pollution with pesticides is an area that has been largely ignored in the United Kingdom. Wagner's chapter provides a well structured review and deals briefly with assertions that exposure to even very low concentrations of organophosphorus compounds can give rise to disease. Useful guidance on how to investigate cases of alleged poisoning is provided. The chapter on multiple chemical sensitivity by Terr struck me as particularly good. Physicians practising conventional medicine seldom know much about non-traditional approaches: useful information is provided. Care is taken in dealing with these methods: where no objective evidence of efficacy has been obtained this is pointed out. Practical matters including the use of provocation challenge (Tsien and Spector) and the assessment of patients (Bardana) are well presented.

If indoor air pollutants are bad for people, the litigation that they produce is good for lawyers. The legal aspects are tackled in two chapters: a formal presentation of the United States legal position by Hirsh and a more provocative essay by Selner entitled "The future". This chapter is a gem. The author issues a call to all scientists to stand up against "junk science" and to require the rigorous application of rules of scientific logic to assertions of harm. Whether this call will be heeded remains moot.

In their preface the editors say "we know of no other text that has addressed the issue of the indoor environment from so broad a platform". I agree: this is an unusual and important book; although at £129.00, too few will buy it.

R L MAYNARD

Chemical incident management for public health physicians By: D J IRWIN, D T CROMBIE, V MURRAY. (Pp 43; £40.00) 1999. London: The Stationery Office. ISBN: 0 11 322107 X.

This small book is the latest in the series on chemical incident management published by the Stationery Office. The authors, all experienced workers in the chemical incident field, have set out to define a series of guidelines

that are intended to help the public health physician deal with a chemical incident. As such it is a handbook of "how to do it". The authors point out that although incidents involving the accidental exposure of people to chemicals are common, the involvement of public health physicians is rare. Despite this, public health physicians have responsibilities for managing aspects of chemical incidents. The book is divided into four sections: prevention, preparedness, response, recovery. Each section is subdivided into sections that deal with specific aspects of each main area. Emphasis is rightly placed on planning and surveillance and the importance of establishing good links with other organisations that have a part to play is stressed. Communications inside the team dealing with the incident and between the team and, for example, the media, are discussed in detail: excellent advice is provided: "Never agree to interviews with solicitors who represent local residents or industry"! Advice is provided on such difficult problems as evacuation versus sheltering. Evacuation is often demanded by the public although the better policy may be to provide advice that will allow people to seal their homes and stay where they are.

Major chemical incidents are often followed by complaints of delayed or lasting effects. Counselling of those affected and epidemiological investigation of such possibilities is needed. Methods are explained briefly.

An unusual and particularly useful feature of this book is the wealth of information provided in the appendices. Addresses and telephone numbers of all those who can help in dealing with a chemical incident are provided. Also, examples of questionnaires that can be used to record essential information are provided.

Dealing with a major chemical incident is rather like fighting a battle, in Clausewitz's words "Everything in war is very simple, but the simplest thing is very difficult". Clausewitz explained this in terms of friction or the fog of war. This book dissipates the fog likely to accumulate about a chemical incident: read it now—before you need to.

R L MAYNARD

NOTICES

What authors want: the ALPSP research study on the motivations and concerns of contributors to learned journals

Alma Swan and Sheridan Brown, Key Perspectives (Pp 78; published June 1999; price: ALPSP members £50.00/ US\$100, non-members first copy £100.00 / US\$200, discounts for more than 1 copy). Order forms and further information from: <http://www.alpsp.org> or John Morris, South House, Clapham, Worthing, West Sussex BN13 3UU, UK.

The Association of Learned and Professional Society Publishers has recently carried out a large scale survey of contributors to learned journals. The aim was to discover what motivated researchers to publish in journals, and how they decided where to publish, as well as their concerns about the

current system, and what changes they wanted or expected to see in the future.

With the help of many publishers, questionnaires were sent to about 10 500 contributors to learned journals published in the United Kingdom, the United States, and elsewhere. The titles were selected to give a comprehensive spread of subjects, and the recipients were chosen to give a representative worldwide geographical coverage.

With a response rate of >30%, the results provide a substantial body of evidence of what the authors of research articles really think and want.

Authors are continuing to publish in learned journals primarily to communicate their findings and advance their careers. Direct financial reward is not an important issue. Their main aim is to reach the widest possible audience, with the quality of peer review and the impact factor of the journal the main factors of importance in achieving their overall publishing objectives. In deciding where to submit their work, the perceived reputation of the journal, its impact factor, subject area, international reach, and coverage by abstracting and indexing services are extremely important.

Offprints continue to be the main way in which authors disseminate their findings after publication, although 84% also claim to announce their results at conferences before publication.

Copyright does not seem to be an area of major concern at the moment, although a considerable number of authors think that copyright should be retained by the author rather than being relinquished to the publisher. Around 30% of authors express dissatisfaction with the peer review system, primarily because of the delays incurred in the

process. Publication delays in general are a source of concern, especially because of the anxiety that someone else will publish the work first.

More than half of authors agree that the purpose of scholarly publishing is changing and increased electronic publishing activities are looked forward to in the future by many authors.

Industrial Audiometry Courses. 12-14 April and 1-3 November 2000. Manchester.

These 3 day courses in industrial audiometry will be held at the Wendover Hotel, Monton Road, Monton, Eccles, Manchester.

The courses comply with the syllabus recommended by the British Society of Audiology and have been approved by the Society as such.

Each course offers basic training in audiometry for industrial medical staff, safety officers, and others concerned with hearing in industry. It concentrates attention on the problems of practical screening audiometry in industry for the assessment of hearing of both new entrants to noisy employment and existing workers.

The course will include lectures on the theory of audiometry, audiometric methods, accuracy of results, interpretation of data, detection of malingering, and available techniques for the prevention of hearing loss.

Assessment of handicap, detection of non-organic hearing loss, legal liability, and current noise legislation will also be covered. Practical work will include the use of manual and self recording audiometers, care and calibration of audiometers, and practice sessions on audiometry.

A range of modern audiometric equipment will be available for use by participants.

Because of the intensive nature of the course and the emphasis placed upon practical work, the number of participants will be limited to not more than 20 per course. Early registration is therefore advisable. There will be an optional examination and successful candidates will be awarded a certificate of competence.

Details from Dr W Tempest, Kismet, Croyde Rd, St Annes, Lancs, FY8 1EX. Tel 0044 1253 712550.

Occupational and New Professional Level Training by NRPB in the Year 2000

Around 40 training courses specialising in various aspects of radiological protection are scheduled to be held in the year 2000 by the National Radiological Protection Board. Past experience indicates that well over 100 private tailor made courses are also likely to be provided.

Further information on arranging private courses can be obtained by contacting the appropriate NRPB Centre. The telephone numbers are as follows: NRPB Scotland, Glasgow (0141-440-2201); NRPB Northern Centre, Leeds (0113-267-9041); NRPB Southern Centre, Chilton (01235-831600).

Information on the new courses is available from the NRPB website (www.nrpb.org.uk). Copies of the new brochure can be obtained free of charge by contacting one of the Centres or through the NRPB Information Office (telephone 01235-822742, fax 01235-822746, email information@nrpb.org.uk).