



Vol. II, No. 2

Summer 1984

ALBERTA OCCUPATIONAL MEDICINE NEWSLETTER

EDITORIAL COMMENTS

Several excellent articles have been submitted over the past few weeks — it is gratifying to know that the Newsletter is well-received, and that interest is high and diverse in nature.

Readers who wish to submit short articles for possible printing in a future issue of the Newsletter are encouraged to contact the editor. As well, requests for topical reviews are welcomed.

In this issue, an interesting cross-section of topics in occupational medicine is presented. Donna Lentjes and Dr. Joan Eakin examine the problems surrounding the provision of occupational health services to small workplaces. Next, a short abstract examines the nature of the Canadian Board of Occupational Medicine. Dr. John Cowell has kindly allowed the Newsletter to print an adaptation of his recent lecture on confidentiality issues in the provision of occupational health services — part one, in this issue, will set the stage, and part 2 will be printed in the fall issue of the Newsletter. Dr. Kirk Barber examines the problem of eczema in those employed as hairdressers. A well-rounded review of the problems of indoor air pollution is offered by a graduate student from the Faculty of Environmental Design, Univ. of Calgary, Mr. Jack Bereziuk. Lastly, Dr. Don Johnston has examined the nature of medical problems and issues in offshore workers in the Beaufort Sea. Hopefully, this will not make for an unduly heavy summer afternoon's reading on the patio . . .

W.M. Csokonay, MD, CCFP(C), DTM&H
Dept. of Community Health Sciences
Faculty of Medicine, Univ. of Calgary.

THE PROVISION OF OCCUPATIONAL HEALTH SERVICES TO SMALL WORKPLACES: PROBLEMS AND APPROACHES

Eakin, J.M., Ph.D. and Lentjes, D.M., R.N.
Dept. of Community Health Sciences
Faculty of Medicine, University of Calgary

In Alberta, the vast majority of companies

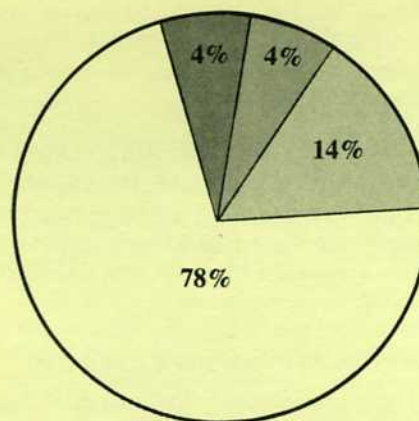
employ small numbers of workers. In 1978, it was estimated that 96% of Alberta businesses had less than 200 workers, 78% had less than 40, and 15% had less than 10. These small companies employ 56% of Albertas' total workforce (see Figure 1.).

While subject to regulations governing hazardous substances, companies with under 200 employees are not required under existing legislation to provide any occupational health services other than first aid. The need for health and safety services in the smaller work site is widely recognized by occupational health professionals, who are increasingly aware of the

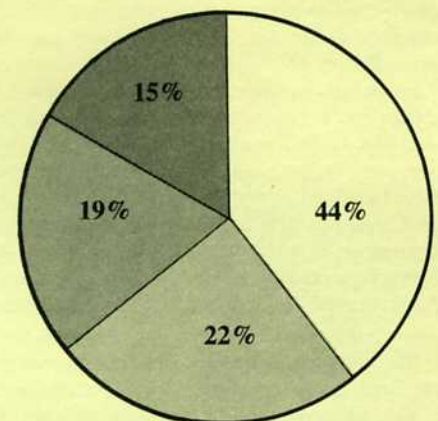
potential health hazards in the workplace. The need is accentuated by the fact that such work sites are heavily concentrated in high hazard industries (Johnson, 1983).

The provision of occupational health services to small businesses, however, has proved to be a difficult task (I.L.O., 1984). Impediments to the development of such services have been structural and attitudinal. A major structural impediment has been financial feasibility (Crawford, 1978; Fischer et al., 1981; Martin, 1977; Plant, 1978). Smaller establishments are generally unwilling to undertake such services because of insufficient product volume over which to spread costs (Lees and Zajac, 1981).

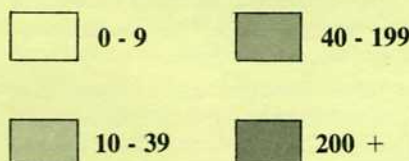
FIGURE 1
Stratification of Alberta Work Sites by Size and Worker Population



Proportion of Work Sites by Number of Workers



Proportion of Worker Population by Number of Workers Employed at the Work Site



Source: Workers' Compensation Board Statistics, December 1978.

The great diversity in the type of work done in small workplaces (Bridge, 1979; I.L.O., 1984), and a characteristically high rate of labour mobility (I.L.O., 1984) also contribute to the difficulty of developing occupational health services for this sector. Further structural problems include the lack of trained occupational health personnel (Working Party, 1980) and particularly in Alberta, the wide geographic dispersion of work sites.

Attitudinal barriers most frequently stem from the lack of knowledge regarding the purpose of, and need for, occupational health services. Employers often do not know what a comprehensive occupational program includes, believing that treatment (i.e., first aid) services are all that is necessary (Howe, Gibson and Wiggett, 1983). In addition, managers, supervisors and workers may be unaware of health hazards present in the workplace and thus fail to see the value of preventative measures (Lees and Zajac, 1981). Employers may feel that occupational health services will be manipulated by unions for their own gain (Howe, Gibson and Wiggett, 1983); at the same time workers may fear that such services will become a management device to forestall compensation payments, or to make decisions concerning employment or promotion (Kerr, 1977).

A variety of approaches to the provision of occupational health services to small workplaces have emerged, mostly in response to structural constraints. Larger companies may share their services with nearby smaller companies on a fee-for-service basis; medical centres, university clinics or hospitals may provide services to small businesses within a specified geographic region; several companies may join together in developing a shared service; private health care organizations may offer services as a profit-making enterprise; or public health units may provide services within their locale. Services may be provided on-site, at a centralized location or through fully equipped mobile units. In Alberta, examples of some of these approaches include: the Red Deer Health Unit which offers free services to companies within the units' jurisdiction; the Faculty of Medicine at The University of Calgary which has recently developed an occupational dermatology clinic; and at least four private organizations in Calgary who provide some combination of on-site and mobile services.

The literature in the field stresses two considerations in the development of occupational health programs. First, is the importance of comprehensive needs assessment prior to program development. Such assessment must include analyses of a wide range of variables, such as the type of work processes, the social and political environment and the existing resources. Second, there is need for methodologically sound evaluation research to objectively assess the outcomes of such programs. Although occupational health professionals believe that such services will benefit the health of workers, skeptical employers and restraint-minded governmental authorities will need to be firmly convinced that such outcomes will justify the cost and effort involved. (References available on request)

THE CANADIAN BOARD OF OCCUPATIONAL MEDICINE (CBOM)

Occupational or industrial medicine is not a discipline in Canada. For almost 50 years physicians interested and working in this specialty have practiced in varied locations in the country. The CBOM was incorporated in October 1980 to "encourage the study, improve the practice, and elevate the standards of occupational medicine throughout Canada."

In order to recognize physicians who have distinguished themselves in the practice of occupational medicine a certificate is granted to those physicians who, having had training and experience which meets the standards of the Board, have been successfully examined. The Certificate of the Canadian Board of Occupational Medicine (CCBOM) is now an accepted qualification in this special field of our profession. To date 100 physicians have been successful in passing the required examination and have been awarded the recognition. Approximately 15 applicants are currently in the process of final eligibility determination for the next examinations, and others are proceeding in their training as they become eligible for future examination.

Liaison with other specialty certifying bodies has been a continuing activity of the CBOM. Currently, following a lengthy series of intensive deliberations and discussions with the Board, the Royal College of Physicians and Surgeons of Canada is considering recognizing Occupational Medicine as a primary specialty for certification by the College.*

The CBOM official mailing address is:

c/o Medical Services
290 Yonge Street, 7th Floor
Toronto, Ontario Canada
M5B 1C8

*Annals Royal College of Physicians and Surgeons of Canada Vol 17, No 1, p. 66

[Abstract courtesy of Canadian Board of Occupational Medicine]

INDUSTRY AND CONFIDENTIALITY IN OCCUPATIONAL HEALTH

J. Cowell MD, Nova, an Alberta Corporation (adapted from a presentation to the Occupational Health Symposium, March 23, 1984 Edmonton, Alberta)

PART I

INTRODUCTION & BACKGROUND

Hippocrates exhorted physicians of all time never to divulge a patient's "holy secrets".

The Canadian Medical Association states that "an ethical physician will keep in confidence information derived from his patient, or from a colleague, regarding a patient and divulge it only with the permission of the patient except where the law requires him to do so".

The "Basic Principles for The Provision of Occupational Health Services" published by the Canadian Medical Association states that "The occupational physician must not divulge confidential information about an employee without the person's consent", and while "The occupational physician must interpret the clinical

findings to management, the findings and the records themselves must remain confidential. The interpretation should indicate if there are any specific limitations as to performance, such limitations being clearly defined."

The Medical Professions Act of Alberta R.S.O. 1975 (2) c. 26 S 17 (1)(2) when referring to matters coming before the council demands confidentiality and sets fines of up to \$500 for disclosure, and Section 70(1) of this act in reference to Professional Corporations says "Nothing in section 64 affects, modifies or limits any law applicable to the *confidential* or ethical relationships between a registered practitioner and a person receiving the professional service of a registered practitioner". Sub-section (2) says that "The relationship between a professional corporation carrying on the practice of medicine and a person receiving the professional services of the corporation is subject to all applicable law relating to the *confidential* and ethical relationships between a registered practitioner and his patient."

The Health Occupations Act of Alberta R.S.A. 1980 c. S-1, S-30 demands that information received by a board of committee received from a member of the designated health occupations must treat the information confidentially.

These two Alberta statutes do not deal directly with the doctor patient relationship, but rather with third party disclosure.

The Health Disciplines Act of Ontario R.S.O. 1980, c. 196 - R.R.O. 1980, rg 448, subsection 27(22) refers to the confidentiality of medical information only indirectly by describing an act of professional misconduct. "Professional misconduct means giving information concerning a patient's condition or any professional services performed for a patient to any person other than the patient without the consent of the patient unless required by law".

One can readily see that the health professional is placed in a rather awkward position because while the codes of ethics are quite clear the statutes are rather vague.

Common law judgements do not help matters much either because while they support the notion that "holy secrets" must be protected so that the physician can enjoy the complete confidence of the patient, they do not clarify what a "secret" is or how to protect it.

In contrast to this ill defined situation for guarding and defining secrets, throughout Canada there is a whole array of statutes that demand very specific disclosures of certain "holy secrets". For the most part these statutes relate to protecting the welfare of the public. For example, a physician must report cases of venereal disease and certain other communicable diseases. Other examples include the Highway Traffic Act and Vital Statistics Act.

In Alberta the Occupational Health and Safety Act, Section 15(a)(b) requires that a person subject him/herself to an examination by the Provincial Director of Medical Services or another physician authorized by that Director to carry out that examination. And Section 18 (1) and (2) demands that, if so required, all medical

reports developed as a requirement under the Act or its regulations must be made available to the Director of Medical Services. No mention is made about patient rights of choice or disclosure, or indeed of access. Section 23 of this act permits the Director of Medical Services to give the information to others.

The Hippocratic Oath, the Voluntary Codes of Ethics, the Ontario Health Disciplines Act and the Alberta Medical Professions Act all indicate that the physician must protect a patient's "holy secrets". Unfortunately, these so called "secrets" have not been clearly defined, leaving it solely up to the physician or nurse to make professional judgement as to what is or is not a secret.

For a health professional to practice effectively, there must be trust between the doctor and patient. Obviously if the patient's "holy secrets" are going to be revealed, the patient is not going to readily reveal them and, in fact, the health professional might even become reluctant to learn them, especially if subsequent revelation might result in a charge of professional misconduct.

The issues surrounding the confidentiality of medical information are at once both ill-defined and highly sensitive. The issues are hard enough to define in the relatively straight forward doctor-patient relationship, but when this relationship is in the context of a third party such as a company or union, they become even more complicated. In order to clarify and simplify the situation, and to work ethically and effectively in the context of a third party, **certain questions must be addressed:**

- 1) Who is a health professional?
- 2) What is a medical record?
- 3) What is medical information?
- 4) Who owns the medical information?
- 5) Who owns the medical record?
- 6) Who controls access to the medical information?
- 7) Who has access to the medical information?
- 8) Who needs to know what?, ie. Disclosure (Part 2 will follow in Fall issue)

RASH STATEMENTS III

Hairdressing is a hazardous occupation. Trainees and employers might shampoo twenty or more clients a day and senior staff can be exposed to a great variety of chemicals. Despite this, hairdressing is a career preference of many young men and women.

A major dermatological dilemma in hairdressing is hand eczema (**irritant or allergic**). The wet-dry cycle and the nature of the work in the presence of many skin irritants (i.e. soaps, detergents and shampoos) denatures the stratum corneum producing an irritant contact eczema. Atopic individuals are more susceptible to this. If an irritant of sufficient strength is applied long enough to anyone's skin, an eczema will occur.

Allergies also abound in the hairdresser's working environment. Hair dyes, preservatives in hair care products and bleaches are common allergens. The recognition of an allergen by patch testing allows an attempted removal of the allergen from the working environment or

an early change in job for the effected individual. Fortunately, most problems are of the irritant variety.

Treatment is based on an understanding of the limitations of the job with respect to hand protection methods, and an understanding of the great desire of these individuals to continue their work. When washing hair, rubber gloves are difficult to use as the hair tangles, and with repeated shampoos, water eventually enters the top of the glove. Gloves are easily torn on hand tools and are basically a nuisance to wear. Patients avoid the use of emollients as they tend to wear off and therefore can coat the customers' hair. Emollients also make hand tools slippery and difficult to use.

Topical steroids are therefore the mainstay of therapy and should be applied on a regular basis. Application and occlusion with Saran wrap type gloves during the night is often very helpful. I have these patients apply their emollients and steroid creams before leaving home for work, during breaks and at the end of the day in addition to evening applications. When working with dyes and other chemicals, gloves are helpful but not all-protective. Reassurance, with frequent examinations (being supportive of the individual in his/her attempt to stay on the job) is most important. I never suggest that a person leave their chosen occupation as I feel this is a personal decision. I simply present the facts when questioned.

(Dr. Kirk Barber, Consultant Dermatologist to the Occupational and Environmental Health Clinic at The University of Calgary.)

PERSPECTIVES: INDOOR AIR POLLUTION: AN OVERVIEW

Assurance of indoor air quality is a far reaching and complex issue that is currently receiving increased attention. There are three reasons for this.

1) Clinical ecologists have implicated chemicals found in air, food and water with adverse health consequences in **hypersensitive individuals**. The predicament of chemically sensitive individuals becomes more alarming when one considers that this population may be increasing in number.

2) There has been an increase in occupant health complaints associated with indoor, non-industrial environments such as **energy-efficient office buildings and residences**. Health complaints range from eye, nose and throat irritation, headache, fatigue, nausea and dermatitis, to reproductive system problems and long term respiratory disease. It is suspected that a reduction of air change rates as well as poor internal distribution of air, particularly in newly constructed "sealed" buildings, has precipitated these illnesses.

3) Concentrations of indoor air contaminants in some buildings have been found to exceed outdoor exposure levels, in some cases exceeding U.S. Environmental Protection Agency outdoor air quality standards.

Indoor pollutants most commonly encountered include radon and radon daughters, ozone, carbon

dioxide, organic compounds, carbon monoxide, suspended particulate matter, nitrogen oxides, "sidestream" tobacco smoke, asbestos and fibrous particles, formaldehyde, and bacteria and other viable particulate matter.

Principal sources of air contaminants include "outgassing" chemicals found in building materials and furnishings; office supplies and equipment, cleaning supplies and processes, and human activities such as respiration and smoking.

Considering that the general population spends 90% of its time indoors, the importance of indoor exposure levels to human health considerations is apparent. The extent to which public health is affected by indoor air pollution has not been documented, although research efforts are underway.

Research

Research into determining the toxic effects of individual indoor pollutants has generally been limited to short term, peak concentration exposures, as opposed to long term, low concentration exposures commonly experienced by building occupants. This has been recognized by the National Research Council (Ottawa) which is currently evaluating less expensive and time consuming techniques involving lower life forms in formulating occupational "Threshold Limit Values". Data on combinational effects of air pollutants on health is limited and not well understood.

To determine the validity of distinguishing between "normal" and hypersensitive populations, differences in responses elicited by various pollutants requires attention. Currently, there is no information available on the numbers, characteristics and distribution of chemically sensitive individuals.

Professionals

Industrial hygienists investigating office worker health complaints have not detected air contaminants in excess of prescribed OSHA and NIOSH standards. However, the applicability of these standards is questionable since they assume an 8 hour exposure period alternating with a 16 hour exposure free detoxification period. Evidence of regulated substances in non-work environments suggests that full detoxification may not be occurring, thus implying that present standards may not be safeguarding the health of workers. Additionally, the problem is confounded by the possible combinational effects of contaminants, as well as predisposing stressors such as job dissatisfaction and working conditions.

Besides awareness of the quality of air in the workplace, physicians diagnosing valid health complaints need to consider the quality of air which an individual encounters in private and public buildings as well as on the street. **Rea** has postulated a total body burden of pollutants which enters the body from various sources, and if overloaded results in health problems. Furthermore, Rea's research indicates that pollutant induced illnesses produced symptoms not unlike various other illnesses.

Policy Makers

Government intervention is currently restrained pending well documented research on sources and concentrations of indoor pollutants, on populations at risk due to exposure and on health effects. In occupational settings the most likely strategy would be continued reliance on traditional pollutant exposure standards or the promotion of minimum ventilation rates. Increasing ventilation requirements may come into conflict with the economics of energy conserving building design, although use of heat exchangers may permit both adequate ventilation and conservation. In non-occupational settings building codes may further restrict certain building materials, such as asbestos and ureaformaldehyde insulation. Currently, a federal-provincial committee is establishing indoor air quality guidelines for use by home-builders. Manufacturers could be regulated to improve public protection through informative labelling of consumer products as required in the food industry.

It should also be kept in mind that although technological control strategies such as increased ventilation, use of low gas-off building materials, sealing of outgassing materials and installation of air filtration systems are available; behavioural problems, such as smoking, continue to be indoor air quality offenders.

In conclusion, although continued health risk research is required to clearly define indoor air quality problems, research into private and public roles and responsibilities is also required to bring about appropriate responses as rapidly as possible. (References available on request).

J. Bereziuk
Graduate Student
Faculty of Environmental Design
University of Calgary
(References available on request)

NOTICE BOARD UPCOMING MEETINGS— CONFERENCES

JUNE

1. Canadian Public Health Association "Kaleidoscope" — June 25 - 28, 1984, Calgary, Alberta.

JULY

1. Canadian Summer School in Occupational Health — July 9 - August 5, 1984, Laval University, Quebec City.

AUGUST

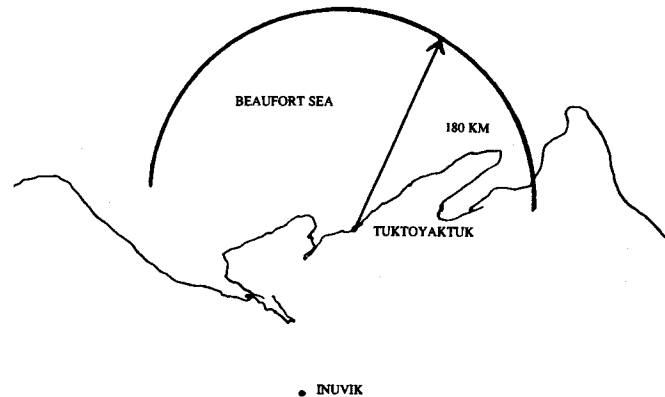
1. 10th Scientific Session of the International Epidemiological Association — August 19 - 24, 1984 Vancouver, B.C.
2. 34th International Congress on Alcoholism and Drug Dependence — August 4 - 9, 1984, Calgary, Alberta.

SEPTEMBER

1. XI International Congress for Tropical Medicine and Malaria — September 16-22, 1984, Calgary, Alberta.
2. XXI International Congress on Occupational Health — September 9 - 14, 1984, Dublin, Ireland.
3. Seminar on Noise Control (Sponsor Canadian Pulp and Paper Association) — September 10 - 12, 1984, Vancouver, B.C.

ISSUES IN THE WORKPLACE OFFSHORE IN THE BEAUFORT SEA

D. Johnston, MD, Medical Director, Dome
Petroleum Canada



Dome Petroleum's Beaufort Sea drilling during peak season has involved up to 1,400 employees. The operation, centered upon four drillships, may involve 40 other vessels, five helicopters and four fixed-wing aircraft (including a 737), and four diving chambers. Centered in Tuktoyaktuk, services include marine operations, water treatment and sewage systems processing and monitoring, food preparation, patient care, contingency planning and medical supplies.

Most services were in place before Dome had a medical department, and evolved without an overall plan, usually in reaction to problems or identified needs as they became known.

Many public health issues involve areas of engineering, including the provision of potable water, sewage treatment facilities, etc., and have little input from medical practitioners unless problems are identified. Monitoring of water quality and sewage treatment follows Health and Welfare guidelines.

Following the appointment of a medical director in 1981, there has been task and role identification, including: (1) prevention - fitness for employment. Guidelines were drawn up outlining for contracted physicians the nature of operations, the medical care available and the philosophy of employing those who will not be an undue hazard to themselves or others because of a pre-existing medical situation.

(2) the illness/injury situation was identified through analysis of Company records. Fully 90% of all visits to the medics were, and continue to be of a non-emergency, non-trauma nature. (URI, GI upset, abdominal pain, etc.) Of the 10% in the other category, the majority are work-related and range from sprains to amputated fingers. In seven years there has never been a myocardial infarct.

(3) With the nearest search and rescue facility being in Edmonton, the companies must provide the initial six hours of acute emergency service. Apart from having medics available to assist in this role, special training in such dangers as *hypothermia* are required. The isolation requires that companies provide their own disaster service. To this end, Dome has pre-packed emergency supplies and has a response system centrally coordinated to ensure that good initial care is

available. This is meshed with the fine back-up provided by the Inuvik General Hospital where the nearest surgical services are available.

(4) Provision of medical services for specialized areas such as diving is done by having selected medics trained in the basics of hyperbaric medicine. This is done in conjunction with the diving contractor who must have divers trained to a certain level of first aid. Together, the divers and medics can provide most of the required care in a pressurized system.

The Canadian Oil and Gas Land Administration (COGLA) is drawing up standards for medics in these remote areas. At present, the qualifications of those employed range from foreign MDs (unlicensed in Canada) to paramedics trained by various provinces and states. The majority, however, are Canadian trained RNs. Industry is drawing up details of skills and knowledge required by medics in these remote areas. Meanwhile, special courses have been run for the medics in Calgary and at Memorial University, to meet the basic needs.

Rig work itself can become monotonous if patient volume is what interests the health professional - on average, there are only about three visits per day. However, if one is reminded that the medic is responsible for the medical disaster plan on that rig, plus the supplies, plus the disaster team, plus back up radio-operator/meteorology, public health, diving chamber back-up and the paper work, then a full load with many demands and responsibilities is created.

Staffing includes one medic per drillship and one at each major worksite plus two at the main camp/airstrip in Tuktoyaktuk. Administration of this polyglot medical service is by an ex-Armed Forces officer who once served as a medic on submarines. The medics themselves, contracted through a Northern registered Company, have ready access to physicians in Inuvik or Calgary via radio or telephone. The medics have been very professional and have received awards and commendations for their excellent service.

This year VTR will be used to provide continuing education for the medics at each worksite, all part of the effort to keep the medics as professional as the rest of the operation.