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Fall 1984

ALBERTA OCCUPATIONAL MEDICINE NEWSLETTER

EDITORIAL COMMENTS

The fall issue of the Newsletter has continued the varied theme and content of previous newsletters. The articles are again appreciated, and a generous thank you is extended to both new and regular contributors.

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W.M. Csokonay, MD, CCFP(C)
DTM & H (London)

WHAT'S NEW?

Tee Lamont Guidotti M.D., will assume the post of Professor of Occupational Medicine at the University of Alberta Faculty of Medicine on September 1, 1984. In addition to teaching and consulting responsibilities, he will direct a major research fund created by Alberta Industries and the Energy and Chemical Workers' Union. Dr. Guidotti is currently a professor of public health and head, Division of Occupational and Environmental Health, San Diego State University Graduate School of Public Health.

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(Preventive Medicine Newsletter, Vol. XXLV, No. 2, 1984.)

THE NOTIFICATION OF OCCUPATIONAL DISEASE IN ALBERTA

Physicians in Alberta have responsibility for notifying occupational diseases both to the Workers' Compensation Board and to the Occupational Health and Safety Division of Alberta Workers' Health, Safety and Compensation.

The Workers' Compensation Act requires that a physician notify the Workers' Compensation Board by means of a claim if a worker has an industrial disease or injury. Diseases deemed to have been caused by employment are listed in Schedule B of the General Regulations (A.R. 362/73) of the Board. (See page 2).

In the past, Alberta had a Regulation Respecting the Notification of Industrial Disease (A.R.62/70), established under the **Public Health Act,** which specified a somewhat different schedule of occupational diseases to be notified to the Division of Industrial Health Services (whose function in this regard was assumed in 1976 by the Director of Medical Services with the Occupational Health and Safety Division, Alberta Workers' Health, Safety and Compensation.) The reporting mechanism was found to be ineffective and redundant to the WCB General Regulations. These Regulations were therefore repealed in 1982.

Currently, the Director of Medical Services of the Occupational Health and Safety Division obtains information on disease claims from the statistical master file maintained on the Workers' Compensation Board computer. Division medical staff can review the complete claim if the computer information is insufficient. The Director continues to be advised of occupationally related illness by physicians both in writing and by telephone when the physician requires advice or assistance in dealing with these cases.

Section 17 of the **Occupational Health and Safety Act** provides for designation of notifiable diseases. Where an examining physician diagnoses a notifiable disease which has been designated, he is required to notify the Director of Medical Services and must provide whatever medical reports the Director requests.

Presently, there are five regulations which define specific diseases for which notification must take place in accordance with Section 17. These are the Noise, Asbestos, Silica, Vinyl Chloride Monomer and Coal Dust Regulations (A.R. 314/81, 7/82, 9/82, 10/82 and 243/83 respectively.) Under these Regulations, the Director of Medical Services must be notified of the following occupational diseases: hearing loss which is medically diagnosed as noise-induced, asbestosis, mesothelioma asbestos-induced lung, laryngeal and gastro-intestinal cancer, silicosis, pneumoconiosis, coal workers pneumoconiosis, angiosarcoma, heptic fibrosis and acro-osteolysis.

The silica, coal dust and asbestos regulations specify the frequency and content of examinations, including x-ray, pulmonary function test and relevant medical history. The x-rays, pulmonary function test results and medical history are forwarded to the Medical Services Branch for review. Certificates of examination are issued to all workers complying with the examination requirements and workers and/or their physicians (after receipt of the worker's authorization) are advised of abnormalities detected. The certificate does not relate to fitness for work. An ongoing epidemiologic review of the results is also done.

The Regulations respecting Industrial Radiological Technicians (A.R. 51/70) under the **Radiological Technicians Act** require "a certificate issued by a medical practitioner registered to practise in Alberta which details the results of a full haematological examination . . ." prior to the issuance of an Industrial Radiological Technician's licence. The medical results are reviewed by the Director of Medical Services. The Regulations Respecting the Protection of Persons from the Hazards of Laser Operation require pre-employment medical examinations, including an ophthalmological examination, of laser equipment workers. The results must be sent to the Radiation Health Branch of the Occupational Health and Safety Division and are reviewed by the Director of Medical Services. Both the Industrial Radiological Technician and Laser Regulations are now under review, and will soon come under the authority of a revised **Radiation Protection Act.**

Requirements for the notification of lead poisoning under the Regulations Respecting the Protection of Workers from the Hazard of Exposure to Lead and Lead Compounds (A.R. 3/72) and for a medical examination to be conducted on miners under the Coal Mines Safety Regulations (A.R. 333/75) are still in existence, but both are scheduled for repeal in the near future.

As mentioned above, access by the Medical Services Branch to the computerized information maintained by the Workers' Compensation Board is no problem on a case-by-case basis. However, it appears that there are significant problems in receiving statistics on occupational disease claims. One major reason for this is that the Workers' Compensation Board classifies diseases on the basis of the Z16.2 codes of the

SCHEDULE B OF THE GENERAL REGULATIONS (A.R. 427/81) OF THE ALBERTA WORKERS' COMPENSATION ACT

	COLUMN 1 Description of Disease or Condition	COLUMN 2 Industry or Process
1	**Poisoning by** (a) Lead; (b) Mercury; (c) Arsenic or arsine; (d) Cadmium; (e) Manganese; (f) Phosphorus, phosphine or the anticholin-esterase action of organic phosphorus compounds; (g) Organic solvents (n-hexane, carbon tetra-chloride, trichloroethane; trichloroethylene, acetone, benzene, toluene, xylene and others); (h) Carbon monoxide; (i) Hydrogen Sulphide; (j) Nitrous fumes including silofiller's disease; (k) Nitriles, hydrogen cyanide or its soluble salts; (l) Phosgene; (m) Other toxic substances;	An Industry or Process (a) where there is significant occupational exposure to lead or lead compounds; (b) where there is significant occupational exposure to mercury or mercury compounds; (c) where there is significant occupational exposure to arsenic or arsenic compounds; (d) where there is significant occupational exposure to cadmium or cadmium compounds; (e) where there is significant occupational exposure to manganese or manganese compounds; (f) where there is significant occupational exposure to phosphorus or phosphorus compounds; (g) where there is significant occupational exposure to organic solvents; (h) where there is significant occupational exposure to products of combustion, or any other source of carbon monoxide; (i) where there is excessive occupational exposure to hydrogen sulphide; (j) where there is excessive occupational exposure to nitrous fumes including the oxides of nitrogen; (k) where there is occupational exposure to chemicals containing CN group including dangerous pesticides; (l) where there is excessive occupational exposure to phosgene including its occurrence as a breakdown product of chlorinated compounds by combustion; (m) where there is significant occupational exposure to toxic gases, vapours, mists, fumes or dusts;
2	**Infection caused by** (a) Staphylococcus aureus, Salmonella organisms, Hepatitis B virus; (b) Brucella organisms (Undulant fever); (c) Tubercle bacillus;	An Industry or Process (a) where close and frequent occupational contact with a source or sources of the infection has been established and the employment necessitates; (i) the treatment, nursing or examination of, or interviews with, patients or ill persons, (ii) the analysis or testing of body tissues or fluids, or (iii) research into salmonella, pathogenic staphylococci or Hepatitis B virus; (b) where there is occupational contact with animals, carcasses or animal by-products; (c) where close and frequent occupational contact with a source or sources of tuberculous infection has been established and the employment necessitates; (i) the treatment, nursing or examination of patients or ill persons, (ii) the analysis or testing of body tissues or fluids, or (iii) research in tuberculousis by a worker who: (A) when first engaged, or, after an absence from employment of the types mentioned in these regulations for a period of more than one year, when re-engaged in such employment, was free from evidence of tuberculosis, and (B) continued to be free from evidence of tuberculosis for 6 months after being so employed (except in primary tuberculosis as proven by a negative tuberculin test at time of employment).
3	**Pneumonoconioses** (a) Silicosis; (b) Asbestosis; (c) Other pneumoconioses	Industry or process (a) where there is occupational exposure to airborne silica dust including metalliferous mining and coal mining; (b) where there is occupational exposure to airborne asbestos dust; (c) where there is significant occupational exposure to airborne dusts of coal, beryllium, tungsten carbide, aluminum or other dusts known to produce fibrosis of the lungs.
4	**Asthma**	An industry or process where asthma is precipitated or aggravated by occupational exposure to any or all of the following irritants: (a) western red cedar dust; (b) isocyanate vapours or gases; (c) the dust, fume or vapours of other chemicals or organic material known to cause asthma.
5	**Extrinsic allergic alveolitis** (including farmers' lung and mushroom workers' lung);	An industry or process where there is significant occupational exposure to respirable organic dusts.
6	**Noise deafness or hearing loss** related to occupational noise or acoustic trauma;	An industry or process where there is prolonged occupational exposure to excessive noise levels.
7	**Contact dermatitis;**	An industry or process where there is occupational exposure to irritants, allergens or sensitizers that cause dermatitis.
8	**Vascular disturbances** of the extremities;	Employment for at least 2 continuous years immediately preceding the vasospastic response in an industry involving the use of high frequency, rapid acceleration vibratory tools.
9	**Radiation injury or disease** (a) due to ionizing radiation; (b) due to non-ionizing radiation; (i) conjunctivitis, keratitis (ii) cataract or other thermal damage to the eye.	An industry or process (a) where there is significant occupational exposure to ionizing radiation; (b) (i) where there is significant occupational exposure to ultra-violet light; (b) (ii) where there is significant occupational exposure to infra-red, microwave or laser radiation.
10	Erosion of incisor teeth	An industry or process where there is significant occupational exposure to acid fumes or mist.

American National Standards Institute rather than the International Classification of Diseases (ICD) or its variants.

There are only 14 Z16.2 codes for occupational diseases, which means that it is a very broad classification. In consequence, it is necessary in many cases to have a combined computerized and manual search in order to estimate the incidence of a given occupational disease. It should be noted that when physicians submit claims, they either write down the diagnosis or the ICD code for the diagnosis, which they are trained to do. In many cases, they use the ICD code because this results in a more speedy handling of the claim. Thus, in many instances, there are ICD codes for individual occupational disease claims in Alberta, but this information is not currently entered into the WCB computer. However, the WCB plans to incorporate the ICD code into the computer system in the near future.

There are unofficial arrangements between the public health authorities and the Medical Services Branch regarding diseases which are both communicable and occupational. For example, if staff of the Medical Services Branch were to detect tuberculosis in a coal miner through the chest x-ray, they would notify the public health authorities. Conversely, public health authorities may notify the Medical Services Branch in the case of a communicable disease in a worker of which they first become aware.

This article is adapted from a section prepared for the publication ***Notification of Occupational Diseases in Canada,*** *which is to be released by the Canadian Centre for Occupational Health and Safety.*

(Courtesy of **R.R. Orford, M.D.,** FRCP(C), Executive Director, Occupational Health Services, Alberta Worker's Health, Safety and Compensation Occupational Health and Safety Division)

RASH STATEMENTS IV

Contact Urticaria Syndrome

A syndrome has now been named to account for a phenomenon that mothers have known for a long time. They recognized their children developing a facial rash or facial itching and burning after a peanut butter sandwich or a tomato is eaten and smeared over the cheeks and chin. Physicians may now listen with knowledge rather than with doubt.

Contact Urticaria refers to a wheal and flare response elicited within minutes after the external exposure of a substance to intact the skin. Classical hives at the contact site may be the presentation; however, itching, burning and tingling symptoms has now been expanded to account for a wide range of extracutaneous symptoms and may be responsible for many as yet unexplained phenomena. The following classification has been presented.

Table I

A. CUTANEOUS REACTIONS ONLY
   1. Localized Urticaria
   2. Dermatitis
   3. Nonspecific Symptoms (Itching, Burning)
   4. Generalized Urticaria

B. EXTRACUTANEOUS REACTIONS
   1. Bronchial Asthma
   2. Rhinoconjunctivitis
   3. Orolaryngeal Symptoms
   4. Gastrointestinal Symptoms
   5. Anaphylactoid Reactions

The pathogenesis of this phenomenon depends on the etiologic agent, and both immunologic and non-immunologic mechanisms have been proposed. Substances such as formaldehyde, colbalt and dimethylsulfoxide are said to produce a direct effect on blood vessel walls or produce a non-antibody mediated release of vasoactive substances resulting in a non-immunologic contact urticaria, and other substances such as penicillin, acrylic, monomers and parabins produce an immunologically mediated contact urticaria.

In an occupational setting, the syndrome is frequently seen in food handlers and has been referred to as protein contact dermatitis. These patients most commonly present with a recalcitrant hand eczema and a history of exacerbation when handling certain food products. Seafoods, garlic, onions, tomatoes, potatoes and horseradish are common allergens. These patients may be protected by the use of light vinyl gloves when preparing the offending foods. There are also well-documented cases of occupational exposure in slaughter houseworkers where this is termed "gut eczema".

Health care workers responsible for the preparation of antibiotics have also developed contact urticaria. Penicillin, cephalosporins, chloramphenicol and gentamycin are all well-documented agents producing an immunologically mediated form of contact urticaria. It is pertinent to advise these patients that they are at increased risk of anaphylaxis should they be systemically exposed to the offending drug.

This "newly recognized" syndrome is now being intensively studied and more substances and symptoms are likely to be included. Perhaps we will finally have an answer for those patients who present with "bizarre" allergic-type symptomatology that defies our current medical expertise.

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

PART II
INDUSTRY AND CONFIDENTIALITY IN OCCUPATIONAL HEALTH

J. Cowell, MD, Vice-Pres. Medical NOVA, an Alberta Corporation.

A few general comments about the health professional working in the industrial setting before discussing definitional and conceptional theory. Remarks are focused on the situation where the employee is required to have a medical examination either because of a regulation or because of an organization's health policy. Such examinations include the pre-placement, return to work, where the work performance is failing because of health reasons, and for health surveillance where there has been or is a potential exposure to a toxic material or a physical agent. Many other examinations of a voluntary nature occur at the workplace, such as a periodic health review, and the results of these examinations are never revealed even as an interpretation of capacity to work, except at the direction of the examined employee.

Collings, in his paper on medical confidentiality made the important observation that the medical professional focuses his/her skill on determining capability to perform work. And to do this fairly, the occupational MD or nurse must have special knowledge of the workplace.

In performing medical examinations that are required, the health professional plays a role in helping to BALANCE THE RIGHTS AND OBLIGATIONS OF THE INDIVIDUAL WITH THE RIGHTS AND OBLIGATIONS OF THE ORGANIZATION AS A WHOLE. Obviously the specific area of concern is health. The underlying question that one poses when performing any medical act is "IS THE HEALTH OF THIS INDIVIDUAL OR HIS/HER CO-WORKERS GOING TO BE ADVERSELY AFFECTED WHEN THE INDIVIDUAL PERFORMS HIS/HER DESIGNATED JOB?" If the health professional can keep these two concepts clear in his/her mind, acting in a professionally competent and credible manner becomes possible.

HEALTH PROFESSIONAL

A health professional is any licensed or certified person who provides medical services to individuals including, but not limited to a physician, nurse, or para-professional under the direct supervision of a physician or a nurse. Under certain circumstances, this may include the industrial hygienist, the safety specialist and the first aid attendants.

A physician is licensed to practice medicine by the College of Physicians and Surgeons and as such is bound by its rules and regulations and codes of conduct, before those of any other organization.

MEDICAL RECORD

A medical record is a file, document or other written or electronically stored material relating to an individual and containing information about the individual's medical history, diagnosis, condition, treatment evaluation, fitness to work, workplace exposure, or other medical information.

MEDICAL INFORMATION

Medical information or information contained in a medical record can be categorized into several different groups, which by their nature must be considered quite differently when it comes to access and disclosure. The different types include:

a) **Technical data such as laboratory tests and x-rays.**

b) **Workplace Environment Exposure Data.**

i) Biological exposure levels — These are determinations done on human tissue, fluids, or waste material in order to determine the presence or level of a specific substance or metabolite that could only be present due to a chemical exposure.

ii) Workplace exposure levels — These are determinations done on the workplace itself in order to determine the level of exposure to a substance or agent that may be present in that workplace.

c) **Health Professional Writings** — These consist of notes, pieces of correspondence and conclusions that the health professionals have developed from their interactions with the patients.

d) **Job Advisements** — These consist of the advice given to management about an employee's ability to perform a certain job.

OWNERSHIP & CONTROL

Who owns and controls the medical information/the medical record is open to interpretation. In distinguising between the medical record and the information contained in it, it is debatable whether the medical record in its physical form is or is not the property of the company, even though the information contained in the record is not accessible to the company except through its medical employees. The medical information in the record depending on its type enjoys joint ownership between the medical professional, who developed the information, and the employee.

The company health professional controls access and disclosure of health information and is the custodian of all medical records. In the event that the health professional ceases to be a part of a company's organization, or if the company ceases operations, then I believe that employee health information should be transferred to the custodianship of the relevant government department — in the case of Alberta, the office of the Director of Medical Services or to the employee's own physician.

ACCESS & DISCLOSURE

On the question of who has direct access to the information, only the medical team that developed the information has uncontrolled access to the information.

The employee does not have complete and unrestricted access to the file. However, the employee must be able to see all technical data, workplace exposure data and be privy to the reasons why any particular conclusions were drawn. Unrestricted access to uninterpreted and highly technical medical data is undesirable because of the great chance of misinterpretation with serious consequences.

Except under unusual circumstances, any other access or disclosure of the medical information must be authorized by the employee, usually by a signed release of medical information. At times a verbal release will do, but the prudent health professional will always back this up later with a signed release. Under emergency situations where the employee's life or well-being is at risk, releases of information may occur without a specific release being obtained. These releases take two forms. One to release information to others, and one to obtain information. These releases are specific to a particular condition and are limited as to time.

At **NOVA,** management learns the results of the medical examinations through the use of the Job Advisement Record (JAR). This document allows for effective communication between the operations personnel, human resources and health professionals without revealing any specific medical information. For the health professional to render a judgement that is both fair and realistic to both the individual and the company, he/she must understand fully the working environment. With this understanding, health and fitness standards are determined, and it's against these standards that fitness to work judgements can be made. These judgements contain NO factual medical information. They must however be clear and precise and be sufficiently informative that operations and human resources personnel can understand what the judgement means in terms of the person's capability of performing work. If a person's health is such that he/she needs work modifications, or indeed is unfit to work, then that person, not the company, needs to know the specific medical problem.

The health professional has to know enough information to make an informed decision about a person's capability, and the individual has a right to know what has been found and concluded about him/herself. The company has a need and right to know only what that person's capabilities are, and whether that person's health will result in him/her being a hazard to him/herself or to others as he/she performs a job.

CONCLUSION

In conclusion, because the issue of confidentiality of medical information is so important, and because it is addressed by codes of ethics and statutes that are at times in conflict and that allow great latitude for professional judgement, companies and their health professionals, in order to function effectively and ethically, must develop specific policies and procedures. These policies and procedures must safeguard the health and rights of employees while at the same time allowing the company to fulfill its obligation to be productive and to function under the law. To paraphrase Krever in his report on the Confidentiality of Health Information in Ontario, 'these policies must recognize that the health professional's duty of confidentiality transcends his/her duty to obey an employer's instructions where those instructions require the health professional to reveal information held in conference.' And finally, the company health professional must be delegated the responsibility for the storage, access and disclosure of any health information collected on employees.

AIDS — THE LATEST ENIGMA

A special report in the New England Journal of Medicine, September 22, 1983 comments on refusal of health care workers to care for patients with AIDS. **It is stated that there is no scientific reason for healthy personnel to be excused from delivering care to patients with AIDS.** Those who believe they are at high risk for infection because of their own immune status should be encouraged to discuss their work responsibilities with their personal physician. If the physician determines that there are certain assignments the employee should not accept, this fact should be communicated in writing to the employing department for appropriate action, according to the institution's policies and procedures. **Pregnant employees should not engage in the direct care of patients with AIDS because of the potential for birth defects from cytomegalovirus and the potentially large amounts of this virus that may be disseminated from such patients.**

There are risks associated with caring for all sick persons and, providing appropriate precautions are taken, **care should not be denied to patients with AIDS on grounds that lack scientific merit.** In cases in which the employee refuses outright to perform his/her duties, ethical, legal and administrative problems must be handled on an individual basis.

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NOTICE BOARD — UPCOMING MEETINGS & CONFERENCES:

OCTOBER

1. 4th International Symposium on Chlorinated Dioxins & Related Compounds — October 16-18, 1984, Ottawa, Ontario (sponsor: Environment Canada).
2. International Conference on Occupational Radiation Safety in Mining. October 14-18, 1984, Toronto, Ontario (sponsor: Canadian Nuclear Assoc. Dept. of Energy, Mines & Resources, Atomic Energy Board).
3. Ontario Occupational Health Nurses' Assoc. Annual Conference. October 29-Nov. 2, 1984, Windsor, Ontario.
4. Mini Residency in Occupational Medicine for Physicians. October 22-27, 1984. Cincinnati, Ohio (sponsor: University of Cincinnati College of Medicine).

NOVEMBER

1. University of Alberta Fourth Annual Heritage Medical Research Days. November 15-16, 1984, Edmonton, Alberta.
2. 112th Annual Meeting, American Public Health Assoc: Occupational Health and Safety. November 11-15, 1984, Anaheim, California.

DECEMBER

1. InterNoise 84; 13th International Conference on Noise Control. December 3-5, 1984, Honolulu, Hawaii.