

THE NOVA SCOTIA MEDICAL BULLETIN

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GUIDELINES FOR AUTHORS

In 1978, a number of American, British and Canadian editors of medical journals met in Vancouver, to establish a common format for the submission of papers, and their deliberations resulted in the "Declaration of Vancouver". The Editor and the Editorial Board of the *Bulletin* have decided to adopt this new format, beginning in 1981, and the changes are chiefly in the style used for citing references.

The entire manuscript should be typed double-spaced on one side only, with generous margins on all four sides. Tables should not be included in the text but typed on separate pages, as should the references and the legends for any figures and illustrations.

Non-metric units should not be used in scientific contributions. Parts of the SI system are controversial or unfamiliar, especially concentrations of substances, gas tensions, blood pressure and radiological units, so that authors should provide conversion factors. Abbreviations should be defined when first mentioned and, if numerous, the author should provide a glossary which will be printed separately in a prominent place in the article.

In general, papers reporting on studies should adhere to the following sequence:

- a) **Title page** — title of article (concise but informative); first name, middle initial and surname of each author, with academic degrees; names of department or institution to which the work should be attributed; name and address of author responsible for correspondence or reprints; source of support (if any).
- b) **Summary or Abstract** — not over 150 words, summarizing the purpose, basic procedures, main findings and principal conclusions.
- c) **Materials and Methods** — describe the selection of subjects, the techniques and equipment employed, the types of data collected, and the statistical tests used to analyse the data.
- d) **Results** — describe in logical sequence, using tables and illustrations.

e) **Discussion** — emphasize new and important aspects, and the conclusions that follow from them. Recommendations, when appropriate, may be included.

f) **Acknowledgements** — only those persons who have made substantial contributions to the study.

g) **References** — usually limited to 10 for short papers and to a maximum of 20 for review articles. Number in sequence, in the order they are first mentioned in the text, with journal titles abbreviated as in *Index Medicus*.

Examples of the new format are:

1. Journal articles — list all authors when six or less (surnames followed by initials without periods); when seven or more, list only the first three and add *et al.*

Epstein SW, Manning CPR, Ashley MJ, Corey PN. Survey of the clinical use of pressurized aerosol inhalers. *Can Med Assoc J* 1979; **120**:813-816.

2. Book —

Fletcher C, Peto R, Tinker C, Speizer FE. *The Natural History of Chronic Bronchitis and Emphysema*. Oxford: Oxford University Press, 1976.

3. Chapter in book —

Deusche KW. Tuberculosis. In: Clark DW, MacMahon B, eds. *Preventive Medicine*. Boston: Little, Brown, 1967: pg 509-523.

h) **Tables** — type each on a separate sheet, number consecutively with *roman* numerals. Supply a brief title for each, give each column a short or abbreviated heading, and reserve explanatory material for footnotes.

i) **Figures and Illustrations** — professionally drawn and photographed, as glossy black and white prints, numbered consecutively with *arabic* numerals. List all legends on one page and state magnification of photomicrographs.

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THE NOVA SCOTIA MEDICAL BULLETIN

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Medical Monopoly and the Alternative

In a recent forum on Medicare, Mr. Justice Emmett Hall was once again defending the nation against the evils of the medical profession. He said, "... A profession cannot be a law unto itself"; and he stated further, "It [the profession] has been granted a monopoly to practise medicine to the exclusion of all others." He was, of course, attempting to make a point regarding doctors' extra billing. His basic premise of an existing monopoly, however, deserves further examination. It has been a long time since we, the doctors, have had the medical field to ourselves, if we ever did. The range of medical alternatives has never been so extensive, and is growing in extent and militancy all the time. When we think of health care, most physicians still think in terms of the hospital, the doctor and the nurse with allied technicians, as being the only model; and, in one sense, it still is. The chance of other influences having a direct effect on our patients, however, is becoming greater all the time.

The proliferation of new health groups and paraprofessionals, the increasing interest of the media including movies, T.V., radio and books, and perhaps the antiprofessional attitude that is rampant in our society today, are all playing a part in the medical philosophy of our patients.

An overall view of the communications scene finds an overwhelming choice of medical information provided to an always curious, if not neurotic, population. A quick look at the women's magazine market brings home the fact that all popular publications offer a lead medical article on a medical subject including such things as smoking, sexual dysfunction or use of vitamins to cure disease. In fact, many of these articles are not written by doctors but by lay reporters seeking the interest of readers and editors. The need to acknowledge the influences of this kind of press has led one medical newspaper to print a regular column *What Your Patients are Reading*.

Book club offerings appear to have ten to twenty percent of their subjects leaning in a medical direction with many self-help manuals and medical guides for the layman becoming much more prominent. A check at your local library will reveal that there is a constant flow of people seeking information or confirmation of diagnoses from these sources. Television is getting into the health act more and more with whole channels providing health information for the professional but also for our patients. Newsletters, such as, *The Family Pharmacy* discuss subjects such as venereal disease, recent government medical studies, use of herbal medicines, and a review of medical books for the public. The Harvard Medical School *Health Letter* for "general readership" is another regular review of the medical scene for the public's consumption. In a manual published by the editors of the *Consumer Reports* called *The Medicine Show*, one can find "money saving facts about popular, brand-name remedies; advice on buying prescription drugs; choosing a doctor and hospital; and what to have and not to have in your medicine cabinet". Certainly then we do not have a monopoly, at least with regard to information or education regarding health matters.

As for a monopoly providing care, it is interesting to note that The Health Discipline's Act of Ontario now recognizes five self-regulating professions in that province including medicine, nursing, dentistry, pharmacy and optometry. Soon, apparently, this is to increase in number. A committee looking at this act recently received 150 submissions from different groups of health providers. The different kinds of providers are too numerous to list here but included acupuncture, chiropractic, nursing, osteopaths, nutritionists, botanic medicine practitioners, diagnostic medical sonographers, masseurs, midwives, prescription footwear makers, art therapists, and many different kinds of psychotherapists, etc.

Nova Scotia is also trying to deal with the roles of the various health professionals and disciplines. The officers of The Medical Society of Nova Scotia were recently presented with a recommended Health Personnel Standards Act drawn up by the Allied Health Committee. This act, if passed by the Legislature, would allow us to be a minority group, a part of a council of fifteen members governing allied health professionals.

Joan Mills, Executive Secretary of the 8,500 member Registered Nurses Association of Nova Scotia said recently she "hopes that nurses may join doctors as an entry point in to the health care system". "We're not going to provide medicine", she says. Other statements from many in the nursing profession makes this claim at least questionable. The nurses, of course, are only the most obvious group at present making a play for access to government funds in Nova Scotia. Recent amendments to The Canada Health Act make it acceptable for other "health providers" to receive funds from provincial coffers, if the province so provides. It is ironic to think that when these groups finally realize The Canada Health Act makes physicians the most economically controlled group of health professionals in the country, they may indeed want to preserve their own prerogatives of billing which we are now losing.

Whether paid from provincial funds or not, it is obvious that increasing numbers of these allied health persons have and are increasing their scope in many fields. For instance, there is a present worry that midwives may be encouraged to practise in outlying areas because doctors will stop delivering babies there, due to the high, malpractice insurance costs. The number of non-M.D. trainees seeking careers as medical scientists is increasing greatly while M.D.s seem to be reluctant to enter a research career. Training in specialized areas, such as sexual counselling, family therapy, etc. if not allocated in medical school, will not be practised and will fall to many of the other psychological and social counsellors waiting in the wings. This may be good or bad but certainly means our so-called monopoly is disintegrating, if it ever existed at all.

Most third world countries have discovered already that the expertise found among doctors is too expensive for their

pocketbooks and have opted for "primary health care workers". Our government, in fact, must be facing the truth soon that not a hundred percent of our own population can receive all the care and investigation that is possible. We have had a monopoly for many of these decisions on who gets high technology treatment but physicians would and should welcome increased input in these areas of decision. Our monopolistic right to choose who gets abortions and where does not seem to be threatened and demonstrates that the government and society is quite willing to leave this type of monopoly in place when it serves their interests.

As for the philosophy of medicine and the guides to practise, we have numerous lawyers that give us medicolegal advice on what to do and what not to do, and how far it is necessary to investigate a patient to cover ourselves legally. We even have lawyers who tell us that we should not sit on hospital boards because we have more important things to do, "let somebody else direct the hospitals", they say while we practise medicine. Then, of course, there are the philosophers who are constantly coaching us on medical ethics, telling us what is right and wrong, thus governing our conduct not by orders but by ideas. We can learn much by exchanging ideas and learning from all branches of the healing arts and, of course, we must let outside thinkers aid us in reaching the truth about where we are in the practice of medicine. However, where we are is not, as Emmett Hall has suggested, in a monopoly position.

In education, ideas, billing, and capability of self regulation we do not have a monopoly. In fact the government itself is establishing a medical system that will not allow independent doctors to compete with it. If a private system were allowed, "... then the government will have to compete, renovate, compensate and reprove itself", says Dr. Bernard Perey, Chief of Surgery, Dalhousie University. "Without competition", he says, "the public will never know when things are deteriorating".

In fact, with the government's type of "monopoly", we will not control the franchise, and probably we won't even be running the store. □

J.F.O'C.

SPORTS MEDICINE ABSTRACTS INVITED

Last January Sport Med '84 awarded the first J.C. Kennedy Memorial Award for original abstracts dealing with Sports Medicine. The recipient of this award was Ms Susan Webster, of London, for her paper on Swimmer's Shoulder.

Next year we will be holding Sport Med '85 in Toronto (January 11 and 12). Again we are inviting papers on either basic science or clinical work devoted to the care and treatment of the athlete.

Abstracts should be less than 300 words, double spaced and submitted in triplicate. Deadline for the receipt of such entries is September 1, 1984. They should be sent to Dr. Robert Brock, Sport Med '85, 1333 Sheppard Avenue, E., Willowdale, Ontario, M2J 1V1. Accepted papers for presentation at our symposium will be notified by October 1, 1984.

Plan to submit your entry now.

Philosophy, Design and Operation of Occupational Health and Safety Programs

THE TEAM APPROACH

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INTRODUCTION

Occupational health and safety issues have taken on added dimensions since the Industrial Revolution and more particularly during the last fifty years. Many of the discussions and principles outlined in 1700 by the Father of Occupational Medicine, Bernardino Ramazzini, in his treatise, *De Morbis Artificum*, still apply today. Increasing technological advances have brought further problems into the workplace in the area of chemical exposures and physical factors, such as, radiation, dust, noise, temperature changes, lighting affects, as well as, newer psychosocial issues related to the changing definition of work itself.

It is important that these safety and health problems in the workplace be addressed by a team of professionals who have been properly trained in the development of the techniques of recognition, evaluation, and control, and with the high index of suspicion for both recognition and treatment channels' activities.

General physicians now provide in Canada most of the medical input in the larger and smaller plants on a part-time basis and this will continue to be the case in the foreseeable future. Therefore, it is important that physicians develop more sophisticated and knowledgeable approaches to work-place health and safety problems, both in the medical school curriculum and in the area of continuing education. This becomes more important as the other members of the team: the nurse, the engineer, the psychologist, etc., develop more knowledge and awareness of these problems. If the physician wishes to maintain a leadership role in this whole area, it is important that our universities begin to provide those educational opportunities for the advancement of knowledge in this field, both in the academic and in the hands-on modalities.

OBJECTIVES AND COMMENTS

An occupational health program has as its chief goal the health of the work force. This work force includes everyone from the chief executive officer to the newest unskilled worker. It should lead to health maintenance and improvement, less absenteeism, increased productivity, and the achievement of worker and corporate goals.

All the basic elements of prevention, acute care, counselling and rehabilitation must be included. The scope of each program will depend on the size of the business or industry, on its geographic spectrum, on the potential hazards inherent

in the operation, and last but not least, in the philosophy of management and labour in that industry.

It is important that the scope of a program be defined in written policy. This is true whether the plan is for a small single establishment involving only a few workers or a large multi-plant corporate program. The scope should include the basic objective of the program, the duties, authority and reporting relationships within the organization. It should clearly indicate that management understands and fully supports the program because without the complete understanding and the philosophical and financial support of management, the best conceived program has little chance of success.

Occupational health and safety programs involve multiple disciplines including occupational medicine, occupational nursing, industrial hygiene, safety and accident prevention, psychology and sociology, and health physics. These health professionals who are members of management must work closely not only with each other, but must have an effective relationship with other management members. This is especially true when working with members of the personnel and labour relations groups. This can be accomplished if the primary objective — the health and safety of the worker — is continually kept in mind. This will have a positive effect not only on the worker but it will favourably influence personnel and labour relations in such areas as workers' compensation, sickness, absence and group insurance. Two other areas ought also to be considered. These are the effect of effluent from the company on the surrounding environment or community and secondly, the effect of the items or materials produced on the health of the user or the consumer.

ADMINISTRATION OF THE PROGRAM

Whether at the corporate level or the plant level, management plays a major role in any health and safety program in industry. The awareness and agreement with management that the program is preventative in nature and not simply a tool to reduce compensation costs or reduce the safety record in a mechanical fashion is an extremely important fact. Authority and responsibility must be given to the Chief Health and Safety Professional in the organization.

FIT OF HEALTH PROFESSIONALS IN MANAGEMENT STRUCTURE

- The physician should report to a senior member of management at both the plant and corporate level with the plant physician reporting to plant manager and medical director reporting at corporate level to the President or a Senior Vice-President.

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- Occupational health nurse should report to the physician in charge, administratively and tactically. If the company is not large enough to have a full-time physician and there is a doctor on a part-time basis, the nurse should report functionally to the doctor on technical matters but may report to the personnel manager administratively.
- Industrial hygienist may report at plant or corporate levels to the medical organizations or directly to the same reporting level as the physician. This is best determined on an individual company basis when consideration is given to the needs, philosophy, expertise, and the full- or part-time status of the personnel involved.
- The safety or accident prevention professional has traditionally reported to the personnel department. As safety activities expand in the plant and the community, the reporting relationship must be reexamined and if necessary, realigned to meet modern requirements.
- First-aid personnel reports to the plant physician technically and administratively to the personnel department.
- Para-medical personnel who are also at times called physician's assistants report directly to the plant physician technically and administratively because the majority of such personnel are employed in plants with a full-time physician.
- Other health professionals; such as, the health physicist, or psychologist, or social worker should have their position determined in a similar manner as outlined for the industrial hygienist emphasizing that whatever the reporting relationship, each health professional must be responsible for planning, justifying and administering his own budget. Also, it is important that a close interface among the disciplines of occupational medicine, nursing, hygiene, accident prevention, psychology, health physicists must be maintained and it may be best to consolidate these activities both at the local and corporate level.

OCCUPATIONAL HEALTH EXAMINATIONS

Occupational health examinations may be carried out in three primary areas:

- preplacement health evaluations
- selective job placements
- periodic health evaluations

Preplacement Health Evaluations

Preplacement health evaluations are performed in order to use this function as an intelligent assessment of the health status of the individual. An automated or check-off type of history will often give the reviewing medical personnel sufficient information to categorize the man's health status without further examinations. Traditionally, physical examination, chest x-ray, urinalysis, and minor blood tests have been done and these have been done in the past to "weed out" things; such as, hernias, bad backs, or other physical disabilities. The results of pre-employment screening should be used effectively in delineating health status of the applicant and determining his physical capabilities to perform a job that he is going to undertake. Initial examination is used for job placement, as well as, a baseline for further periodic health examinations based on work exposure.

Selective Job Placement

If physical requirements of the job are considered in relation to the physical limitations of the worker, it will frequently prevent accidents, ill health, and will increase productivity. It is important to match the applicant's physical capabilities to the work that he is expected to perform. This will permit utilization of a willing worker with some physical defects as often occurs.

Periodic Health Evaluation — Based on Job Exposure

Management must agree with the purpose of the periodic examination and it should be clearly defined in a well-developed program. It is to evaluate health conditions of the individual employee with emphases on specific "target organs" which may be affected by actual or potential environmental exposure. This examination relies heavily on a carefully planned check-off questionnaire, selected tests; such as, audiometry for noise; spirometry for air-borne particulates, and blood determinations for specific metals and/or chemicals. If all of the test parameters are normal, the physician may eliminate the personal examination and only review the record. Such a procedure lends itself to multiphasic screening.

ENVIRONMENTAL HAZARDS AT WORK OR IN THE WORK ENVIRONMENT

Recognition, evaluation, and control are important aspects of hazards that may be found in any working environment. At all times there must be a high index of suspicion in order for proper identification of environmental hazards; such as, air-borne particles, vapors, physical agents: such as, ionization radiation or non-ionization radiation, etc. The ability of these raw materials to do harm, as well as, industrial process which change these raw materials into more refined materials and the intermediate steps and their exposures ought also to be considered. Finally, the finished product should often be reviewed to determine the possible effects on the worker himself. In other words, each step in production ought to be considered for its effect on the workers for a long period of time and in emergency conditions; such as, acute spills or breakage. Industrial hygiene baselines and periodic monitoring of workplaces are developed by the Industrial Hygienist as he assesses these in relation to severity, length of exposure, and engineering methods for control. Other factors such as proper protective equipment, educational programs of instruction with regard to hazards, and the proper wearing of the equipment ought also to be instituted.

CORRELATION OF ENVIRONMENTAL DATA AND PHYSICAL EXAMINATION

It is extremely important to correct untoward environmental contaminants, exposures, and stressors; and if these cannot be done completely, to provide personal protective devices. As the environment is measured, physical examinations ought to be carried out of the organ systems affected by the particular metal, etc. These are related and may be computerized to relate exposures to individual persons and to groups of workers in large complex operations. This whole system must involve a proper epidemiological approach and coordinated thus. Industrial engineering would determine a workers' location and movements. Industrial hygienist would monitor the environment and atmospheric exposures and the medical department and multiphasic screenings will be used in physical examination of the worker.

FUNCTIONS AND DUTIES OF HEALTH PROFESSIONALS

- Occupational Physician
- Occupational Health Nurse
- Industrial Hygienist
- Safety Coordinator
- First-Aid Personnel
- Other Health Professional

Occupational Physician

An occupational physician must be familiar with the industrial process in the particular plant, must be familiar with the potential and actual health hazards associated with the manufacturing process, and the physical requirements of the job. He must often step out of his office into the plant environment or "shop floor" atmosphere to discuss things with supervisors, etc. Then he will be able to provide his proper function of advising management regarding health conditions of workers, actual health hazards existing in the plant, and advise on safeguards protecting the health and safety of the workers. It is important that he has his basic information in order to properly carry out preplacement and periodic examinations, and health education programs in the plant. The occupational physician must have a basic knowledge of prevention, industrial hygiene, engineering control measures, ergonomics, standards, etc.

The family physician is an important contact for the occupational physician at the plant. Emergency cases may be seen but referred to the family physician or other specialists; such as, for eye injuries, or major surgery, in most cases. However, it is important that the physician in the plant, at frequent intervals, be kept aware of the conditions which are adversely affecting the health of the employees. If a non-occupational disease is entertained by an employee, and he consults the physician in the plant, he should be seen but referred as soon as possible to the family physician for more definitive care. Clear ground rules must be established between the physician, the company, and the local medical society regarding delivery of health care. All female employees should be examined in the presence of a third party preferably a nurse. Reportable communicable diseases ought to be reported to the local health department. Plant physician must review preplacement, periodic, transfer, and reentrance health examinations. The plant physician should arrange for on-going First Aid Courses for key plant personnel and CPR (Cardio Pulmonary Resuscitation) Courses directed by St. John Ambulance and the medical staff in the plant. An applicant or an employee's health or record ought not to be discussed with other personnel except as required in the performance of their duty. Specific diagnoses are maintained in an area of confidentiality between the occupational physician and the employee.

Any biased judgement or opinion which might be used to further the company's or the employee's interest at the expense of the other party is considered unprofessional and highly inappropriate.

Occupational Health Nurse

She should be well trained and, if possible, certified in occupational health nursing in order to conduct her duties properly which can be divided into prevention, treatment,

education, and rehabilitation. Preliminary testing and completion of medical questionnaires in preplacement and periodic examination are important enabling the doctor to better utilize his time with abnormal findings. Under the direction of written orders of the physician, the nurse can handle many of the major accidents and injuries which occur in the industrial setting. Written orders are a necessary ingredient defining limits and responsibilities of the nurse with regard to treating the patient. Sometimes rehabilitation is carried out in the unit or in the local hospital. The nurse should be in contact with the rehabilitative team. The nurse educates individual workers or groups of workers from time to time in proper health techniques, diets, hypertension, and the proper use of personal protective equipment. Also, the nurse serves as a counsellor for personal, physical, and mental health problems. She often can be especially effective in the latter area of alcohol and drug abuse.

The occupational health nurse should visit the shop floor and areas in the plant periodically, as well as, the family physician in order to understand the relationship between employee's symptoms and work.

Industrial Hygienist

An industrial hygienist may be an integral part of the plant health and safety team or may be hired as an outside consultant or from private companies in order to perform the important function of monitoring workplace environments. He must make the corporate management aware of potential in-plant environmental hazards, how to measure these hazards, and recommend appropriate engineering controls, periodically monitoring the controlled environment. He must work closely with the physician and nurse achieving and maintaining proper environmental control, with his special knowledge in the area of hygiene, toxicology, and ergonomics. He must, also, be familiar with the "shop floor" atmosphere.

Safety and Accident Prevention Coordinator

All safety and accident prevention programs in the plant is his responsibility. Two major areas are: employee education which is a primary factor in working safely, and also, property safety. In other words, he must attend to both the "unsafe action of the employee and the unsafe nature of the workplace environment itself". The safety supervisor must make periodic checks of the working environment and must at all time be familiar with the numbers of accidents, the severity of these accidents, and be in close contact with the physician and nurse in order to effectively work as a team member. As mentioned previously, this professional has traditionally reported to the personnel department but this might often have to be reexamined and realigned to have a higher area of reporting, perhaps reporting to the same official as the medical officer in the plant.

First-Aid Personnel

Often where there is no full-time or part-time physician or where there is no nurse, employees are selected and trained as first-aid personnel to provide emergency first aid in the plant. They should attend and obtain certification from a proved first-aid course; such as, given by the St. John Ambulance, or the Red Cross, or other similar organizations. In cases where there are physicians or nurses in the plant, these programs are organized by the health services department who must ensure that sufficient numbers of

personnel are trained in order to carry out emergency acts when necessary.

Other Health Professionals

There may be other health professionals involved from time to time in the medical department; such as, a health physicist, a psychologist, or a social worker. The need for these will be governed by the size and the type of operation.

FACILITIES

When designing an in-plant medical facility, consideration should be given in the new design to plan for possible future expansion. The size of the operation, the number of employees and the activities of the plant determine the location, size, layout, and equipment necessary. Accommodation for disabled persons should be made and the facilities should be established on the first floor location if possible. An access for an ambulance should be developed. It is difficult to determine size but this is usually based upon the extent of the program and the number of employees. The usual rule is 1 to 1.5 square feet for each employee up to a thousand employees. Over a thousand employees, square footage per employee can be appropriately reduced.

We have to remember that these medical units serve the basic functions of prevention treatment and rehabilitation and that there should be separation of preventive and treatment activities. The facility should have appropriate accommodations to enhance privacy during examination and larger units should have specialized rooms for minor treatment of illness or injury; such as, a special room for minor suturing where good aseptic conditions may be carried out and also, an area for observation of patients. There should be accommodations for storage and also, rooms for health counselling. It is important that the rooms have a sink, dressing cabinet, a treatment chair, examination table, desk, and files for keeping confidential medical records.

The training, background, and length of time that the medical personnel are at the plant should determine the type and sophistication of emergency and therapeutic medical equipment and drugs that will be maintained on the premises.

HEALTH RECORDS

The health record at work should include all records, including the employee's health at the beginning, at preplacement, periodically throughout his work, and at the termination of employment. It must record all occupational injuries, illnesses, and treatments. When designing a preplacement health questionnaire, it is important to consider the educational status of the average applicant so that the history portion may be completed by the applicant with a minimum of assistance from medical personnel. Consideration should also be given to transfer to computerized programs. Records must be kept confidential and as mentioned earlier, the personnel office and management are entitled to know whether or not a man can fulfill a job properly but do not have access to confidential diagnoses.

Evaluation

It is important in order to evaluate the effectiveness of the program properly and to enable a determination of accurate costs of medical services and a realistic budget, — that a

statistical reporting should be done covering costs, number of patients, various tests, etc.

Accident and Illness Investigation Reports

Earlier determination of the causes of occupational injury and illness is assisted by an intelligent accident or illness report that is completed jointly by the first-line supervisor, the plant safety coordinator, and the medical service. If each of these disciplines intelligently and accurately complete their portion of the report, unsuspected problem areas may be identified and controlled. They will assist in reducing accidents by making the entire plant more aware of the in-plant environment. It will also demonstrate to the employees that the company takes the matter of their health and safety seriously. Such reports with certain modifications can be used as Worker's Compensation reports.

Industrial Hygiene Records

Sufficient numbers of examinations should be done by the hygienist in order to characterize in-plant exposure to people at different locations. When these reports are given to management, they should be more than a list of numerical values. They should be an interpretation of the data from the point of view of TLVs (threshold limit values), or TWAs (time weighted exposures), or excursion peaks. These reports should also discuss corrective action which would be appropriate and acceptable exposure concentration should be emphasized.

INDUSTRIAL HYGIENE

There are three basic types of industrial hygiene surveys from a health standpoint.

- baselining the operation
- periodic monitoring
- emergency monitoring

Followed by a walk through which has been completed and evaluated, the industrial hygienist will move in with appropriate equipment and do a *baseline survey* of the working environment including vapours, dusts, etc. He will also do a *periodic monitoring* of the plant in essentially the same way except that the number of individual samples can usually be reduced following the obtaining of a baseline. The third type which is the *emergency survey* is done when there are sudden spills or explosions. These can be kept to a minimum.

The doctor and the industrial hygienist should be consulted by management early in initial planning and pilot stages of a new process or operation so that necessary environmental control and medical monitoring can be included in economic feasibility studies. Environmental and occupational health are necessary costs of doing business. Everyone should be aware of the old axiom that minimal changes in the process can cause maximal environmental problems.

SAFETY AND ACCIDENT PREVENTION

Consideration of safety will cover property, machine guarding, fire safety, mechanical safety, electrical safety, and also the education of management, as well as, the work force in safe working procedures. It begins at the moment that a worker is employed and continues on through the job and continuously an educational program involving the consider-

ation of the unsafe act, as well as, the unsafe environmental condition and a high incidence of suspicion of all of these things. There must be a systematic inspection of new, revised, and existing production and safety equipment to identify potential safety hazards and to ensure compliance with governmental requirements. Also a systematic accident investigation program should be coordinated with first-line supervision in the medical service.

SPECIAL PROGRAMS

In many industries in addition to the general basic occupational health and safety procedures, there are special risks and special toxicants; and therefore, programs have to be introduced in order to identify, monitor, and control these. The worker must be properly motivated to cooperate in not only the recognition, evaluation, and control but basically for the protection of his health. Some of these more common specific hazard control programs include: hearing conversation against noise; eye protection against flying particulate; respiratory protection against such air-borne agents as lead, silica, asbestos, cotton, and solvent vapour; thermal stress protection against heat or cold; and dermal protection of the skin against sensitizers or irritants. Entry to confined spaces is often a problem and educational programs should be developed regarding this area. Other special programs would include:

- medical disaster control
- alcohol and drug abuse
- consultation and management on group insurance benefits
- absentee control (not as a policeman)
- occupational mental health
- effluents from the facility — hazards and toxins that go over the fence into the community
- social impact on enlarging operations in a community, i.e., expansion of community services

- health evaluation of new or modified products — as these affect the consumer

CONCLUSION

In summary, prevention of illness and injury and promotion of health through proper evaluation of both the employee and the working environment, as well as, the institution of measures to combat emergencies and other stressors are all features of a comprehensive occupational health program. The breadth of such a program depends upon the number of employees, the enlightenment of management and labour unions, the amount of costs that may be borne by the industry and the community, as well as, the priorities given to these preventative approaches in the total spectrum of health care in the community. There is no question, based upon studies which have been done, that a proper program for employees will cut down on human suffering, enabling the employees to develop their potential to a maximum and maintain their health. Also, the returns to management and to the community are decreased absenteeism, increased productivity, and a healthier and happier work force in general. □

Reference Reading

1. American Association of Industrial Nurses, Inc. 76 Madison Ave., New York, N.Y. 10016 *Guide for Training Courses for Nurses and Audiometric Technicians in Industry.*
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Hypospadias

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The development of cytogenetics, the identification of the pathways of steroid synthesis and the method of action of hormones on the target organs, as well as further insight into the embryological events of the differentiation of the testes has allowed us to look differently at this classical anomaly of the penis and urethra. The location of the abnormal meatus on the ventral surface of the penis, the absence of the ventral foreskin, and the ventral bend (chordee) of the penis represent the classical triad of hypospadias. (Fig. 1)

of the penis forms the glanular navicularis. Formation of the ventral foreskin is intimately related to normal urethral development. Failure of the urethra to reach the tip of the glans is invariably accompanied by the absence of the ventral foreskin. In addition, the configuration of the glans itself is affected by incomplete urethral formation. A ventral groove, or dimple, is often present and the glans may be flattened and spade like. If normal development is arrested and the urethral folds fail to fuse, then the meatus may be

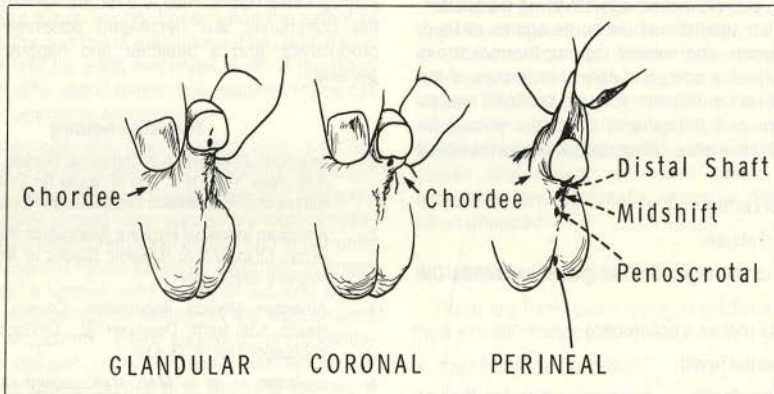


Figure 1

EMBRYOLOGY

Hypospadias is a relatively common anomaly of the lower urinary tract, seen in 1 of 250 male births. The male external organogenesis requires an intact hypothalamic-pituitary-gonadal-target organ axis. Development arrest produces a fusion defect in the urethral tube and its occurrence is interpreted as incomplete masculinization of the target structure caused by either diminution in the circulatory hormones, partial tissue insensitivity or improper chronological correlation between the hormone level and the critical time for this tissue to respond to androgens. In most cases, hypospadias occurs as a single defect with no demonstrable genetic or endocrine disturbance at birth or in later life. However, it also may be a manifestation of genetic or endocrine derangement, especially if severe enough to cause ambiguity of the external genitalia or if accompanied by other disorders of male sexual differentiation, such as cryptorchidism or the presence of well developed müllerian duct structures. Most patients with hypospadias do not exhibit features of intersexuality and there are no uncertainties regarding their sex.

The penile urethra is formed by fusion of the parallel urethral folds which begin at the base of the phallus and extend towards the glans. An epithelial ingrowth from the tip

found anywhere along the course of the phallus from the perineum to the glans. Such an abnormally positioned meatus is apt to be stenotic, but significant obstruction with secondary changes in the upper tracts seldom occurs. The associated chordee usually present is caused by the foreshortened ventral skin devoid of its normal dartos, by splaying and fibrosis of the incompletely formed spongiosum or by both.

GENETICS OF HYPOSPADIAS

A family pedigree questionnaire by Bauer and Retik of Boston revealed that 25% of the responders had a second affected family member. Fourteen percent of the brothers and 9% of the fathers also had a hypospadias. If the father and the son were the affected ones, the risk of recurrence within the family was 27%. The incidence of affected male siblings was also related to the severity of the hypospadias in the index child. No boy with a coronal hypospadias had other brothers with the anomaly, while 12% and 19% of the boys with penile and perineal hypospadias, respectively, had an affected brother.

The incidence of associated congenital anomalies in patients with hypospadias is approximately 25%. The incidence of other malformations increases with the severity of the hypospadias, but most of the associated anomalies of both the upper and lower urinary tract are minor in nature and only a very small percentage will require surgical correction.

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Most urologists do not perform intravenous pyelograms routinely on patients with hypospadias unless it is indicated clinically. It is rare indeed for a patient with glanular hypospadias to have other congenital anomalies.

AGE AT TIME OF SURGERY

Traditionally, most surgeons operate on children with hypospadias at the age of 3½ - 4 years, so that the repair would be completed before the child enters school. With the availability of optical assistance in the form of binocular loupes or operating microscopes, there has been a tendency to operate at a slightly earlier age, usually between 2½ and 3½ years. The fact that orchiopexy is now recommended at one year of age may have been a stimulus for a few surgeons to attempt surgical repair of hypospadias at this young age. However, because of the technical difficulties of the surgery of hypospadias repair, few experienced surgeons have accepted this challenge.

It would appear that up to the age of 6 months there is minimal concern over brief parent-child separation. From 6-12 months the infant is aware of the separation while from 1-3 years the separation is truly traumatic. From 3-6 years of age the child can be adequately prepared for a surgical procedure. The parent-child separation anxiety is best managed by allowing the parent to live in with the patient.

SEXUAL FUNCTION

It would appear that operations on the male genitalia in early life does not have a bad affect on the patient's future sexual life. As a general urologist with an interest in pediatric urology, I have had the opportunity to see a number of these patients as young adults, none of whom would appear to exhibit obvious sexual problems related to their genital surgery.

A Swedish study in 1980 of the social and sexual adjustments of men operated on for hypospadias during childhood were compared with controls. In the control study, 34 men operated on for hypospadias in childhood and 36 controlled subjects were interviewed concerning their sexuality and social adjustments. At the time of the interview, the two groups were similar. Most of the hypospadiacs had a stable sexual relationship but they had been less sexually active than the controls. The mean age for a first ejaculation was 13.8 years in both groups, but the sexual debut was retarded in the hypospadiacs. The first erotic kiss occurred significantly later among the hypospadiacs (14.7 years) than the control subjects (12.7 years). Hypospadiacs experienced first intercourse significantly later (17.7 years) than the controlled subjects (16.0 years). The number of coital partners ranged from 0-50 in the hypospadiacs median (5.5) and from 0-350 in the controls median (7.5). Three hypospadiacs complained about persistent curvature and weak ejaculations as well as five patients who believed the meatuses were too proximal. Fertility seemed to be equal in the two groups and even patients with severe forms of hypospadias reported fertility.

SURGERY FOR HYOSPADIAS

Not all patients with hypospadias require surgical treatment. If the meatus is adequate and is located on or near the glans and there is no chordee and if the distal urethra is of a good quality, then these children are, in my opinion, best managed without surgery. However, the majority of patients

with glanular hypospadias have a stenotic meatus and they require a simple meatotomy. Several meatal advancement procedures have been described for this group of patients; but unfortunately extensive mobilization for the slightly proximal urethra carries the risk of fistula, meatal recession, stricture and spraying of the stream, while sometimes gaining very little. If, when the child is day trained, he is not able to adequately and easily direct the urinary stream, (or if he pees on his boots), he will require a repair of the hypospadias.

The overwhelming number of surgical procedures described for the correction of hypospadias will attest to the difficulty encountered in its treatment. Until recently, most surgeons have been willing to repair hypospadias in two or three stages and to accept a straight penis with a meatus in the region of the coronal sulcus as satisfactory. Aesthetic considerations were of secondary importance and a meatus at the tip of the penis was viewed as an impractical goal. Excessive skin was removed infrequently since it might subsequently prove useful in the management of complications such as fistula or residual chordee.

However, during the past decade, significant advances have been made in the state of the art and science of hypospadias repair. The addition of the glans-plasty to most repairs rounds the spadic hypospadiac glans and brings the meatus to the tip of the penis to produce a very superior cosmetic result. In addition there has been a further migration by many surgeons to one-stage repairs. Admittedly, the fewer the operations to obtain an excellent result, the better; but the paradox of the one-stage repairs is that about 50% of these patients require a second operation. In truth, in many patients the only difference between a one-stage and a two-stage repair is that in the one-stage repair the major repair is performed in the first stage while in the planned-staged repair the major repair is performed in the second stage. The choice between a one-stage or two-stage repair depends not only on the surgeon's preference but also on the position of the abnormal external urethral meatus, the degree of chordee and the quality of the distal urethra. It is not possible to use a single method of repair for all types of hypospadias. On the contrary, the surgeon must select the repair that is best suited for each individual patient.

My dominant choice has been a two-stage repair. In the first stage, the chordee is excised and the dorsal hooded prepuce is moved to the ventral surface of the penis, and, if required, a glans-plasty is performed. In six months, the ventral skin tag is used to form a tubularized pedicle graft which is buried as a urethra in a manner that delivers the new external urethral meatus to the tip of the glans. I was introduced to the general principle of this operation as a resident by Dr. John MacLean, a urologist and Dr. H. Baxter, a plastic surgeon at the Royal Victoria Hospital in Montreal. However, Dr. Elmer Belt has been credited with the origin of the operation. The operation became known as the Belt-Fuga technique when Dr. Foster Fuga published an extensive series in 1970. Dr. Fuga's operation failed to place the meatus at the tip of the penis.

We and others have independently modified the operation to add a gland-plasty which rounds the glans and delivers the meatus to the normal position on the glans. Space limitations preclude the use of illustrative material to describe the details of this operation. For those interested, I refer you to the *Urological Clinics of North America*, Vol. 8, No. 3, October 1981, where Dr. W. Hardy Hendren describes the operation in detail and reports his results.

RESULTS

Thirty-six patients had a two-stage hypospadias repair during the past five years. Twenty-eight patients had a good cosmetic result and required no further surgery, while 8, or 22%, developed a urethral fistula and required a third operation. The incidence of fistula during the past year has been reduced to 12% which may be related to a recent modification. This, I think, is original and it is a modification of the perineal urethrotomy which many surgeons use for urinary diversion and drainage in the post operative period. The modification could be called a retrograde cystostomy. A number 12 or 14 French plastic gastric lavage tube is passed through the abnormal meatus into the bladder. The tube is cut to an appropriate length and the distal end is wedged onto a number 12 French sound which is then passed into the bladder. It is possible to palpate the tip to the sound suprapubically. A small incision is made over the tip of the sound and the plastic tube is pulled through the incision. The distal end of the tube remains wedged on the sound so that when the sound is removed the distal end of the tube is brought through the abnormal meatus. Holes are cut into the tube so that the proximal portion of the tube drains the bladder and the distal portion becomes a stent for the neourethra, which allows for easy daily irrigation of the urethra post operatively. The surgical repair of hypospadias widely opens the surrounding tissue planes which contributes to the abundant exudate seen post operatively. This is an important factor that contributes to both infection and fistula formation. The accumulation of the exudate is less with the irrigation stent and it has been associated with a significant reduction in the incidence of fistula formation.

The incidence of fistula in Dr. Hendren's personal series was nil, while the incidence of fistula for other members of his department was 28%.

My enthusiasm for the method described is based on the superior cosmetic appearance with a meatus at the tip of the penis and freedom from long term complications. Hopefully, the incidence of fistula will continue to decline.

I would like to conclude with a comment on complications by Dr. Norman Hodson, a urologist from Milwaukee who has a large and long experience with surgery for hypospadias: "None of us is free of the burden of complications but intensive commitment to detail in the operating room and during the healing process has diminished the trouble with which one lives." □

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Diabetic Foot

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Since diabetic patients have higher incidence of peripheral vascular disease and peripheral neuropathy, minor foot lesions may go unrecognized due to diminished sensation. Trivial trauma in a diabetic patient can lead to serious infection resulting in ulceration, gangrene and eventual amputation. Patient education is an important part of diabetic foot care and an aggressive approach is needed for the care of diabetic foot infections or ulcerations.

INTRODUCTION

Five percent of the total population will develop diabetes during their life time. Foot lesions are primary problems for one out of every five diabetics who are hospitalized. About 50% of diabetics who have one leg amputated eventually will lose the other extremity.

The belief that diabetes mellitus is a risk factor in the development of atherosclerosis is based on many epidemiological studies. Whether diabetes acts in the development of atherosclerosis as an independent factor or whether its effect is related to hyperlipoproteinemia has not been resolved. In the past several years indirect evidence has been produced that suggests an oral hypoglycemic agent may actually aggravate vascular complications in patients with adult onset of diabetes.

There are two mechanisms related to foot problems, i.e. peripheral angiopathy and peripheral neuropathy. The peripheral angiopathy in diabetes is divided into three major categories:

1. Large vessel disease.
2. Small vessel disease.
3. Microvascular disease consisting of thickened capillary basement membrane, the hallmark of diabetes mellitus.

The atherosclerotic process is multisegmental and frequently involves the infrapopliteal vessels. Although large vessel thrombosis can lead to extensive gangrene, it is small vessel and microvascular disease which is responsible for most of the foot lesions resulting in amputation.

The peripheral neuropathy acts as a potential source of infection as loss of the autonomic system results in decreased perspiration with dry skin developing into cracks and fissures. Sensory loss may result in unrecognized trauma and motor loss, giving rise to muscular atrophy, resulting in changes in gait, causing new pressure points which may lead to ulceration.

PATHOPHYSIOLOGY

Diabetic microangiopathy is characterized by thickening of the basement membrane causing increased capillary permeability to fluid and protein, which may be responsible for edema in the diabetic foot. It may inhibit the egress of

leukocytes into the interstitial space and thus decrease the ability to fight infection. Infection leads to microthrombosis formation which is related to a variety of clogging abnormalities. These include increased fibrinogen levels, decreased fibrinolytic activity, increased von-willebrand factor and tendency toward platelet adhesiveness and aggregation. The current information suggests that abnormal platelet adhesiveness and aggregation may be a critical factor in the pathogenesis of vascular disease in diabetes.

The first step in the development of atherosclerosis is endothelial damage from the effect of lipids, followed by platelet adhesiveness and aggregation to the injured areas. The platelets also seem to have a stimulatory effect on smooth muscle proliferation. These muscle cells from the media proliferate into the intima and the lumen of the vessel. Formation then occurs of clots and plaque consisting of deposits of lipids, platelets, muscle cells and debris.

The process is also influenced by prostaglandin metabolism in the platelet and endothelium.

SIGNS AND SYMPTOMS

Signs and symptoms of peripheral vascular disease in diabetes are listed in Table I.

TABLE I
SIGNS AND SYMPTOMS OF VASCULAR DISEASE
IN THE DIABETIC FOOT

-
1. Intermittent Claudication
 2. Cold Feet
 3. Rest Pain
 4. Absent Pulses
 5. Blanching on Elevation
 6. Delayed Venous Filling After Elevation
 7. Dependent Rubor
 8. Atrophy of Subcutaneous Fatty Tissue
 9. Shiny Appearance of Skin
 10. Loss of Hair on Foot or Toes
 11. Thickened Nails
 12. Infection
 13. Gangrene, Patchy or Extensive
-

While the symptom of intermittent claudication is common, it is the diabetic cold foot that gets many of these patients into serious difficulty from applying a heating pad or hot water bottle to warm their insensitive foot.

Although a variety of vascular tests can be performed in vascular laboratories, a physical examination in most instances will suffice. An excellent clinical evaluation of the status of the foot and leg can be made by noting the strength of the pulse, coldness of the feet, status of nails and skin,

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presence or absence of hair on the foot, degree of blanching on elevation of the extremity, extent of delayed filling time on lowering of the leg and extent of dependent rubor.

The ultimate evaluation of the location of arterial occlusion and feasibility of carrying out arterial surgery depends on angiography. The criteria of angiography are rest pain, ulceration and infection not responding to bed rest, debridement and vigorous antibiotic therapy and gangrene or incipient gangrene of the foot.

TREATMENT

The treatment of a diabetic foot may be divided into three parts:

1. Preventive.
2. Local treatment for infection of ulceration.
3. Surgery.

Since many diabetics are prone to develop trivial trauma which may go unrecognized due to neuropathy, a simple instruction sheet is provided to all diabetics, especially those who have passed the age of 50 as foot lesions are not a problem in younger diabetics.

Table II outlines the instruction sheet which can be handed to diabetic patients over 50 years of age who exhibit any symptoms suggesting peripheral vascular disease.

TABLE II
PATIENT INSTRUCTIONS FOR THE CARE OF
THE DIABETIC FOOT

1. Do not smoke
2. Examine feet daily for blisters, cuts and scratches and don't miss looking between the toes — a mirror can help you see the bottom of the feet.
3. Wash feet daily and dry carefully especially between the toes.
4. Avoid extremes of temperature, test water before bathing.
5. If feet feel cold at night, wear socks but do not apply hot water bottle or heating pad.
6. Do not use chemical agents to remove a corn or callus.
7. Inspect inside shoes daily for foreign objects, nail points and torn lining.
8. Wear properly fitted stockings; do not wear mended stockings, avoid stockings with seams; change stockings daily.
9. Do not wear garters.
10. Wear comfortable shoes at all times.
11. Do not wear shoes without stockings.
12. Do not wear sandals with thongs between the toes.
13. Never walk barefoot.
14. Cut nails straight across.
15. Do not cut corns or calluses; follow special instructions from your physician or podiatrist.
16. See your physician regularly and be sure your feet are examined regularly.
17. If your vision is impaired, have a family member inspect your feet daily, trim nails and buff down calluses.

LOCAL TREATMENT

Once ulceration has developed in a diabetic foot the patient should remain off their feet. A heel protector should be used to prevent pressure necrosis.

Many therapeutic approaches have been suggested in the treatment of diabetic foot ulcers. These include a variety of cream ointments, proteolytic enzymes, and even topical insulin. Success reported with the use of all these preparations is more likely the result of the enthusiastic care and debridement and removal of pressure from the ulcer rather than from any specific preparation. Vasodilators have been suggested but review of the clinical studies reveals little evidence to support this.

Therapeutic shoes are important in preventing and treating diabetic foot ulcers. These shoes shift and redistribute weight away from the pressure areas and this decreases callus buildup and breakdown of these areas.

Infection in the diabetic foot frequently consists of multiple organisms, including anaerobes and especially *Bacteriodes fragilis* which is common in the diabetic foot due to the high degree of anoxia, secondary to vascular insufficiency. Once infection has developed, adequate drainage and debridement of the area is essential and becomes part of the emergency care in diabetics.

SURGERY

Reconstructive arterial surgery is indicated in those patients where major vessel occlusion is present with distal reconstitution at the infra-popliteal region. In this situation local debridement or limited amputation and bypass grafting offers the best therapeutic approach.

Unfortunately, the majority of arterial lesions are at the infra-popliteal arterial segment, involving the small vessels, and arterial reconstruction is not feasible. In these situations a limited amputation of the foot might be indicated as an initial step, but non-healing of the initial local foot amputation will lead to higher amputation. Once an amputation has been performed it is essential to protect the opposite foot, especially the heel during the same hospitalization, and afterwards when the patient is ambulatory, as 50% of diabetics who have leg amputation eventually will lose the other extremity. □

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Sexual Disinhibition and Antipsychotics

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Impotence as a side-effect of psychotropic medication, especially tricyclic antidepressants and thioridazine, has been quite extensively reported.^{1,2} Aphrodisiac effect of psychiatric chemotherapy, on the other hand, has not enjoyed nearly as much publicity. Scattered reports of the latter possibility are either quite general^{2,3} or else seem to imply its paradoxical character.⁴

Hypersexuality, along with general hyperactivity and disinhibition of oral impulses, is a component of the Kluver-Bucy Syndrome (1939) resulting from bilateral temporal lobe ablation in primates. Inasmuch as sexual impulses in human males remain presumably under a tonic control of the dominant temporal inhibition of the amygdala, sexual disinhibition would result from a lifting of this control, either physiologically or pharmacologically. Antidopamine effect of most antipsychotic drugs would bring about just such a state of affairs. This would happen more readily with a tenuous dominance of a genetically vulnerable left hemisphere, as is apparently the case of schizophrenics and the mentally defective.⁵

Three clinical vignettes presented below are meant to illustrate this intricate relationship.

CASE 1

A single male schizophrenic of limited intelligence, hospitalized three times for paranoid episodes between ages 24 and 35, had fluphenazine decanoate prescribed at 25 mg biweekly at age 38 due to active noncompliance. Within less than three months of the introduction of this long-acting intramuscular antipsychotic medication, he started molesting sexually his underage nieces living next door — conjugated estrogens 1.25 mg daily per os having brought about a prompt control of the deviant sexual behaviour. Over a year later, when the clinical picture was one of residual schizophrenia and the dose of fluphenazine reduced to 18.75 mg i.m. monthly, the patient stopped taking the estrogens due to an oversight and about five months later, paedophilic behaviour re-emerged. Conjugated estrogens were reintroduced, this time at 2.5 mg daily p.o. Four months later an acute quasi-catatonic picture developed amidst signs of excessive neuroleptization (oily complexion, muscular rigidity, mask-like face); the patient was staring vacantly, roaming aimlessly and even running up and down the road in apparent confusion and uncontrollable agitation. Bizarre, hallucinating acoustically and delusional, he had to be rehospitalized. Discharged about two weeks later, he remained symptom-free on a maintenance regime of haloperidol 7.5 — 15 mg daily and 1.25 mg of conjugated estrogens daily.

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CASE 2

The youngest of 21 children, of whom two others were diagnosed and treated for schizophrenia, an unemployed bachelor of less than average intelligence was hospitalized a dozen times between ages 17 and 38 for paranoid episodes. Then, following consecutive institutionalization prompted by his explicit threats to kill his old mother, against a hypochondriacal and inappropriately euphoric backdrop, he was discharged on an oral regimen of fluphenazine hydrochloride, 20 mg daily. Some three months later he was still very inappropriate, quite excitable, restless and incoherent, but the main concern of the family was his abnormally high libido, as manifested by undeterred sexual advances towards his sisters or else parasexual activities with the cattle. Chlorpromazine, 450 mg daily, was substituted for fluphenazine and conjugated estrogens 2.5 mg daily were added for antiaphrodisiac effect. About six weeks later he developed a slightly painful left-sided gynecomastia and estrogens were stopped. A few months later the patient was verbalizing potent sexual urges and soon resumed his acts of bestiality. Haloperidol, 10 mg daily, produced considerable sedation, but the patient resumed his incestuous advances and vicarious sexual outlets with cows some eight months of the cessation of estrogens. He complained of poor sleep and uncontrollable sexual urges, other than for manifesting bizarre hypochondriacal delusions and explosive incoherent speech pattern. Introduction of thioridazine, 300 mg daily, along with 50-100 mg of levomepromazine at bedtime resulted in abatement of the deviant "hypersexuality" within ten days.

CASE 3

A 47 year-old bachelor manifesting both minimal secondary sexual characteristics and features of an overall physical infantilism, with a history of homosexual seduction in his teens but no known heterosexual experience or autoerotic activity as well as rather poor academic performance, required three psychiatric hospitalizations for paranoid episodes — diagnosed as schizophrenic — between ages 30 and 42. Maintained on outpatient basis with only periodic necessity for antipsychotics for the past 5 years and abstinent for over 15 months, he grew progressively excited, sleepless, and he somewhat exhibitionistically related an incident of apparent seduction by a male relative, that he referred to as "rape", amidst an amplified, accelerated and disjointed verbal output. He also became inappropriate in his emotional expression, and readily angered. A trial of fluphenazine decanoate at 18.75 mg i.m. has seemingly brought an accentuation of sexual disinhibition to the point of veritable obsession with homosexual topics and even spontaneous seminal emissions during daytime upon mere inspection of pictures of some young male relatives and acquaintances or live encounters with them. Addi-

tional appearance of quite violent, coarse resting tremor has prompted discontinuation of fluphenazine five days later, and oral administration of 200 mg of thioridazine daily succeeded in full symptomatic control of the disinhibition of sexual impulses in particular within less than a fortnight.

The above case presentations raise several aspects of the relationship between the manifest sexual disinhibition and antipsychotic medication. First of all, the apparent "hypersexuality" assumed blatantly deviant forms (paedophilia, incest, bestiality, homosexuality) in these mentally deficient and schizophrenic bachelors practically deprived of opportunities for normal heterosexual relationships. Seeking such vicarious outlets must have been prompted by a high intensity of sexual urges, presumably corresponding to more conventional "hypersexuality".⁴

Sexual disinhibition appeared in all cases within about three months of starting antipsychotic regimens and in the absence of any acute psychotic symptoms. Regardless of the chemical structure of the compound or its route of administration, the alleged dopamine supersensitivity must then have been under control.⁵

Thirdly, estrogen preparations and/or thioridazine (the strongest inhibitor of the luteinizing hormone, LH) were manifestly effective in controlling the uninhibited sexual activity.¹ As they were useful otherwise in combating tardive dyskinesia apparently representing supersensitivity of nigro-striatal neurons to dopamine, a parallel sensitization of the mesolimbic dopaminergic network might well have been responsible for the observed sexual disinhibition.⁷ Heightened levels of prolactin were found heralding the outbreaks of supersensitivity psychosis⁶, and estrogens as well as non-specific stressors seem to promote prolactin release via serotonergic neurons.⁸ Development of an apparent "exogenous" (dopamine "supersensitivity"?) psychosis in the first case while on estrogens seems to confirm this relationship. It is as if "hypersexuality" and psychotic phenomena were mutually exclusive — the former resulting from serotonergic, and the latter from dopaminergic stimulations prevailing.

Lastly, the reciprocally inhibitory relationship between the dopaminergic and serotonergic networks, regardless of their location (hypothalamic, mesolimbic, nigrostriatal), seems to be corroborated by the apparent efficacy of anticholinergic agents, such as thioridazine, in the latter two cases. □

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Community CPR Training: A Need for Nova Scotia

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Eighty thousand deaths are attributed annually to cardiovascular disease in Canada. These deaths occur suddenly and unexpectedly, most often outside of the hospital prior to the arrival of medical help. The interval between circulatory arrest and initiation of resuscitation is a critical determinant of the victim's chances for survival. If effective cardiac circulation is not resumed within four to six minutes, cerebral hypoxia occurs, usually resulting in irreversible brain damage. Immediate initiation of CPR by lay bystanders can increase the heart attack victim's chances for survival.

This review of literature indicates that a large scale program of community education in heart health and CPR is needed in Nova Scotia to help eradicate unnecessary death from cardiovascular disease.

More than 81,406 deaths are attributed annually to cardiovascular disease in Canada.¹ Kuller, Lilienfeld, and Fisher have estimated that two-thirds of these deaths occur outside the hospital, suddenly and unexpected, within two hours of symptom onset.² Of these two-thirds, one-third will die before the arrival of rescue personnel.^{3,4}

The interval between circulatory arrest and initiation of resuscitation is critical to the individual's chances for survival.⁵ Immediate initiation of Cardiopulmonary Resuscitation (CPR) by bystanders can increase the patient's chances for survival.^{5,6,7} CPR by bystanders within four minutes maximizes the heart attack victim's chances for survival.⁷ This paper reviews literature which indicates the necessity for community education in heart health in Nova Scotia.

REVIEW OF LITERATURE

CPR has become an important medical procedure in treating cardiac arrest. It was first introduced in 1960 by a group of physicians using external compression of the chest to support the cardiac arrest victim's circulation, combined with artificial respiration.⁸ The use of this technique has spread from the medical profession to allied health professions and most recently to the lay (non-medical) public.

Since the implementation of CPR, a number of deaths from cardiac arrest have been prevented, but the mortality rate is still high.⁹ The most common cause is ischemic heart disease. Sixty to 70 percent of sudden deaths occur at home within one or two hours of symptom onset.² The chance of survival for a victim of sudden arrest is dependent upon prompt, skillful resuscitation efforts. If effective cardiac circulation is not resumed within four to six minutes, cerebral hypoxia develops, usually resulting in irreversible brain damage.⁹

Immediate initiation of resuscitation dramatically increases the victim's chances for survival.^{5,6,10} Thompson found that when bystanders initiated CPR 43 percent of patients survived, but if resuscitation was delayed until the arrival of rescue personnel, only 21 percent of 316 people survived.⁵ Copley found that victims receiving bystander CPR within five minutes had higher survival rates than victims whose resuscitation was delayed beyond five minutes, pending arrival of rescue personnel.³ Lund and Skulberg found the victim's probability of survival quadrupled from 8 percent to 36 percent when CPR was begun by bystanders within five minutes of collapse.⁴

Due to the widespread use of this technique, Weaver and colleagues decided to measure the efficacy of lay CPR training. "The results showed significant decreases in knowledge and skill performance within six months of training." Gass & Curry found that the medical professional had similar losses.¹² Such results argue that retraining and recertification are needed more often than annually, which is currently the Canadian Heart Foundation (CHF) standard. None of the studies published so far indicates the impact of training-effect loss on bystander CPR effectiveness. Although CPR provided by lay people does save lives, it is reasonable to expect it to save still more if enough of the public keep their skills up to standards.¹³

However, it must be remembered that CPR is only a temporary measure to provide basic life support until advanced life support (ACLS), including electrical defibrillation, infusion of intravenous drugs, and the insertion of tracheal airway, is available.^{9,14} Research repeatedly indicates that CPR should be administered within four minutes and ACLS within 10 minutes in order to maximize the survival of the cardiac arrest victim.^{6,9,14-16} Whether or not these standards can be met is dependent upon the community's Emergency Medical Services (EMS) system. The EMS system provides, organizes, and administers the personnel, facilities, and equipment for the delivery of health care under emergency conditions.¹⁷ Many studies across Europe and North America have shown that a comprehensive EMS system is essential if all patients are to receive the most appropriate care in prehospital, hospital, interhospital, critical care, and rehabilitation phases of the health care system.^{14,18}

In 1973, the United States Congress passed an EMS Act to ensure the facilitation of a comprehensive system throughout the U.S. However, in Canada, health care is a provincial responsibility. Some provinces have very comprehensive EMS systems. Unfortunately, as Murphy indicated, Nova Scotia's system is "primitive."¹⁸

In Nova Scotia there is no legislation concerning ambulances. The present ambulance services are privately owned, with the exception of the hospital-based companies of the Victoria General and Roseway Hospitals.¹⁷ Owners belong to the Ambulance Operators Association of Nova Scotia which negotiates on behalf of the owners with the Department of Health Subsidy Program. In order to receive a subsidy, a

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private operator must be a member of the Association. The Association, theoretically, is to enforce standards of care. However, the quality of this quality control is questionable.¹⁸

The minimum standard for an ambulance attendant in Nova Scotia is having attained 19 years of age and earned a valid driver's license. This does not ensure the quality of service Nova Scotians need. All ambulance attendants should be able to provide basic life support, if not more.⁹ This is *not* the case in Nova Scotia. In 1979, the taxpayers of Nova Scotia paid 3.5 million dollars in subsidies to ambulance operators for an inadequate service. Dr. Ghent summarized the present ambulance services in Nova Scotia accurately when he said, "You call, we haul, that's all."¹⁸ A comprehensive EMS system is needed!

The key elements of a comprehensive system include:

1. provision of out of hospital acute care;
2. a publicized, easily accessible emergency telephone number, 911; and
3. central communications and dispatching facilities and vehicles equipped with CPR and ACLS trained personnel, located at predetermined areas throughout the community to ensure speedy ambulance arrival times.

It is these intrinsic elements, along with sound public education that comprise a comprehensive EMS system.^{14,17,18}

Researchers have defined several segments of the interval from symptom onset or time of cardiac arrest to delivery of definitive care (ACLS) as: 1. denial time; 2. decision time; 3. ambulance arrival time; 4. onscene time; 5. transport time; 6. total travel time; and 7. time for transfer from emergency room to coronary care unit.⁷

It is only logical that the time between symptom onset and the patient's arrival at the hospital in the emergency room or coronary care unit should be as short as possible to maximize the patient's chances for survival.¹⁹

Moss found the denial and decision time embraced 65 percent of the total time from symptom onset to arrival at the hospital.⁷ Research has shown that the delay in soliciting medical help is due to the victim's own indecision.¹⁹ This indecision has been related to:

1. lack of information concerning the significance and importance of symptoms;
2. fear that the chest pain may actually signal a heart attack;
3. misinterpretation of the chest pain as a symptom of indigestion or disorder of another organ system;
4. reluctance to call a physician or a hospital during an inconvenient time such as at night or weekend; and/or
5. lack of encouragement or assistance from family members, friends, or co-workers in seeking medical help.¹⁹

Mitic and Perkins successfully used a mass media campaign to reduce the heart attack denial and decision times in Halifax.²⁰ This area has had little investigation, even though researchers in the field think that a significant reduction in denial and decision times would be the most effective way of lowering cardiac mortality rates in the community.^{16,19}

Ambulance arrival times for urban centers range from three to 15 minutes.^{17,19} The arrival time is affected by the communications, numbers of vehicles, vehicles locations, topography of the community, traffic conditions, and location of cardiac arrest. The most effective method of communication has been found to be a rapid access number (911) which connects the public with a trained dispatcher.¹⁴

Goldstein found that ambulance arrival times averaged 5.3 minutes, with a standard deviation of 3.9 minutes, in Halifax-Dartmouth.¹⁷ In communities where the population is not as concentrated, ambulance arrival times would be longer. The lack of a central access number also delays ambulance arrival.¹⁴

Time spent at the scene and transport time must be minimal for survival rates to be maximal.⁶ The times depend on the quality of staff training and on staff efficacy. Survival discharge rates where no ACLS is available at the scene has been shown to be between only 4 and 15 percent.¹⁶ Higher survival discharge rates, 25 to 70 percent, have been reported for American and Canadian cities which employ mobile coronary units and paramedics who can supply ACLS at the scene.^{10,15,16}

SUMMARY

Research has shown CPR should be received within four minutes and ACLS within ten minutes after the onset of arrest to maximize the survival of the cardiac victim. Often these time limits are exceeded. We must find a way to meet these limits.

Possible solutions to improve the time to initiation of CPR include increasing the number of vehicles staffed with emergency personnel and increasing the number of citizens trained in CPR. The latter seems somewhat more economically feasible. In Seattle, where 33 percent of the population is trained in CPR, the survival discharge rate of cardiac arrest increased dramatically as the percentage of the population trained in CPR rose.

A large public education program needs to be implemented to make the public aware of the signs and symptoms of heart attack and what to do in the event of a heart attack. Methods using mass media to educate the public need to be utilized further.

Some say the employment of paramedics with mobile coronary care units is a necessity. However, such a proposition is extremely costly in semi-rural populations, where response time may be too great to be effective. Unless paramedic programs can achieve an average response time under eight minutes, they are not likely to be successful.¹⁰ Implementation of such units in urban areas may be effective, but costly to the public, both in time and money needed to initiate set-up. Money may be better spent on training more individuals in CPR and on a mass media campaign of signals and actions of heart attack.

Other partial solutions may be the adoption of a central-emergency phone number, 911, and a central dispatch for all ambulance services. As mentioned previously, our ambulance service needs to be updated and standards enforced. The public must demand service for their money. Lobbying must be done and legislation passed before the ambulance services in Nova Scotia will improve. The establishment of a provincial EMS agency under the Department of Health would help make such improvements possible.


Another answer to the problem may lie not in improved treatment, but in the prevention. Lifestyle education may be another avenue to decreasing the prevalence of heart disease in our society. As Lalonde proposed, it is the public who must reduce the self-improved risks on their health in order for their health betterment.²¹ Building more coronary units will not cure heart disease. CPR training programs can include not only how to recognize and deal with a heart attack, but how to prevent and minimize heart disease.

Although better community CPR training should be a high priority goal for Nova Scotia, such training will not be sufficient. Training thousands of citizens in CPR without developing an emergency definitive care program is practically futile. Half a program will not save many lives. □

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How Well Are Babies In Nova Scotia Fed?

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A province wide survey of 1,121 mothers of newborns between the ages of 6 and 12 months was conducted by the Nova Scotia Department of Health in February 1982. The survey was designed to acquire basic information on infant feeding practices including prevalence and duration of breastfeeding, introduction of solids, use of vitamin supplements and sources of advice used by parents.

Survey results indicate a need to provide parents with reliable information on infant feeding. Just slightly over one half (51%) of mothers surveyed breastfed their infants with over half (55%) discontinuing by the time their infants were four months old. Nearly half the mothers were giving vitamin supplements. Inappropriate supplements were offered in some areas of the province. Twenty-eight percent of the mothers introduced solids before their babies were three months old.

Physicians were indicated as the most helpful person by many mothers, particularly in urban areas of the province.

Feeding practices are an integral part of infant health care.

In the past 15 years, research has lent support to those who believe in the importance of good infant nutrition. There are many factors which combine to form an optimum feeding pattern in the early months of life, for example, whether the infant is breast or bottlefed, the type and dilution of infant milk or formula, vitamin/mineral supplementation and the timing and sequence of solid food introduction. In addition, parents' sources of advice and demographic variables can affect feeding regimens.

In 1979, the Nova Scotia Department of Health's Nutrition Services released the first edition of *Year One Food for Baby: A Guide for Parents*. Its development resulted from the realization by community nutritionists across the province that parents were receiving conflicting advice on infant feeding from health professionals, friends and relatives.

In February 1982, a provincewide survey of mothers of newborns between the ages of 6 and 12 months was conducted by the Department of Health. The objectives of the survey were to:

1. document feeding practices in the province;
2. provide information necessary to improve programs providing services to mothers;
3. ascertain whether infants were being fed in agreement with recommended practices;
4. determine how helpful *Year One Food for Baby* is; and
5. identify additional topics for inclusion in future editions of the guide.

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METHOD

A systematic random sampling of mothers was used, with the sample stratified by region and by municipality. The sampling frame was generated from the lists of births filed with Vital Statistics by hospitals.

A total of 1,121 mothers were contacted by telephone during the evenings and on Sundays using trained interviewers. A structured questionnaire was administered asking questions on breastfeeding, commercial milks, introduction of solid foods, addition of salt and sugar, and mothers sources of advice.

The question remains as to whether the sample is representative of Nova Scotian mothers of newborns. It is always suspected with telephone surveys that the middle and upper socio-economic groups are over-represented and lower socio-economic groups under-represented. A comparison between the sample's income distribution and income distribution in Nova Scotia suggests that this is true.¹ However, to ensure adequate representation from lower socio-economic groups, personal interviews would have been necessary, which would have increased the cost of the study substantially.

The nature of the survey sample suggests that trends reflected in the data may be more positive than what is actually occurring, as middle and upper class populations tend to be better informed and have healthier lifestyles.

RESULTS

Breast or Bottle?

While breastfeeding is the recommended method of infant feeding, results indicate that only slightly more than half (51%) of mothers in the sample breastfed at any time. (see Table I) A cursory examination of the data suggests a rural-urban division in the incidence of breastfeeding.

The lowest rates of breastfeeding occurred in Cape Breton (33%), Northumberland (38%) and Western Health Units (42%). The highest rate occurred in the cities of Halifax (67%), Dartmouth (64%), in the Annapolis Valley (64%) and Halifax County (62%).

The Canadian Pediatric Society recommends that infants be breastfed for the first 6 to 9 months of life.² An examination of data from the survey suggests that duration of breastfeeding for the majority of infants was significantly less than this (Table II). By 4 months of age, 54.8 percent of infants were weaned.

The reasons most frequently cited by mothers for the discontinuance of breastfeeding were returning to work, inadequate milk supply, inconvenience and medical reasons.

Thirty-one percent of mothers who breastfed believed that they needed to supplement their breastmilk with commercial formula.

Results indicate that the milk most widely used for weaning

was a commercial formula; the second was whole cow's milk. The use of unmodified evaporated milk use appeared to be relatively low, with higher use concentrated in Lunenburg/Queens and Western Health Unit areas.

VITAMIN/MINERAL SUPPLEMENTS

Forty-four percent of mothers interviewed reported giving their infants vitamin/mineral supplements. The most frequently used supplements were Tri-vi-flor® and Infantol®, each used by 27% of mothers. Further examination on the use of the supplements containing fluoride is required to determine if infants receiving them are living in fluoridated water supply areas.

FOODS

The majority of mothers were giving their infants solid foods at the time of interview. Twenty-eight percent of mothers introduced solids before their infants were 3 months old. (Table III). The recommended age for the introduction of solids at the time of the survey was 3 months old. This guideline has since been changed to 4-6 months.

The vast majority of mothers (83%) in all regions began with cereals, as is recommended. The second food offered was vegetables again as recommended, by 58% of the sample.

Most infants were receiving food which was at least partially prepared at home and only 7% were receiving food

TABLE I
METHOD OF MILK FEEDING BY REGION, IN PERCENTAGES

	Cape Breton	Cobequid*	Dartmouth	Fundy*	Halifax	Halifax County	Lunenburg/Queens	Northumberland*	Western* N.S.	
Bottled Only	66.9	47.5	36.3	36.4	33.3	37.6	55.4	62.4	58.6	48.9
Breastfed	33.1	52.5	63.7	63.6	66.7	62.4	44.6	37.6	41.4	51.5
TOTAL	195	91	115	107	123	117	60	109	79	995

*Regions: Cobequid includes counties of Colchester and Cumberland; Fundy includes counties of Hants, Annapolis and Kings; Northumberland includes Pictou, Antigonish and Guysborough; Western includes counties of Shelburne, Yarmouth and Digby.

TABLE II
INFANTS AGE WHEN WEANED BY REGION, IN PERCENTAGES

	Cape Breton	Cobequid	Dartmouth	Fundy	Halifax	Halifax County	Lunenburg/Queens	Northumberland	Western N.S.	
1 month	13.4	27.9	19.6	14.8	6.4	14.5	8.1	16.1	21.9	15.4
1-2 months	15.9	16.3	13.0	13.0	8.5	7.3	18.9	12.9	15.6	12.7
2-4 months	24.2	30.0	19.6	29.6	34.0	23.6	29.7	29.1	18.7	26.7
4-6 months	12.2	14.0	26.1	24.1	25.6	18.1	24.3	25.9	24.9	21.4
6-12 months	34.1	11.5	21.7	18.7	25.5	36.3	18.9	16.1	18.7	23.8
TOTAL	54	39	58	54	62	55	22	31	26	400

TABLE III
INFANT'S AGE WHEN SOLID FOODS WERE INTRODUCED BY REGION, IN PERCENTAGES

	Cape Breton	Cobequid	Dartmouth	Fundy	Halifax	Halifax County	Lunenburg/Queens	Northumberland	Western N.S.	
1-2 months	20.7	17.2	13.2	15.1	6.4	11.2	21.0	18.3	15.0	15.3
2-3 months	13.0	11.1	6.6	11.3	11.7	14.5	17.0	15.6	16.0	12.7
3-4 months	30.3	25.3	30.8	26.4	26.6	23.1	26.0	33.9	32.0	28.5
4-6 months	26.3	34.3	29.7	44.3	47.9	45.3	44.0	47.7	51.0	46.9
6-10 months	9.6	12.1	19.8	20.7	19.2	13.7	6.0	5.5	11.0	13.3

purchased solely in the store. Twenty-five percent of mothers reported adding salt to the infant's food and 31% reported the addition of sweeteners. Regional rate for the addition of salt ranged from 14% in the City of Halifax to 35% in Cape Breton. Range for adding sweeteners was 21% in the City of Halifax to 41% in Cape Breton.

INFORMATION SOURCES

Thirty-four percent of mothers interviewed cited their doctor as the most helpful person when they had questions about infant feeding. Twenty-five percent identified their families and 30% cited the community health nurse. (Table IV)

Around the province, the lowest incidence of specifying the doctor as helpful was in Cape Breton and Northumberland Health Unit areas (23%); the highest occurred in the City of Dartmouth (46%). In terms of reliance on the family for assistance, the lowest rate occurred in the City of Dartmouth (17%) and the highest occurred in Cape Breton (30%). Those identifying the community health nurse as helpful varied from 10% in the City of Dartmouth to a high of 25% in Northumberland.

When mothers were asked to identify the source of information which was most helpful, 55% selected books and 36% selected magazines and pamphlets.

Ten percent of mothers indicated that they had concerns with which they had difficulty getting help. The concerns most often expressed were those regarding a change in infant feeding such as the timing, order and quantity of solid foods. Other mothers had concerns about and wanted information on food allergies.

YEAR ONE FOOD, FOR BABY — IS IT USED?

Ninety percent of mothers surveyed had received *Year One, Food for Baby*. Most mothers (71%) found the booklet "very helpful". Many mothers expressed the need for more flexibility in the guidelines for introducing solid foods, stating that they were receiving conflicting information from the booklet, their families and their doctors.

DISCUSSION

Can We Increase The Incidence of Breastfeeding In Nova Scotia?

Evidence suggests that the number of mothers choosing to breastfeed their infants has been increasing in Canada.^{3,4} There is reason to believe that this trend is being observed in Nova Scotia. The Atlantic Region, however, trails behind other parts of Canada in the prevalence of breastfeeding.²

Research indicates that socio-economic factors contribute to prevalence of breastfeeding, with the lower income groups being less likely to breastfeed.^{2,3} These factors may have an impact on other infant feeding practices as well.

The results of this study indicate that although more mothers are attempting to breastfeed, many discontinue prematurely. Reasons given for discontinuing, other than returning to work, suggest that mothers may be committed to the concept, but need more support to have a successful breastfeeding experience.

The citing of inadequate milk supply as a reason for cessation is a clue that mothers may not understand the physiology of breastfeeding. A mother's milk supply is

encouraged by the sucking of her baby. Therefore, if a baby is not sucking properly or enough, milk supply will diminish. If a breastfeeding baby is supplemented with formula before a mother's milk supply has been fully established, her milk supply will most likely diminish. It is common for mothers to feel that their milk supplies may not meet their baby's needs, particularly when infants undergo growth spurts at 3 weeks and 6-8 weeks of age. Extra nursing will usually meet these demands.

TABLE IV
MOST HELPFUL PERSON, IN PERCENTAGES

	Nova Scotia	Range in Regions of Province
Doctor	33.7	23.1 — 45.6
Community Health Nurse	19.6	10.0 — 25.0
Nutritionist/Dietitian	3.6	1.1 — 6.4
Family	25.0	21.0 — 29.8
Friends	7.1	3.0 — 12.0
Other	2.5	.9 — 6.7
Can't Say	8.4	4.3 — 14.4

Breastfeeding is a socially acceptable practice among some groups. However, in spite of the knowledge that breastfeeding is optimal, many parents choose not to feed their infants this way. This decision may be based more on family and social pressure than on lack of information. Health professionals, particularly physicians, can be instrumental in encouraging parents to breastfeed.

Mothers who do choose to breastfeed need support, encouragement and accurate information. Health professionals have a key role to play in helping mothers establish milk supply, deal with problems that occur and in providing reliable information on techniques of breastfeeding. As well, peer support given by experienced breastfeeding mothers can be an invaluable resource to women needing more frequent contact than a health professional can provide.

Methods of information dissemination are extremely important in a primarily rural province such as Nova Scotia. Low income groups, in particular, may not be well served by current methods of sharing information. More attention to the attitudes and beliefs of this group may result in a change in infant feeding practices.

Many health professionals in Nova Scotia have the impression that unmodified, evaporated milk (e.g. Carnation,[®] Perfection[®]) is widely used both as milk feeding and as a weaning milk. The results of this study do not support this belief. It may be, however, that the slightly skewed nature of the sample has masked the true prevalence of evaporated milk use. If use of evaporated milk is diminishing, it is for the best. Evaporated milks do not have a suitable nutrient profile for infants.

Vitamin/mineral supplements were used by 44% of mothers sampled. Research has documented the need for certain nutrient supplements for infants, depending on the type of milk fed and the fluoride content of the water. Several supplements, such as Poly-vi-flor[®], Tri-vi-sol[®] with fluoride

Metrication

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(labelled For Breastfed Babies) and Tri-vi-flor,[®] contain fluoride. There is risk of an infant receiving too much fluoride and developing mottled tooth enamel with excessive fluoride intakes. Therefore, infants fed commercial formula or those drinking from fluoridated water supplies do not need a supplement containing fluoride.

Infantol seems to be widely prescribed in some areas of the province. Infantol has perhaps the least appropriate combination of nutrients for infants.

Results of this study indicate that 56% of mothers surveyed introduced solid food to their babies before they were 4 months old. Many parents misinterpret their infants signs of hunger and begin feeding solids to satisfy. Crying of course, is not always a sign of hunger. Most babies younger than 4 months of age can be satisfied with extra milk feedings if hungry. Inappropriate early introduction of food can lead to constipation, gas, diarrhea or allergies in young babies because of the immaturity of their digestive systems.

Where Can Physicians Get Information?

Results of this survey show that there continues to be a need for information designed to help parents nourish their babies appropriately.

It is obvious from the results that the family physician is often consulted by mothers seeking information on infant feeding, particularly in urban areas. Community nutritionists employed by the Department of Health may be able to assist physicians throughout the province by providing up-to-date, reliable information on this aspect of nutrition. (Table V)

TABLE V
NUTRITIONIST'S AREA AND PHONE NUMBER

AREA	PHONE NUMBER
Cape Breton	564-4447
New Glasgow	752-5151
Truro	895-5321
Halifax	424-3953
Dartmouth	424-5512
Bedford	835-7181
Kentville	678-8931
Yarmouth	742-7141
Bridgewater	543-4685

Year One Food For Baby is available to all parents of newborns from the Nova Scotia Department of Health.

Physicians wishing to receive more information on infant feeding or who have comments about *Year One Food For Baby* can contact their local community nutritionist, or write to Director, Nutrition Services, Nova Scotia Department of Health, P.O. Box 488, Halifax, N.S. B3J 2R8. □

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The introduction of the metric-decimal system in a predominantly Anglo-Saxon country is extremely difficult. The process runs into crass irrationality, thinly-veiled racism and gross religious bigotry. In the Anglo-Saxon mind, the metric system, born of the French revolution and Catholic France, is the work of Satan; the British Imperial system, based on the measurements and weights of various parts of the Royal anatomy is the system of God. Since 1790 a tremendous amount of study, money and energy has been expended to prove the above thesis.

In the latter part of the 19th century a British archaeologist decided to prove definitely that the British Imperial system was the work of God and put the matter to rest forever. He reasoned as follows: as the pyramids of Egypt were the greatest creative act of God on earth as expressed through man, the pyramids must have been constructed using the British Imperial system. He would therefore go to Egypt, study, measure and triangulate the pyramids and definitely prove this theory.

Therefore, on a small grant from a London's fundamentalist Bible group, our archaeologist set out for Egypt. There he spent the next 25 years studying the pyramids and Egypt. In the process he became the world's greatest authority on Egyptology and pyramidology. He found that God, if God was involved in the process at all, had used neither the metric or the British Imperial system in the construction of the pyramids.

He returned to London at the turn of the century to be knighted by a grateful sovereign. He landed in London in the middle of a controversy. That year the Cup Finals was played in the Oval. The coach of the Northern team, anticipating the coach of the Toronto Maple Leafs by almost a century, was to use "pyramid" power to win the Cup Final. He reasoned that the pyramids were the greatest act of creativity performed on earth by God and therefore, the pyramids had great power. His men wore T-shirts with pyramids on them. They slept in tents shaped like pyramids, they wore little hats shaped like pyramids, and the toes of their boots were pyramidal in shape. An attempt by this coach to have the league use a pyramidal-shaped ball was turned down by the league officials, in their wisdom. That year the Northern team lost the Cup Final.

Our archaeologist was asked if the pyramids did have power and if they were the greatest expression of God's creativity on earth. After much reflection he replied, "I doubt it. If the pyramids were the quintessence of God's creativity on earth, he would have made man in the form of a pyramid. Man would have a square base, sloping sides and a pointed head. But he made very few that way and most of them are in the colonies — Canada, I believe, where they can do quite well, becoming political leaders and even judges." □

"The Cure for Life is Death"

— Socrates

CANADIAN OPHTHALMOLOGICAL SOCIETY POLICY STATEMENT, JUNE 1983*

ROLE OF OPHTHALMOLOGY

Preamble

All evaluations that purport to diagnose eye disease should be carried out by a physician. An ophthalmologist is a doctor of medicine who specializes in diagnosis and treatment of disorders of the eye, in addition to diagnosing systemic disease when manifest in eye signs or symptoms.

The practice of ophthalmology has historically encompassed all aspects of visual function in health and disease, including refraction, orthoptics, binocular vision and strabismus. Medical and surgical treatment of disease involving the visual system and awareness of ocular manifestation of systemic disease are also an integral part of the practice of ophthalmology.

Evaluation

For the ultimate benefit of the public, a clear distinction should be made between a diagnostic eye examination and an examination for the purpose of refraction. A diagnostic eye examination involves the practice of medicine and requires the highly specialized training of a physician.

A refractive examination involves the taking of measurements from the visual system, which is simply a data-gathering procedure and involves no medical expertise.

The use of ancillary personnel to perform certain nonmedical procedures or tests is appropriate as a means of increasing the availability of ophthalmologists to provide medical services and to provide comprehensive and efficient vision care to the greatest number of individuals. It is understood that such personnel work with and are supervised by ophthalmologists at all times. The ophthalmologist is responsible for the delivery of comprehensive eye care, which includes primary, secondary or tertiary care.

APPROPRIATE REFERRAL

Preamble

It is in the public interest that there be obligatory referral of patients by nonmedical practitioners to licensed physicians and surgeons when certain signs or symptoms of possible eye disease or injury are found.

Many eye diseases and systemic diseases that affect the eye have subtle signs and minimal or no symptoms. Nonmedical practitioners are not qualified by education, training or experience to diagnose or treat these diseases. Failure to refer them promptly to a physician may result in significantly impaired vision or may delay diagnosis and treatment of systemic disease.

Evaluation

Patients usually seek the advice of ophthalmologists or optometrists for evaluation of eye complaints, while pediatricians, internists, general practitioners and other physicians

are often consulted and treat some eye conditions. Only ophthalmologists are qualified by education, training and experience to provide total eye care, which includes vision examination, eye examination and treatment where indicated.

A mechanism must be provided to protect patients who initially select a nonmedical practitioner for evaluation of what may be a medical problem.

Guidelines

To ensure that these patients are referred promptly for definitive diagnosis and treatment when indicated, the following guidelines are recommended:

A nonmedical practitioner providing services to any person should refer such a person to a licensed physician and surgeon for definitive diagnosis and treatment at any time the patient requests, when any eye disease or central nervous system disorder is suspected or when a nonphysician notes:

- a) Failure to achieve corrected 20/40 (6/12) visual acuity in either eye, unless the cause of the impairment has been medically confirmed earlier and appropriately treated;
- b) Complaints of flashing lights, recent onset of floaters, haloes, transient dimming or distortion of vision, obscured vision, loss of vision or pain in the eyes, lids or orbits, double vision or excessive tearing of the eyes;
- c) Reports of suspect or real, permanent or temporary loss of any part of the visual field;
- d) Presence of a tumour, swelling of the eyelids or orbit or protrusion of one or both eyes;
- e) Presence of detected opacities or abnormalities in the normally transparent media of the eye, the ocular fundus or the optic nerve;
- f) Presence of inflammation of the lids, conjunctiva or globe;
- g) Strabismus or malaligned eyes, whether permanent or transient;
- h) When optical measurements show rapid or unexpected changes, even though the vision may be fully correctable;
- i) Where intraocular pressure is suspected to be above normal;
- j) Anisocoria (unequal pupils); or
- k) Any case that does not respond normally to routine testing.

Where possible it is in the public interest to use local physicians.

NONMEDICAL USE OF DRUGS FOR DIAGNOSTIC AND THERAPEUTIC PURPOSES

Drugs may have serious side effects, and nonmedical practitioners are not trained to recognize or treat patients suffering severe drug reactions.

It is not in the best interest of the public to have nonmedical personnel use drugs in eyes for diagnostic or therapeutic purposes.

*1867 Alta Vista Drive, P.O. Box 8844, Ottawa, Ontario, Canada K1G 3J2

LOW VISION

Preamble

In Canada, the total number of partially sighted persons is rising 10% faster than the increase in population. In 1982, the Canadian National Institute for the Blind registry of legally blind persons totalled 39,151, and it is estimated this number is probably one half of those actually eligible for registration. Approximately three-quarters have some vision remaining, and these people function visually. There is also at least as many partially sighted individuals whose vision is not sufficiently limited for them to be registered as blind but whose vision is less than normal — those with vision between 20/60 and 20/200. It is estimated that approximately 70% of these are older than 50 and 55% older than 65.

Statement

1. The policy of the Canadian Ophthalmological Society is to encourage provision of the best eye care possible, and this applies to both normally sighted and partially sighted patients.
2. The term "partially sighted" refers to those patients whose vision is outside normal limits (less than 20/60) and who cannot have improvement in their vision through medical or surgical means.
3. The numbers of partially sighted individuals in our communities are rising, chiefly because the great majority of these patients are elderly and this portion of our population has increased disproportionately in the past few years. In addition, newer surgical techniques now preserve eyes and vision that in previous years could not have been preserved; many of these patients are left with reduced vision.
4. The cost to the individual and to the community of this type of disability in terms of inadequate realization of personal potentials, loss of productivity and expensive support services required from social service agencies and government is great.
5. It is important that members of our society recognize the problems that partially sighted patients face and assist them wherever possible by carefully informing them of the type of medical problem that is present, by advising them of the steps that can be taken to assist them and by providing full and sympathetic regular care as required. Although this is especially important for partially sighted children in helping to achieve an education, it is also very important for those who become partially sighted during their adult career in business or the home and necessary for older retired patients to assist them in enjoying their retirement years.
6. The provision of visual and nonvisual aids to partially sighted persons whose disability is relatively minor can easily be done by the ophthalmologist in the office. The provision of more sophisticated devices for those whose visual disability is greater can be done by those who have a special interest in this type of work at centres where there is gathered a wide selection of devices and a staff with a variety of training in fitting and using devices together with statistical analysis of the successes.
7. In a referral centre for the complicated problems of more severe visual disability, the medical or surgical eye problems causing the disability must be evaluated by an ophthalmologist. Specific low-vision services can be provided by

ophthalmologists, optometrists and opticians. Instruction in the use of the devices can be completed by nursing staff, ophthalmic assistants and trained clinic volunteers. Other problems involving social activities, living skills etc. can be evaluated and provided by mobility instructors, vocational rehabilitation instructors, home care instructors and so forth.

8. With suitable instruction and supervision, medically trained staff can conduct screening programs and provide assistance for partially sighted patients whose medical and surgical problems have been identified by previous ophthalmological examination. □

NEW MEMBERS

The Physicians listed below have joined The Medical Society of Nova Scotia between February 1, 1984 and May 31, 1984. A most cordial welcome is extended by the Society.

M.S.M. Abenheimer	Sydney
P.R. Beecroft	Annapolis Royal
J.Y. Bibawi	Halifax
C.A. Brown	Kentville
J.A. Cameron	Halifax
B.J. Cookey	Halifax
T.J. Coonan	Halifax
F.P. Crowe	Sydney
D.C. Elliott	Digby
M. Farooq	Sydney
E.R. Harrison	Halifax
C.G. Llewellyn	Halifax
R.F. Martel	Arichat
B.R. MacKenzie	Halifax
T.H.M. McDonagh	Springhill
B.W. Palmer*	Inuvik, NWT
C.C. Poulin	Digby
B.B. Quinn	Sydney
J.K. Rosales	Halifax
S.L. Russell	Halifax
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Current Topics in Community Health

Prepared by: Dr. Frank M.M. White,
Department of Community Health and Epidemiology
Dalhousie University, Halifax, N.S.

HEALTH IN MYTHOLOGY

To ward off disease or recover health, men as a rule find it easier to depend on healers than to attempt the more difficult task of living wisely. Asclepius, the first physician according to the Greek legend, achieved fame not by teaching wisdom but by mastering the use of the knife and the knowledge of the curative virtues of plants. In contrast to Hygieia, the name Asclepius is of very ancient origin. Apparently, Asclepius lived as a physician around the twelfth century B.C. He was already known as a hero during Homeric times and was created a god in Epidaurus around the fifth or sixth century B.C. His popularity spread far and wide, even beyond the boundaries of Greece. Soon Hygieia was relegated to the role of a member of his retinue, usually as his daughter, sometimes as his sister or wife, but always subservient to him. In most of the ancient iconography from the third century on, as well as in all subsequent representations, Asclepius appears as a handsome, self-assured young god, accompanied by two maidens: on his right Hygieia and on his left Panakeia. Unlike Hygieia, her sister, Panakeia became omnipotent as a healing goddess through knowledge of drugs either from plants or from the earth. Her cult is alive today in the universal search for a panacea.

The myths of Hygieia and Asclepius symbolize the neverending oscillation between two different points of view in medicine. For the worshippers of Hygieia, health is the natural order of things, a positive attribute to which men are entitled if they govern their lives wisely. According to them, the most important function of medicine is to discover and teach the natural laws which will ensure to man a healthy mind in a healthy body. More skeptical or wiser in the ways of the world, the followers of Asclepius believe that the chief role of the physician is to treat disease, to restore health by correcting any imperfection caused by the accidents of birth or of life.

Source: From *The Mirage of Health* by Rene Dubos, Harper and Brothers Publishers, New York, 1959, as published in *J. Occup. Med.* 1984; 26: 144.

Editorial Note: In case you are wondering, the editor of this column is a follower of Hygieia, although intending no disrespect to Asclepius. The principle of healthy skepticism applies of course to all three gods, especially Panakeia!

GONORRHEA IN CHILDREN UNDER 10 YEARS, CANADA, 1970-1983

National morbidity data indicate that each year a number of children acquire gonococcal infections. Some of these cases involve newborns who acquire their infection during delivery. The conjunctiva, pharynx, respiratory tract, and anal canal are the usual sites for this type of infection. Gonococcal

ophthalmia neonatorum (GON) is a relatively rare condition in Canada because of the use of preventive measures shortly after birth. While gonococcal infections in children under 1 year of age reflect the prevalence of undiagnosed, untreated gonorrhea in pregnant females, most childhood gonorrhea is thought to be transmitted through sexual abuse.¹ Very little information is available on the frequency of sexual abuse of children in Canada, but any venereal disease diagnosed in a child between 1 year of age and puberty should be considered an indicator of this problem until proven otherwise.²

Information on gonococcal infections in children under 10 years of age was reviewed for the 14-year period 1970-1983. Table I shows the average annual number of cases and rates for this period. The total number of cases reported by provincial health departments was 1145; 104 of these involved the eye, 56 occurring in males. However, it was not possible to determine exactly how many of these were neonatal in origin as reporting case definitions differ from province to province. Ninety-six (96) of these 104 cases were seen in children under 1 year of age (50 males, 45 females, 1 not specified) and 8 in those 1-4 years (6 males, 2 females). The remaining 1,041 infections were not identified specifically as to anatomical site; 805 (82%) of these occurred in females. The age breakdown of these 1041 cases was as follows: 155 (15.8%) occurred in children under 1; 309 (31.5%), 1-4 years; and 516 (52.6%), 5-9 years. It should be noted that there were great variations observed in the male-to-female ratio for these 3 age groups (Table I).

TABLE I
GONORRHEA IN CHILDREN UNDER 10 YEARS OF AGE,
CANADA, 1970-1983

		Average Annual		
Age		Number	Rate/ 100,000	Male-Female Ratio
1 yr	Male	5	2.9	1:1.2
	Female	6	3.4	
	Total	11	3.1	
1-4 yr	Male	2	0.3	1:10.0
	Female	20	3.0	
	Total	22	1.6	
5-9 yr	Male	5	0.6	1:5.8
	Female	32	3.5	
	Total	37	2.0	
10 yr	Male	12	0.7	1:4.7
	Female	58	3.3	
	Total	70	2.0	

COMMENT

Provincial data regarding infection site is condensed to the two categories "eye" and "other" on the report form for Statistics Canada. It is evident from review of the data described here that more detailed information would help to clarify the problem of gonorrhea in children.

It is well known that gonococcal infections in adults are underreported. Because of possible medical, social and legal implications, underreporting of the infection in prepubertal children is likely to be even greater. With increasing attention being devoted to sexual abuse of children, there is an obvious need to establish reliable baseline data when discussing gonorrhoea in children.

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Source: MJ Todd, MHSc, AG Jessamine, MB, ChB, Bureau of Epidemiology, LCDC, Ottawa, Ontario, in *Can Dis Wkly Rep* 1984; 10: 50-51. □

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 Old Age a regret."*

— Benjamin Disraeli (1804-1881)

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The Development of The Oenophile

David B. King, M.D., F.R.C.P.(C)

Halifax, N.S.

Wine has been fascinating for man for a long time. It has been a source of man's comfort, his entertainment, his health and in many instances, his religion. Wine has been part of the fabric of history. It is not difficult to see how it can capture one's interest and imagination. This is particularly so for the physician who by years of training has acquired the ability to observe and assess empirical data.

My interest in wine started almost 20 years ago when I was serving in the Royal Canadian Navy. The Navy offered considerable advantages for the wine novice. The prices were free of duty and ships sailed to ports both in Europe and the United States. Life aboard ship was conducive to the ritual of wine by virtue of our wardroom traditions, dating back to the 18th Century, with its development of the connoisseurship of claret and port. My Naval experiences expanded my vinous horizons.

Though I continued an interest in wine, after leaving the Navy and entering Medical School, it became apparent that civilian prices and my pocketbook would not allow much in the way of fine drinking. It became necessary to find wines which were affordable and offered enjoyable, if not magnificent drinking. These were the days before there was great local interest in wine and, as a consequence, the choices in Nova Scotia were limited. Periodically, there would be interesting wines of character and reasonable prices. Italy offered the odd bottle of a good Chianti Reserva, the occasional Barolo and, in later years, the addition of the new Tuscan reds, with their modification of the classic Chianti grapes.

This modification consisted primarily in the elimination of the white varieties with or without the addition of Cabernet Sauvignon. These wines, such as Sassicaia, which is all Cabernet Sauvignon and Tignanello were selling six or seven years ago at modest prices and provided greatness for the small pocketbook. Italian wines, in general offer more character than refinement, but some can be of significant nobility. They run difficult balances as the sun of Italy provides enhanced alcohol with the tendency towards coarseness and harshness at the expense of delicacy and finesse. They are often great, strapping wines with high acidity as well. This is somewhat unusual and probably related to early picking and fermentation practices. These wines compliment Italian foods and should be appreciated in that context.

About the time that I was in Medical School, I also began my first trips to Spain and the great world of Spanish wine was unveiled. The experience of dry, delicate finos from Jerez appreciated in their natural setting, conveys a tradition that is both British and Spanish. They make superb aperitifs, an accompaniment to the soup course and, in the form of Olorosos, can make a significant contribution to after dinner

drinking. The sweeter sherries, the so-called cream sherries, so appreciated by the English, found less favor with my palate, but still made for interesting wines which on occasion were capable of some subtlety. My student years and my days in Spain were commensurate with the rise in the quality of Rioja. I thought then, and I do now, that Rioja offers the best value for the wine dollar currently available. These wines have a distinct character of oak, with garnet colors acquired from wood age. There is a distinct smell of vanilla in the nose and a lovely blend of oak and fruit with long and subtle finishes. The alcohol contents from the Rioja Alta are moderate and these wines make glorious, subtle and refined table beverages.

To people who have visited the region of Rioja and who have become aware of the emerging connoisseurship in Spain, there will be an awareness that their production is based upon the best techniques of Bordeaux, a superb climate for grape growth and a tradition that dates back to the time of the Romans. There has been superimposed in recent years increasing rigorous quality control. These wines today in Nova Scotia continue to offer extremely good value. The Reservas and Grand Reservas of Rioja from good vintages can deliver both power and subtlety as well as a measure of unctuousity. It is important also to appreciate with Spanish wines that they are ready for consumption at the time that they are released, as opposed to the wine of France, which often must be cellared for extended periods. This was an important consideration for a medical student without a cellar.

Our trips to Spain were always accompanied by excursions to the other European countries. With particular reverence and by this time, an increasing pocketbook, I visited France. France is a vinous monument. It is the soul of the world of wine and the shrine for the vinous pilgrim. It is the cradle of virtually all wine styles and offers the greatest products that money can buy. It is, further, a blending of history, tradition and culture. When one travels through the wine regions sampling superb foods, complimenting them with a wide range of wine styles, one begins to appreciate more fully the greatness of the culinary arts in which simplicity, freshness and creativity constitute the cornerstones. There is the fascination of blending foods of unique flavor with legendary wines whose reputations lend majesty to an occasion.

It is, however, to Bordeaux where I eventually turned my most ardent vinous attention. This is a city whose vinous origins pre-date the Romans. Its institutions were born of wine and its development of the juice of the grape has been the single greatest factor in the development of the oenologic canons of taste. It's wines offer every facet of the tasting experience. It is the supreme expression of the vinous art. It's wines are not only capable of the highest subtlety, of the greatest power, of the greatest complexity, but they are also

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capable in some instances of aging for a century. There is an overwhelming sense of history when opening a great bottle of claret, pre-dating the First World War. This is associated with the unveiling of incredible nuances of flavor and an unrivaled individuality of expression. As the wines from the great estates change with the vintage it is like a symphony played with different arrangements. The theme of Lafite is the same and the wine can be recognized as Lafite through the generations, despite the fact that its style changes from vintage to vintage. This subtle variation from year to year allows a clearer definition of the wine's basic character. The one variable, the weather's changeability working on a great fixed estate with an historical and human continuity allows for endless fascination with the wines of Bordeaux.

My yearly visits to Europe led me more and more to Bordeaux, and subsequently to increased familiarity with its residents and its wine making traditions. My interests and probably fanaticism has subsequently led to my introduction to the inner sanctum of Bordeaux and subsequent acceptance as a Grand Maître. In the wake of my Bordeaux experience, I founded a chapter here of the Commanderie de Bordeaux, an International Wine Society, affiliated with the Bordelaise. That has led to a world wine cultural and spiritual connection. Chapters of the Commanderie exist from London to Tokyo and its members are united in their love and respect for the wines of this region. This of course has led to considerable expansion of one's cultural horizons. These contacts are artistic, political financial and confraternal.

It is difficult to capture adequately in language the significance of a truly great wine. It is much the same difficulty that one has, on attempting to describe a symphony. Music has its own means of communication and our attempts to verbalize the essence of music are often a clumsy effort at a translation. Our vocabulary in reference to the sense of smell is very limited and indeed, people smell different things in the same glass. Savors of mint, or oak, vanilla or violets are merely subjective devices with which one attempts to define one's own olfactory experience. These words do not necessarily convey any precision to another taster. The experience however of tasting continues to sharpen one's faculties and stimulates one to be increasingly precise about the form, structure and styles of wine. The joy of wine, is in this appreciation rather than in its intoxicating qualities and indeed, the latter are a problem to the enthusiast. It is only by having a clear mind that one can fully appreciate the essentials of the beverage. It is this that dictates moderation.

Bordeaux makes virtually every style of wine from sparkling through to the greatest sweet wines on earth. It makes all ranges of red wine and indeed produces the equivalent of a vermouth. Its estates number well over 3500 and each makes a wine of individuality. The people of Bordeaux range from the humble to the elite. After leaving the City of Bordeaux itself and driving into the surrounding vineyards, one drives by estates, graced by great Châteaux of another age. Each line of vines is punctuated at its end by a rosebush and the legend and its modern experience become one.

Because of the vast range of wine styles from Bordeaux, it is difficult to give a generalization that is universally applicable to these wines. In general they are dark in color in their youth, and over many years shed their purple robes becoming increasingly garnet, mahogany and subsequently amber in great age. Their nose is derived from a complex

blend of two or four grape varieties as well as hints of oak and some character derived from the soils that vary from the gravel of the great Medoc estates, Graves, and parts of St. Emilion and Pomerol, to the clay soil of the distinguished inner circle of Pomerols of which Petrus represents the supreme example. Around these fringes of gravel and clay is sand, which makes common, plainer wines.

People smell many things in the nose of Bordeaux; they talk of mint, cedar, violets, bell peppers, vanilla, caramel, chocolate, raspberries and other fruits and floral essences. The noses are big and intense and I think most importantly have an evolution, so that they change constantly as one proceeds through a meal. It is this essential feature telling vividly of the wine's complexity which is part of the great fascination of Bordeaux, but classic claret perhaps can be understood in terms of a balance of sweetness and acidity that lends a significant elegance to the wine, along with the fabric of backbone of tannin which provides firm tasting impressions and a richness of body which suggest unctuousity to the palate. The fruits tastes are complex and very long, so that there is a prolonged farewell of the wine, a lingering aftertaste that conveys all sorts of delicate nuances. The alcohol contents are low, and so the wines are not intoxicating and the lower alcohol lends smoothness and warmth to the wine, as opposed to harshness and bitterness. The texture of these wines can be incredibly smooth when they are aged and refined. Time blends these elements into a perfect or unified whole.

Two years ago in Nova Scotia I was proud to entertain 15 Château owners from Bordeaux and subsequent to that date, we have had the opportunity of having individual visitors from that region in our area. This year we are holding an 18th Century dinner in costume in the Fortress of Louisbourg. For that we will be having 15 Château owners including the Grand Master from Bordeaux, as well as a number of North American Commanderies to this function. A French chef, Bernard Meyer, has been engaged to prepare 18th Century dishes and Bordeaux will be supplying the wine for the occasion, from a vintage preceding the Second World War. We will have musical accompaniment from representatives of the Halifax Symphony and hope with this occasion to display French tradition, history and our own local part in that process.

None of these remarks on Bordeaux are made to denigrate the equally fine wines from Burgundy or to reduce the contributions of California to the world of wine. California has been responsible for the introduction of scientific techniques to winemaking that have allowed the cold fermentation of white wines, resulting in greater fruitiness and flavor. It has fostered the innovation of many techniques that have provided us with unusual and fascinating tasting experiences.

I recently had occasion to be in California and had the opportunity to travel through the wine districts there as a guest of some of the vintners. It is again difficult to generalize about wines from this region. Some of their wines are truly great and must be amongst the first wines of the world. Many on the other hand are simple, direct wines that are being offered to the consumer at reasonable prices. Production techniques from companies such as Gallo have made available varietal tasting impressions to the general public. I could not conceivably do justice in a few lines to the vast range of wine styles that issue from California. I think it

particularly interesting to drink these wines against the great classics from Europe. Not so much by way of qualitative comparison but by way of highlighting the strengths from both areas. I do not feel that tasting wines should be a competitive event of one wine against another but more a way of sharpening one's faculties for an increased appreciation of both, the New World and the Old.

I had hoped to convey in these few paragraphs some of the elements which lend interest to wine as a hobby and a diversion. Like all hobbies, things should be kept in perspective, so that wine become an adjunct or an accompaniment rather than a totally dominating theme. There is an unfortunate tendency amongst oenophiles to become pedantic and graceless. Etiquette requires balance and, as wine should not dominate food or food wine, this subject should not dominate all conversations at table.

Wine is as old as established religion. Interest in it, today, is greater than, perhaps, it has ever been, and though the costs of some wines seem great, they are more readily available now than have ever been before. Our situation in Nova Scotia is improved significantly in terms of range and quality of wine. My personal opinion is that the Government attempts to extract too much revenue from these products. I should like to see private enterprise take over the sale and distribution of wines in Canada in the future. The definition of what is a luxury is not the prerogative of Government. It is unfair in a free society that the taxes paid to attend a sporting event are far lower than the taxes and additional charges one has to pay for a bottle of wine enjoyed for the same period of time. Why is one man's diversion considered mildly improper

and the other considered acceptable and fees apportioned on that basis?

Certainly at this juncture no political party in Canada could champion a cause for cheaper wine. But it is in this that the contrasts in Europe and Canada become more apparent. On that Continent, if the price of wines were raised significantly, there would be riots, precisely because wine is considered a food and a staple rather than a luxury. The hope for the oenophile of the future is that this cultural concept will cross the Atlantic and that we will see the prices of wine moderate and, hopefully, we will rid ourselves of unsophisticated and facile moral restrictions on wines and spirits. □

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Correspondence

To the Editor:

I have just received the February issue of the *Bulletin*, and enjoyed reading it's contents — especially the wide variety of topics which covered subjects ranging from the diseases which afflict all the whole world, to the more specific statistics of the results of treating cancer of the cervix in Nova Scotia. I also admired your Editorial on the ramifications of The Canada Health Act.

I would like to express my sincere thanks to all the staff in producing the journal, and say how much I enjoyed my innings as Editor. I shall never forget the untiring effort of all concerned, especially the never flagging enthusiasm of Tove Clahane.

I am pleased that the *Bulletin* still flourishes. It is one if not the last bastion of physicians' literary skills against the invasion of computers, video cassettes, television, and the other intruders of our equanimity.

Life up here continues to be challenging and stimulating, and promises to be entertaining this summer as it will be the fiftieth anniversary and a homecoming for the citizens of Yellowknife. From the days when it started with the discovery of gold, to the present wonderfully diverse community, it never ceases to be a fascinating environment!

There are so many Maritimers here that we can't help thinking about you.

With every best wish,
Yours very sincerely,

Basil J. S. Grogono, M.B.,
5613-50th Avenue,
Yellowknife, N.W.T. X1A 1G2

*You who this faint day the High North is luring
Unto her vastness, taintlessly sweet;
You who are steel-braced, straight-lipped, enduring
Dreadless in danger and dire in defeat,
Honour the High North ever and ever,
Whether she crown you, or whether she slay;
Suffer her fury, cherish and love her,
He who would rule he must learn to obey.*

Men of the North

Robert W. Service (1874-1958)

To the Editor:

Re: Changes to the Provincial Immunization Programme

I would greatly appreciate your assistance towards alerting medical colleagues about important future changes in the Department of Health's immunization programme.

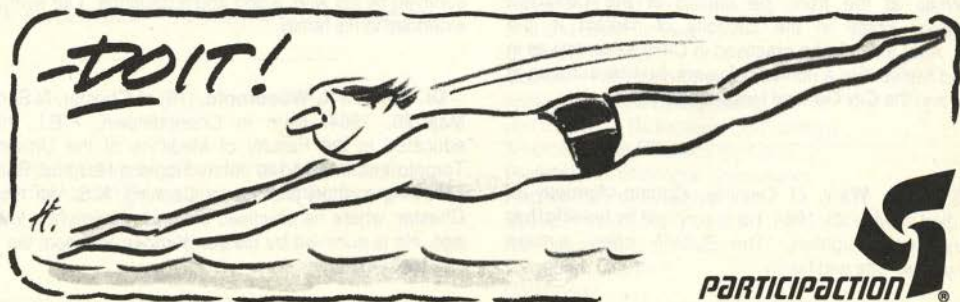
Combination vaccines used for routine immunization containing alum-adsorbed diphtheria and tetanus toxoids will be introduced into Nova Scotia and Ontario in early fall, and the "fluid" or non-adsorbed alternative preparations will no longer be available by late 1984. Both the National Advisory Committee on Immunization and the Canadian Pediatric Society have advocated the use of adsorbed vaccines for a number of years and this change has recently been facilitated with the development of safe and effective adsorbed products to replace the fluid preparations that are currently being used for routine immunizations in both Nova Scotia and Ontario. These new products have been shown to provide a better immunologic response than the "fluid" vaccines, particularly to diphtheria and pertussis, without any increase in reactogenicity.

Except for the discontinuation of the mid-school DT-P booster at age 10, the routine immunization schedule will remain essentially unchanged. The use of adsorbed vaccines, however, will necessitate some substantial changes to the usual mode of administration and dose volume. These vaccines must be given in *reduced dosage* (0.5 ml) and only by the *intramuscular* route. Adsorbed vaccines should not be given subcutaneously as there may be a more marked local reaction and a subcutaneous nodule may develop which can progress to a sterile abscess.

The Department of Health plans to conduct a more extensive publicity campaign concerning these changes before they become effective early in the fall of 1984. In the meantime, further information can be obtained from myself, either by telephoning 424-8698 or writing to Community Health Services, P.O. Box 488, Halifax, N.S., B3J 2R8.

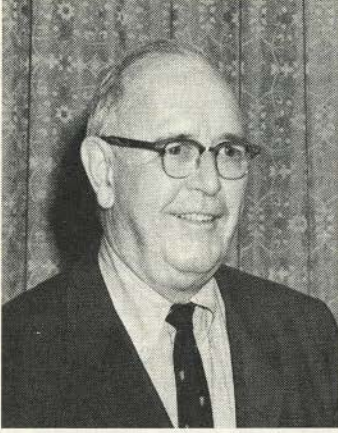
Yours truly,

Pierre M. Lavigne, M.D.,
Provincial Epidemiologist,
Community Health Services,
Department of Health,
Province of Nova Scotia.



An Appreciation

DR. ROBERT C. DICKSON



Dr. Robert C. Dickson died in Vancouver on February 19, 1984. Born in St. Mary's, Ontario, he was the son of the late William and Mabel (Clark) Dickson. He graduated from the University of Toronto in 1934 with an M.D., and his postgraduate education at the Toronto General Hospital was interrupted by service with the Royal Canadian Army Medical Corps during the Second World War. In 1945 he became a Fellow of the Royal College of Physicians and Surgeons of Canada, and he served this organization first as a Member of Council and later as its President. In 1960 he was elected Fellow in the American College of Physicians and served as Governor, later as Regent, and finally as a Member of the Executive Committee. He was elected a Master of the College in 1976.

During his years in Halifax, he built a Department of Medicine that was recognized nationally and internationally for its role in medical education. In addition, he was a major factor in the development of a program in Outpost Nursing at Dalhousie, and the Diabetic Day Care service at the Victoria General Hospital. He was a founding member of the Canadian Association of Gastroenterology and served as President in 1963. In 1966 he was appointed a member of the Canadian Forces Medical Council and served as Chairman in 1974. He was appointed the Queen's Honorary Physician in 1973.

His academic career began in 1945 when he joined the Faculty of the University of Toronto, where he remained until he became Head of the Department of Medicine of Dalhousie University in 1956. He served also as Head of the Department of the Victoria General Hospital and Consultant to Camp Hill Hospital, to the Halifax Infirmary, to the Izaak Walton Killam Hospital for Children and to the Canadian Forces Hospital. In 1974 he was appointed Professor Emeritus of Dalhousie's Department of Medicine, and he continued to serve as a consultant until his retirement in 1983 because of ill health.

He is survived by one son, William, Vancouver; two daughters, Shelagh (Mrs. Michael Wotherspoon), St. John's, Newfoundland and Jane (Mrs. Donald Jardine), Vancouver; and one sister, Isabel (Mrs. Tuzo Wilson), Toronto; and six grandchildren. He was predeceased by his wife, the former Constance Grant.

No one has contributed more to Medicine in the Atlantic Provinces in recent years. However, he was much more than a leader and a builder, and he will be remembered by his colleagues and students primarily for his personal characteristics — his honesty, his sense of fairness, his enthusiasm, his tenacity, his love of life, and his absolute integrity. □

R. N. Anderson, M.D.
Halifax, N.S.

OBITUARIES

Dr. Cecil O. Walsh, (91) of Canso, N.S. died on April 16, 1984. Born in Canso he received his medical degree from McGill University in 1915. Dr. Walsh immediately proceeded overseas and served as medical officer on British hospital ships. While at the front, he served in the Canadian Expeditionary Force in the capacity of captain in the R.C.M.C. After the war, he practised in Canada as well as in the United States. For a number of years, he was surgeon at St. Rita's and the City General Hospital in Sydney.

Dr. G. Owen Warr, of Oakville, Ontario, formerly of Halifax, died on May 28, 1984. He is survived by his wife, two sons and two daughters. The *Bulletin* offers sincere sympathy to his wife and family.

Dr. C. Donald Vair, (61) of Dartmouth, N.S. died on May 28, 1984. Born in Halifax, he attended Halifax Academy and Mount Allison University prior to serving with the fleet air arm in the Second World War. Following the war he returned to Dalhousie University where he received his Medical Degree in 1951. He then became associated with the Dartmouth Medical Centre where he practised until his death. He is survived by his wife, a son and a daughter. Our sympathy is extended to his family.

Dr. Edward K. Woodroffe, (78) of Chester, N.S. died on May 28, 1984. Born in Charlottetown, P.E.I., he was educated in the Faculty of Medicine of the University of Toronto and interned at Johns Hopkins Hospital, Baltimore. Following a short practice in Canning, N.S., he moved to Chester, where he practised until his retirement a few years ago. He is survived by his son Kimber, to whom we extend sincere sympathy.

Personal Interest Notes

A LEADER IN MEDICAL RESEARCH

The 1984 award in recognition of outstanding service to the Dalhousie Medical Research Foundation presented to **Dr. J. D. Hatcher** who, for the past eight years, has been Dean of Medicine at Dalhousie University. The presentation was made during a dinner in his honour at which he was accorded high tribute by government, business and professional people.

It would be impossible to imagine an individual more worthy of the recognition than Dean Hatcher. It was he who conceived the idea of the research foundation and who gave leadership in its establishment. Now, five years later, it is possible to look about the foundation as a strong and positive factor in the contemporary medical field in Nova Scotia. It is, indeed, one of the factors which has given this province an enviable position in the world of medicine.

Research is the key to progress in medicine. Where it is in progress, patients are in a position to be better served, training centres are better equipped and qualified personnel are more readily available. Research opportunities attract first-class scientists and teachers. That, in turn, attracts superior students. The end result is beneficial for all with the public standing to gain the most and that, after all, is much of what medicine is all about.

Those who spoke during the course of the dinner in his honour were lavish in their praise of Dr. Hatcher and his work. A man of vision, indefatigable in his work and devoted to his profession, his efforts as expressed through the Foundation have made possible the developing liver transplant program in Nova Scotia. Those capable of doing the work are here because of the Foundation. "Without Don Hatcher," observed Health Minister Dr. Gerald Sheehy, "these men would not be here."

The high praise bestowed upon Dr. Hatcher bespeaks the gratitude of the people of the Maritimes, all of whom, directly or indirectly, are the beneficiaries of his work.

Reprinted with permission — *The Chronicle-Herald*, May 28, 1984.

"The commonest, one might call it the natural, rhythm of human life is routine punctuated by orgies."

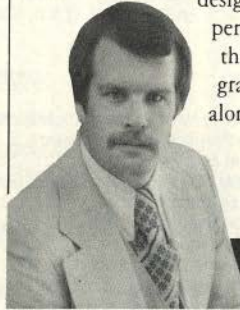
— *Alfous Leonard Huxley (1894-)*

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Medical Estate Planning Services	91
Professional Economic Consultants	78
Registered Psychologist	85
Scotia Physiotherapy	82
Sun Life of Canada	99
Whitzman, Martin P.	78
Classified	78, 99