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Physician Responsibility and Discipline

Recently, the Nova Scotia Medical-Legal Society sponsored a panel presentation, "Abuse and Misuse of Prescription Drugs". The panel was arranged with the cooperation of the Provincial Medical Board, the Medical Society of Nova Scotia, the Nova Scotia Pharmaceutical Society, and the Nova Scotia Commission on Drug Dependency, along with the R.C.M.P. Metro Drug Section. The representatives of these bodies attempted to deal with the long-term problem of the misuse of prescription drugs, and also with the more immediate problem of the documented involvement of doctors prescribing narcotics to drug abusers in large amounts and frequently enough, to be a major source of "street drugs".

The problem of double doctoring, where the patient sees more than one doctor for narcotics, and the situation where doctors are being duped by slick con artists, was addressed. It became clear in the panel discussion that, in a number of circumstances, the doctors themselves might be guilty of consistent unprofessional behaviour, if not complicity, in creating a problem for police, pharmacies and sometimes for patients. Even more important, it became clear that the profession itself has a problem in deciding just how to deal with the doctor whose prescribing habits are far outside the norm. At this panel, the R.C.M.P. presented statistics that certainly strongly suggested improper behaviour.

The problem of double doctoring and prescribing of narcotics has been on the agenda of the Provincial Medical Board for at least ten years, and has been mentioned in the Annual Report every year in an attempt to focus attention on the problem. However, Dr. M.R. Macdonald, Registrar of the Provincial Medical Board, states that no doctor in Nova Scotia has ever lost his licence for abusing his prescribing habits. This of course may be interpreted in many ways. Are we, the physicians of this province, that good? Has no doctor merited the censure of his colleagues? Or is it time to look at the whole discipline problem in light of this recent R.C.M.P. investigation? Constable MacNeil, of the above panel, states that he would rather see the doctors deal with the problem and not have the R.C.M.P. involved (relative to policing the over prescribing doctors).

Dr. B.J. Steele, President of the Provincial Medical Board, states that the issue has been dealt with by sending letters to all doctors named in the R.C.M.P. investigation, and that all have replied with an explanation. Where necessary the doctors will be dealt with by the Discipline Committee, with everything from an interview to a public hearing. At a public hearing the doctor will answer to charges with a lawyer present. The committee will then recommend to the Board, and the Board will concur or differ. Discipline can range from a simple reprimand to erasure of the doctor's name from the Registry. All this takes time, and there is evidence both from the audience and participants in the panel discussion, and also with the government, that there is a justified impatience beginning to stir.

Dr. Gerald Sheehy said recently that if the doctors involved cannot be stopped, he might have to raise the matter at the next meeting of the health ministers, with a view to strengthening Federal legislation.

These are not subtle hints to the profession, but as direct statements as we are ever going to get. If self-discipline is an important part of "professionalism", then we are certainly in danger of losing this right. And we are going to lose it if we do not soon appreciate the importance of this right, and the heavy responsibility that is attached to it. It was only during a recent Council Meeting that the Discipline Committee of the Medical Society was almost dissolved. It should also be noted that the Provincial Medical Board itself, while composed of physicians, is a government

appointed Board, and thus controlled to a large extent by them. The appointments by the Medical Society number six, as compared with seven by the government, and one by Dalhousie University. For the last number of years the discipline of the profession has been left in the hands of the Provincial Medical Board, and we might be wise to remember that the Board is made up of physicians from the profession, but not necessarily representing the profession only.

While the duties and responsibilities of the Provincial Medical Board are set out in the Medical Act of Nova Scotia, surely the professional ethics we respect are much more than this legislation. Our true responsibility lies in our contract with our patients, and the profession as a whole has a responsibility to see that our members meet more than minimum legislated standards. We all suspect that physicians impaired by drug and alcohol exist in our midst. We all know that there are physicians we do not trust practising in many communities. While the definite identification and the necessary corrective action are difficult to achieve, this is no longer an acceptable excuse for no action at all. Physicians, of course, have rights but so do our patients, and respect for them indicates that a new direction is indicated in many areas. Not only in monitoring of prescribing habits, and addiction problems, but also in corrective action that is meaningful and useful. It is not a simple task, nor is it a pleasant one. But our arrogance has been on display for some time, and will not be tolerated much

longer. None of us wishes to see addicted doctors lose their livelihood, nor do we wish to "treat doctors like pushers", as was recently suggested in a "Platform" column by Barry L. Beyerstein and Bruce K. Alexander in the *Canadian Medical Association Journal*. In this paper they conclude that with some restrictions, allowing Canadian doctors to prescribe narcotics according to their judgement of patient's needs would be more efficacious than increasing the penalties they face for violating non medical norms.

In the Canadian Medical Association's Brief to the House of Commons on Justice and Legal Affairs, re Bill C-18, they urged the Committee to recognize that there is a great need for more research into all causes of drug dependency, and they concluded that proposed amendments should not be used to charge as criminals, honest physicians who are genuinely trying to help addicts. While this point of view should be taken into account, we are now seeing documented evidence that a laissez faire attitude is really "not enough". Programs such as the Drug Dependency Commission offer are also "not enough", and we must continue to evolve solutions that are better than we now have. Self-discipline imposed by the profession as a whole on its members will go a long way in protecting not only physicians' professional privileges, but also the rights of our patients and the communities in which we live. □

J.F.O'C

A New (Old) Look

As the *Bulletin* begins a new year and another volume, observant readers will note a "new look", as we introduce a mid-eighteenth century type developed by John Baskerville.

The last change of type occurred with the first issue for 1970, a few months after Dr. David Shephard became Editor-in-Chief. During the last 15 years, the type was "Helvetica", which is in a very modern style without serifs. One problem is that some letters can be confusing as when attempting to distinguish between an upper-case [capital] "I" and a lower-case [small] "i".

John Baskerville was born on January 28, 1706, at Wolverley, Worcestershire. He was not educated for any particular trade but acquired great skill in calligraphy and in cutting monumental inscriptions. After an early career as a writing master, he established a japanning business in 1740 and used the profits to begin experimenting with type founding around 1750. His type faces introduced the "modern" pseudoclassical style, with level serifs and with emphasis on the contrast of light and heavy lines.

Having produced a type to his taste, he began publishing editions of standard works in 1757. In 1758, he was elected a printer to Cambridge University, and subsequently printed new editions of the Bible and the Book of Common Prayer. This Bible was one of the finest ever produced and its beauty "has caused the volume to find its way into almost every public and private library where fine and curious books are appreciated". Nevertheless, the financial terms granted by the University were extremely onerous and it was not commercially successful.

Not everyone appreciated the bold quality of Baskerville's print, which was due to his use of highly glossed paper and to his invention of a really black ink. His friend, Benjamin Franklin,

related to him that a gentleman "said you would be a means of blinding all the readers of the nation; for the strokes of your letters being too thin and narrow hurt the eye, and he could never read a line of them without pain". Others complained of the gloss of his paper, as well as his "too-sharp type", which demonstrated his mastery of calligraphy and letter cutting.

After the death of his son, who was to have been his successor, Baskerville attempted to dispose of his unprofitable printing business but "love of art in the end proved stronger than dislike of pecuniary loss". He continued printing nearly to the end of his life and one of the last works produced under his care [in 1774] was Dr. William Hunter's *magnum opus* "On the Human Gravid Uterus". Baskerville died on January 8, 1775, in Birmingham, leaving the major part of his £12,000 estate to his wife.

Because his typography was criticized by contemporary "experts", his types after his death were declined by the Universities and by the London trade. Eventually, they were purchased by the French dramatist, Beaumarchais, and were used in his edition of *Voltaire*. Their subsequent history is uncertain but the surviving punches and matrices were recognized in Paris in 1929, and were presented to Cambridge University in 1953.

Baskerville type is undergoing a revival, for its clarity and balance make it an excellent type for continuous reading. The Editorial Board of the *Bulletin* will be interested in receiving comments from the readers. □

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A.C.I.

Encyclopaedia Britannica
Dictionary of National Biography

Hypothermia

Sheilagh Martin, Ph.D., J.G. Holland, M.D. and W.T. Josenhans, M.D.,*

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Hypothermia, a condition of lowered body temperature, can result from exposure to cold air or water. For some time, it has been recognized as a killer among maritime sportsmen and workers, but in more recent times it has come to be recognized as a major contributor to deaths among the elderly and young children. Hypothermia may be considered under two headings: exposure to cold air or to cold water. Victims of cold air exposure would include those involved in outdoor pursuits, e.g. hiking, cross-country skiing, hunting; the elderly or the very young living in inadequately heated houses; and those persons stranded as a result of an accident or winter storm who are ill-prepared for the situation. Immersion hypothermia will occur as the result of cold water exposure, as the result of a boating accident (small pleasure craft, fishing vessels, major liners); as a result of repeated dives by professional or amateur divers; or as a result of an accident on an oil rig.

The physiological effects of hypothermia, however caused, are the same with the exception of the time factor. Exposure to cold water will bring about the deleterious effects more quickly since the thermal conductance of water is approximately 1000 times greater than that of air at a comparable temperature.

This paper will explore some of the aspects of hypothermia considering the general physiological effects, and methods of treatment.

PHYSIOLOGICAL EFFECTS OF HYPOTHERMIA

Immersion hypothermia was first studied by James Currie, a British physician, in 1798. For the next century and a half there was little or no research in this area. However, the 1930s saw a resurgence of interest in the mechanisms of hypothermia because of its use as a therapeutic tool for relief of patients suffering from cancer or schizophrenia.¹ An added impetus to investigation of the physiological and psychological effects of hypothermia was provided by the many fatalities of World War II, as well as loss of life in twentieth century shipwreck.

The development of hypothermia is initiated when the "core" temperature begins to fall from the normally maintained value of 37°C. If the non-homeothermic state is maintained, other physiological systems are affected, e.g. metabolism, acid-base balance, circulation and respiration.

What is meant by "core" temperature? The body may be considered to be composed of a central core, usually maintained close to 37°C and a peripheral shell made up of limbs, skin and cutaneous tissue.² There are considerable variations in temperature in the more peripheral region and there may be considerable change in body heat content before there would be alteration in the "core" temperature.

The rate of body cooling, resulting in a fall in the core temperature, may be decreased or augmented by various factors such

as subcutaneous fat, body shape, clothing, exercise and drugs. Studies have indicated that a greater tolerance to cold is shown by subjects with a greater subcutaneous fat thickness.³⁻⁶

Exercise during cold water immersion results in a more rapid loss of body heat possibly due to increased muscle blood flow, and, in addition, causes a stirring action of the water, thus preventing a build-up of the warm boundary layer or microclimate of the individual, resulting in increased body cooling.^{7,8} This decrease is attenuated by clothing, particularly at the cooler water temperatures.⁸ Body areas which tend to lose heat very quickly, as established by an infrared thermography study, are the chest wall in the midaxillary line and the groin.⁹ These areas should be well protected and taken into consideration when designing life-saving equipment, e.g. life jackets.

The rate of body heat loss by a resting subject can be further decreased by adoption of the thermally protective behaviour while immersed in the cold water.¹⁰

Survival time in cold water has been explored by many investigators during the last forty years. One study developed an equation to predict probable survival time during cold water immersion.¹¹ The work is based on the assumption that death would occur at a rectal temperature of 30°C. The data are derived for lightly clad, quiet subjects wearing a life jacket and do not account for survival time in rough seas, or for persons in an exhausted or alcoholic state. Since many factors are involved in body cooling, there is considerable individual variation in survival time as noted by the authors.

Although alcohol ingestion during cold exposure does not appear to have a direct effect on body cooling^{12,13} when combined with strenuous exercise, the decrease in body temperature is greatly exacerbated.^{14,15} It should be noted also that the depressant activity of alcohol on the central nervous system usually results in people taking inappropriate measures for survival in a hazardous situation. Another commonly used drug is diazepam. This drug, in young, healthy adults, exposed to cold air has been shown to significantly lower body temperature when compared to controls, during a one hour exposure.¹⁶

The initial cardiovascular response to cold water is an increased heart rate and arterial pressure.¹⁷ As hypothermia progresses, the major changes include slowing of the pacemaker, decreased heart rate, cardiac output and force of ventricular contraction, a relative prolongation of systole, as well as an increase in central venous pressure. The end result may be cardiac arrest or ventricular fibrillation.^{18,19}

Some interesting respiratory responses are noted within the first 1-2 minutes of cold water immersion. These include a fall in end-tidal PCO₂ which is sustained, associated with a high pulmonary ventilation.¹⁷ Since this initial gasp has been shown to be attenuated by preheating in a sauna,²⁰ the initial hyperventilation response is thought to be due to the rate of change of the deep skin temperature.²¹ Other respiratory changes seen during hypothermia include a left shifted oxygen dissociation curve,

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increased solubility of carbon dioxide, depression of central and reflex control of respiration and respiratory acidosis.²²

Renal and metabolic activities are also affected by hypothermia. A serious renal consequence is the excessive sodium and water excretion.²³ This could lead to a decreased blood volume and result in the serious problem of decreased arterial pressure and consequent cardiovascular collapse during rewarming.

In addition to the physiological effects of hypothermia, psychological effects have also been noted. These include temporary bewilderment, delirium, unconsciousness and amnesia²³ and, in all situations, there was an inability to take the necessary action for survival.

MANAGEMENT OF HYPOTHERMIA

Until the body temperature drops below 35°C there is usually no evidence of trouble. Below 35°C there is violent shivering which may be replaced by muscle rigidity at a lower temperature and thinking is dulled. Below 30°C there are respiratory and cardiovascular problems and the victim will often be unconscious.^{24,25} In order to diagnose and treat hypothermia adequately, it is necessary to have a low reading, rectal thermometer, calibrated to read accurately to 21°C, e.g. the British-made Zeal thermometer (available from Adco Surgical Supply Co., 304 Stillwater Avenue, Bangor, ME 04401).

Rewarming of a hypothermic victim may occur in the field or in a hospital. In either situation the criteria for rewarming are: non-injurious, rapid, and allowing access to the patient to care for associated injury and disease. In the field the victim should be removed from the cold and/or wet, provided with dry, warm clothing and placed in a sleeping bag or insulated in some other way. Warm packs, carefully covered, may be applied to the person's body. Breathing warm air may be useful. If conscious, the person may be given hot liquids. Normally a victim of severe hypothermia should not be rewarmed in the field but rather stabilized and evacuated as quickly as possible.²⁶ If prompt evacuation of the victim is not possible, e.g. due to bad weather conditions, an attempt at rewarming should be made, using the best possible means at hand. If the attempt is made and proves unsuccessful, the would-be rescuer should not be made to feel guilty.

A variety of treatments are available in a hospital setting. These include warm bath, peritoneal dialysis, femoral perfusion, gastric lavage, inhalation therapy and extracorporeal blood rewarming.^{24,27-30} The method of choice depends on the expertise of the attending physician, e.g. a cardiac surgeon might use a bypass machine as a heat exchanger, an internist might use peritoneal dialysis, others might choose rapid rewarming in the warm tub. Water temperature should be maintained at about 40-44°C and temperature monitored when the patient is conscious. Care should be taken to heat the body core, keeping the limbs covered but outside the tub.

Dangers during the rewarming include cardiac arrhythmia, metabolic acidosis superimposed on respiratory acidosis, and overheating. It is necessary to have an electrocardiograph operating, and there should be constant monitoring of pH, PCO₂ and PO₂. Of course any electrical equipment attached to the patient during the hot tub immersion should be appropriately grounded. Blood gas measurement should be corrected for temperature.³¹ Intravenous sodium bicarbonate could be given, where necessary, to correct the acidosis. When forehead sweating is initiated, the patient may be considered adequately rewarmed. After treatment, the person should be kept under constant care after he is revived and should be continuously

monitored for some hours. Some patients may have severe underlying disease, masked by hypothermia, but responsible for the hypothermia, e.g. hypoglycemia coma. Physicians should be aware of this possibility and are referred to more specialized texts for this management.

SUMMARY

The definition and causes of hypothermia and the effects on various physiological systems are outlined. Methods of managing the hypothermic victim in the hospital and in the field are noted. Due to special media presentations and educational programs, there is an increasing awareness by the public that hypothermia is a potential killer. Thus continuing research and dissemination of material can only serve to benefit our population. □

ACKNOWLEDGEMENT

The authors wish to thank Dr. K.E. Cooper for helpful comments on the manuscript.

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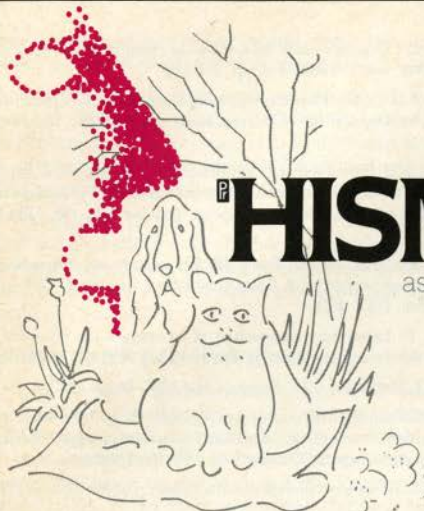
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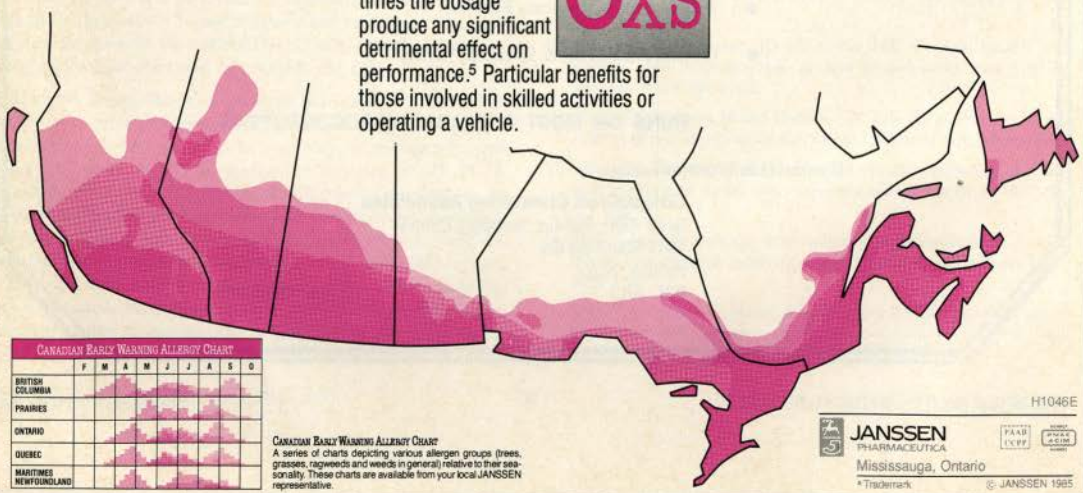
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ACTION Astemizole is a potent, long-acting and selective histamine H₁-antagonist. It produces a dose-related inhibition of skin reactions to intradermal histamine. Astemizole inhibits the nose reaction to nasal challenge with histamine and allergens. It inhibits the bronchial reaction to inhaled histamine and allergens in asthmatic patients. Astemizole has extremely weak serotonin antagonism, no anticholinergic properties, no antagonism of dopamine or other catecholamines. Astemizole has no effect on the C.N.S. and does not interact with drugs acting on the C.N.S.

Astemizole is rapidly absorbed after oral administration. Peak plasma levels are reached within one hour. Astemizole is extensively metabolized, and plasma levels of unchanged drug are low.

Astemizole is completely metabolized in the liver and mainly excreted through the faeces. Two metabolites of astemizole, desmethylastemizole and norastemizole have, orally, the same pharmacological properties as the parent compound.

INDICATIONS HISMANAL* astemizole is indicated for the treatment of seasonal allergic rhinitis, allergic conjunctivitis, chronic urticaria and other allergic conditions.

CONTRAINDICATIONS HISMANAL astemizole is contraindicated in patients with a known hypersensitivity to the drug.

PRECAUTIONS Use in Pregnancy Due to insufficient data, HISMANAL astemizole should be used in pregnant women only when, in the opinion of the physician, the potential benefits outweigh the possible hazards.

Use with C.N.S. Depressants HISMANAL astemizole had no potentiating effects with alcohol or other C.N.S. depressants in clinical and laboratory studies.

Drug Interaction No drug interaction has been found between astemizole and bronchodilators, other systemic antihistamines, antibiotics, sulfonamides, corticosteroids, estrogens, progestogens, oral contraceptives, diuretics, antihypertensive agents, analgesics and anti-inflammatory agents, tranquilizers and antidepressants.

ADVERSE REACTIONS The incidence of adverse experiences during astemizole treatment was comparable to that during placebo control treatment.

During chronic treatment, body weight tended to increase. This is probably due to an increase in appetite.

Astemizole had no effect on laboratory parameters.

SYMPTOMS AND TREATMENT OF OVERDOSAGE In cases reported to date, involving oral ingestions of up to 300 mg of HISMANAL astemizole, no untoward effects have been noted.

DOSAGE AND ADMINISTRATION Adults and children older than 12 years of age: 1 tablet (10 mg) once a day.

Children between 6 and 12 years of age: ½ tablet (5 mg) once a day.

Children under 6 years of age: 2 mg (1 mL suspension) per 10 kg/day.

To achieve optimal absorption, astemizole should be taken on an empty stomach.

AVAILABILITY

Tablets Each white, round scored compressed tablet contains 10 mg astemizole. Available in boxes containing 2 blister packs of 10 tablets each.

Suspension Each mL contains 2 mg astemizole. Available in bottles of 30 mL.

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Update on Measles in Nova Scotia

Enhanced province-wide surveillance for measles was introduced to primary care physicians, as a major community health priority in November, 1984. The following is a report which summarizes the initial results of this strategy.

During the period November 1, 1984 to March 8, 1985, 19 suspected measles cases were reported. Only 13 met the clinical case-definition for a measles infection (i.e., a rash lasting more than 3 days; a temperature of 38.3°C or greater, and at least one of cough, coryza, or conjunctivitis). Approximately 75% of the 19 had laboratory investigations and none was laboratory confirmed. Paradoxically, two cases were reported to be positive for measles virus antigen in nasal secretions, however serology did not indicate any evidence of an active measles infection. A three-fold rise in measles HI titre was found in another case, but was most likely related to the administration of MMR vaccine three weeks before the illness.

It would be premature to conclude that measles has been eliminated from this province on the basis of these preliminary results. Nevertheless the results are encouraging. One cannot be sure whether measles would have been ruled out on those four cases where laboratory investigations were not performed; however, only one of the four met the clinical case-definition. A failure to obtain serological specimens primarily resulted from late reporting.

Please report promptly any suspect measles cases to your local Community Health Unit. Community Health Services will continue to give high priority to epidemiologic and laboratory investigation of these cases. Another progress report is planned within the next four months.

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

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An Investigation into the Incidence of Low Back Pain in Hospital Workers

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William D. Stanish, F.R.C.S. (Can) and James C. Wall, B.Sc., M.Sc., M.Ed., Ph.D.*

Clinical concerns have been expressed at the seemingly high number of hospital workers suffering from low back problems. The literature indicates that this condition is a recognized source of incapacitation, suffering and economic loss, especially in industrialized nations. The purpose of this study was to quantify the incidence of low back disorders and to describe some factors associated with them.

This was a retrospective study of the accident report forms filed in the occupational health department of a large general hospital. Data were collected over a two year period and SPSS routines were used to calculate descriptive statistics on twelve variables. The total number of reported back injuries was 171 which represents 10 percent of the total number of injuries reported. The nursing profession reported 102 low back injuries or 60 percent of the low back injuries reported. Other factors such as work time lost, location in hospital where injury occurred, age, activity associated with injury were recorded.

The data provide useful information concerning low back injuries in this occupational group and thus form a basis for further investigation of some of the factors reported.

INTRODUCTION

The epidemiology of low back pain has received increasing attention in recent years, because of the immense economic effects and social impact that follow from the syndrome.¹ Annual costs of back pain in the United States have risen to 14 billion dollars of which an estimated \$5 billion is spent directly on professional visits and treatments.²

While heavy industry has commonly been studied, service industry employees, including hospital workers, have also contributed to back injury statistics. In Great Britain in 1979, 750,000 working days were lost by nurses as a result of back pain.³ Similar economic statistics on back injury in Canada have not been compiled, although comparable proportional figures can be assumed. The present study investigated the actual incidence of back disorders reported to the Occupational Health Department and some of the individual and work factors associated with their occurrence.

METHODS AND MATERIALS

Data were collected from the accident report forms filed in the Occupational Health Department of the largest general hospital (approx. 3000 employees) in Atlantic Canada. The reviewed reports covered a two year period. Twelve variables were extracted as follows:

1. Age.
2. Sex.
3. Location of work.
4. Specific nursing ward.
5. Accident activity.
6. Time of Day.
7. Type of Shift (8 or 12 hour)
8. Shift time.
9. Day of shift cycle.
10. Work time lost.
11. Previous disability
12. Permanent disability.

A statistical package (SPSS) using a Cyber computer was employed to calculate descriptive statistics for these data.

RESULTS

Although it was recognised that a bias exists in this sample because only the reported injuries were included, the results provide useful information on the low back injury profile. The total number of reported back injuries was 171 representing 10% of all reported injuries over the two year period as indicated in Table I. Sixty four (38%) of these injuries resulted in time lost from work whereas 84 (49%) did not lose time and information was not available for the remaining 13%. Approximately 44% of those that lost time from work lost more than one week from work. Further details are provided in Table II. Three injuries (2%) of the cases reviewed resulted in permanent disabilities and cessation of employment.

TABLE I
SUMMARY OF THE REPORTED INJURIES AND
LOW BACK INJURIES

	Total injuries reported	Total low back injuries	Total nursing injuries	Total low back injuries to nurses	Total injuries to other occupational groups	Total low back injuries to other occupational groups
	1650	171	561	102	1089	69
Percentage of total injuries	100%	10%	34%	6%	66%	4%
Percentage of total low back injuries		100%	—	60%	—	40%
Percentage of total injuries for that occupational group			100%	18%	100%	6%

— Occupations other than nursing (RN's, CNA's)

The age range of employees reporting low back pain was between 17 and 59 years, with the mean age being 28.9 (s.d. 10) years. A frequency distribution for age is presented in Figure 1

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from which can be seen that 50% of the cases were 25 years or less. The predominant results show that females (79%) with no previous back injury (78%) were injured performing lifting tasks (68%) between 7.00 a.m. and 3.00 p.m. (61%). Tables III and IV provide more details of these variables. Employees most frequently involved in low back injuries were nursing (including RNA and CNA's), accounting for 60% of the cases. The next most frequent groups to report injuries were the dietary, laundry and central escort accounting for 12 (7%), 8 (5%) and 8 (5%) respectively. Since 34% of the total injuries reported involved nurses or CNA's the percentage of low back injuries reported for nurses was 18% compared to 6% for all other hospital employees [Refer to Table I].

TABLE II

WORK TIME LOST REPORTED FOR LOW BACK INJURIES

	1-3 Days	4-7 Days	8 days-1 month	1-3 months	More than 3 months	Permanent Disability
Total Number	64	20	16	10	9	6
Percentage of total reported low back injuries	38%	12%	9%	6%	5%	4%
Percentage of total injuries resulting in work time lost	100%	31%	25%	16%	14%	9%

One hundred and twenty (70%) of the injuries occurred on the nursing wards. Of these, the wards where injuries occurred most often were neurosurgery (21%), nephrology (16%) and cardiology (16%) accounting for the location of over 50% of the injuries. This is an interesting finding as 12 different wards were identified as sites where injuries occurred.

DISCUSSION

The results of this study suggest that low back pain is a costly problem even when the human and financial costs of those back injuries resulting in permanent disablement are disregarded. The total payments made to employees for work time lost due to low back injuries for the time period studied were estimated to be \$128,444. The exact payments made were not easily accessible and this value was based on an average hourly wage for the occupational groups affected. From this total value, the average payment per low back injury resulting in time lost from work was \$2,105.

In contrast to previous literature indicating that back injuries form 20-25% of all injuries, this study found a lower incidence (10%), although the incidence for nurses alone (18%) was closely comparable. Hospital employees are always encouraged to report every type of injury including minor cuts and abrasions which may help to explain the relatively lower figure for back injury. In some industry groups, 60% of back injuries were sustained by persons with less than 12 months of job experience.⁴ While the data on length of employment were not accessible, the present result of 50% of back injuries being sustained by persons less than 25 years of age suggests that the level of experience may be worthy of further study.

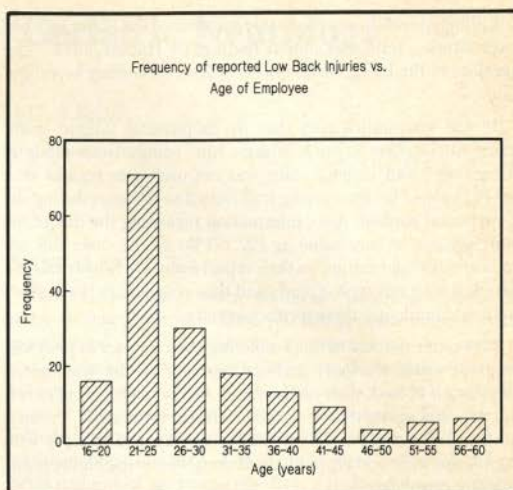


Figure 1

TABLE III

TIME OF DAY THAT LOW BACK INJURIES WERE REPORTED

Time of Day	Actual Cases Reported	Percentage of Total Number Reported
3:01 am - 7:00 am	6	4
7:01 am - 11:00 am	55	32
11:01 am - 3:00 pm	49	29
3:01 pm - 7:00 pm	21	12
7:01 pm - 11:00 pm	12	7
11:01 pm - 3:00 am	16	9
time not recorded	12	7

TABLE IV

ACTIVITIES ASSOCIATED WITH LOW BACK INJURIES

Activity	Actual Cases Reported	Percentage of Total Number Reported
Lifting	116	67.8
Pulling/Pushing	19	11.0
Falling/Slipping	16	9.4
Bending/Reaching/ Twisting	8	4.7
Other Activities	11	6.5

— One value was not reported.

High rates of back injury contribute to staff turnover and attrition. Of nurses leaving owing to illness, 40% have done so because of severe back pain.⁵

Lifting injuries in nurses clearly constituted the major cause of back injuries, reflecting similar findings by Hoover, 1973⁶. The specifics of the lifting task, however, deserves further investigation.

It was also anticipated that psychophysical fatigue might cause an increase in such injuries but, comparisons made of nurses on 8 and 12 hour shifts was not useful, as regular shift times changed for the nursing staff from 8 to 12 hours during the time period studied. Also, information regarding the day of the shift was not of any value as 122 (71%) of the cases did not indicate this information on their report form. Obviously this is a problem with this type of study and thus emphasizes the importance of completing these forms correctly.

Forty-nine percent of those suffering back injuries did not lose time off work, which is perhaps contrary to the widespread impression of back pain malingering. While malingering exists, one report suggests that its frequency is overestimated.⁷ Troup *et al.* found that nearly 70% of employees returned to work with continuing back and leg pain, the latter group being highly prone to early recurrence.⁸

Efforts to minimise the incidence of back injury and their recurrences have focussed mainly on preventive and re-educative programs.⁹ While much anecdotal support exists for them, further controlled studies are required for their substantiation. The results of this study reinforce the observation by Bell *et al.* that priority should be given to detailed investigation of the problems of lifting patients.¹⁰ Results such as those presented can assist in focussing attention onto the groups, areas and activities to be examined using an experimental approach. It is also evident from these results that although similarities may be found among institutions, that identifiable differences exist which can provide factors worthy of further investigation. □

ACKNOWLEDGEMENTS

Thanks are expressed in particular to Mrs. G. Thomas, R.N. M.A., of the Occupational Health Department for provision of facilities and assistance and to Pamela Doig for her assistance with data collection.

This project was supported in part by funds from the Department of Surgery, Dalhousie University.

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SPINA BIFIDA ASSOCIATION OF NOVA SCOTIA

Spina bifida is the second most common birth defect in the world. Because of ventricular shunts and intermittent catheterizations, most of these children are living to adulthood. Their orthopedic, urinary and educational needs are extensive. Hospitalizations are numerous and families require continuous medical and social support. The Spina Bifida Association of Nova Scotia consists of parents of children with spina bifida, adults with spina bifida and health professionals from the IWK Hospital for Children and the Grace Maternity Hospital. The organization provides information on all aspects of human development with spina bifida. It provides people the opportunity to meet others with similar problems and to share common goals and experiences.

The association provides Parent Kits to families who have a new spina bifida baby. The kit has two booklets, one written by a physician and one by a parent. As well, there is literature on breastfeeding, despite early separation of mother and child. A phone number and address is provided for contact with members of the association.

Another service offered by the association is the Parent-to-Parent group. A small group of parents who are dealing effectively with their situations and who have been trained by a social worker, are available to talk to new parents, offering support and encouragement. Referrals to the support group are made at the request of the family. For further information about the association, the Parent Kits, and the Parent-to-Parent group, you can write to SBANS, Box 3145, Dartmouth East, B2W 5G2, or call Marg Carroll at 865-6383.



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Some Observations on "Geriatric Neurology"

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It should be apparent to all physicians and adult neurologists that elderly patients comprise an increasing part of daily practice. The prevalence and incidence of neurological disorders affecting the elderly will undoubtedly increase as this century draws to a close. Along with the defined neurological disorders there will have to be greater attention paid to what is "normal" in the neurological assessment of elderly patients. If not specifically defined at present, the field of "geriatric neurology" will come into its own right in the future just as "pediatric neurology" has evolved over the past thirty years.

The aging brain retains little of the plasticity and adaptability present in earlier years to compensate for disease and "normal" function. The concept of a "threshold phenomena" allows one to understand such processes. There comes a time when failure to compensate passes beyond a certain "threshold" and leads to normal aging and inevitably to disease. It appears the more you start with (in terms of neurological abilities) the better off you will be in the long run. Certain individuals age "earlier" or "later" than others and one therefore has to assess physiological rather than chronological age.

It is most important that you do not give unnecessary significance to physical findings which are in fact "normal" for elderly patients if they do not correlate with historical symptoms. These findings *must* be interpreted in light of the clinical presentation. For example, it is no use pursuing consultation or EMG studies in an elderly patient who has reduced reflexes but no symptoms of neuropathy.

With these thoughts in mind I would like to review some of the more common findings in the neurological examination that I have observed in elderly patients in terms of "normal" blending into pathological processes.

HISTORY

It is important to obtain a good chronological history of the events that brought the patient to your attention. First, try to obtain it from the patient directly, *and* get a collateral history from the spouse, relative or friend who knows the patient well. Failure to do so in some cases may lead to unqualified judgements and erroneous conclusions, resulting in unnecessary investigations. If you have to repeat any single aspect of the total examination or investigations in the future, often repeating the *history* will be the most helpful. Try to avoid letting the person accompanying the patient detail the complaints, but allow them to listen to your inquiring questions and later they can assist you in confirming or negating the salient points. Be sure you fully understand what the patient means by their symptoms (often elderly patients use medical terminology inappropriately). Finally, allow sufficient time for these patients to express their complaints (their memory, attention span and ability to give a history may be normally slow with advancing years).

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MENTAL STATUS

In all circumstances where the history clearly indicates a disorder of higher cortical function you *must* perform a mental status examination. If the intellectual deterioration is subjective or minimal on historical grounds, then I would recommend that you tell your patients that you are going to ask them several questions, some of which may appear "silly or ridiculous". They are not intended to insult them but merely are a means by which you can test their brain functions. I have observed several demented patients in the older age groups who have minimized their complaints or relied on their spouse to answer historical questions. Many physicians *assume* in this setting that the problems are not significant but are surprised at a later date to find that the mental status examination, performed by a neurologist or psychiatrist, is grossly abnormal. Omitting it in such cases leads to the wrong diagnosis and is so easily corrected by a few minutes of mental status examination.

One cannot expect you to do a detailed mental status approaching formal psychological testing on all patients, but as a *minimum* be sure they are oriented to time, place and person, can recall three objects at the end of one minute and three minutes, and do serial seven subtractions from one hundred. Also, be sure they are not aphasic and have no obvious depressive or content disorder. If you would *only* do this on all elderly patients with historical evidence of intellectual deterioration, then the yield would be surprisingly significant in differentiating normal memory loss from organic dementia, which would lead to further mental status testing and avoidance of unnecessary investigations.

CRANIAL NERVES

Most older patients have some hearing impairment going back over several years usually due to presbycusis. It has always interested me how we tend to speak louder to the elderly, assuming hearing loss which may not be present. You can test hearing in normal conversation and by rubbing your index finger and the thumb in front of each ear independently and simultaneously, with their eyes closed. Beware of significant progressive unilateral hearing loss (pathological at any age).

Pupils are smaller and less reactive in the elderly. Cataracts frequently obscure adequate fundal examination. Visual acuity is commonly reduced in the elderly but rarely tested by most physicians. A brisk jaw jerk, palmomental reflexes, pout reflex and glabellar tap are not uncommon in the elderly who have some degree of cortical atrophy without dementia. Vertical gaze is usually diminished.

MOTOR SYSTEM

In the frail elderly, testing muscle strength can be difficult and hard to assess. Be sure all limbs move adequately and bilaterally equally against gravity. Slowness of movement is common. Weakness of proximal muscles is not uncommon and not necessarily myopathic. Tone is frequently increased in a cogwheel fashion or even spastic qualities, depending upon the presence of a previous

(usually forgotten) small stroke, cervical spondylosis or cortical atrophy. Wasting of small hand muscles and anterior compartment muscles of the lower limbs without weakness are common. Although isolated fasciculations often occur with tiredness at any age, diffuse and persistent fasciculations are uncommon and usually indicate anterior horn cell disease (often insidious and slowly progressive in the elderly).

Postural or action tremor on extension of the arms and involving the head is common and not always associated with Parkinson's disease.

SENSORY SYSTEM

It is difficult at the best of times to examine the sensory system in the elderly, but reduced pain and vibration sense in the lower limbs are common. Position sense should be normal.

REFLEXES

Absent ankle jerks are common in the elderly. Absent reflexes or those only present with reinforcement are common in the absence of neuropathy. Brisk reflexes and an occasional upgoing toe may occur as a result of the disorders mentioned above which lead to spastic qualities.

STANCE AND GAIT

Probably the most important functional assessment in the elderly patient outside the history and mental status examination is the assessment of gait, but also, probably the most forgotten assessment, particularly in bedridden or hospitalized patients. Slowness of movement, difficulty turning, poor tandem gait, failure to swing arms are not uncommon, and frequently related to medication or multiple sensory deficits rather than Parkinson's disease. Tandem gait is usually poorly done and some "swaying" with the eyes closed is often present without sensory ataxia or cerebellar disease.

THE MULTIPLE SENSORY DEFICIT SYNDROME

As an example of a common syndrome in the elderly that leads to much confusion clinically and numerous referrals and investigations, I would like to discuss briefly the syndrome of Multiple Sensory Deficits originally described by D. Drachman in 1972.¹

Our perception of ourselves in space depends upon adequate visual, auditory, vestibular, and proprioceptive information being available to our brains in time to correct our spatial orientation when changing positions (such as walking, turning and bending). Any *serious* impairment of *any* of these sensory modalities at any age can lead to imbalance, dizziness or vertigo. In the elderly what occurs is *mild to moderate* impairment of many of these modalities that *summate* to produce the same symptoms. No *single* abnormality is usually sufficient to be of clinical significance.

Thus, an elderly patient with reduced visual acuity (secondary to cataracts or macular degeneration), reduced hearing (secondary to presbycusis and otosclerosis), reduced vestibular function (secondary to labyrinth disorders) and reduced position sense (secondary to cervical osteoarthritis, diabetic sensory neuropathy and peripheral nerve changes of ageing) will present with position producing "dizziness". One can readily see the number of specialists that could be involved in such a case and the numerous (usually unnecessary) investigations that could be performed.

What is necessary is to see the connection between all the problems and treat each problem separately in order to treat the whole patient. Moving slower, turning slower, getting up slower, as well as treatment of the medical conditions will improve the patient. Drachman felt this disorder was the commonest cause of "dizzi-

ness" in the elderly and observation has found this to be true. You have undoubtedly seen this syndrome but may not have recognized it, and it deserves re-emphasis.

INVESTIGATIONS

Investigations should always be tailored to the clinical setting. In the elderly patient it is easy to underinvestigate or overinvestigate patients as in any area of medicine. Before sending numerous referrals and ordering several tests be sure you make the symptom fit the sign and vice versa, and be sure that the information you are seeking will change your management. Neurologically, not everything appears on a "CT scan" and frequently, if the diagnosis is incorrect, the best tests are repeating the history and physical and following the patient with good objective assessments.

CONCLUSIONS

Of course you will see the elderly patient who most approximates what you consider to be a totally normal neurological examination in a younger person. You will see the "normal" blending into the pathological. You will, however, miss many problems in the elderly unless you train yourself to observe by STOP, LOOKING, and LISTENING. It can be most useful to bring back these patients on one or more occasions to complete your observations. As well I have found that elderly patients with or without neurological disorders to be a most receptive and pleasant group of patients to deal with clinically. Their medical expectations are not as high as younger patients and they are extremely grateful for anything you can do for them.

Many standard neurological books do not deal specifically with geriatric neurological disease. However, as a reference, I can direct your attention to *The Neurology of Aging*, for those who have a special interest in this area.² It is an excellent and up to date monograph. □

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Discontinuation of Home Apnea Monitoring: A Time of Stress for Parents

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Home apnea monitoring (HAM) is stressful to parents but discontinuing the monitor (D/C) is also very anxiety provoking. We have assessed 25 families' adjustment by questionnaire 2 months after D/C. HAM was used for 7 months average (range 2-36) with infants 9 months of age average (3-41) at D/C. 14/25 had true apnea alarms at home and 17/25 felt that HAM saved their child's life. 10/25 families insisted HAM be continued beyond the D/C criteria because of severe anxiety. HAM was D/C "cold turkey" in 17/25 and 4 weaned off gradually (4 uncertain).

The first weeks after D/C, parents frequently checked the infant at night: 12/25 every 15 minutes, 8 at least 2-3 times/night, 3 once/night, and 1 if baby slept late. 2 months after D/C, 9/25 families still checked 2 times/night. After D/C, 19/25 mothers were "anxious, sick with worry, or scared to death", and 9 reported significant depression usually with weight loss and sleep disturbance. After D/C 7 marriages were better, 2 worse, and 12 unchanged. Siblings and infants seemed unchanged by D/C. Because of the HAM experience, 8 families will have no further children. All 25 would use HAM again and would recommend it to others.

Therefore, most parents experienced extreme stress for at least 2 months after D/C HAM. This should be anticipated and lead to continued family support.

INTRODUCTION

In recent years, home apnea monitors have been prescribed frequently for children who have had an apneic episode without identifiable cause, or who have had a previous sibling die of sudden infant death. Having a home apnea monitor is a stressful but manageable experience for most families, given adequate technical and emotional support.¹ Nonetheless, we have observed that families become very dependent on the monitor and now report our experience in discontinuing this treatment.

METHOD

Three groups of children have had home apnea monitors between 1979-1982. First, consecutive children with infant apnea syndrome presenting to the I.W. Killam Hospital for Children (a regional tertiary pediatric centre for a population of approximately 1.5 million) were investigated extensively by protocol described elsewhere.² Those infants with a clear history of serious apnea but without identifiable cause, and whose families were judged capable, received home apnea monitors.

Secondly, subsequent siblings of a child who died of SIDS (sub-SID) who themselves showed, on overnight polygraphic

Presented, in part, at Canadian Pediatric Society, June 27, 1983, Quebec, P.Q.

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recording, evidence of excessive periodic breathing (greater than 20% of sleep time), or greater than 4.0 apneas per hour of sleep time, or prolonged (greater than 15 seconds) isolated apneas, received home monitors.

Third, infants with neonatal apnea persisting beyond 40 weeks gestational age but without definable cause, were also monitored at home.

The monitors used assessed heart rate and respiration by chest impedance measured by stick-on or belt electrode. The apnea alarm was set at 15 seconds with the heart rate alarm at 80 beats per minute. Families were instructed in CPR and monitor use and spent a night in our Care By Parent Unit with the baby and monitor prior to discharge. Once at home, the families were visited by our biomedical technician and they received comprehensive support weekly or as needed, by a team including pediatricians, social worker, and public health nurse. If problems arose, the families were encouraged to call us either at work or at home. Otherwise, the child and his family were evaluated every two months by the SIDS team physician.

Before taking the monitor home, the families agreed to the following discontinuation criteria: for infant apnea syndrome, 2 months apnea free and a minimum of 6 months of age; and for sub-SIDS, 2 months apnea free and 8 months of age. Both groups of children had to have a second normal polygraph if the first was abnormal. Once the child fulfilled the above criteria, a recommendation was made to the family by the SIDS team physician to discontinue the monitor. Two methods were suggested, either to stop suddenly and completely or to gradually 'wean' the child off the monitor over several weeks. The family choose their own preference. Two months following discontinuation of the monitor, the families completed a questionnaire (available on request).

RESULTS

The total number of patients monitored was 25: infant apnea syndrome - 12; subsequent sibling of SIDS - 8; persistent neonatal apnea - 5. Fourteen of the 25 families reported apnea alarms at home "requiring" stimulation of the baby to recommence breathing. Monitors were used for an average of 7 months (2-36 months) and the infants average age was 9 months (3-41 months) at the time of discontinuation.

Ten of the twenty-five families successfully persuaded the physician to continue the monitor for at least 2 months or longer than the discontinuation criteria. For 5 of the 10, it was even necessary to discontinue the monitor in hospital. Seventeen out of twenty-five chose to discontinue the home apnea monitor suddenly and completely, while 8 tapered its use by initially stopping during daytime naps.

Two months after discontinuing the monitor, 18 of 25 mothers reported they were "very anxious", "sick with worry", "scared to death", or "depressed". Eight mothers reported sleep distur-

Analysis by these techniques are generally reliable except in moderate to advanced renal disease where inactive metabolites build up and cross-react with the antibody resulting in false-positive results.

Larger institutions often analyze high volume drug assays such as theophylline and anticonvulsants by high-performance liquid chromatography. This technique is not affected by renal disease and is more precise than immunoassay procedures (typically <5% day-to-day coefficient of variation).

One can anticipate major advances in technology since several companies are introducing dry film layer systems similar to the dipsticks used for urinalysis (Pippenger, 1985). Some of these systems provide quantitation of drugs such as the Ames Seryalyzer. The Syva Company (Syntex Diagnostics) plans on introducing a dry reagent "stick" with a colour comparison chart for semi-quantitation. These systems will probably be marketed for in-home monitoring. This may be important for asthmatics on theophylline for example, considering the impact of home blood glucose monitoring in the management of diabetes.

Digoxin Analysis in 1985

Requests for digoxin quantitation result in approximately 1000 analyses/month for the Dalhousie teaching hospitals. Availability of the test has provided information concerning the pharmacology of the drug even though there is no specific therapeutic range. In fact, overlap in therapeutic and toxic ranges exists from 1.92-3.84 nmol/L.

Indications for digoxin analysis have included: when changing the dose in patients with renal impairment; to confirm clinically suspected toxicity; to document a possible drug interaction and to verify suspected patient non-compliance.

On the other hand, a review of 27 clinical studies (Dodek, 1977) which included digoxin analysis concluded that drug levels provided no diagnostic information in addition to that obtained from routine clinical observation. Whether knowledge of the digoxin level was diagnostically more useful than awareness of the digoxin dose, renal function, serum potassium concentration and cardiac status was not elucidated in any study. *In addition, the wide overlap between therapeutic and toxic ranges makes requests for emergency digoxin analysis of very limited value.*

Laboratory analysis of digoxin still has several challenges. Since the unfortunate experience in Toronto, the known interference by endogenous substances such as fatty acids and an endogenous digoxin-like substance, one should interpret all "apparent" digoxin values with caution, especially in the neonatal population (Hicks, 1984; Soldin, 1984).

Summary

The availability of drug monitoring has improved patient care, especially for the anticonvulsants, aminoglycosides, theophylline and lithium. For new drugs, one must critically evaluate the need for monitoring in light of pharmacokinetic principles, analytical costs and limitations and the overall clinical usefulness of the results.

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ISSN 0705-291X

Annual Subscription Rate \$12.50

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Dead Bodies, Autopsies, Transplants and The Law of Nova Scotia

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Working in a centre for medical research and transplantation, Nova Scotia physicians must become familiar not only with the law of living patients but also with the law of their remains. Such knowledge cannot only assist the living but place the Nova Scotia medical community in a better position to lobby for legislative change where it is necessary.

Four major medical-legal issues are concerned with human remains, as well as with a number of minor miscellaneous problems. The four major problems are:

- I - Moment of Death
- II - Transplantation from and use of Dead Bodies
- III - Unclaimed Dead Bodies
- IV - The Fatality Inquiries Act

I - MOMENT OF DEATH

One cannot deal with the remains of a deceased until death has taken place. The question that arises, therefore, is when does death in fact occur.

Death has numerous legal consequences since at the moment of death various laws relating to the dead body immediately come into effect. Death itself, however, is not a legal matter but is a physical condition determined by medical science.

In Nova Scotia there is no legislation stating when in fact death has occurred. Were a dispute to arise in the law courts over whether death had or had not occurred at a particular time, the matter would be determined by the judge listening to the expert medical witness giving their opinions. Their opinions on the fact of death would be based on current scientific knowledge and practice on the subject.

Therefore, if the current state of the art says that when all brain activity ceases an individual is considered dead, the courts will follow suit and accept that opinion. If, on the other hand, there is some disagreement among the experts as to whether or not an individual was dead at a particular moment in time, the court will then have to make a judgment among the experts.

For the purposes of determining moment of death in order to transplant part of the deceased's body into a living body, the Human Tissue Gift Act of Nova Scotia states that the fact of death shall be determined by at least two physicians in accordance with accepted medical practice.¹ This means that the accepted medical practice could change from time to time but, when a transplantation is about to take place, more than one physician must make that decision according to the method of determining death that is accepted at that time.

It should be noted that the Human Tissue Gift Act further states that no physician who has had any association with the proposed recipient of an organ nor any physician who is to take part in the transplant procedures shall be involved in the determination of death.² This is intended to avoid the possibility of a conflict of interest whereby the physician wants to declare the person dead so that a potential recipient can benefit, even though the person who is about to die may not yet be dead.

There have been a number of attempts in Canada to have provincial legislatures establish a moment of death by law. Only Manitoba has bowed to this pressure, as have number of American states. The Manitoba Vital Statistics Act states that the death of a person takes place at the time at which irreversible cessation of all that person's brain function occurs.³ The Law Reform Commission of Canada has also recommended such a legislated moment of death for the purposes of the Criminal Code. The result of such an enactment would be to have politicians sitting in legislatures and parliaments making scientific determinations which could only be changed through the political process. Fortunately this development has not yet occurred across the country.

It is often believed that no one is officially dead until a physician has pronounced death. There is no legal requirement for such a pronouncement. If there is a dispute over whether someone is dead, the court will make such a determination on the basis of medical opinions as well as testimony given by non-medical witnesses.

What is required is a medical certificate from a physician last in attendance or the medical examiner stating the cause of death. Without such a certificate the funeral director will not be able to obtain a burial permit. No body may be disposed of, nor a funeral held, without such a permit.

II - TRANSPLANTATION FROM AND USE OF DEAD BODIES

Every province in Canada has what is known as human tissue gift legislation. In Nova Scotia, the Human Tissue Gift Act governs transplantations from one living human body to another⁴ as well as so-called post-mortem donations for transplants and other uses.⁵

One says "so-called donation" because the law does not regard the body or its parts as property. Therefore, it cannot be donated. Instead, the Human Tissue Gift Act allows for a direction that the body be used in a particular manner and gives authority to others to act upon the direction.

There are three situations involving the so-called donation of bodies and parts. The first is where the deceased wanted his body to be used for transplantation or other uses. The second is where the deceased's relatives wanted the body to be used. The third is where the Medical Examiner becomes involved.

*Based on a paper presented by Mr. Lorne Elkin Rozovsky, Q.C., Member of the Halifax law firm of Kitz Matheson and Adjunct Associate Professor of Law and Medicine, Dalhousie University, Halifax, Nova Scotia in the Department of Anatomy, Faculty of Medicine, December 11, 1984.

i) Consent by the Donor⁶

The Human Tissue Gift Act of this province permits any person who has attained the age of 19 to consent either in writing at any time, or orally in the presence of at least two witnesses during his last illness, to the use of his body or parts of his body after death for therapeutic purposes, medical education or scientific research. Therefore, he could consent to the transplantation of a part of his body. He could also consent to an autopsy or to the use of his body by anatomy students and researchers.

Anyone under the age of 19, which is the age of majority in Nova Scotia, is not permitted to give consent to the use of his body after death. However, if someone under 19 does give consent and a physician or other person acts upon that consent and does not have any reason to believe that the deceased was under 19, the consent is valid.

A consent given under the Act by a deceased is binding and is full authority for the use of the body or the removal and use of a particular part of the body. The only restriction is that no one shall act on the basis of the consent if he has reason to believe that it was subsequently withdrawn.

The result of this provision is that one may make use of the body on the basis of the consent even though the relatives may object. Once a deceased has given his consent to the use of his body, no relative has the legal right to stop it.

ii) Consent by Others⁷

Where a person of any age has not given a consent or in the opinion of a physician is incapable of giving a consent by reason of injury or disease and his death is imminent, the Human Tissue Gift Act permits a number of other individuals to consent on his behalf to the use of his body. These individuals are listed in order of priority so that each succeeding person in the list can only exercise his authority to consent if there is no such person in existence further up the list, or if such persons are not readily available. The Act does not define "readily available", but this would depend on the circumstances.

The list in order of priority is as follows: spouse of any age; any one of the children who has attained 19; either of the parents of any age; any one of his brothers or sisters who has attained 19; any other of his next of kin who has attained 19; and the person lawfully in possession of the body. However, if he died in hospital, the administrative head of the hospital although in lawful possession, cannot give consent.

The wording in the list results in some anomalies. A wife of 15 or 16 can donate her deceased husband's body even though she cannot donate her own. Similarly, parents under the age of 19 can donate the body of their deceased child, but not their own bodies.

A further result of this list is that if there are two living parents or more than two living siblings and there is a disagreement over the use of the body, the consent of one parent, or if there are none, one sibling can serve as authorization. The objection of the others is of no effect.

A further result is that those higher on the priority list overrule the desires of those lower down. The spouse overrules the desires of the children, parents and the next of kin.

A person other than the deceased may consent in writing that is signed, may consent orally in the presence of at least two witnesses, or may consent by the telegraphic, recorded telephonic or other recorded message. Thus a telephone consent is acceptable, but it must be recorded.

Just as in the case of the deceased having given consent, consent by another person may be to the body or part or parts for therapeutic purposes, medical education or scientific research.

The problem with this list of priorities is found in the individual last on the list, that is, the person who is lawfully in possession of the body.

While that provision is clear, the Act specifically excludes the administrative head of the hospital where the individual died in the hospital. In such a case, the administrative head of the hospital, as the agent for the hospital corporation, is the person who is in effect lawfully in possession of the body, and yet he is not permitted to consent to its use.

The purpose of excluding the administrator is, of course, to avoid the possibility of conflict of interest where the administrator consents to the use of the body because it is in the hospital's interests to use the body. The consent would therefore not be an unbiased one.

However, if there are no relatives and no spouse and the administrator cannot consent, it would appear then that no one can give consent and action could not be taken, at least for transplantation purposes or hospital autopsy purposes under the Human Tissue Gift Act.

It should also be pointed out that no one can consent to the use of a body under the Act if they have reason to believe that the person who died or whose death is imminent would have objected to such use.

iii) The Medical-Legal Examination⁸

A special section was introduced into the Fatality Inquiries Act in 1982 which gave any person performing an autopsy, under the direction of the Chief Medical Examiner, the authority to extract the pituitary gland and to have it delivered to any person or agency designated by the Medical Examiner for use in the treatment of persons having a growth hormone deficiency.⁸ This can be done despite the fact that the deceased did not consent.

However, this provision of the Fatality Inquiries Act does not apply if the Chief Medical Examiner or the person performing the autopsy has any reason to believe that the deceased would have objected or that the surviving spouse, parent, child, sibling or personal representative objects. It is not clear as to whether the Medical Examiner should make inquiries to determine if any of these individuals have any objection. It is probably not necessary unless he has some suspicion that they might object.

III - UNCLAIMED DEAD BODIES

The Anatomy Act of Nova Scotia deals with the subject of unclaimed dead bodies.⁹

Under this Act, any medical examiner in Nova Scotia and every municipal officer having charge or control of dead bodies requiring to be buried or cremated at the public expense, and any administrator of any municipal home, prison, morgue, hospital or other public institution having charge of dead bodies of persons who prior to death were maintained at the public expense, shall notify the Inspector of Anatomy of any body that is unclaimed.

A body is considered unclaimed if no one who is at least a second cousin claims it for burial or cremation within 48 hours after death or if the deceased person was a traveller who died suddenly.

The Inspector then has the authority to remove the body to any legally established medical school or college for the advancement of anatomical or pathological science. However, such a school must be within Nova Scotia.

The school or college is required to provide a bond to the Inspector in the amount of \$1,000 for every body that it shall be used only within the province for the promotion of medical science. After being so used, the remains shall be decently buried or cremated.

The medical school or college is also required to keep a register of every body supplied either by the Inspector of Anatomy or under the Human Tissue Gift Act with the name, sex, age, religion and nationality of the deceased, as well as the date of delivery for burial or cremation with the name or description of the cemetery in which the body was buried or the place where the body was cremated. All expenses are to be paid by the college or medical school and not by the province or any municipality.

It should be noted that under the Anatomy Act, medical schools are permitted to receive bodies and permit their dissection only if the body has been supplied by the Inspector of Anatomy or received with his permission or have been given under the Human Tissue Gift Act. To do so in any other manner imposes a penalty of not less than \$100 and not more than \$200.

Should someone wish to send or take a body outside of Nova Scotia for surgical or anatomical purposes, written permission of the Inspector of Anatomy is required. The fine for contravening this section is \$100.

The Anatomy Act does not deal with the question of whether the Inspector of Anatomy can consent to a post-mortem transplantation. However, if under the Human Tissue Gift Act there is no one else who can consent and he is in possession of the body, he might be authorized to consent if the body was not required by the medical school. From a practical point of view, this is not very likely, since he would not assume this position for at least forty-eight hours.

IV - THE FATALITY INQUIRIES ACT¹⁰

Every province and territory has a system to investigate sudden or unexplained deaths. Most provinces use what is referred to as the coroner system. However, Alberta, Manitoba and Nova Scotia employ the medical examiner system under which there are Chief Medical Examiners in all parts of the Province as well as a Chief Medical Examiner for the entire Province.

If it appears that on the discovery of a body there is reasonable cause to suspect that the person died by violence, undue means, or culpable negligence; or that the person died in jail or prison, the Chief Medical Examiner of the area takes charge of the body. He is required to inquire into the cause and manner of the death and may have an autopsy performed. He may do it himself or appoint someone else to perform it for him.

Such use of the body does not require the consent of the spouse or relatives. They may even object to the autopsy. The Chief Medical Examiner's power, however, is paramount. He is not required to seek their consent and may ignore their objections.

Even where a deceased has consented to the use of his body for transplantation or other purposes under the Human Tissue Gift Act, once his body falls within the provisions of the Fatality Inquiries Act, the Medical Examiner has the total authority over the body for the purpose of medico-legal investigations. The Chief Medical Examiner does not have the authority to consent to its use

for transplantation nor for scientific or educational purposes.

It should also be noted that various other individuals who may be in possession of a body, such as the Public Trustee, a funeral director or the superintendent of a crematorium also do not have the authority to consent to the use of a body for anatomical purposes.

V - MISCELLANEOUS PROVISIONS

In addition to the legislation or consent to the use of a body, a number of other miscellaneous provisions exist with respect to human remains.

i) Section 11 of the Human Tissue Gift Act specifically prohibits the buying, selling or otherwise dealing in, directly or indirectly, for valuable consideration, any tissue for a transplant, or any body or part or parts other than blood or a blood constituent, for therapeutic purposes, medical education or scientific research. The result of this prohibition is that a medical school cannot buy a body or parts but is restricted to bodies and parts given under the provisions of the Human Tissue Gift Act or the Anatomy Act.

ii) The Human Tissue Gift Act, under Section 12, also prohibits any person from disclosing any information or document whereby the identity of any person who has given or refused to give a consent to the use of a body; with respect to whom a consent has been given or into whose body tissue has been, is being or may be transplanted, may become known publicly.

iii) Where the donation of a body or part of a body cannot be used for any of the purposes specified in the consent, that body or part shall be dealt with as if no consent had been given. This means ordinarily that it would revert to the estate of the deceased, which would have the responsibility of disposing of it.

iv) Transportation of dead bodies is dealt with under Sections 51 and 52 of the Health Act.¹ Any body that is to be transported where the transportation exceeds 72 hours after death must be embalmed or have been prepared in a manner outlined in the Act. That manner includes closing all orifices of the body with absorbent cotton, washing it with a disinfectant solution containing not less than 5% of a formaldehyde gas, enveloping it in a sheet saturated with that solution, placing it in an impermeable container and at once placing it in a coffin which is permanently sealed.

The body of a person who has died from Asiatic cholera, bubonic plague, smallpox or any other communicable disease specified by the Provincial Minister of Health shall not be embalmed but shall be enveloped in a sheet thoroughly saturated with a disinfectant solution containing not less than 5% of formaldehyde gas before being placed in the casket, and the casket shall be immediately closed permanently.

v) The Health Act also prohibits anyone from disinterring or removing a buried human body except at the instance of the Attorney General, unless with the written permission of the Medical Health Officer for the place in which the body is buried. Various provisions are also included with respect to the handling of a disinterred body.

vi) While most provisions dealing with bodies are under provincial legislation, the Criminal Code of Canada does have one section dealing with the subject. Section 178 makes it a criminal offence to neglect, without lawful excuse, to perform any duty that is imposed upon him by law or that he undertakes with

Continued on page 19

Current Topics in Community Health

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THERE IS NO FETAL TISSUE IN THE RUBELLA VACCINE NOW USED IN CANADA

The currently available rubella (German measles) vaccine is the most effective of several such vaccines developed since 1969. The incidence of rubella is at an all-time low in Canada and the United States because of the success of childhood immunization programs. More important, the congenital rubella syndrome has also become very rare. This syndrome refers to the malformations and damage occurring as the result of infection of the fetus following infection of a susceptible mother during the first trimester of pregnancy.

Prior to the use of the vaccine, approximately one of every 2000 live born infants suffered this syndrome during non-epidemic periods. Following an epidemic, as many as 2% of all newborns were affected. There is a 70% chance that a congenitally infected baby will have severe damage or malformation of one or more organs including the brain, eye, ear, heart, bones, teeth, pancreas, or thyroid.

To manufacture the vaccine, large amounts of virus are required. Viruses, including rubella, can grow only within cells and virus vaccines are produced by a process called tissue culture. Human or animal cells are placed in bottles containing nutrient fluid where they grow and divide. A special attenuated or weakened rubella virus is added to infect the cells. After the virus grows and multiplies, it is separated from the cells and purified to make the vaccine. No cells or other material from the tissue culture are present in the vaccine.

Only certain kinds of cells will grow continuously in tissue culture. Fetal cells will grow and divide well. The cells used to grow rubella vaccine virus are named W138, and were derived from lung tissue of a normal fetus obtained after a therapeutic abortion, nearly 25 years ago. W138 was not developed specifically for the purpose of vaccine production but has proven to be extremely effective for growing viruses. Large numbers of the cells were grown, frozen, and stored and are still available for vaccine production. Fetal cells are safer to use than adult human cells or animal cells for the production of vaccines, because fetal cells are much less likely to be infected with known or unknown viruses or to have been exposed to carcinogens and other toxins. In addition to rubella vaccine, rabies vaccines and one of the live polio virus vaccines are also produced using W138 cells.

Fears that rubella vaccine contains fetal tissue are totally unfounded. The vaccine consists of live viral particles and there is no fetal tissue in it. The use of rubella vaccine has prevented thousands of cases of the congenital rubella syndrome and has also prevented countless abortions which would have been performed because of rubella infections in early pregnancy.

Source: Canadian Paediatric Society, December 1984.

Note: This press release was developed in response to concerns expressed by some members of the antiabortion movement in Ontario about the use of fetal cell culture methods.

EXPLAINING "VACCINE FAILURES" - THE USE OF A SPORTS ANALOGY

Public health professionals are sometimes confronted by the apparent evidence of an "increasing rate of immunization failure", when no such increase exists. In fact, this "failure" is a paradox of vaccine coverage - namely that, for any given level of vaccine efficacy, the proportion of cases vaccinated in a population tends to rise as vaccination coverage increases in that population. Since national immunization programmes are currently achieving higher rates of coverage each year, this paradox is more likely to confront public health workers in their dealings with the press and public during outbreaks of vaccine preventable diseases. The following simple analogy, a "hockey statistics" story, may assist in explaining this paradox.

The Hockey Mask Paradox

Once, in a remote rural area, there were two hockey leagues which were always the subject of much discussion among the local population. The supporters of the Freedom League, which did not require its goalies to wear protective masks were constantly pointing out that the Safety First League, which did require its goalies to wear masks, had a very high rate of "mask failure" - facial injuries among goalies *while they were wearing their masks*. The Freedom League supporters would then suggest that such injuries were proof that masks were not only uncomfortable but ineffective. They would point out that fully half of the facial injury cases among goalies in the Safety First League occurred while they were wearing masks, as opposed to only 18% of such injuries occurring among goalies wearing masks in the Freedom League. On the other hand, supporters of the Safety First League were certain that there was good evidence of hockey masks' efficacy, in that sound experimental studies had shown that masks reduced the risk of facial injuries by 90%. Yet the Safety First League supporters could not see how it was possible for the Freedom League supporters to "lie with statistics" so that the masks appear to do no good.

The question is - what was the "lie" in the Freedom League supporters' argument?

The answer to this question is hidden in the phrase "the proportion of those injured *who were wearing masks*". Let us assume that 10% of goalies in these two leagues can expect to sustain a facial injury in a given hockey season if no mask is worn. If, as the experimental studies of masks had shown, the masks do reduce the risk of such injury by 90% - i.e. from a 10% to a 1% risk per year - we need only to specify one more fact in order to see why the percent of goalies injured while wearing masks is inevitably higher in the Safety First League *even if the masks are effective*. The fact that must be specified is the exact percentage of goalies wearing masks in each of the two leagues.

Suppose that 50% of the goalies in the Freedom League wear masks, as opposed to 90% of the goalies in the Safety First League. We can now calculate by simple arithmetic what fraction of facial injuries will occur to masked *vs.* unmasked goalies in each

league over a season of games. (Assume that there are 100 goalies in each league).

1. First calculation:

a. Number of facial injuries among unmasked goalies (50% of league)

= No. of unmasked goalies \times their rate of injury (without mask)

= (50 goalies) \times 10% per year

= 5 injuries per year.

b. Number of facial injuries among masked goalies (50% of league)

= No. of masked goalies \times their rate of injury (with mask)

= (50 goalies) \times 1% per year (masks reduce injury risk by 90%, from 10% to 1%)

= $\frac{1}{2}$ injury per year.

Therefore the fraction of all injuries in the Freedom League occurring to masked goalies in a year

= $\frac{1}{2} \div (5 + \frac{1}{2})$ is approximately 9%.

2. Now we will calculate the proportions of facial injuries occurring in the Safety First League to masked and unmasked goalies:

a. Number of facial injuries occurring among unmasked goalies (10% of league)

= No. of unmasked goalies \times their rate of injury

= (10 goalies) \times 10% per year = 1 injury per year.

b. Number of facial injuries among masked goalies (90% of league)

= No. of masked goalies \times their rate of injury

= (90) goalies \times 1% per year

= 0.9 injuries per year

Therefore the fraction of all injuries in the Safety First League sustained by masked goalies:

= $0.9 \div (1 + 0.9)$ is approximately equal to 47%.

In other words, the Safety First League has a higher fraction of its injuries occurring to masked goalies than the Freedom League does, precisely *because* most of its goalies wear masks! But note that the total rate of injury in the Safety First League is only about 2 injuries per year *vs.* 6 in the Freedom League – a 65% reduction because of the greater use of masks.

Implications for Immunization Programs

One can see that if two different Health Units, one under "Dr. Efficient" and one under "Dr. Mediocre" have, respectively, 90% and 50% measles vaccine coverage, and if a measles outbreak occurs in both, it is likely to be Dr. Efficient's Board and local press who will query the high proportion of "vaccine failures". In Dr. Mediocre's Unit, only a small minority of measles ceases are occurring after vaccination. In short, the paradox explained above may "lay blame" at the feet of the most successful Public Health Units, in terms of vaccination coverage, and to "exonerate" the others!

This fallacy tends to become worse as vaccine coverage in a local area approaches 100%. In such a situation (e.g. 99% coverage), virtually all of the cases will of necessity occur among immunized subjects, because there remain almost no unimmunized subjects in the population to fall victim to the disease, even at very high (unprotected) baseline levels of risk. Therefore the victims tend to be made up from the small proportion of inevitable vaccine failures among the immunized 99% of the popula-

tion. The tendency for measles outbreaks in North America to involve larger and larger proportions of previously immunized individuals can be expected to *increase* in the future as current efforts to improve vaccine coverage succeed. Nevertheless, the overall rate of measles will decrease, as did the overall injury rate in the "Safety First League" described above.

Conclusions

In summary, public health professionals will be increasingly required to explain this paradox to the press and public whenever the issue of "percentage of cases vaccinated" is raised. Otherwise, anti-immunization forces can be counted on to capitalize on the paradox (much as has recently occurred in England for pertussis).² It is hoped that the hockey mass analogy described above will assist Public Health professionals in this explanation.

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Source: Dr. John Frank, Assistant Professor, Department of Preventive Medicine and Biostatistics, University of Toronto in Ontario *Disease Surveillance Report* No. 25, June 22, 1984.

Comment

The same principle applies to other preventive procedures, such as seatbelts and fluoridation.

DEAD BODIES, AUTOPSIES, TRANSPLANTS AND THE LAW OF NOVA SCOTIA

Continued from page 17

reference to the burial of a dead human body or human remains. This means that someone in a medical school who has received a body for the purposes of anatomical research and fails to bury it could be convicted under this section.

This section also makes it a criminal offence to interfere improperly or indecently with or offer any indignity to a dead human body or human remains, whether buried or not.

And so ends the law of human remains.

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Appreciations

DR. DOUGLAS F. MACDONALD

Dr. Douglas Fraser Macdonald, 81, died on November 30, 1984, at the Yarmouth Regional Hospital. Though in failing health for several years, "Doug" was happily able to attend his patients until the week before his passing and was always available to them at his office. At their home or in hospital, he will be greatly missed by the large group that could always depend on his faithful care. When roads were blocked with snow he attended on his skis before cross country skiing got its name.

Doug was born in New Glasgow, N.S., took his pre-med at Dalhousie, then continued in medicine, gaining his MDCM in 1929. He was a charter member of the Phi Rho Sigma Medical Fraternity. He played several musical instruments.

In Detroit he took postgraduate work in internal medicine at the Henry Ford Hospital, and met and married Gladys Root. On his return to Canada, he opened his office in Yarmouth at the peak of the great depression and quickly acquired a large practice. He became a very active Rotarian and president of the Yarmouth Club.

Before Government grants to hospitals he provided service to the hospital and community with his own electrocardiograph. For many years he was the only cardiologist in Yarmouth. As Public Health doctor for Yarmouth during the days of World War II he did much to control the V.D. problem created by two air units and an army unit. He became a Fellow of the Royal College of Physicians and Surgeons of Canada.

He was secretary of the Yarmouth Hospital Medical Staff for many years and represented the Western division of the Nova Scotia Medical Society. In 1962, he was elected President of the Nova Scotia Medical Society. He was a charter director of Maritime Medical Care and appointed an honorary senior member of the N.S. Medical Society and Canadian Medical Society. Shakespeare said "Each man in his time plays many parts". Doug's cheerful presence will be greatly missed in the community and by the Medical Society.

He was predeceased by his wife Gladys. He is survived by his daughter, Hazel and his son, Dr. E. Fraser Macdonald, both of Yarmouth, and three grandchildren, to whom the Society extends their greatest sympathy.

J.A. Webster, M.D.,
Yarmouth, N.S.

DR. ARTHUR W. TITUS

Dr. Arthur W. Titus, affectionally known to the medical profession of Nova Scotia as "Art", died suddenly in the Halifax Infirmary on December 2, 1984. Through his very long association with Maritime Medical Care and before that, the very active part he took in the activities of the Medical Society of Nova Scotia, he was widely known and highly respected.

Art was one of those who enjoyed life. Meeting him always made one's day a little brighter. As a raconteur, he was unsurpassed; as a friend, associate and companion, he will never be forgotten.

Arthur was born on November 10, 1917 in Yarmouth, N.S., the son of the late Raymond and Dorothy (Dorothy Law) Titus. He attended school in Yarmouth, graduating from the Yarmouth Academy. During this time he developed a province-wide reputation as a swimmer and diver, and was recognized as an outstanding high school athlete. He attended Mount Allison University, receiving a Diploma in Commerce in 1939. He entered Dalhousie University in 1940, receiving a B.Sc. in 1942 and graduated in medicine MDCM in 1947. During this period at Dalhousie, he gave freely of his time to the welfare of others, being elected President of the Student Council in 1945, President of the Students Medical Society in 1945, he was also President of Sigma Chi and Phi Chi fraternities.

Following graduation, he established a general practice in Halifax and before long was one of the busiest and most highly respected practitioners in the area. He became very active in the Medical Society of Nova Scotia, serving for many years on the executive committee and on numerous other committees. He was secretary of the Halifax Medical Society for a year. He was also a member of the Board of Directors of the College of General Practice of Canada, and President of the College's Nova Scotia Branch. He served a term as President of Medical Staff of the Halifax Infirmary. The above offer ample testimony to his great ability and to the high regard in which his colleagues held him.

When Maritime Medical Care needed a full-time medical director, they turned to Art to take on the job. We all know with what dedication he did this job, and his first loyalty was always to the profession. All received a sympathetic hearing, no matter how small the problem. A large part of the credit for the smooth relationship between Maritime Medical Care and the profession is in no small part, due to Arthur's efforts. Through his attendance at sectional meetings throughout the province, he became probably the most widely known and highly respected of the profession in the province. He retired from this position two years ago.

Art was an excellent golfer and on many occasions was Champion of the Medical Society of Nova Scotia's annual Golf Tournament. He enjoyed curling, sailing and photography. He was a member of the Halifax Curling Club, the Ashburn Golf Club and he was the first Commodore of the Hubbards Yacht Club. A long-time member of the Halifax Rotary Club, he also served on the executive of the Halifax Wild Life Association for many years. He was a member of the St. Andrew's United Church in Halifax.

He is survived by his wife, Lorraine "West" (Fuller) Titus, in Halifax; two daughters, Ann, in Halifax, Susan (Mrs. William MacCann) in Bedford; a brother, Gregory, in Toronto; three sisters, Jean (Mrs. Edwin Crowell), in Halifax, Mildred (Mrs. William Saunders), in Bridgewater and Eleanor, in Yarmouth; and by three grandchildren. He was predeceased by a sister, Olga, in Yarmouth.

Arthur achieved a great deal during his lifetime. He will be surely missed by his family, friends and colleagues. A void has been left which will be difficult to fill.

J.H. Charman, M.D.,
Halifax, N.S.

DR. GORDON C. MACDONALD

The recent death of Dr. Gordon C. MacDonald, age 72, of Sydney, removes one of the area's most popular and productive doctors.

He was a son of the late Dr. John MacDonald and Frances (Creelman) MacDonald. Gordon was born in Sydney, where his father carried on an extensive practice for many years. He attended Sydney Academy and Dalhousie University, from which he graduated M.D. in 1936.

His medical career was busy and varied. In his earlier years he served on the hospital ship *Arras*, servicing the Newfoundland coast and outports, and, as may be supposed, there were not many dull moments in this interesting and hazardous practice.

After returning to Sydney, he developed an extremely wide clientele. He served on both St. Rita and Sydney City Hospital staffs, was president on several occasions, and acted on many committees where his unfailing good humor and far-seeing advice contributed a great deal.

He had many interests outside medicine which enhanced his professional influence on medical administration in the Province, especially in the fast changing post-war years. He was a long-time member of the Provincial Medical Board and chaired committees of the Medical Society at the Provincial level.

Always keenly interested in public affairs from the municipal to the Federal, he was president of the regional Progressive Conservative Party for many years, served as president of the Kinsmen's Club of Sydney, and actively supported other service groups. His many contacts and good judgment have contributed greatly to the profession over the years.

He is survived by his wife, the former Doris Irene MacLeod of Sydney, one daughter, Mary (MacFadgen), and a son, Kenneth, in Moncton. His brother, Dr. J. Philip MacDonald practises in Sydney.

Dr. MacDonald will be remembered by his colleagues above all for his personality traits, which made him an extremely pleasant fellow practitioner as well as a sage counsellor.

F.B. MacDonald, M.D.,
Sydney, N.S.

DR. WILLIAM B. KINGSTON

Dr. William Brian Kingston, L'Ardoise, died on January 12, 1985, at the age of 58, at Strait Richmond Hospital. He was born in Winnipeg and spent his early life in Saskatoon. He graduated from Dalhousie University, Halifax, in 1963 and practised in Newfoundland for the next 3 years. He then returned in 1966 to Dalhousie, where he founded and directed the Dalhousie Student Health Service. During this time in Halifax he was also affiliated with the Oland Soccer Club and the N.S. Voyageurs, and he had a great interest in Sports Medicine.

In 1977 he opened his practice in L'Ardoise, N.S. where he remained until the time of his death. He was the first physician to establish a medical practice in this community and played an active role in the development of the Health Care System in Richmond Co.

Through his personal efforts, L'Ardoise developed a Community Health Clinic which is among the finest and best equipped in the country. He was on the Medical Staff of Strait Richmond Hospital but had to resign due to ill health. Besides his busy practice, he was actively involved in various community projects as well as serving on the board of the proposed C.B. Regional Hospital Foundation. He was a member of the Holy Guardian Angel Church, L'Ardoise, and a member of the Royal Canadian Legion, having spent time in the Royal Canadian Navy during the early part of his life. He was a member of the Nova Scotia Medical Society and the Canadian Medical Association.

He is survived by one daughter, Jane, in Halifax, a sister, Verna, and step father William Harris, both of Saskatoon. Our sympathy is extended to his family and to the community of L'Ardoise which he served so well.

M.A. Naqvi, M.D.,
Sydney, N.S.

DR. DONALD J.G. MORRIS

Dr. Morris was born in Nashville, Tennessee in 1932. His family moved back to Windsor, N.S. when he was a child and he was educated in Windsor. He attended King's College School in Windsor and his pre-medical education was obtained at the University of King's College in Halifax. He played rugby for King's College School as well as for King's College. He also played for a Town of Windsor entry into the short-lived Nova Scotia Senior Rugby League.

After his graduation from Dalhousie University Medical School in 1961, he returned to Windsor to practise medicine. He was the third generation of his family to practise from their beautiful old Victorian home on Grey Street. As his family and practice grew larger he required more room both for his house and for his office. He built a new office building, which was still attached to his house, so that he could carry on his practice as it had been before the renovations.

When Donnie began his practice, Medicare was not in existence and he looked after all who could not pay with the same care and attention that he gave to his more affluent patients. This was a Morris tradition. Many stories are still told of patients who never received a bill from his grandfather, his father or from him.

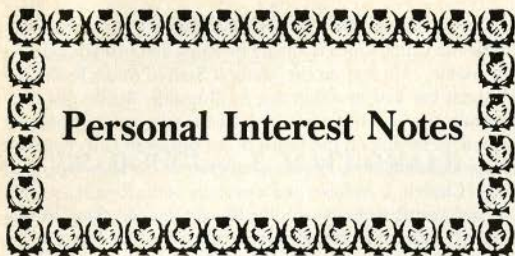
Don practised medicine in a manner that is gradually disappearing. He still made house calls — he could be reached at night or on weekends. He had a small surgery in his office where minor surgical procedures could be performed without having to resort to the local hospital. However, Don had an active practise in hospital; and it was while starting to make rounds on a Saturday morning, Feb. 23, that he had the heart seizure.

He will be missed by all who knew him. His friends will miss his great sense of humour. No matter what the problem — whether it be simple or complex or irritating — Donnie never failed to see some small humorous side to the problem, and we would all wait for his latest humorous pronouncement.

We extend our deepest sympathy to his wife Molly, and to his children David, Clare, Peter and Mary Ruth.

H.R. Roby, M.D.,
Windsor, N.S.

□



Personal Interest Notes

The American College of Psychiatry honored the late Halifax psychiatrist, **Dr. R.O. Jones**, formerly Professor Emeritus, Faculty of Medicine, Dalhousie University, at a ceremony in Houston, Texas, in February.

Dr. Jones' widow, Mary, was invited by the college to attend the annual dinner with their son, David Jones, a historian at Dalhousie. Together, they received the 1985 Bowis Honor Award, a gold medal and a certificate, awarded posthumously to Dr. Jones, for his great contribution to psychiatry and to the American College of Psychiatry of which, he, a Canadian, was a founder member 40 years ago.

Five members of the Medical Staff of The Victoria General Hospital were honored by their peers recently. In recognition of their exemplary service to the hospital and to their patients over the years, each received a citation and a plaque as a memento of the occasion. Those honored were **Drs. Gordon W. Bethune, John H. Charman, James F. Ross, Lea C. Steeves and C.E. Van Rooyen.**

The awards are based on nominations received from the various medical disciplines within the hospital and the recommendations of the Victoria General Medical Executive.

The Victoria General Hospital recently announced the appointment of **Dr. Philip Belitsky** as Director of the hospital's Multi-organ Transplant Program. He is an Associate Professor of Urology at Dalhousie University, having joined the active staff of the Victoria General Hospital in the Department of Urology in 1972.

Dr. Roland A. Perry, Halifax County Medical Examiner, has been appointed the first Chief Medical Examiner for the Province of Nova Scotia. He has been involved in forensic medicine for the past 20 years, the last eight as the chief medical examiner for Halifax County.

The American College of Physicians (ACP) announced that **Dr. David Bryan Hogan** of Halifax has been elected to Fellowship in the 60,000-member American College of Physicians. Dr. Hogan, a specialist in internal medicine, was honored during the Convocation ceremony at the College's Annual Session in Washington, DC, in March of this year.

*"Facts do not cease to exist
because they are ignored."*

— Aldous Leonard Huxley (1894-1963)

Dr. Donald J.G. Morris, (52) of Windsor, N.S. died on February 23, 1985. Born in Nashville, Tennessee he received his medical degree from Dalhousie University in 1961. He practised medicine in Windsor for 23 years and was on the medical staff of Hants Community Hospital. He was a member of the Medical Society and College of General Practitioners. He is survived by his wife, two daughters, and two sons. Our sympathy is extended to his family.

Dr. Frank F.P. Malcolm, (87) of Dartmouth, N.S. died on February 28, 1985. Born in Halifax, he received his medical degree from Dalhousie University in 1920. He practised medicine in Dartmouth for more than 60 years and was closely associated with the St. John's Ambulance Society. During the Second World War he served in the Royal Canadian Army Medical Corps with the rank of Lieutenant-Colonel. He was made a senior member of The Canadian Medical Association in 1969 and was a member of The Medical Society of Nova Scotia. He is survived by a son and three daughters, to whom we extend sincere sympathy.

Dr. C.A. Sandy MacDonald, (80) of Sydney, N.S. died March 31, 1985. Born in Baddeck, he received his medical degree from St. Michael's University in 1934. He practised medicine in Sydney for 48 years and served with the Canadian Army Medical Corps during the Second World War. He is survived by two daughters to whom we extend sincere sympathy.

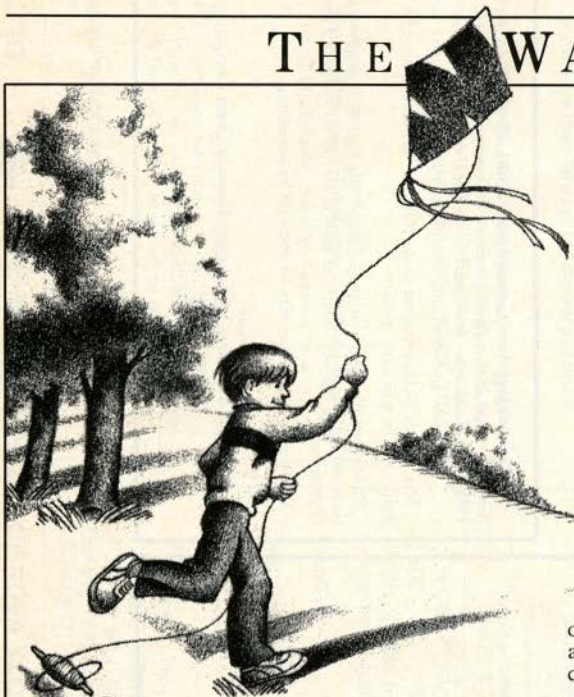
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Papers are invited for submission to **The Journal of Palliative Care**. The first issue will be published September 15, 1985. All submissions will be subject to anonymous, critical peer review. Inquiries or submissions may be sent to David J. Roy, B.A. (Math), S.T.D., S.T.L., Ph.L., Dr. Theol., The Editor, The Journal of Palliative Care, 33 Prince Arthur Avenue, Toronto, Ontario, Canada, M5R 1B2.

ADVERTISERS' INDEX

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CompuCroft Consulting Associates.....	5
Doane/Raymond	12
Janssen (Hismanal).....	6
Kitz Matheson	28
Mead Johnson Canada (Prosobee).....	OBC
Medical Practice Productivity	14
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Walwyn Stodgell Cochran Murray Limited	23
Classified	24

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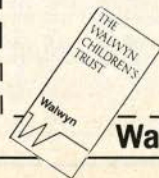
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"ADVOCACY... The Art of Being Heard."

Mrs. Yhetta Gold, President of the National Advisory Council on Aging, will be a keynote speaker.

The Gerontology Association of Nova Scotia is open to organizations and individuals who have a professional or personal interest in Gerontology.

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Radiology	J.A. Aquino	W.F. Barton
Surgery	G.M. Saunders	T.B. Murphy
Urology	S.G. Lannon	W.A. Ernst

GENERAL INDEX

VOLUME 63, 1984

- ALLISON, N: Psychogeriatric Services at The Nova Scotia Hospital, 117.
- Anorexia Nervosa with Muscular Dystrophy, A Unique Case (Beck) (Haworth) (David), 56.
- Appreciations: Dr. Harold J. Devereaux, 2; Dr. Robert C. Dickson, 98; Dr. Robert O. Jones, 132; Dr. G. Ronald Forbes, 133; Dr. Thomas Burns Acker, 160.
- BECK, G: A Unique Case of Anorexia Nervosa with Muscular Dystrophy, 56.
- BISSON, G.E: Metrication, 89.
- Breast Feeding by Infected Mothers, 26.
- BROWN, B.St.J: How Safe is Diagnostic Ultrasound?, 3; Obstetrical Ultrasound — Update 1984, 49.
- BROWN, D.C: Brief on the Health Effects of Herbicides, Insecticides and Pesticides and Safety and Training of Forest Workers, 45.
- CAMERON, I: Halifax and the Cholera Epidemic of 1866, 149.
- Cancer of the Cervix: Cancer of the Cervix in Nova Scotia (Tupper) (Tompkins) (Nolan), 17; Colposcopy and Pap Smears: The Necessary Tools for Prevention of Cancer of the Cervix (Wood) (Snow) (Fraser) (Tompkins) (Tupper), 123.
- CAPPON, P: Third World Medical Equipment Assistance Project, 126.
- Cholera Epidemic of 1866, Halifax and the (Cameron), 149.
- COCHRANE, P.L: Prenatal Nutrition Guide Now Available to Physicians in Nova Scotia, 159.
- Colposcopy and Pap Smears: The Necessary Tools for Prevention of Cancer of the Cervix, (Wood) (Snow) (Fraser) (Tompkins) (Tupper), 123.
- Community Health, Current Topics in (White), 30; 62; 92; 130; 163.
- Coronary Heart Disease Trends in Halifax County, A Study of (MacKenzie) (Crofts) (Gregor) (MacDonald) (McMahon) (Rautaharju) (Wolf), 147.
- Correspondence: (Morse), 29; (Grogono), 97; (Lavigne), 97; (Armstrong), 164.
- CPR Training, Community: A Need for Nova Scotia, (Fulton), 83.
- CROFTS, P: see MacKenzie B.R.
- Cryptorchidism, On the Diagnosis of (Schwartz), 7.
- DAVID, C.J: see Beck G.
- DEWAR, L.G: A Retrospective View: 1943-1983, 59.
- Diabetic Foot (Naqvi), 79.
- Doctor and his leisure, The: The Development of The Oenophile (King), 94; Small-Time Computing for The Family Doc (Godwin), 127.
- Editorials: The Canada Health Act (O'Connor), 1; Occupational Health (O'Connor), 33; Medical Monopoly and the Alternative (O'Connor), 69; Geriatrics and Values (O'Connor), 101; "Them is Us" (O'Connor), 137.
- EMBIL, J.A: see Sharma, A.K.
- ERNST, W.A: Hypospadias, 71.
- Eulogy: Dr. Robert O. Jones, 161.
- FOX, R.A: Geriatrics and the Psychiatry of Old Age, 119.
- FRASER, R.C: see Pierce, B; see Wood, D.C.
- FULTON, K.A: Community CPR Training: A Need for Nova Scotia, 83.
- Gestational Trophoblastic Disease Registry and Surveillance Clinic, Nova Scotia; Molar Pregnancy — Choriocarcinoma (Pierce) (Fraser) (Zayid), 23.
- Geriatrics: Geriatrics (ed) (O'Connor), 101; Health Care of the Elderly: Theory and Practice (Williamson), 103; The Role of Geriatric Medicine in Canada (Hogan), 109; The Vulnerable Elderly in Nova Scotia: Their Abuse and Neglect (Hansen), 111; Sir Ferguson Anderson, The World's First Professor of Geriatric Medicine (Hinds), 116; Psychogeriatric Services at The Nova Scotia Hospital (Allison), 117; Geriatrics and the Psychiatry of Old Age (Fox), 119; Geriatrics: A Fertile Meeting Ground for Medicine and Psychiatry (Shulman), 121.
- GODWIN, M.S: Small-Time Computing for The Family Doc (The doctor and his leisure), 127.
- GREENOUGH, H: see Gregor, A.K.
- GREGOR, F.M: The Role of The Canadian Heart Foundations in Public and Professional Education, 15.
- GREGOR, R.D: see MacKenzie, B.R.
- HANSEN, N.H: The Vulnerable Elderly in Nova Scotia: Their Abuse and Neglect, 111.
- HAWORTH, H: see Beck, G.
- Health Department of: Congenital Anomalies Reporting, 38; How Well are Babies in Nova Scotia Fed? (Milligan) (Ryan), 86; Prenatal Nutrition Guide Now Available to Physicians in Nova Scotia (Cochrane), 159.
- Heart Foundation: The Role of The Canadian Heart Foundations in Public and Professional Education (Gregor) (Greenough), 15.
- HINDS, B: Sir Ferguson Anderson, The World's First Professor of Geriatric Medicine, 116.
- HOGAN, D.B: The Role of Geriatric Medicine in Canada, 109.
- Hypospadias (Ernst), 76.
- JOHNSTON, E.M: Nutrition Related Characteristics of Pregnant Nova Scotia Women, 157.
- KING, D.B: The Development of The Oenophile (The doctor and his leisure), 94.
- KUBACKI, A: Sexual Disinhibition and Antipsychotics, 81.
- LEIGHTON, A.H: Caring for Mentally Ill People in Nova Scotia (Murphy) (Munro), 52.
- MACDONALD, N: see MacKenzie, B.R.
- MACKENZIE, B.R: A Study of Coronary Heart Disease Trends in Halifax County, 147.
- MCMAHON, D: see MacKenzie, B.R.
- MCPHERSON, T.A: Address by the President, The Canadian Medical Association, 152, xxxvi.
- Medical Society of Nova Scotia: Page of Officers, 66, 100, 136, 168; New Members, 29, 91; Dr. M.G. Shaw, President, 138; Proceedings of the 20th Meeting of Council and the 131st Annual Meeting, 152, i-xxxii, Presidential Valedictory Address 1984 R.D. Saxon, 152, xxxii, Address by Hon. Gerald Sheehy, Minister of Health, Province of Nova Scotia, 152, xxxiv; Address by T.A. McPherson, M.D., President, The Canadian Medical Association, 152, xxxvi; Pictorial Highlights — 131st Annual Meeting, 152, xxxviii.
- Medicine: A Retrospective View: 1943-1983 (Dewar), 59.
- Meniscus Worth Saving? Is the (Stanish), 139.
- Mentally Ill People in Nova Scotia, Caring for (Leighton) (Murphy) (Munro), 52.
- Metrication, (Bisson), 89.
- MILLIGAN, C.L: How Well Are Babies in Nova Scotia Fed?, 86.
- MORSE, W.I: Pornography and Obscenity: New Insights and Social Action in Nova Scotia, 143.

MUNRO, A: see Leighton, A.H.
MURPHY, J.M: see Leighton, A.H.
Muscular Dystrophy, A Unique Case of Anorexia Nervosa with
(Beck) (Haworth) (David), 56.

NAPIER, R.W: The Old Potted Plant Game, An Allegory from the
Days of Private Practice, 28; When the Caring Stopped, 154.

NAQVI, M.A: Diabetic Foot, 79.

NOLAN, M: see Tupper, W.R.C.

Nutrition: Nutrition Related Characteristics of Pregnant Nova
Scotia Women (Johnston), 157; Prenatal Nutrition Guide
Now Available to Physicians in Nova Scotia (Cochrane), 159.

Occupational Health: Occupational Health (O'Connor) (ed), 33;
The Development of Occupational Health Services in Nova
Scotia (Prentice), 35; Occupational Medicine and The
Family Physician (Reid), 37; The Provision of Medical
Services to the North Sea Oil Industry (Webster), 39;
Educational Opportunities in Occupational Health — An
Interview (Prentice), 43; One Physician's View —
Occupational Health: The Doctor and Nurse as Informers
(Rosenborough), 44; Brief on the Health Effects of
Herbicides, Insecticides and Pesticides and Safety and
Training of Forest Workers (Brown) (Chairman), 45;
Philosophy, Design and Operation of Occupational Health
and Safety Programs — The Team Approach, (Prossin), 71.

O'CONNOR, J.F: The Canada Health Act (ed), 1; Occupational
Health (ed), 33; Medical Monopoly and the Alternative (ed),
69; Geriatrics and Values (ed), 101; "Them is Us" (ed), 137.

Ophthalmological, Canadian Society Policy Statement, June 1983,
89.

Personal Interest Notes: 32; 65; 99; 134; 165.

PIERCE, B: Molar Pregnancy — Choriocarcinoma, Trophoblastic
Disease Update, 1982, 23.

Pornography and Obscenity: New Insights and Social Action in
Nova Scotia (Morse), 143.

PRENTICE, J: The Development of Occupational Health Services
in Nova Scotia, 35; Educational Opportunities in
Occupational Health — An Interview, 43.

PROSSIN, A: Philosophy, Design and Operation of Occupational
Health and Safety Programs — The Team Approach, 71.

RAUTAHARJU, P.M: see Mackenzie, B.R.

REID, D.S: Occupational Medicine and the Family Physician, 37.
Reminiscences: When the Caring Stopped (Napier), 154.

ROSEBOROUGH, J.F: One Physician's View — Occupational
Health: The Doctor and Nurse as Informers, 44.

RYAN, B.J: see Milligan, C.L.

SAXON, R.D: Presidential Valedictory Address, 152, xxxii.

SCHWARTZ, M.D: On the Diagnosis of Cryptorchidism, 7.

Sexual Disinhibition and Antipsychotics (Kubacki), 81.

SHARMA, A.K: The Six Diseases of The W.H.O.: Upon Our
Threshold, 10.

SHEEHY, HON. G: Address by Minister of Health, Province of Nova
Scotia, 152, xxxiv.

Short Story: The Old Potted Plant Game, An Allegory from the
Days of Private Practice (Napier), 28.

SHULMAN, K.I: Geriatrics: A Fertile Meeting Ground for Medicine
and Psychiatry, 121.

SNOW, H.M: see Wood, D.C.

SPANISH, W.D: Is the Meniscus Worth Saving? 139.

Third World Medical Equipment Assistance Project (Cappon), 126.

TOMPKINS, M.G: see Tupper, W.R.C; see Wood, D.C.

TUPPER, W.R.C: Cancer of the Cervix in Nova Scotia, 17; see
Wood, D.C.

Ultrasound? How Safe is Diagnostic (Brown), 3; Obstetrical
Ultrasound — Update 1984 (Brown), 49.

VINCENT, N.C: see MacKenzie, B.R.

WEBSTER, D: The Provision of Medical Services to the North Sea
Industry, 39.

WHITE, F.M.M: Current Topics in Community Health, 30; 62; 92;
130; 163.

WILLIAMSON, J: Health Care of the Elderly, 103.

WOLF, H.K: see MacKenzie, B.R.

WOOD, D.C: Colposcopy and Pap Smears: The Necessary Tools
for Prevention of Cancer of the Cervix, 123.

World Health Organization: The Six Diseases of The W.H.O.: Upon
Our Threshold (Sharma) (Emblil), 10.

ZAYID, I: see Pierce, B.

Lorne Elkin Rozovsky, Q.C.

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THE PROFESSIONAL CHALLENGE

THE CHALLENGE

The Professional Challenge is a public demonstration of the benefits of an active lifestyle as doctors challenge lawyers, accountants, engineers, architects, dentists and pharmacists in a battle for physical supremacy.

The Professional Challenge, a program sponsored by The Medical Society of Nova Scotia's Physical Fitness Committee, is intended to re-establish the principle of exercise and healthy lifestyle through a day of fun and fitness between the traditional professions.

Fitness is a critical element related to a professional's ability to effectively cope with the demands of a busy career. Improved productivity, efficiency and an expanded capacity for work and recreation are just a few of the benefits that participants in the event will realize.

The medical profession have long recognized the relationship between health and fitness, and this annual event will demonstrate the importance of this relationship to those participating, and a much larger audience.

THE EVENT

The Professional Challenge will involve professionals of all ages and at all levels of physical ability in a variety of athletic and novelty activities related to each of the professions. Participants representing various professions will enter as a team representing their respective professional associations.

Each team will consist of eight members of which five must be of one profession. Every team must have no less than two members of the opposite sex and no more than three members who are associated with the professional group (i.e., employees, spouses).

The event, scheduled for June 8th at the Dalplex in Halifax, will consist of eleven events requiring the full team's participation in all but one event. Registration fees of \$80.00 (per team) should be forwarded with the attached form by April 30, 1985.

Following completion of the eleven activities and the announcement of the winners, a social event will be held with food and entertainment. The location of the social will be announced when it is confirmed.

For more information and details, contact Ms. Lori MacKay at the City of Halifax Recreation Department at 421-6424.

FITNESS

The requirement for professionals to maintain their physical fitness has not, until recently, been documented or, for that matter, advocated. As other segments of society have become participants of the fitness movement in the last 10 years, professionals have, for many reasons, not followed the trend.

Being active and physically fit has many advantages — increased energy, a feeling of well being, greater productivity, reduced stress levels, and better sleep patterns. Regular fitness activities such as running are extremely beneficial for improving heart and lung function and reducing body fat.

'Fit in mind and body' is a significant statement for a successful professional today. Stress and an often highly competitive environment dominate the professional workplace and require professionals to perform at 100%.

To realize this state of mind and body, professionals must make a conscious effort to maintain their health and fitness. Improved performance, productivity and motivation can all be attributed to physical health and activities. The Professional Challenge is intended to reintroduce and reinforce the benefits and enjoyment of health and fitness activities.

Information on fitness training and establishing a fitness program for yourself as well as counselling will be available at the event.

We look forward to an active and enjoyable event.

Yours truly,

Dr. Mike Banks
Chairman