

The NOVA SCOTIA MEDICAL BULLETIN

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EDITORIAL

On page 198 of this issue will be found the first of six essays on medical public relations which will appear consecutively in the Bulletin. These have been commissioned by your Editorial Board so that our readers may know how thoughtful physicians and well-informed laymen feel about the problems that face organized medicine. You may well ask, "Is this necessary?" To this question we would answer an emphatic and resounding "Yes!!!" Difficult times are ahead for organized medicine. The spectre of state control looms over us. Make no mistake, the individual, independent practice of medicine as we have always known it has not much longer to live; in fact is already beginning to disappear. We grant that, in a very real sense, the physician is the servant of the people. But there can be a great difference between a servant of the people and a civil servant. Your editor has been both and he knows whereof he speaks. While self-interest will always guide the voter's pencil in the ballot-box, all is not lost if this be *enlightened* self interest. We submit, however, that we are doomed as a profession to live forever shackled in bureaucratic chains, if this self-interest is combined with an untutored, unreasoning hatred of organized medicine by the man in the street. He it is who must be enlightened—and it is our duty to enlighten him. We enjoin you therefore—read these articles closely, carefully, and critically. If you disagree with what they say, for heaven's sake, make your disagreement public by writing to us. If you agree, write to us anyhow. Let us all join together to rebuild in the minds of the public the image of Medicine of which *we* have always been justly proud—not the poor thing that is being viciously bandied about in the daily press and the popular magazines. This is the time for all men of good will to come to the aid of the brotherhood. There is nothing to lose and the world to win!

S.J.S.

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PUBLIC RELATIONS AND THE MEDICAL PROFESSION

F. A. DUNSWORTH, M.D.*

Halifax, N. S.

The very thought of Medical Public Relations seems disturbing to the average physician; to some it may even be associated with advertising or other unethical procedures. It seems clear, therefore, that a series of articles dealing with public relations and the medical profession is long overdue.

THE NEED FOR GOOD PUBLIC RELATIONS

This has been forced upon us by changes in communication and the universal penetration of modern news. Medical discoveries and techniques are now of top news value. Almost all newspapers carry several medical columns, weekly newsmagazines have a regular section on medicine and women's magazines use medical articles in nearly every issue. Since the public is constantly receiving medical information from these sources, should we not attempt to make sure such information is correct?

An even more positive approach seems indicated. We must be realistic enough to accept the fact that the physician is no longer viewed with awe. In modern times he has been removed from his high pinnacle and is now often criticized by playwrights, authors and politicians. He is criticized for acting "high and mighty", he is criticized for his high fees and income, and he is alternately praised and reviled for his services. Above all, the faceless power of "organized medicine" is feared and distrusted, and it is the latter picture that I find most disturbing.

THE PRINCIPLE OF GOOD PUBLIC RELATIONS

Careful surveys (the most recent Canadian survey was carried out by the B.C. Division)— have confirmed that, generally speaking, one's own physician is highly respected, but "those doctors" are pictured as avaricious, monopolistic and reactionary. It seems obvious that on many topics of public interest it must be our medical associations that should speak out. Unfortunately, however, our medical associations seem to have neglected one of the cardinal principles of public relations, the principle of establishing a *positive* approach to problems so that, when it becomes necessary to take an apparently negative attitude, it will nevertheless be viewed as having a constructive aim. Two examples may illustrate this point. Within the past fifteen years the American Medical Association has taken a strong stand against "socialized medicine." It never defined what it meant to my satisfaction nor did it clearly explain its stand to its own members---I remember many of my American colleagues resenting the arbitrary assessment that their state medical society exacted to pay for the organization of a "lobby" in Washington. The general public and the press construed that move as being reactionary and having selfish motives.

As an example of the poor public relations that result from such a policy, Professor Means of Harvard, writing in *Pharos of Alpha Omega Alpha*, quoted Mr. Justice Frankfurter as saying, "My profession is pretty bad. . . . but I am bound to say that I should be a little troubled if my profession lined

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up an advertising agency to work out its relations with the Government." Dr. Means goes on to say that this statement referred to the episode in 1950 during the Truman administration when" the officials of the A.M.A. raised an enormous "War Chest" to fight what they called "Socialized Medicine" and hired the advertising firm of Whitaker and Baxter to do it for them. They were for the moment successful, but at the cost of adopting behavior patterns more suitable to business or politics. The point that I should like to make is that organized medicine should abide corporately by its code of ethics as assiduously as it expects its individual members to do so personally. Any double standard in this regard is intolerable."

Within the past four years The Medical Society of Nova Scotia has opposed the licensing of chiropractors in this province. If we want the public to believe that our reason for opposition is based on the principle that this cult is a threat to the health of Nova Scotians, we should make sure that at all times we, as individuals, and also our society, will speak in a positive manner concerning general health. Otherwise our opposition to the chiropractors will be construed as an attempt to maintain a monopoly based on selfish motives, especially that of financial gain.

STEPS TO IMPROVE PUBLIC RELATIONS

It is my strong conviction that the certain steps must be taken to help maintain the practice of medicine on a high ethical and professional level.

The first is a principle, a principle of service to our patients, that individually and collectively we will constantly strive to offer the highest standard of treatment. This will mean that we must individually follow the highest ethical principles and expect the same from our colleagues. *Bluntly, we must discipline ourselves.* The figure of 11% with respect to doctors overcharging prepaid medical schemes should be a challenge to all physicians. It should be required that physicians must notify their discipline or ethics committees when they discover unethical practices in their colleagues. If we continue to cover up such practices, we cannot complain if some non-medical agency starts to impose standards.

One of the most common criticisms of the doctor by the public is that he frequently cannot be reached. Emergencies in which this occurs are particularly unpleasant. To the best of my knowledge there is no emergency medical service established anywhere in Nova Scotia. Should not the larger centres at least have such a service? In the eyes of the public this is a matter of life and death. The difficulty in obtaining a doctor for accidents, for transients with no personal physician, on weekends etc., creates an extremely "poor press" for the medical profession. The establishment of an emergency medical service should receive the highest priority in our cities and larger towns and, perhaps as a sign of its importance in public relations, it should be sponsored by the county societies.

Physicians need time off for rest, recreation and professional meetings like any other group, but it is only common sense that, if they are not going to be available, that they should have a "sign out" system to an available colleague or to an Emergency Service.

OF DRUGS AND DOCTORS

In these days of "payola" or "kick-backs", anything that suggests these practices in medicine should be immediately discouraged. We should not have "favourite drug companies," nor "favourite drug stores." We should do all in our power to avoid any entanglement with any advertising techniques, such as prescription blanks with our names coupled with a drug, a drug company or a druggist. Above all, our prescriptions should, whenever possible, take into account our patient's pocket-book. Unless there are strong reasons for a particular company's product we should order according to the generic name. It seems obvious too that organized medicine should strongly publicize its opinions with respect to the large amount of money wasted on promotion by drug companies. All of us throw away many items every week of expensively prepared drug advertisements without even a glance. Many companies also send unsolicited samples of their products that end up in the waste basket.

The public identifies the price of drugs with the doctors, since it is we who prescribe them. Anything we can do to keep these prices as low as possible will help our public relations.

CONFLICTS BETWEEN DOCTORS

Friends in other professions have frequently commented that doctors "stick together" and "rarely criticize each other" but we must not rest on our reputation, we must maintain it. It is my impression that disagreements between doctors are based on poor communication. It is rare to have a fundamental difference with a colleague with whom we are in contact almost daily. The difficulties arise when the contacts are infrequent and tenuous, for example a letter of referral, followed, at too long an interval, by a letter of response. I feel that the logical answer to disagreements is face-to-face discussion, but many disagreements should be preventable.

The consultant is placed in a difficult situation when he receives a phone call from a patient from out of town stating, "Dr. X told me to come and see you." Frequently the patient expects an appointment within the next twelve hours, and at times it can be arranged but most consultants have committed their time for other consultations and for teaching a week to ten days ahead. The result is resentment by the patient, by the consultant, and frequently by the family physician.

Fortunately this type of "referral" (deliberately placed in quotation marks for obvious reasons) has almost disappeared but other forms of referrals persist, which because of insufficient "briefing," fail to obtain the most good for the patient. The consultant who is asked to see a patient prefers to know the pertinent facts on which the consultation is based, and what exactly is wanted. In many cases he wishes to know if the referring doctor wants him to take over the case for immediate treatment if indicated or whether, for the present, he wants only an opinion.

It thus seems obvious that such a referral requires a fairly comprehensive letter or a conversation, either directly or by telephone. The traditional consultation which consisted in the referring physician introducing the consultant to the patient, waiting while the patient is being examined and then, after discussion with the consultant, giving a combined opinion to the patient or relatives, seems impossible as we all have such busy schedules. We should,

however, attempt to duplicate those leisurely and ethical steps as closely as possible.

There is certainly something drastically wrong in our communication when the consultant has to ask for information from the patient that he should have received from the referring physician, but even worse, when the referring physician is forced to ask the patient what the consultant's opinion was! To anticipate and prevent such misunderstandings, it seems obvious that we should make more use of the modern methods of communication, as well as written referrals and reports.

There are two other unpleasant topics in intraprofessional relations that should be mentioned. The first is the resentment of the average practitioner towards the "specialist" who not only practices his specialty and charges accordingly, but in addition accepts "self-referrals," that is, does not restrict his practice to referrals from other physicians. To make matters worse, such a physician may be carrying on a general practice in other areas of medicine than his own specialty. Though it will produce much sound and fury in discussion, I feel that it is time that this relationship between the family physician and the specialist should be clarified.

The second difficulty is the complaint of the general practitioner that he rarely hears, or at least only hears after a considerable period of time, the results of investigations carried out in another centre. It is mostly for this reason that the public relations between many of the Halifax hospitals and the provincial doctors are poor. This state of affairs is serious and it needs immediate correction.

PHYSICIANS AND NEWS MEDIA

Physicians are very uncomfortable when approached by newsgathering agencies. Their greatest fear seems to be that of incurring the disapproval of their colleagues, and they frequently refuse to give any information at all. This is a negative approach and in the past has justifiably antagonized the news media. We can hardly expect the newspapers to listen to our side of any story when we have refused to cooperate with them in the past. The important consideration seems to be *ethical cooperation*. A general policy is outlined in the C.M.A. publications, "Code of Ethics" and "A Code of Cooperation." These publications should be in the library of every physician and should be read and reread often.

Their broad principles are:

(1) There must be nothing that suggests self-advertising in our contracts with the press or radio; it is the profession rather than the individual physician that is exalted.

(2) To avoid any implication of self-involvement, physicians will protect themselves by first communicating with the appropriate persons in their society before allowing themselves to be quoted by newspapers on matters of medical controversy. Whenever possible then, a physician should be identified as a spokesman for the group or specialty, hospital or other organization rather than for himself.

(3) When asked to divulge details of an illness of a prominent personage, or of an accident, the physician must obtain consent from the patient or responsible relative and must never permit the release of any information before the next of kin is notified. He should give only a general picture of any illness or accident and no medical details that are likely to be misinterpreted.

In the Atlantic provinces, it is the habit not to publish the names of attending doctors. Most newspapers will agree not to publish your name if you so request.

There are important legal implications in many accidents and the "Code of Cooperation" suggests that, after previous permission has been given, one simply releases the name, address, sex, approximate age and a very general description of any injuries. One must always be careful not to hazard any opinion on anything non-medical. In particular one should not guess how a certain accident occurred nor mention any suicidal attempt or any involvement of liquor or drugs.

MEDICAL SECRECY

Many physicians have become concerned about an apparent looseness in handling medical information. It is notorious that there is too much discussion of cases in doctors' lounges or within earshot of non-medical personnel. The problem has been made worse by the forms that we complete for many third-party agencies wherein we list diagnoses and treatments. In many of these schemes we are not legally covered by written permission to release information.

It seems obvious that to hold the trust of the public, which is by far the greatest single pre-requisite in public relations, we must exercise care in transmitting any confidences. . . . "And whatsoever I shall see and hear in my intercourse with men, if it be what should not be published abroad, I will never divulge, holding such things to be holy secrets. . . ." Like the priest, the physician is expected to remain silent. Thus he is trusted with the most intimate secrets, not only medical but moral, a trust that we can never violate if we wish to keep our good name.

In conclusion, the concept of medical public relations is here to stay. We can no longer function as physicians responsible only to a small circle of patients and to our small community. The world has shrunk as the result of modern communications, and medicine is news. We can, at one and the same time, uphold the highest traditions of medicine, carry our profession's ethical concepts into our individual lives and help the larger body of medicine fulfil the function of raising the standards of medical care. To perform these functions we need the news media, and it is reasonable to suggest that if we meet them in a coöperative manner they will be more than willing to coöperate with us.

We must improve our public relations on two levels. As individuals we must strive to raise to the highest possible level our physician-patient relationship. Collectively we must do all in our power to show that "organized medicine" is not a faceless, reactionary, selfishly-inspired business organization but that it is motivated by a sincere and abiding interest in the public welfare.

The following paper is the last of three reports dealing with the geographic distribution of multiple sclerosis. The first, *The Geographic Distribution of Multiple Sclerosis: A Comparison of Prevalence in Charleston County, South Carolina, U.S.A. and Halifax County, Nova Scotia, Canada* by Alter, M., Allison, R. S., Talbert, O. R., and Kurland, L. T. will be published in the first issue of *World Neurology* a new journal which is to appear in July, 1960. The second paper *The Geographic Distribution of Multiple Sclerosis 1. Prevalence in Charleston County, South Carolina* by Alter, M., Allison, R. S., Talbert, O. R., and Kurland, L. T. will be published in the *Medical Journal of South Carolina* in the near future. This large study in the geography of epidemiology was a happy collaboration of the National Institutes of Health, Bethesda, Maryland; the Faculty of Medicine Dalhousie University; the Medical College of South Carolina; and the hospital record departments and practicing physicians of Halifax County, Nova Scotia and Charleston County, South Carolina. Additional assistance was rendered by the Multiple Sclerosis Society of Canada and the Canadian Paraplegic Association. Those of our readers who wish to review the purposes and background of this study are referred to a paper which introduced this research project to this area. (*Epidemiology in the service of clinical medicine. An introduction to the epidemiological investigation of chronic neurological disorders in Halifax County. Godden, J. O. The Nova Scotia Medical Bulletin, July 1957, page 1.*) The survey in the two communities—Halifax County and Charleston County showed a 2.4 fold increase in prevalence in Halifax County which lies twelve hundred miles north of its "twin" The Editorial Board of *The Nova Scotia Medical Bulletin* is pleased to publish these fruits of international medical cooperation. The authors, in a covering letter, asked us to acknowledge their debt to the practicing physicians of this area whose valuable cooperation was essential to the success of this study. (Ed.)

THE GEOGRAPHIC DISTRIBUTION OF MULTIPLE SCLEROSIS

A Comparison of Prevalence in Charleston County, South Carolina and
Halifax County, Nova Scotia

II. Prevalence in Halifax County, Nova Scotia

By

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INTRODUCTION

Variation in the frequency of multiple sclerosis with a geographic factor, such as latitude or climate, has been suggested by several epidemiologic studies

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(1, 2, 3). However the extent to which methodological considerations such as difference in diagnostic criteria, medical terminology, and case finding techniques may account for the alleged difference in frequency is not known. It is for this reason that an epidemiologic survey of multiple sclerosis was initiated using methods as similar as possible in two communities widely separated geographically and with different climatic conditions but otherwise having many factors in common. These were Halifax County, Nova Scotia and Charleston County South Carolina, the former having a temperate climate and the latter a subtropical one. This report presents the results of the survey in Halifax County.

Table I summarizes several characteristics of Halifax County and Charleston County.

TABLE I. SOME CHARACTERISTICS OF CHARLESTON COUNTY, S. C. AND HALIFAX COUNTY, N. S.

Community	Total Population 1955	Racial Composition		Temperature Mean °F		Medical Facilities	
		White	Negro	Jan.	July	Physician/Population Ratio	Hosp. Bed/Population Ratio
Charleston	188,000	94,000	94,000	50.9	81.5	1:810	1:235
Halifax	198,000	190,000	8,000	24.0	64.7	1:905	1:188

METHODS

The medical records of all hospitals and clinics in Halifax County for the years 1946 through 1955 were reviewed for cases with neurological diagnoses or neurological symptoms. One of us (MA) selected the records with diagnoses of multiple sclerosis, primary lateral sclerosis, paraplegia, cerebellar ataxia, myelitis (including encephalomyelitis and myelopathy), and retrobulbar (or optic) neuritis. The five "allied" diseases in addition to multiple sclerosis were included because of the possibility that diagnostic nomenclature in the area might vary and the "allied" diagnoses might conceal cases of multiple sclerosis.

All practitioners in active clinical practice in the county were asked to identify local patients whom they had seen since 1950 with suspected multiple sclerosis and the allied disorders. Replies were received from 81 per cent of the 175 practitioners surveyed and 47 per cent (of those replying) referred relevant cases.

Mortality data on local residents were gathered from deaths certified as due to multiple sclerosis primarily or contributed to by this disease.

Additional information was obtained from Public Health Nurses and two voluntary agencies, the local chapter of the Multiple Sclerosis Society of Canada and the local Paraplegia Association.

A total of 319 potential cases was collected from the above sources as follows: private practitioners alone 13.5 per cent; hospital records alone 59 per cent; the Multiple Sclerosis Society 8.6 per cent; the Paraplegia Association 3 per cent; death certificates 5 per cent; miscellaneous sources 1.1 per cent; the remaining 9.7 per cent were derived from more than one source (e.g. a practitioner and hospital record).

SELECTION OF ACCEPTABLE CASES

1. PREVALENCE DAY—All resident cases living on December 31, 1955, were included in computing prevalence rates. Those patients who had died before prevalence day or who had developed the first symptoms after this date were excluded.

2. RESIDENCE—Only patients who were residents of Halifax County for at least a year prior to prevalence day were included. Patients institutionalized outside of the county or temporarily absent on prevalence day were also included.

3. ERRORS IN FILING OR DIAGNOSIS—After perusal of clinical notes, cases incorrectly filed or diagnosed were excluded.

After eliminating patients who were disqualified for any of the above reasons, the provisional list was reduced from 319 to 139 cases. Of these 139 patients, 132 were personally examined.

DIAGNOSTIC

There is no specific laboratory test for multiple sclerosis so that the diagnosis in living patients is dependent upon clinical characteristics. A modification of the diagnostic criteria used by Allison and Millar (4) was formulated before any patients were examined. Three clinical categories were established and patients were classified according to the following criteria after mutual agreement among the investigators (MA, RSA, ORT).

1. EARLY PROBABLE AND LATENT MULTIPLE SCLEROSIS: Patients were assigned to this diagnostic group when they showed slight or no disability and few physical signs but had a history of remitting symptoms usually associated with onset of the disease, e.g. transient blindness, diplopia, vertigo, ataxia, and numbness or weakness in one or more limbs. If abnormal physical signs were absent the patient was excluded. Patients who were not available for examination were accepted only when there was well-documented proof of such symptoms and physical signs. Retrobulbar neuritis alone was not considered as early multiple sclerosis in this study. An example of a case classified in Group 2 follows:

ED No. 309H. White male age 30 when seen in Halifax on July 3, 1958. Except for non-focal seizures until six years of age, this patient was in good health. In 1953, at age 25, he complained of blurred vision and loss of color vision. The onset was sudden. Improvement occurred after one month. A year later, he had double vision for several weeks. In 1955, soreness and paresthesia, first in the feet and later in the left face, arm and leg occurred. For a little over a year he had impotence and precipitancy of micturition. *On examination* in 1958 he showed coarse horizontal nystagmus on lateral gaze and vertical nystagmus on upward gaze. Muscle stretch reflexes and motor function were normal. Sensation was intact. He was able to carry out all of his usual activities with no obvious disability.

Designation of an early probable and latent category is believed to serve a useful purpose. Such cases, because of slight or negligible disability, are more likely to escape detection if the index of suspicion among practitioners

is low. The proportion of such cases to the total number of cases identified is a crude index of the extent to which practitioners in a community are aware of the disease. Furthermore, it is possible that the finding of a large proportion of early cases in an area may reflect the influence of a factor which tends to arrest the progress of the disease. It might be misleading to combine cases with few physical signs and negligible disability with more severely affected patients having multiple signs under the same "probable" diagnostic group. On the other hand, the "possible" category implies an uncertainty about diagnosis which is not warranted for cases such as illustrated above.

2. PROBABLE MULTIPLE SCLEROSIS: When there was no reasonable doubt about the diagnosis, patients were classified in this group. Some evidence of disability was invariably present, the history was usually remitting rather than progressive, and on examination definite physical signs explained only on the basis of multiple lesions of the neuraxis was found. Supporting evidence, such as a change in the colloidal gold curve or a negative myelogram was required for patients in whom the history was unreliable, or who otherwise were of "borderline" probability. An example follows:

HJD No. 63H. White woman, age 62 when seen on July 11, 1958. In 1917, when 21 years old, she had complained of double vision for 6 months. In 1926 she had "crying spells" for one month. Impaired vision in the left eye began in 1935 and grew progressively worse. Since 1951, she had noticed shaking of the arm and recurrence of double vision. Urinary symptoms also began at this time. On sudden flexion of the neck she had felt momentary "shocks". Examination in 1958 showed a grayish-white right optic disc, but peripheral and central fields were full. Slight "guttering" of small hand muscles with flattening of the thenar and hypothenar eminences was present. The hand grips were weak. Tendon reflexes were slightly greater in the left upper limb and there was a spastic paraplegia with extensor plantar responses. Vibration sensibility was lost below the knee on the right and impaired on the left. Position sense in the toes was lost. Rapid alternating movements were poorly performed at the wrists and fingers and intention tremor was present on finger to nose test. She was unable to walk without assistance.

3. POSSIBLE MULTIPLE SCLEROSIS: Patients classified in this group had some physical disability and signs indicative of central nervous system disease which was suggestive of multiple sclerosis. The course of the disease had usually been static or progressive and the physical signs demonstrable did not provide sufficient evidence of multiple lesions at different levels in the neuraxis. However, evidence for any other diagnosis which might explain the symptoms was absent. Patients with cervical spondylosis were not excluded if the findings were otherwise suggestive of multiple sclerosis for it has been shown that both conditions may coexist (5). The occasional patient with a history of a positive serological test for syphilis was not necessarily excluded unless the cerebrospinal fluid was positive while the clinical course progressed. Patients with a clinical picture of hereditary spastic and ataxic paraplegia were not included unless typical features of multiple sclerosis were also present, e.g. disassociated nystagmus or unioocular retrobulbar neuritis. Skeletal deformities, with onset in several members of the family at the same

age, and cardiac anomalies weighed against the acceptance of some cases (6). An example of a case in Group 3 follows:

BD No. 54H. Negro female age 58 when seen in July 1958. The past history included spring-summer allergic symptoms. In 1946, she began to drag her left foot. At that time examination showed spastic ataxia with extensor plantar responses. Deep tendon reflexes were elicited with difficulty in the lower limbs. Sensation was intact. A myelogram was negative. Urinary bladder function was not affected. When examined in 1958, the cranial nerves were intact, but a spastic paraplegia with scissors gait was present. Tendon reflexes in the upper limbs were brisk and equal bilaterally. Tone was greatly increased in the lower limbs. The knee and ankle jerks were difficult to elicit. Extensor plantar responses were present. Vibration and postural joint sensibility were both impaired over the lower limbs and trunk.

RESULTS

TABLE 2. CLASSIFICATION BY DIAGNOSTIC CATEGORY, MULTIPLE SCLEROSIS SURVEY, HALIFAX COUNTY

Diagnostic Category	Halifax County	
	No.	Per Cent
Early Probable and Latent	9	14
Probable	33	52
Possible	22	34
Total	64	100

Of the patients finally considered for prevalence, 64 fulfilled the diagnostic criteria. The classification of accepted cases into three diagnostic groups is shown in Table 2. Twenty-six of the patients were male and 38 were female. All but two were white.

ESTIMATION OF PREVALENCE RATES:

A prevalence rate is the proportion of affected individuals to the population at risk in a given area and at a specified time. A rate per 100,000 population is conventionally used.

1. **TOTAL PREVALENCE RATE:** The prevalence of multiple sclerosis in Halifax County, based on the 64 cases is 32.4 per 100,000 population. If "possible" cases are excluded, the prevalence rate is 21.2 per 100,000 population.

2. **AGE SPECIFIC PREVALENCE RATE:** As shown in Table 3, the rate per decade increases until the seventh decade.

TABLE 3. MULTIPLE SCLEROSIS: SPECIFIC PREVALENCE BY AGE FOR TOTAL POPULATION IN HALIFAX COUNTY, DECEMBER 31, 1955

Age	Estimated Population	Number of Patients	Prevalence Rate per 100,000 Population
0-9	48,000	—	—
10-19	32,000	2	6.3
20-29	34,000	6	17.6
30-39	30,000	22	73.5
40-49	23,000	15	65.5
50-59	14,000	11	78.6
60 +	17,000	8	47.1
Total	198,000	64	32.4

3. RATES BY SEX: The prevalence rate for females was 38.9 per 100,000 and 26 per 100,000 for males, or almost 1.5 female cases for every male case.

4. RACIAL AND ETHNIC DIFFERENCES: The few negroes in Halifax County make a prevalence rate for this group of doubtful statistical reliability. Two negro patients were found among the 8,000 negro inhabitants. A prevalence rate per 100,000 for the white population alone is 32.6 and that for the negro population is 25. The difference in rates by race is well within chance variation. There was no obvious difference in prevalence rates among the various ethnic groups which comprised the white population.

5. CLINICAL FEATURES AS RELATED TO PREVALENCE: Some clinical information is helpful in comparing the prevalence of multiple sclerosis in Halifax with that reported from other areas.

The average age at onset was 31.1 years and on prevalence day was 42.5 years. The average duration of illness for the patients included in the study was, therefore, 11.4 years. These values are essentially the same for both probable and possible cases.

The general course of illness was remittent in 66 per cent and progressive in 34 per cent. The frequency of relapse among the remittent cases was 0.25 per person-year of illness or an average of one relapse every 4 years (41 patients had 120 relapses in 487 person-years of illness experience).

The degree of disability was assessed for each patient at the time of examination and scored according to the six-degree scale devised by Hyllested (7). The disability was mild to moderate in 32 patients (56 per cent); in 25 patients (44 per cent) the disability was more severe. There was no apparent tendency of patients with the disease to settle in the Halifax area because of its medical facilities since 73 per cent of the accepted cases were natives of the county and 83 per cent developed their first symptoms there.

DISCUSSION

Studies of the prevalence of multiple sclerosis have been carried out in several areas having a latitude similar to that of Halifax. In Kingston, Ontario, White and Wheelan (8) found a prevalence rate of 53 per 100,000 population. Westlund and Kurland (1) reported a prevalence rate of 40 per 100,000 in Winnipeg, Manitoba. A rate of 64 per 100,000 population was reported based upon Mayo Clinic records for residents of Rochester, Minnesota (9). All of these studies used methods which were apparently similar in that the population at risk was carefully defined and patients were sought

in the records of all pertinent medical facilities serving that population. Despite the apparent similarities, differences in methods exist, the significance of which is hard to estimate. Initial case finding is a reflection of more than effort expended since personal judgment (or prejudice) may be an important variable. The prevalence rate obviously depends on how the unit case is defined. Yet, seldom are diagnostic criteria sufficiently clearly defined in reports of prevalence to permit comparison between studies of different investigators. Variability is also introduced by differing methods of clinical examination. Comparison of the results of different prevalence studies must be cautious for these reasons and small differences often cannot be regarded seriously.

It is probable that the rate suggested for Halifax County is an underestimate of the true rate. Patients who may have had mild symptoms but did not present themselves for medical advice and hence had no chance of being diagnosed could not be ascertained in our study. Patients who left Halifax County after developing multiple sclerosis and hence were not residents on prevalence day would not be reflected in the prevalence rate. To what extent patients known to physicians were not reported is uncertain but since over 80 per cent of practitioners responded to our inquiries, the loss from this source is considered small. In an effort to avoid loss of cases because of variations in terminology among practitioners, five disorders other than "multiple sclerosis" were included but these "allied disorders" contributed only two of the cases which were finally accepted.

Previous studies (1, 2, 3, 7) purporting to show a high prevalence in north temperate regions compared with more southerly areas have given rise to speculation about the influence of geographic factors such as climate in the etiology of multiple sclerosis. Hopkins and Swank (10) were unable to show any direct correlation between onset of symptoms or exacerbation of symptoms and climatic variables except temperature change. The correlation between prevalence of multiple sclerosis and mean temperature or degrees north latitude seems not to pertain for areas with a mean January temperature colder than 30°F. and for areas further north than 40° North latitude. Preliminary data (10) comparing the prevalence of multiple sclerosis in northern and southern Japan show no significant north-south variation. In Germany, (12) Schaltenbrand found a band of high frequency of multiple sclerosis along the Rhine River but no strict north-south difference. Swank (13) and Presthus (14) found relatively high prevalence rates in Southern Norway compared with the north of this country.

In our search for cases we were impressed with the importance of methodological variables such as definition of the accepted case, completeness and accessibility of hospital records, cooperation of practitioners and attitudes of patients toward medical care in determining the number of cases found. Until the influence of these variables is assessed in different areas it would be premature to attribute differences in prevalence rates between widely separated regions solely to a geographic factor.

SUMMARY

A comparative epidemiologic study of the prevalence of multiple sclerosis was carried out in Charleston South Carolina, a subtropical community

and Halifax Nova Scotia, a community of temperate climate in order to obtain further data on the geographic variation in the frequency of this disease. Data on the Halifax survey were presented in this report.

Diagnostic criteria were formulated before any patients were seen.

After surveying hospital records for the decade 1946-1955, and physicians' experience from 1950 to 1958, 64 cases were accepted giving a prevalence rate on December 31, 1955 of 32.4 per 100,000. An increasing age-specific prevalence rate was shown up to the seventh decade. The rate for females was almost 1.5 times greater than for males. No obvious ethnic predilection was apparent. The average age at onset was 31.1 years. The average duration of illness was 11.4 years from onset of symptoms to prevalence day among the patients reported in the survey and living on December 31, 1955. Of the cases personally examined, 56 per cent were considered to have no more than moderate disability. Seventy-three per cent of the accepted cases were natives of Nova Scotia and 83 per cent had had their first symptoms in Halifax County.

The numerous factors affecting the measurement and evaluation of prevalence rates were discussed.

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TUBERCULOSIS — 1960*

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It is common knowledge that death rates from tuberculosis in the so-called well developed countries have declined rapidly since 1947. In Nova Scotia, in the year 1911 when our population was only about 500,000 approximately 1100 persons died of tuberculosis for a death rate of 207.6. (Table I) In 1946, there were 382 tuberculosis deaths for a rate of 62.6. In 1959, preliminary figures indicate 28 deaths in a population of 719,000 for a rate of 3.9 per 100,000 population.

This has led to considerable complacency, both professional and lay. Our health educators may well be jubilant about our progress but often fail to inform us that death rates in some undeveloped countries still reach 250 to 500 per 100,000 population. With ease of travel and increased movement of world populations, this fact may become of very considerable importance to us personally, if we have not already been moved in spirit by the plight of our less fortunate world citizens.

Too often our daily papers play up our successes and do not mention our failures. A new case of tuberculosis which has developed in our midst must be considered a calamity when we have available to us measures to prevent such tragedies.

In Nova Scotia in 1957, there were reported from all sources 282 new cases of active tuberculosis and 79 persons who suffered reactivation of previously inactive disease. For 1958, the figures were 268 new active cases and 105 reactivations whereas preliminary figures for 1959 indicate 287 new active cases and 136 reactivations. In other words, during the past year there were at least 423 persons for whom it was necessary to institute treatment either for the first time or as a repeat performance. This compares to 373 in 1958 and 361 in 1957. (Table II)

On occasion, progress has complicated the picture. Years ago, many persons did not survive their tuberculous disease for any great period of time. Such people, generally speaking, now do not die but by surviving they are given an increased opportunity to spread their tubercle bacilli to others. Especially is this true when treatment has been inadequate in regard to choice of drugs, duration of drug administration or the provision of necessary auxiliary treatment. Patients with their tuberculous disease in an apparently inactive state are reactivating with increasing frequency. Surely, our objective should be to return a patient to health and at the same time heal his tuberculosis so thoroughly that it remains healed for all time.

The largest single problem facing the clinician involved in tuberculosis control is the factor of bacterial drug resistance. This is recognized as a great problem in respect to the quickly-growing bacteria such as the staphylococci, gonococci and others. The problem is magnified many times when dealing with a chronic disease caused by the slowly-growing mycobacterium tuberculosis.

The anti-tuberculosis drugs are not bacteriocidal *in vivo*. They are bacteriostatic. They operate by slowing up or preventing the multiplication

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TABLE I MORTALITY FROM TUBERCULOSIS IN NOVA SCOTIA

Year	Population (approximate)	Deaths (number)	Death Rate/100,000 pop.
1911	500,000	1100	207.6
1946	615,000	382	62.6
1959	719,000	28*	3.9

*Preliminary figure

TABLE II MORBIDITY FROM TUBERCULOSIS IN NOVA SCOTIA

Year	Newly Discovered Active Cases	Reactivations	Requiring Treatment (new or repeat)
1957	282	79	361
1958	268	105	373
1959	287*	136*	423

*Preliminary figure

of bacteria and so allow the normal body defences to attack the bacilli during their most vulnerable pre-division stage.

If a single anti-tuberculous drug is given to a patient with active tuberculosis, the bacteria will develop a strain resistant to that drug sometime between six weeks and six months in nearly every case. If, two drugs are given in adequate doses at the same time the second drug will control the strains that tend to develop resistance to the first drug. In this manner, a combination of two drugs adequately administered may be effective for many months or even years.

The total picture is not this simple however. Anti-microbial drugs have been used for the treatment of tuberculosis in humans since 1947. For the first few years, streptomycin was the only drug available. Patients treated with this single drug soon became resistant to it. Then, in 1949, PAS became available. Those persons who were resistant to streptomycin were given the new drug but in like manner, they soon became resistant to PAS. Shortly afterwards, it was found that an adequate combination of both the drugs would prevent the emergence of resistance to either but this applied only to new, previously untreated cases. If the patient was already resistant to streptomycin, there was no point in giving it along with the PAS as resistance to PAS developed just as quickly as if the drug were given alone. In other words, streptomycin in such a case was useless and PAS soon became ineffective.

Human frailty also entered the picture. Those persons previously untreated with drugs and for whom a combination of streptomycin, and PAS should have been adequate required PAS in high dosage. This means the swallowing of 24 to 32 large pills a day, every day for a year or more. PAS has a tendency to upset the gastrointestinal tract and so many patients discontinued this drug secretly reverting to streptomycin alone and their infections soon became resistant. When this omission was discovered and they were urged to resume PAS, they quickly developed resistance to this drug as well.

Patients take their drugs better in a sanatorium or tuberculosis hospital than they do at home where they are different from the other household members and because there is no established routine for the taking of medication. Dixon¹ and others in 1957 summarized the literature and described an investigation in which a single urine test for PAS was done on out-patients receiving treatment at home. They found that 50 per cent had not taken their PAS on the day of the test. Wynn-Williams² and Arras in one year tested 900 urines for PAS on 153 out-patients. Of these, 49 per cent showed negative tests. In other words, these persons were not taking their drug conscientiously.

In 1952, Isoniazid became available and is our best anti-microbial agent in the treatment of tuberculosis. Here again the problem of the emergence of drug resistance exists but there is evidence that this drug still exerts some good, although limited, effect upon tuberculous disease even in the presence of laboratory evidence of drug resistance.

When a patient is admitted to the Nova Scotia Sanatorium for treatment, a number of factors must be considered:

- 1) Has this patient received drug treatment previously? Is it possible that he is already resistant to one or more of the usual treatment drugs, streptomycin, PAS or INH?

- 2) Has the patient, who has never been treated previously, possibly contracted his tuberculosis from some patient who had been treated with drugs? If so, are the tubercle bacilli now partially or wholly resistant to one or all of the drugs? Recently, two children were admitted to the Sanatorium. They had never received treatment before but the tubercle bacilli of one were completely resistant to PAS and INH and only very slightly sensitive to streptomycin. The bacilli of the other child showed only slight sensitivity to streptomycin and INH and moderate sensitivity to PAS. The mother had refused sanatorium admission and had been treated with all three drugs at home. She is now in Sanatorium but it is too late as far as her children are concerned and also too late for the protection of a school girl next door who has also been admitted infected with resistant tubercle bacilli. These are not isolated instances. Many of our cases are admitted or readmitted with drug resistant tubercle bacilli.
- 3) It requires up to four months to determine whether or not a patient's bacilli are resistant and so some adequate routine must be instituted at the beginning of treatment which can be safely modified later on if it is necessary. Knowing that patients on admission are more likely to be resistant to one drug than to all three, our policy now is to start all new admissions and readmissions on three drugs routinely in the hope that there will be a combination of some two that will work effectively to prevent the emergence of further drug resistance.

It has been established that daily streptomycin in combination with other drugs is more effective than streptomycin two or three times a week. This drug, therefore, is now given daily to all patients under forty years of age and to all patients with marked constitutional symptoms. Patients over forty are most likely to develop hearing or vestibular complications and so they are given the drug twice a week unless the extent of their tuberculous disease warrants risking the auditory complications.

On admission or readmission, therefore, the average patient will receive daily one gram of streptomycin sulphate as a single dose, 16 grams of Sodium PAS and 300 milligrams of Isoniazid. PAS and INH are given in four divided doses with meals and with a bedtime snack.

If, after four months, the patient is found to be sensitive to all three drugs, either PAS or Streptomycin may be eliminated but not INH which is our best anti-microbial drug.

If testing shows that the bacilli are resistant to two or more of the commonly used three drugs, then some other drug combination must be used. At the Nova Scotia Sanatorium, Cycloserine, one half gram per day, and Pyrizinamide, one and half grams per day, are most frequently substituted. Tetracycline, 2 grams per day, Viomycin, one gram per day, or Kanamycin, 2 grams per day twice weekly, may be used but are relatively ineffective.

Unfortunately, drug resistance is not the only problem encountered in providing anti-microbial therapy. Drug intolerance is a fairly frequent occurrence. In particular, pyrizinamide and kanamycin are dangerous drugs requiring close supervision of the patient, the former because of hepatitis which may be fatal and the latter because of deafness which may be insidious and permanent. Cycloserine may cause neurotoxic manifestations, including convulsions. Any of the drugs may cause serious skin rashes necessitating their discontinuance. Severe exfoliative dermatitis has developed in some

cases, especially with the use of streptomycin or PAS. Prolonged treatment with dihydrostreptomycin may also cause deafness so this drug is used cautiously and only when streptomycin cannot be tolerated.

Treatment for pulmonary tuberculosis must be by a suitable combination of drugs, it must be uninterrupted, and it must be continued for a minimum of one year but preferably eighteen months. In the more serious cases, antimicrobial therapy may be required, in various suitable combinations as indicated by drug resistance testings, for periods of two, four or even more years.

In all cases, treatment should be started in a tuberculosis hospital or sanatorium and continued there until the sputum is repeatedly negative on culture and the lesion from an X-ray point of view appears stabilized and essentially healed. This is for the protection of contacts in the home and elsewhere. The patient may then be returned home on drug therapy for the final three, six, twelve months or longer in order to consolidate gains made while in hospital and prevent future possible relapse.

Thoracic surgery is required less frequently for tuberculosis than in the past. This is because medical treatment, if carried out conscientiously for a sufficient period of time, can bring about much better results than was the case before the era of chemotherapy. Pulmonary resections are still needed to remove significant residual areas of caseous tuberculous disease which may lead to eventual reactivation, or to remove tuberculous cavities or tuberculous bronchiectasis which persists in secreting tubercle bacilli. Such surgery must not be undertaken until medical treatment has stabilized the tuberculous disease and rendered the sputum negative, if possible. Resectional surgery in the presence of positive sputum carries with it a greater risk of complications than when the sputum is negative. This fact has been demonstrated by many authors^{2,3,4}.

Treatment by artificial pneumothorax is used not at all and artificial pneumoperitoneum only infrequently in this modern age. The occasional primary thoracoplasty or extrapleural pack operation may be indicated but, whenever possible, it is preferable to remove as nearly as possible the offending disease rather than leave it within the body to heal slowly or become a subsequent source of danger.

In the days before streptomycin and the other newer drugs, patients derived great benefit from bed rest. Indeed, many persons with advanced tuberculous disease was able to recover completely by means of the conscientious application of bed rest over a prolonged period of time, relaxing the stringency of the regimen as clinical improvement occurred. As it was efficacious in those days, it is still of great value. Indeed, many of our patients who, after four months laboratory investigation, are found to be drug resistant have, of necessity, been relying mainly upon bed rest to bring about healing of their disease.

By bed rest is meant lying flat in bed for the entire twenty-four hours of the day while the patient is febrile or when other evidence of active disease is present. As soon as possible, bathroom privileges are gradually permitted. Indeed, only a very few ill patients are denied bathroom privileges at least once a day even from the beginning of treatment.

Treatment by bed rest acts in a number of ways. Lying flat in bed increases the blood supply to the apical and posterior portions of the lungs which are most often affected by tuberculosis. In addition, staying quietly in bed diminishes the depth and frequency of respiration compared to standing

or walking. Physical activity increases the metabolic requirements and concomitantly the rate and depth of respiration needed to meet the increased oxygen demand of the musculature of the body as a whole. The interior of the lung is under elastic tension at all times. The deeper and more frequent the respirations the more frequent and greater the alternate stress and relaxation upon areas of lung trying to heal. Though this stress may be slight in degree, it occurs 25,000 times each day and is an important work factor for the portion of the lung which is attempting to heal.

Indeed, Alvin Barach⁵ in 1949 reported the use of his barospirator which effected complete immobilization of thoracic structures. The therapeutic effect was gratifying but the apparatus was costly, supervision was complicated and the patient resisted immobility comparable to that in an iron lung. This approach does exemplify the value of bed rest, however.

Dillwyn Thomas⁶ in 1950 demonstrated the value of postural retention. This method of treatment required patients to be postured with the affected side down for long periods of time, frequently in a plaster cast. In many cases, cavities appeared to melt away in days or weeks, in others there was steady progress over many months. The procedure worked by providing hyperaemia to the affected side and also providing it with added rest.

At the Nova Scotia Sanatorium we never gave up our use of bed rest treatment to augment drug therapy and necessary surgical procedures. With the increasing complexity of the situation in respect to drug resistant bacilli, we have been at least providing this accepted and effective form of treatment to all patients whether their drug therapy was effective or not.

Tuberculosis is a public health problem which manifests itself as an illness of selected individuals within the community. To consider and treat the individuals and neglect the community as a whole would be analogous to treating a diabetic ulcer and neglecting the diabetes.

To treat a patient with infectious or active tuberculosis at home is to neglect to protect or treat the community. Community and home contacts so infected may not develop clinical or demonstrable tuberculous disease for one, two or even fifteen years. If they had not been so exposed, however, they would never have developed it.

A positive tuberculin reaction is the first indication of tuberculous infection in most instances. Therefore, every recent converter from a negative to positive tuberculin reaction should be treated. This should be done at home if there is no other evidence of clinical tuberculous disease. Also, every child under five years of age even without demonstrable tuberculosis other than a positive tuberculin reaction should be treated with INH for one year. This will prevent the development of clinical tuberculosis at a later date in almost all.

Known contact of a child with a positive tuberculin reaction should be tuberculin tested and given an X-ray examination if tuberculin positive in order to find the source case and bring it under treatment. This is an excellent case finding method.

The very best means of detecting new cases is the periodic (at least yearly) examination of all contacts of a known case of the disease. The second most productive source is the regular examination of all known positive tuberculin reactors. There are about 200,000 in Nova Scotia. The third most productive and probably the most accessible and most easily surveyed group is made up of patients entering hospital. In 1959, this source yielded 67 new active cases of the disease in this Province. Many of these people were admitted to a general hospital for the treatment of some non-pulmonary condition.

If their tuberculosis had not been discovered on their way into hospital and had they not been placed on infectious precautions they would have presented a very great health hazard to other patients and especially to nursing staff looking after them. Another good source of new cases is the group of persons who visit doctors' offices because they do not feel well. Perhaps tuberculosis is the cause of their complaints or perhaps it is just a contributing cause. A tuberculin test and/or a chest X-ray examination for all such persons is a worthwhile undertaking. The earlier in the development of tuberculosis the condition is found, the more effective treatment will be and the greater the protection afforded to the community.

B.C.G. vaccination provides about 85 per cent protection against development of tuberculosis. It should be reserved for those persons such as students and interns who have an occupational or environmental exposure to tubercle bacilli in appreciable numbers. Mass vaccination of the whole tuberculin-negative population in a relatively low incidence area such as Nova Scotia is futile and unwarranted. There would be approximately 500,000 persons who would be eligible for such vaccination, Once vaccinated they would then lose the use of the tuberculin test as a valuable differential diagnostic aid if any of them should develop an undiagnosed chest lesion. Also, once vaccinated, this group would require chest X-ray examinations yearly to detect developing disease. The size of such a program would be prohibitive.

SUMMARY

The control of tuberculosis is a community problem of which the treatment of a patient is an important part. Treatment carried out in a tuberculosis hospital protects the community at the time and also in the future. Drug therapy must be continuous and prolonged and the proper choice of drugs administered in combination depends upon careful laboratory evaluation in respect to drug resistance. The older valuable drugs, such as Streptomycin, PAS and INH, are becoming less useful for many patients for whom the newer, more dangerous drugs must be administered in conjunction with bed rest treatment and chest surgery where indicated. Mass vaccination with B.C.G. vaccine is not the answer to tuberculosis control in Nova Scotia. Our endeavours must be directed toward finding new cases before they can spread their disease to others and in time to allow optimal response to treatment. The postponement of death may mean the increased dissemination of tuberculous disease. In Nova Scotia, at least, the numbers of patients requiring treatment have been increasing rather than diminishing over the last few years.

True control is within our grasp if we do not let it slip through our fingers. If new cases are not found quickly, isolated and treated long enough with the correct drugs in the right dosage, we may soon be faced with a generation of patients whose disease no longer responds to our present therapy. This present therapy if properly applied, could eliminate tuberculosis from our Province in the lifetime of some of us.

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DISCUSSION

- DR. J. O. GODDEN: Lowe in Britain, 1956, in a study of smking habits of patients in sanatoria and in out-patient departments estimated that 70 per cent of relapses of pulmonary tuberculosis in men and 30 per cent in women were related to the habit of cigarette smoking. I have two questions. Have you done any studies in your institution on smoking as a factor in the breakdown of quiescent tuberculosis? What do you do about smoking among your sanatoria patients?
- DR. HILTZ: No, we have not done any studies on the contribution of smoking to relapses in pulmonary tuberculosis. The second problem is complex. At the Sanatorium, we do not say to a patient "you are not allowed to smoke," but we do say "It would be to your advantage if you did not smoke." It is then up to the adult patient to take or reject our advice. If anyone had the time to study our provincial reactivations from the point of view of their smoking habits we should be very happy to co-operate with them but I fear that a clear-cut answer could not be obtained. Indeed, if smoking does contribute to relapse in tuberculosis, it is only one, and perhaps a minor one, of a number of factors that are involved. However, when trying to overcome any disease it is well to try to eliminate all conditions, great or small, which may retard recovery or help cause relapse.
- DR. J. E. BETHUNE: You mention that treatment of tuberculosis must always be by a combination of drugs and yet you recommend isoniazid alone for tuberculin converters. How do you reconcile this apparent discrepancy?
- DR. HILTZ: It has been demonstrated by a number of studies involving many hundreds and thousands of persons whose tuberculin reaction has converted from negative to positive that it is safe and adequate to treat them with isoniazid alone in the absence of a demonstrable tuberculous lesion. Once such a lesion is discovered, the converter becomes a clinical case and should be treated by means of combined therapy.
- DR. C. J. W. BECKWITH: Our experience with tuberculin converters in Halifax schools is that an appreciable number revert to negative tuberculin status within one year whether or not they had received preventive isoniazid therapy at the time tuberculin conversion had been identified. It is my belief that infants with a positive tuberculin reaction must have isoniazid therapy, even though examination discloses no indication of "disease," and the same approach is justified in the pre school group. However, tuberculin converters in children of school age and adolescents (5 - 20 years) who show no indication of "disease" I think might be kept advantageously under observation particularly with reference to tuberculin status, for a few months, rather than placing them routinely on isoniazid as preventive therapy. The same would apply to adults. I must also remark that these observations on the stability or instability of tuberculin existing are so recent and the numbers involved so few, that no conclusions have been possible. Investigation is continuing.
- DR. HILTZ: Dr. Beckwith may well be right. Time alone will tell, but personally I favour treating any recent converter in the hope of preventing subsequent development of overt tuberculous disease either of the lung or elsewhere in the body due to a "silent" blood stream spread of tuberele bacilli.
- DR. D. R. S. HOWELL: In the case you quote of the patient who refused treatment and subsequently infected others, could this situation not have been prevented by means of Public Health Legislation and Court action.
- DR. HILTZ: Yes, indeed, but unfortunately, the situation may be extremely difficult from the point of view of the Director of the Health Unit who must lay charges. Sometimes, you lose more than you gain when you take some step that greatly antagonizes a segment of the public. In this case, the administrative problem was a very difficult one. Dr. Holden has just whispered to me that I am forgetting to mention another victim of this patient, a five-year old child of the cleaning woman who came into the household to be with his mother. This boy has been at the Sanatorium for the past year. Truly, legislation has its place in tuberculosis control but education is better. The former should be invoked only when the latter fails. In this case, probably too much was expected of education and legislation should have been utilized long before to bring the patient to the Sanatorium.
- DR. C. J. W. BECKWITH: I cannot subscribe to Dr. Hiltz' statement that mass B.C.G. vaccination does not have a place in our Nova Scotia Tuberculosis Control Programme. In the City of Halifax we have been conducting a very worthwhile programme of tuberculin testing and B.C.G. vaccination of negative reacting Grade IX students.

- DR. HILTZ: Dr. Beckwith and Dr. C. B. Stewart, who are sponsoring this programme, are to be congratulated for their very fine work. Its merit, however, to my way of thinking, lies in the fact that it is a large controlled *study* which may well provide us with needed additional knowledge regarding this vaccine. Information presently available would indicate the correctness of my statement that a mass vaccination programme in Nova Scotia is unwarranted. I am quite prepared to be shown otherwise, however, if this or any other series of well-conducted studies can provide proof to the contrary.
- DR. S. J. SHANE: Perhaps, due to the developing complexity of the situation caused by the emergence of drug resistant bacilli in increasing numbers, the question of B.C.G. vaccination may once again take on added significance. This situation is rapidly assuming more importance because of our failure to discover a really effective, really-non-toxic anti-microbial agent since isoniazid.

SYSTEMIC LUPUS ERYTHEMATOSUS AND HYPERTENSION WITHOUT RENAL INSUFFICIENCY. Sutnick, A. I., et al. *Ann. Int. Med.*, 52: 849, (Apr.) 1960.

This paper reports two patients with systemic lupus erythematosus who presented a clinical picture of severe arterial hypertension without marked impairment of renal function. Both failed to respond to energetic antihypertensive therapy, which in one patient included subtotal adrenalectomy and subdiaphragmatic sympathectomy. The clinical course of these patients suggested a collagen disease. At necropsy, lesions compatible with lupus erythematosus were found in the heart and kidneys. These observations suggested that one should consider the possibility of disseminated lupus, among other etiologic factors in patients with "essential" hypertension.

S.J.S.

OCULAR FINDINGS IN CYSTIC FIBROSIS OF THE PANCREAS. Bruce, G. M., Denning, C. R., Spalter, H. F. *A.M.A. Arch. Ophthal.*, Vol. 63, No. 3: 391-401, (March) 1960.

Abnormal ophthalmoscopic lesions were observed in 24 cases of cystic fibrosis of the pancreas with moderate to severe pulmonary involvement. Changes observed were: papilledema, venous distention and tortuosity, retinal hemorrhages, and cystic changes in the macula. The majority of the patients showed both venous engorgement and increased tortuosity of the retinal vessels, though in some instances a single abnormality was present. In less than half the group, retinal hemorrhages were also a part of the picture. Macular changes were found in 2 patients. It would seem that these abnormalities may occur independently and need not be associated one with another. Investigation into the etiology of the abnormal eye findings in this group of children has thus far disclosed only two constant relevant factors: the presence of moderate to severe pulmonary disease, and elevation of the gamma globulin levels in the serum and cerebrospinal fluid. The immediate etiologic and prognostic significance of these findings is being investigated further.

J.H.Q.



Hay For Hobby Horses

THE ENCIRCLED PHYSICIAN

It may keep the practitioner out of the clutches of the arch enemy of his professional independence—the pernicious literature of our camp-followers, a literature increasing in bulk, in meretricious attractiveness, and in impudent audacity. To modern pharmacy we owe much, and to pharmaceutical methods we shall owe much more in the future, but the profession has no more insidious foe than the large borderland pharmaceutical houses. No longer an honoured messmate, pharmacy in this form threatens to become a huge parasite, eating the vitals of the body medical. We all know only too well the bastard literature which floods the mail, every page of which illustrates the truth of the axiom, the greater the ignorance the greater the dogmatism. Much of it is advertisements of nostrums foisted on the profession by men who trade on the innocent credulity of the regular physician, quite as much as any quack preys on the gullible public. Even the most respectable houses are not free from this sin of arrogance and of ignorant dogmatism in their literature. A still more dangerous enemy to the mental virility of the general practitioner, is the “drummer” of the drug house. While many of them are good, sensible fellows, there are others, voluble as Cassio, impudent as Autolyceus, and senseless as Caliban, who will tell you glibly of the virtues of extract of the coccygeal gland in promoting pineal metabolism, and are ready to express the most emphatic opinions on questions about which the greatest masters of our art are doubtful. No class of men with which we have to deal illustrates more fully that greatest of ignorance—the ignorance which is the conceit that a man knows what he does not know; but the enthralment of the practitioner by the manufacturing chemist and the revival of a pseudoscientific polypharmacy are . . . (steadily increasing).

WILLIAM OSLER

An address before the Canadian Medical Association, Montreal, 1902.

In the May 28th issue of the Saturday Review, John Lear wrote an editorial of the above title which ends with the following paragraph: “Too many physicians still fail to grasp that they are the ones who have been put on trial by the drug makers tactics. At every important turn of the Senate hearings, testimony shows responsibility for the practical affects of misleading drug promotion being shifted by the exploiters to the doctors they exploit.” Every physician has become increasingly aware that his co-operation is vital to the success of one of the largest of modern industries, that of drug manufacture. He knows that big business judges itself by other standards than those of public service, indeed he would be naive to expect a business to do otherwise. The executive in the drug industry may pride himself that his company is “ethical”—that is that the company advertises its products through professional journals only, conveys these products to the patient only on prescription by his personal physician and supports a large research laboratory with physicians and other scientists who work to ensure the purity and safety of the company’s products.

However, there is ample evidence that the tremendous pressures operating within a highly competitive industry far outweigh the restraints, unnatural to commerce, that are demanded by a completely objective evaluation of new drugs. Compare in your own minds the atmosphere of research and evalu-

ation in an independent establishment such as Connaught Laboratories with that in a commercial pharmaceutical house. John Lear has done the medical profession a real service in pointing out instances in which a major drug house has falsified clinical results to support an advertising blitz. Following his revelation in September 1959, the medical director of the manufacturer involved resigned in protest when it became clear that the needs of the sales department outweighed the objections of the medical staff. It is not within the scope of this column to undertake a thorough examination of this difficult and complex field. I can only raise a number of points with you with the option of returning to them at a later date.

As Dr. K. J. R. Wightman said in his valuable paper before the Royal College of Physicians, speaking on *The Era of Rational Therapeutics*: "Our present situation in medicine is comparable to the position occupied by surgery three or four decades ago. We have before us numerous therapeutic agents and methods and by trial and error are trying to choose the most reliable of them. Our present use of drug therapy is not in any sense rational because there is no reliable way of evaluating a new drug without extensive trial on human beings." In short the evaluation of new drugs is a "by guess and by God" business at best. Even after the most elaborate experimental evaluation many drugs only reveal their ultimate toxicities after a period of prolonged use in a clinical setting. Machinery for cautious and impartial trial under controlled conditions *by those who have nothing to lose if the drug fails*. has been provided in the past by clinicians and other workers in university medical centers and large clinics. These agencies have been overwhelmed long ago by the flood of new products and only a minority of new drugs get an independent critical evaluation before they are released to the public.

Like young hopefuls flocking to Hollywood for a career in the movies, only a small percentage of new drugs will survive for any length of time. Only a few of the survivors are actually new products and add anything to the physician's ability to deal with human disease. The chief stimulus for 90% of the new drugs that appear on the market is not clinical need but a response to the pressure of economic competition, a response to the incessant demand for novelty which will provide a temporary advantage in the market place. The senior medical student should have it driven home to him that of each new class of drugs, i.e., antihistaminic, muscle relaxant or tranquillizer, all but a few will disappear within a year or so, that of agents within a given class all are similar in action and are likely to differ very little except in cost and, except in an occasional case, most are not likely to give better results than the old standbys of clinical therapeutics. Armed with this approach, the young physician should use one agent in each group long enough to discover *on the strength of his own experience* whether or not the new agent has worthwhile advantage over older methods of treatment. After the physician has used Panacea-Plus at 40c a tablet for a few weeks he may come to the conclusion that phenobarbital at 2c a dose does much the same thing for his patient. In time he will be proof against much of the slick propaganda that flows in an unending stream across his desk.

Tremendous changes have taken place in the drug industry since the end of the World War II. Many of the big chemical companies have bought out older pharmaceutical houses and have expanded and developed them in the last few years. The practicing physician stands as a bottleneck in this expansion. He obtrudes himself between the producer and the consumer and

mulishly insists upon deciding what the consumer should and should not have. The big drug houses have reacted to this in a practical way. "The overworked doctor does not have time to keep up with the tremendous advances in pharmacology. However he can depend on us to help him choose those products that will benefit his patients. Our detail men, our scientific reports (fed in a direct stream from the desk of our medical director and advertising manager to his desk) and our advertisements in journals are all a part of modern medical education. (One enterprising firm now invites physicians in Eastern Canada to call collect to members of their medical, technical or laboratory departments for medico-pharmaceutical information to "fill a gap in existing drug house service".) The ethical drug manufacturer is proud to be a tried and true partner of the valiant public-spirited physician." There is some truth in this claim of partnership but we must keep a close eye on our ambitious partner particularly when he is so eager to do our thinking for us and involves us in his quarrels in the market place.

It is a sobering fact that the physician himself is responsible for much that is offensive and wasteful in modern drug advertising. Repeated studies by consumer research groups has shown that saturation advertising direct to the physician's desk is the best way to increase the sale of a given product in the drug stores of a community. The sales manager of a drug house agrees at once that direct advertising is wasteful but he insists that it is the way that works best. The physician has shown that he will respond to bright, meretricious (if not mendacious) and expensive medical advertising. Until he ceases to respond to this type of advertising which makes up 30% of the sales dollar it will continue.

I had the facts of life put to me bluntly by a friend of 25 years standing who is now head of his own pharmaceutical house. He began with the assumption that all he had to do was to produce new products that were a proven addition to the physician's armamentarium at a reasonable price, let the physician know that these agents were available and all would be well. He found to his dismay that his products, although they were almost without competition and better and less expensive than the few competing lines that were being imported from abroad, were not being prescribed by the physician. In short, he was gradually brought to face the fact that although competitive advertising increased the price of his products to the patient by a marked degree he was forced to conduct the same type of advertising campaign as his wealthy and powerful competitors. He said with justified asperity that if doctors would resist this sort of approach the drug industry would be relieved of a wasteful burden and those drug manufacturers who were genuinely interested in producing needed products at a reasonable cost would have an advantage. As it now stands the truly ethical drug manufacturer is at a marked disadvantage.

A principle that has guarded British political life demands that any man assuming cabinet rank divest himself of all appointments or holdings that would raise the slightest suspicion of conflict of interest. Lear asks a potentially embarrassing question in his editorial after commenting on the action of officers of certain state medical societies in rallying to the aid of a drug house under scrutiny by the U.S. Senate Sub-Committee on antitrust and monopoly. "What percentage of the operating budgets of the (state) medical societies is paid by drug houses?" How much are we influenced by the endless offers of

co-operation from our "partners in the miracle of modern medicine?" We assume that a physician remains free no matter what favors he accepts. The physician is annoyed and offended when his patients imagine that he is responsible, in some way, for the cost of drugs. As a profession we have not yet concerned ourselves about what our self-appointed partner does in his end of the shop. Is it time we did?

Yours, for rational therapeutics,

BROTHER TIMOTHY.

PRESCALENE FAT PAD BIOPSY. Higgins, G. A., and Brownlee, W. E.: *J. Thor. Cardio. Surg.*, 38: 402, Sept., 1959.

The diagnostic and prognostic significance of prescalene fat pad biopsy was determined in this study of 362 patients in whom this procedure was performed during a 5-year period. The series included 138 patients from a university hospital and 224 patients from a veterans' hospital. A comparison of the two series as well as a study of the entire group was made.

Of the 362 biopsies, 98 (27%) were positive, 68 (19%) for carcinoma and 30 (8%) for diseases other than carcinoma. Of 208 patients whose final diagnosis was bronchogenic carcinoma, 68 (32%) had a positive prescalene fat pad biopsy. Of 68 patients having a histologic diagnosis of carcinoma, 50 (73%) had clinically palpable nodes, while 18 (27%) had nonpalpable nodes. Of 142 patients in whom the final diagnosis was bronchogenic carcinoma and who had non-palpable nodes on clinical examination, 18 (12%) were positive on histologic examination.

Prescalene fat pad biopsy appears to be a simple, efficient and reasonably accurate procedure in the diagnosis of bronchogenic carcinoma and other pulmonary diseases.

S.J.S.

GOITER AND MYXEDEMA DUE TO IODIDE ADMINISTRATION. BURROWS, B., NIDEN, H., and BARCLAY, W. R., *Ann. Int. Med.*, 52: 858, (Apr.) 1960.

In this paper are presented 4 cases of thyroid disturbance due to potassium iodide administration. All revealed evidence of myxedema and 3 developed clinically discernible goiter. Failure to recognize the nature of the syndrome may lead to inappropriate and even dangerous therapeutic measures. It is believed that iodide-induced thyroid disease is more common than is generally appreciated, and that increasing awareness of the syndrome will lead to recognition of additional cases.

S.J.S.

THE PRECANCEROSES

HOWARD I. GOLDBERG, M.D.

Halifax, N. S.

The concept of precancerosis is based on statistical data and describes lesions and changes which do not yet fulfil all the criteria of malignancy but which eventually become truly malignant in a relatively high percentage of instances. One may classify the precanceroses as obligatory, i.e., where malignancy is inevitable, and non-obligatory, where a small percentage of lesions become malignant. Table I lists some of the precanceroses under these headings.

Table I
MALIGNANCY IN PRECANCEROSES

Obligatory	Non-obligatory
1. Paget's disease of the nipple.	1. Senile Keratosis.
2. Bowen's disease.	2. Cutaneous horn.
3. Erythroplasia.	3. Riodermatitis.
4. Xeroderma Pigmentosum.	4. Arsenical keratoses.
	5. Leukoplakia.
	6. Kraurosis vulvae.
	7. Chronic ulcerations.
	8. Seborrhic keratoses.

Since the main purpose of this article is to emphasize the common precanceroses, a group of lesions known as keratoses, or keratomas should be discussed in detail. This group can be divided into two types, and their clinical characteristics are listed in Table II, as a differential diagnosis.

Table II
DIFFERENTIAL DIAGNOSIS OF KERATOSES

Seborrhic Keratoses	Senile Keratoses
1. greasy, yellowish.	1. brown, darker, dry, raised.
2. not very raised, but older lesions can be very raised.	2. hard, rough.
3. soft feel.	3. single or few.
4. multiple.	4. exposed parts, exclusively, e.g. face, back of hands, lips.
5. on covered parts.	

The senile keratosis is a feature of the senile skin and may be seen more commonly in the weather-beaten type of complexion, as a result of a lifetime occupation such as mariner or farmer. The differential diagnosis is important because about 10% of the senile type can become malignant, whereas the seborrhic type rarely does.

The cutaneous horn is really an exaggerated form of senile keratosis, and as the name implies features an elongated, pronounced, horny hyperkeratosis. It, of course, can become malignant at the base. As with most of the precanceroses, a squamous or prickle-cell epithelioma is the type of malignancy that develops.

Depigmented scarring, hyperpigmentation and telangiectasias are the clinical features of a chronic radiodermatitis, which is good terrain for malignant changes. Arsenical keratoses, from the prolonged and indiscriminate ingestion of arsenic, are rarely seen to-day.

Leukoplakia must be suspected when chronic whitish patches are noted on the buccal mucosa, lips or tongue. A biopsy is recommended to help rule out other dermatoses that occur in this locale, e.g. lichen planus, but these may be seen in their usual predilection areas. Kraurosis vulvae is a variant of leukoplakia. Chronic ulcers, burns, sinuses and fistulae may assume malignant changes.

OBLIGATORY PRECANCEROSES

This group is rare and need not be dealt with in detail. Paget's disease of the nipple may be suspected clinically by a chronic eczematous patch in this locale, featuring retraction of the nipple and palpable infiltration of the affected area. Bowen's disease can be a difficult diagnosis to make clinically. It, too, usually appears as a chronic, infiltrated, eczematous plaque and in most cases can only be recognized under the microscope.

Routine biopsy of suspected precanceroses is a most important procedure. Most of the unadulterated, non-obligatory precanceroses usually only require local conservative treatment or superficial destruction, e.g. electro-surgery or scalpel surgery. The obligatory group and lesions, where malignant changes whve been established, will require immediate surgical intervention, e.g. a senile keratosis with beginning infiltration and ulceration, rapid growth, and an inflammatory reaction.

ORAL ANTIDIABETIC THERAPY. Williams, R. H., Pollen, R. H., Tanner D. C., and Barnes, R. H.: *Ann. Int. M.*, 51: 1121, 1959.

The authors present their opinions based on the literature and personal experience in the treatment of approximately 200 patients. They compare results with chlorpropamide, metahexamide and tolbutamide, their feeling being that the advantages of using chlorpropamide and metahexamide extensively in diabetes do not appear to over balance the disadvantages that they have exhibited, viz., the greater frequency and severity of side-effects. Their study included also phenethylbiguanide which they felt was most needed as an adjunct to insulin in juvenile diabetics. They felt also, used simultaneously with sulfonylureas, it is more effective than either drug alone, and that in some patients with maturity onset diabetes PEBG is more effective than insulin or sulfonylureas. They prefer the sulfonylureas because of their lower incidence of side-effects and more normal physiologic changes produced.

L.C.S.

LETTERS

To the Editor:

Doctor Eaton's paper (N.S. Med. Bull., 39 : 86, (March), 1960.) on the surgical treatment of massive upper gastro-intestinal haemorrhage is indeed excellent.

There is always a challenge in these cases. In the past there has been a battle between the internist and the surgeon over the management of this type of emergency, but this problem has been solved and greater coöperation between the two now exists. The internist concerns himself with pre-operative care and assesses the patient for any possible associated disease. The surgical team has improved its techniques to provide safe conduct for the patient through gastric surgery.

As Doctor Eaton stated, it is difficult to categorize massive haemorrhage. I feel that a patient who has had a recent episode of haematemesis or melaena, and has a haemoglobin of 8 gm. per 100 ml. or less, should fall into the category of massive haemorrhage. Gardner and Baronofsky (Surgery, March 1959) differentiate between massive and non-massive haemorrhage by the "amount of blood utilized by the patient, with 2000 c.c. given as the dividing line, and those using more than this amount being defined as massive bleeders. Patients who utilize this 2000 c.c. in under twenty-four hours should be candidates for surgery."

I certainly agree with the indications for surgery that Doctor Eaton has laid down in his article, particularly with reference to patients over 45 years of age. This group represents the patients who cannot withstand prolonged anaemia or anoxia, and would therefore bring about increased *late* mortality.

In the yet older age group these workers state that "there is little evidence to support the contention that arteriosclerosis occurs in the involved vessels and prevents retraction. Studied material indicates that necrosis of the arterial wall occurs during acute erosion, breaking up the elastic fibrils and thus preventing retraction. The increased mortality from this disease in the older groups should not be explained on the basis of local vascular factors, but on the basis of more generalized body changes."

One might mention that, although bleeding may occur anywhere in the gastrointestinal tract, it is known that the culprit which is the real hazard to life is the ulcer lodged on the posterior duodenal wall, usually penetrating into the pancreas, and often eroding a large vessel.

An emergency roentgenogram can be of great value in determining the urgency of surgery. Despite early controversy on this point, this can be done safely, if the patient is not in severe shock.

Craters frequently disappear on medical treatment, and therefore the presence of a crater late in the course of a medically-treated bleeding duodenal ulcer indicates some degree of intractability of the disease, thus favouring gastric surgery.

Recently Wagensteen et al, (Ann. Surg., Sept. 1955) have reported some interesting work on gastric cooling. They have found that cooling retards and inhibits active gastric digestion. This is due primarily to three factors, viz., (a) depression of peptic activity, (b) suppression of gastric secretion and (c) diminished blood flow. Local gastric hypothermia is accomplished by circulating a cold solution of equal parts alcohol and water through an indwelling gastric balloon. By regulating the temperature of the inflowing fluid to

0° to 5° C. the gastric mucosa can be maintained within a temperature range of 10° to 40°C. At this temperature, peptic activity is practically suspended, gastric secretion is diminished by 75%, and the gastric venous outflow, which undoubtedly reflects arterial inflow, is decreased by approximately 66%. Surface warming of the patient with an electric blanket suffices to maintain a normal body temperature. In 30 patients with bleeding from the upper gastrointestinal tract, the above method controlled haemorrhage in all.

It is gratifying to contemplate this new method of stabilizing patients with massive gastrointestinal haemorrhage, making them better subjects for urgent or elective surgery.

In closing, I should like to congratulate Doctor R. B. Eaton on his concise and comprehensive article.

Yours very truly,

A. R. GAUM, M.D.,
Sydney, N. S.

Dalhousie University,
Pathology Department.

To the Editor:

Re—Page 140, April Edition
Nova Scotia Medical Bulletin

What on earth is a "Calaigh"? Nothing to do with a "Ceilidh," I hope. I think you should have sub-editors for the major foreign languages.

Yours truly,

W. A. TAYLOR, M.D.

ELECTROCARDIOGRAPHIC SIGNS OF PERICARDITIS IN TYPHOID FEVER.
Ellakim Marcel, M.D., Am. J. Med. Sci., 239:492, (Apr.), 1960.

Electrocardiographic signs of pericarditis observed in 3 patients with typhoid fever are reported in this paper. In 2 of the cases the changes were preceded by electrocardiographic evidence of myocardial involvement, usually found in typhoid fever. In one case the changes were characteristic of "pure" pericardial involvement. The changes of pericarditis were observed during a relapse in one case, and during the second or third week of the disease in the other 2 cases. In all cases they appeared after defervescence, and in 2 cases lasted 4 to 5 days; in one case they lasted more than 2 weeks. No clinical or roentgenographic evidence of pericarditis was found and no special treatment was required.

S. J. S.

PERSONAL INTEREST NOTES

The results of the Nova Scotia Provincial Election on June 7, 1960 are now history, but we thought the profession might be interested in the following table:

COMPOSITION OF NOVA SCOTIA LEGISLATURE
(By Profession)

	Progressive Conservative	Liberal	C.C.F.
Barrister	10	3	
Business Executive	1		
Car Dealer	1		
Druggist	2		
Farmer	3		
Housewife	1		
Manager	1		
Merchant	2	2	
Miner			1
Mines Clerk	1		
Mortician	1	1	
Newspaperman		1	
Physician	2	6	
Printer		1	
Radio Commentator	1		
Radio Station Manager		1	
Teacher (Retired)	1		
	<hr/>	<hr/>	<hr/>
TOTALS	27	15	1

The Saskatchewan Provincial Election took place on June 8, 1960. We thought you might like to compare the following table with that above:

COMPOSITION OF SASKATCHEWAN LEGISLATURE*
(By Profession)

	C.C.F.	Liberal
Agent		1
Barrister	2	1
Business Manager		2
Civil Servant (Former)	1	
Dealer and Agent		1
Farmer	26	7
Housewife	2	
Labor Executive	1	
Minister	1	
Municipal Secretary		1
Railway Worker	2	
Rancher	2	
Schoolteacher	1	1
Storekeeper		2
	<hr/>	<hr/>
TOTALS	38	16

*Athabaska: deferred to June 29, 1960.

CUMBERLAND MEDICAL SOCIETY

Dr. Donald Brown, previously of Tatamagouche, has taken over the practice of Dr. D. M. Cochrane at River Hebert, and has been admitted to the courtesy staff of Highland View Hospital, Amherst.

Dr. David Drury recently spent several days in Ottawa as representative of the Nova Scotia Medical Society to V.O.N. A.G.M.

Dr. and Mrs. Norman Glen recently visited in Portland, Maine, and returned with a travel trailer with which they hope to see some of Canada and the U.S. during the coming years. ("Travel Tip": Don't leave your house-call bag in your car, and try to cross the U.S. border! They don't like narcotics and send you back to Canada—then the Canadian customs don't like it either and don't want to let you back in!)

Dr. H. E. Christie catches large fish on the Miramichi River!

Dr. Alden McCully, recent Dalhousie Graduate, and whose home is in Stellarton, has announced he is entering general practice in Amherst.

Dr. H. A. Myers, Amherst, returned recently from a two weeks' refresher course in cardiology at the Montreal General Hospital. Last year Dr. Myers took a similar course, having received a scholarship from the College of General Practice.

HALIFAX MEDICAL SOCIETY

Dr. S. J. Shane, Halifax, Nova Scotia, Editor-in-Chief of the Nova Scotia Medical Bulletin, has been designated one of the Canadian Tuberculosis Association Travelling Scholars for the year 1960. Dr. Shane is Associate Professor of Medicine at Dalhousie University, Halifax, N. S. and Director of the Cardiac Unit of the Victoria General Hospital as well as Medical Director of the Tuberculosis Unit of the Halifax Health Centre. This is an exchange scholarship with the Chest and Heart Association of Great Britain and involves visiting a large number of medical centres in the United Kingdom, to observe the newer techniques in the diagnosis and management of cardiac and pulmonary diseases, as well as to compare notes with British workers as to the recent advances that have been made in these fields in Canada. Dr. Shane will probably also visit France and the Scandinavian countries. He left for London with his family by air on July 3, 1960.

UNIVERSITY

May 31, 1960—Dr. J. C. Sinclair, Department of Medicine and Virology, Banting Institute, University of Toronto spoke at the Victoria General Hospital on "Recent Work on Infectious Hepatitis."

June 1, 1960—Dr. Oscar Auerbach, Senior Medical Investigator, United States Veterans Administration, East Orange, New Jersey spoke on "A Pathology Investigation of Smoking and Lung Cancer" at the V.G. Hospital.

(Ed. Note: We are enclosing a complete list of the recent medical graduates of Dalhousie University, so that the more senior physicians may know where medical students come from, and where these new doctors go to.)

BIRTHS

To Dr. and Mrs. Donald Beanlands (nee Rhona Rowdon), a daughter, Heather Janeen, Grace Maternity Hospital, May 20, 1960. A sister for Rob Stewart.

Dr. and Mrs. George E. Clark (nee Joyce Jennings), a son, Andrew Eric, Grace Maternity Hospital, June 1, 1960. A brother for George Stephen.

Dr. and Mrs. Carl Giffin (nee Betty Ellis, R.N.), a son, Robert Cleaveland, Colchester Hospital, Truro, June 2, 1960. A brother for Scott and Gaye.

Dr. and Mrs. Solomon Hirsch (nee Doris Lidz), a son, Grace Maternity Hospital, June 13, 1960. A brother for David and Robert.

Dr. and Mrs. J. A. Myrden, a son, Grace Maternity Hospital, May 24, 1960.

MARRIAGES

Dr. Douglas C. S. Brown, (Class of 1957) to Dr. Pamela Mary Mylward, Holybourne, Hants, England at Holy Rood Church, Holybourne on July 2, 1960.

COMING MEETINGS

October 10-14, 1960—46th Annual Clinical Congress of the American College of Surgeons, San Francisco, California.

November 7-10, 1960—34th Annual Dalhousie Refresher Course, Halifax, N. S. Guest speakers will include Dr. D. G. Cameron, Professor of Medicine, McGill University, Dr. R. M. Janes, Professor Emeritus of Surgery, University of Toronto, and Dr. F. B. Carter, Professor of Obstetrics and Gynaecology, Duke University. The John Stewart Memorial Lecturer: Dr. D. F. Cappell, Professor of Pathology, University of Glasgow, Scotland.

November 17-19, 1960—International Symposium on "The Extrapyr-
amidal System and Neuroleptics"—Department of Psychiatry, University of Montreal, P.Q.

November 30-December 3, 1960—Joint Annual Meeting of the Canadian Heart Association and National Heart Foundation of Canada—Royal York Hotel, Toronto, Ontario.

INFECTIOUS DISEASES—NOVA SCOTIA
Reported Summary for the Month of April, 1960

Diseases	NOVA SCOTIA				CANADA	
	1960		1959		1960	1959
	C	D	C	D	C	C
Brucellosis (Undulant fever) (044)	0	0	0	0	8	11
Diarrhoea of newborn, epidemic (764)	0	0	0	0	4	10
Diphtheria (055)	0	0	0	0	1	3
Dysentery:						
(a) Amoebic (046)	0	0	1	0	0	1
(b) Bacillary (045)	0	0	0	0	230	48
(c) Unspecified (048)	0	0	0	0	13	3
Encephalitis, infectious (082.0)	0	0	0	0	1	1
Food Poisoning:						
(a) Staphylococcus intoxication (049.0)	0	0	0	0	0	0
(b) Salmonella infections (042.1)	0	0	0	0	0	0
(c) Unspecified (049.2)	0	0	0	0	54	34
Hepatitis, infectious (including serum hepatitis) (092, N998.5)	83	0	20	0	409	299
Meningitis, viral or aseptic (080.2, 082.1)						
(a) due to polio virus	0	0	0	0	0	0
(b) due to Coxsackie virus	0	0	0	0	0	0
(c) due to ECHO virus	0	0	0	0	0	0
(d) other and unspecified	0	0	0	0	11	9
Meningococcal infections (057)	0	0	6	0	12	23
Pemphigus neonatorum (Impetigo of the newborn) (766)	0	0	0	0	0	0
Pertussis (Whooping Cough) (056)	11	1	0	0	631	351
Poliomyelitis, paralytic (080.0, 080.1)	0	0	0	0	23	0
Scarlet Fever & Streptococcal Sore Throat (050, 051)	111	0	54	0	2559	1902
Tuberculosis:						
(a) Pulmonary (001, 002)	14	1	30	6	401	515
(b) Other and unspecified (003-019)	4	0	0	0	144	0
Typhoid and Paratyphoid Fever (040,041) (Paratyphoid—1)	0	0	0	0	41	190
Veneral diseases						
(a) Gonorrhoea—						
Ophthalmia neonatorum (033)	0	0	0	0	0	0
All other forms (030-032, 034)	33	0	12	0	1356	1070
(b) Syphilis—						
Acquired—primary (021.0, 021.1)	0	0	0	0	0	0
—secondary (021.2, 021.3)	0	0	2	0	0	0
—latent (028)	1	0	2	0	0	0
—tertiary — cardiovascular (023)	0	0	0	0	0	0
— „ — neurosyphilis (024, 026)	0	0	0	0	0	0
— „ — other (027)	0	0	0	0	0	0
Prenatal—congenital (020)	0	0	1	1	0	0
Other and unspecified (029)	3	1	1	1	163*	150*
(c) Chancroid (036)	0	0	0	0	0	0
(d) Granuloma inguinale (038)	0	0	0	0	0	0
(e) Lymphogranuloma venereum (037)	0	0	0	0	0	0
Rare Diseases:						
Anthrax (062)	0	0	0	0	0	0
Botulism (049.1)	0	0	0	0	0	0
Cholera (043)	0	0	0	0	0	0
Leprosy (060)	0	0	0	0	0	0
Malaria (110-117)	0	0	0	0	0	0
Plague (058)	0	0	0	0	0	0
Psittacosis & ornithosis (096.2)	0	0	0	0	0	0
Rabies in man (094)	0	0	0	0	0	0
Relapsing fever, louse-borne (071.0)	0	0	0	0	0	0
Rickettsial infections:						
(a) Typhus, louse-borne (100)	0	0	0	0	0	0
(b) Rocky Mountain spotted fever (104 part)	0	0	0	0	0	0
(c) Q-Fever (108 part)	0	0	0	0	0	0
(d) Other & unspecified (101-108)	0	0	0	0	0	0
Smallpox (084)	0	0	0	0	0	0
Tetanus (061)	0	0	0	0	0	0
Trichinosis (128)	0	0	0	0	0	0
Tularaemia (059)	0	0	0	0	0	0
Yellow Fever (091)	0	0	0	0	0	0
N.S.U.	8	0	2	0	0	0

C — Cases

D — Deaths

C.D.C. 2

*Not broken down