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A Modern Virus Laboratory – Its Value to The General Practitioner in the Diagnosis of Central Nervous System Disease*

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THE past three decades have witnessed remarkable progress and many new developments in the field of virology. Prior to the introduction of antibiotics and chemotherapeutic drugs, the identity of many diseases of viral origin remained concealed behind a wall of secondary bacterial infection. Today the situation has materially improved and our ability to control such conditions as pneumococcal and streptococcal pneumonia, and menigococcal and tuberculous meningitis has opened the door to the study of viral diseases affecting the respiratory tract and the central nervous system. Simultaneously, and likewise by process of exclusion, we are now able to recognize and to identify systemic viral diseases, the aetiology and characteristics of which were hitherto obscure.

At various medical schools and research institutes in the U.S.A., Europe and Canada, virus laboratories have been established and maintained for many years. The foresight of these organizations in their planning for the future has placed them in an advantageous position in a rapidly moving field. It must not be assumed however, that the medical practitioner and public health worker have not had some role to play in molding these events. To the contrary, it is the practitioner and, more often than not, the Public Health Nurse, who are the first to observe the incidence or frequency of a disease which may be either epidemic or endemic among the members of a particular community.

The best known classic illustration of the contribution of a country medical practitioner toward the advancement of knowledge in viral diseases is obviously the work of Jenner on cowpox, affecting Gloucestershire dairymaids. The value of his contribution to humanity in the control of smallpox is too well known to merit further description. Likewise in 1930, the first case of psittacosis or parrot fever in Great Britain was recognized by Hillier, a general practitioner in the City of Birmingham. (Thomson & Hillier, 1930). Several of the affected persons, many of whom were desperately ill, were admitted to St. Bartholomew's Hospital. Here pathological material was studied at the virus laboratories of Dr. Mervyn Gordon—as well as being submitted to Prof. S. P. Bedson of the London Hospital. Whilst research was still in progress at these two centres, it is worth recalling that Dr. Alfred Coles, a retired general practitioner, who resided amid the peaceful and salubrious atmosphere of Bournemouth in England and who devoted his leisure hours to the hobby of micros-

*Paper presented at The Atlantic Branch of The Canadian Public Health Association, at Kentville, on the 7th November, 1956.

copy, requested from Professors Gordon and Bedson, that they should forward to him stained smears of infected material. The request was complied with. It is amusing to record that Dr. Coles promptly identified the causal elementary virus bodies of psittacosis and was ready for publication of his discovery before his academic brethren had concluded their more profound investigations. (Coles 1930).

Another country practitioner who acquired professional distinction in the field of Virology was Dr. Pickels. In his classic monograph entitled "Epidemiology in Country Practice," Pickels described an outbreak of jaundice among his patients in Wensleydale, and so gave to medicine valuable clues as to the character of the disease which we now recognize as infective hepatitis. (Pickels 1930). In Canada, no reference to infective hepatitis would ever be complete without mention of the work of the Bacteriologist Roy Fraser who has received universal recognition for his description of the first water-borne epidemic of Infective Hepatitis at Mount Allison University, Sackville, N. B.

Much of the early work on the epidemiology of non-paralytic poliomyelitis which led to the establishment of Coxsackie disease as a clinical entity in Canada, was conducted at Orangeville, Ontario, through the co-operation of Dr. Wilson, M.O.H. and his local colleagues in general practice. (Silverthorne, 1949 and 1950 and Armstrong 1950).

Many more illustrative examples may be cited, but the point I wish to stress is that it is the practitioner in the field, who is the first to encounter and to observe the occurrence of an unusual disease, the aetiology of which he is at a loss to explain. The ability to observe the unusual has always been, and will probably remain, the hall-mark of the genius and the lone discoverer. In much the same fashion Fleming's powers of observation led to the discovery of antibiotic action which other bacteriologists failed to comprehend. With the provision of modern laboratory facilities and new and more accurate methods for diagnosis of disease there has been an unfortunate tendency to place greater and greater reliance on pathological, bacteriological, biochemical and radiological reports. However, conclusive any result may be, it should always be remembered that laboratory tests only serve to confirm a clinical diagnosis and should never be regarded as a substitute for clinical judgment.

The relationship of this remark to the text of the present paper is that much of the success or failure of the virus laboratory is dependent on the degrees of thoroughness with which the patient's physical examination has been conducted by the clinician coupled with his ability to narrow down the illness to the virus group of maladies. This is particularly true of virus affections of the central nervous system. A wide range of viral agents are now known to attack the central nervous system with varying degrees of severity. The laboratory investigation of these agents is laborious and costly. It is essential that the patient should be subjected to a thorough physical and neurological examination, and a tentative clinical diagnosis be established incriminating a particular virus or group of viruses prior to the submission of specimens to the laboratory.

Recent work on paralytic and non-paralytic Poliomyelitis, Aseptic meningitis, Coxsackie B. Orphan or enteric cytopathogenic human orphan viruses, a-well as mumps and others, reveals the necessity for familiarity with the litera

ture. Above all the necessity for an intimate knowledge of the practices and principles of internal medicine in general and neurology in particular is essential.

The use of tissue culture methods for virus isolation from human stools, derived from cases of paralytic and non-paralytic poliomyelitis, aseptic meningitis and other neurological affections has produced a range of viruses hitherto unknown in character. Likewise viruses having similar properties have been recovered from the gut of apparently healthy children over a world wide distribution, including such locations as Egypt, Connecticut, Maine, Rhode Island, Ohio, the Philippine Islands, and Ontario. In view of the habitat of these viruses in human gut content, they have been referred to by Ramos-Alvarez and Sabin (1954) as enteric viruses, but the term "Orphan Viruses or "viruses in search of disease," as proposed by Duran Reynals (1955) has received wider acceptance. (See Committee 1955). Subsequently, a committee set up by the National Foundation for Infantile Paralysis, consisting of Dalldorf, Enders, Hammon, Sabin, Syverton and Melnick (1955), reviewed the current status of these agents and proposed that they be placed in a group designated the Enteric Cytopathogenic Human Orphan (ECHO) Viruses. A detailed definition of which has been provided according to the following description.

Viruses isolated from the lower bowel, which are more cytopathogenic for monkey kidney cells than human HeLa cells in culture, not neutralized by Poliomyelitis types I, II and III or by Coxsackie virus antisera and non-pathogenic to 24 hour old suckling mice. The ECHO viruses are neutralized by human gamma globulin as well as by individual sera and this property is thought to be indicative of their pathogenic role towards man. It was also pointed out that the ECHO viruses were unrelated to other groups of viruses derived from the alimentary tract such as the viruses of herpes simplex, influenza, mumps, measles and varicella. Likewise the Adenoidal Pharyngeal Conjunctival (APC) viruses and those of the Acute Respiratory Disease (ARD) group have been stated to bear no relationship to the ECHO group. Criteria for the performance of Serological tests on a standard pattern have also been recommended. Each tissue culture is inoculated with a mixture consisting of 100 TCD_{50} of virus plus an equal amount of antiserum containing 20 units of antibody against its homologous virus. Twenty units representing a 20 fold concentration of that dilution yielding 50% neutralization of 100 TCD_{50} of virus. From such analysis no less than 13 antigenically distinct ECHO viruses have emerged. Types 2, 3, 4, 5, and 6 were obtained from patients diagnosed clinically as suffering from Aseptic Meningitis in Connecticut, Maine and Rhode Island. The eight remaining antigenic types originated from apparently healthy individuals studied at centres as widely separated as Ohio, Egypt and the Philippine Islands.

In Canada, a study of Aseptic Meningitis has been conducted by Duncan, Rhodes, McNaughton, Johnson and Woods, 1955, at the Hospital for Sick Children, Toronto. These workers investigated patients diagnosed clinically as suffering from benign aseptic meningitis or non-paralytic poliomyelitis. Certain of these cases, affecting older children were preceded by a minor illness, consisting of pains in the extremities and abdomen, or with sore throat of variable duration prior to the development of neurological involvement. Subsequently, headaches, vomiting, sore throat, stiff neck and temperatures ranging

from 100 to 104°F., and occasionally cervical adenitis developed. Cerebrospinal fluid from such patients was inoculated in monolayer cultures of trypsinized monkey kidney prepared by the method of Dulbecco and Vogt, 1954. The results showed that in three instances Coxsackie B virus was isolated and in two others, unidentified or so called orphan viruses were recovered. Tests were also carried out for homologous antibody against either the strain of Coxsackie virus of the orphan virus isolated from cerebrospinal fluid. For each test 100 CPD_{50} doses of virus were employed and the serum end points were expressed as 50% cytopathogenic inhibiting doses ($CPID_{50}$) in terms of final dilution. All cultures were subject to daily examination for seven days, and thereafter rejected. A definite rise of homologous antibodies was detected in two cases from which orphan viruses were detected and it was concluded that these agents were pathogenic to man.

These studies conducted at the Hospital for Sick Children, Toronto, are of considerable interest to us in Canada. The number of cases is not large enough to enable us to draw any conclusions as to the relative frequency of these agents in Canada as a whole. They nevertheless indicate the necessity for virological methods of examination in all cases diagnosed as benign aseptic meningitis or non-paralytic poliomyelitis and constitute a forward step in the progressive elimination of guess-work in clinical diagnosis.

The isolation of viruses from cerebrospinal fluid by the new procedure mentioned, is also worthy of special comment, for past experience has shown that neurotropic viruses are rarely found in cerebrospinal fluid and consequently examination of such material for viruses is generally negative. (See Rhodes and van Rooyen 1953).

The introduction of the agar overlay techniques by Dulbecco (1952) for growth of cells in sheet form on flat surfaces has provided a new refinement in tissue cultivation practice which has been immediately utilized in the field of virology. The method renders it possible to localize virus colonies in solid agar so that the growth of virus is accompanied by the formation of plaques, or areas of clearing. In this way, minor differences in the destructive effects of different viruses can be conveniently observed in thin sheets of cells.

Among the multiplicity of clinical states involving the central nervous system where virus studies are of maximum assistance, patients exhibiting the following symptomotology may be most profitably examined:

1. Cases showing muscular paralysis accompanied by fever.
2. Patients exhibiting fever with cranial nerve palsy.
3. Radiculo-neuritis of the Guillain-Barré syndrome associated with albumino-cytologic dissociation and flaccid paralysis. Muscular pain with loss of deep sensation and reflexes but with retention of superficial reflexes. Said to occur predominantly in winter.
4. Suspected encephalitis during the prevalence of poliomyelitis in the summer months.
5. Poliomyelitis affecting infants where the clinical diagnosis is acknowledged to be exceptionally difficult.
6. After the administration of gamma globulin or poliomyelitis vaccine.

The situation concerning poliomyelitis warrants careful consideration in anticipation of future developments in the U.S.A. and the U.K.

"Salk Type" formalin-inactivated-killed vaccine has been used in Canada for immunization of children, where it has served its purpose for the time being. In the USA and more recently at Belfast in Northern Ireland, a cautious approach is now in progress to explore the value of immunization by oral administration of attenuated live poliomyelitis virus vaccine. Preliminary reports from U. S. centres have been encouraging and it is not improbable that the method pioneered by Koprowski, Sabin and others may ultimately replace the Salk procedure. Following oral vaccination attenuated live virus may be excreted in the subjects' stools for as long as 1-82 days. There are no restrictions on the movements of children and families between cities of the USA and Canada. If therefore, oral live virus mass vaccination were to be instituted in the USA, increased demands for poliomyelitis isolation are likely to follow in Canada irrespective of whether or not such vaccination is adopted in Canada. The isolation of poliomyelitis virus from suspected cases of this disease for purposes of establishing an accurate clinical diagnosis is only one phase of the function of the virus laboratory Three different types of Polomyelitis virus exist. It is of equal importance that information should systematically be gathered respecting the incidence, frequency, and seasonal distribution of these types, among the members of the local population. Such information would ultimately prove invaluable in determining the optimum antigenic composition of vaccine best suited to the needs of the community to be protected. The virus laboratory of the Provincial Department of Health at Halifax has now been equipped, the staff trained, and in operation for some three months. During this period we received many requests for examination. Stools, blood and cerebrospinal fluid were selected from approximately 100 undiagnosed cases of nervous system illness and duly examined for evidence of poliomyelitis infection by innoculation on HeLa and Monkey Kidney cell tissue cultures. From these patients one type I virus was isolated from a paralytic child at Truro and two Type II strains were recovered from centres situated as far apart as Antigonish and Digby. Employing modern tissue culture techniques the recovery rate of poliomyelitis virus has been found to be better than 90% according to Enders.

From our initial experience during the summer of 1956 in Nova Scotia it would appear that a substantial number of affections of the central nervous system, other than poliomyelitis were reported.

Perhaps a percentage of these unclassified cases may be due to Coxsackie infections. A number may be grouped under the heading of benign aseptic meningitis, the remainder a heterogeneous collection of clinical infections associated with orphan and other viruses in the intestinal tract which may or may not have been described elsewhere in the USA or Canada. There is no reason to believe that the more severe equine viral encephalitides as encountered in Western Canada are prevalent in Nova Scotia. In Nova Scotia a search for Coxsackie virus infections may prove to yield the most interesting results. According to Dalldorf, (Dalldorf 1955) twenty-four Coxsackie viruses have been described so far. These have been divided into two groups A and B respectively in conformity with the clinical conditions with which each category is associated. Continuing, Dalldorf has defined these as follows:

Group A—Group A Coxsackie Viruses are responsible for herpangina, a

disease chiefly of young children during the last months of summer, characterized by multiple herpetiform blisters of the soft palate and posterior pharyngeal wall, fever, headache, and at times pain from the muscles. The blisters are small, 2-3 mm. in diameter surrounded by a thin bright red rim of inflammation. They quickly rupture. They do not occur on the lips or gum as do herpetic sores and are more evanescent. Herpangina was proven to be due to infection with several types of Group A Coxsackie virus by Heubner et al. who established that infection was common in patients and absent from healthy children of similar ages. In other words they emphasized the significance of their virus isolations by means of suitable controls.

Group B—Group B Coxsackie Viruses cause epidemic pleurodynia or Bornholm disease, also a disease of later summer, characterized by the sudden onset of excruciating pain most commonly in the lower thorax but often in the abdomen or an extremity or the shoulders. Bornholm disease and herpangina are usually accompanied by severe headaches and frequently cases of the former at least have symptoms of aseptic meningitis; the cerebrospinal fluid cells are increased in number. Whether these are cases complicated by poliomyelitis virus infection or whether the Coxsackie viruses have invaded the central nervous system has not yet been proven.

More recently in England, McLeod and Associates, (McLeod et al, 1956) have described seventeen cases of aseptic meningitis caused by Coxsackie B virus. Symptoms in order of frequency were—fever, signs of meningitis, nausea and vomiting, headache, drowsiness, pain in the neck and back, myalgia, convulsions, pleurodynia is pathognomonic but rare—none was seen in McLeod's series. The agents causing aseptic meningitis in North America are: Poliomyelitis, Coxsackie B, mumps without parotitis, herpes simplex, the ECHO viruses and lymphocytic choriomeningitis. The principal laboratory findings were moderate leucocytosis; all patients showed cells in the CSF, the average number being one hundred seventy one per cubic mm. with equal distribution of lymphocytes and polymorphs. The number of cells varied greatly from case to case. CSF protein, sugar and chlorides were constantly normal. In short, it may be said that the syndrome of Coxsackie B infection cannot be differentiated clinically from non-paralytic poliomyelitis without attempting direct virus isolation, or by demonstration of specific antibody rise. The sum total of these new developments demands that many well-established neurological syndromes described in the past must be reappraised from their etiological standpoints.

In attempting to establish a virological diagnosis in cases showing neurological involvment the following points are of paramount importance:

(a) Accurate and complete case history.
(b) A thorough clinical examination of the patient combined with a complete assessment of the central nervous and musculo-skeletal systems.
(c) Data relating to temperature, pulse, respiratory rate, lucocyte count total and differential, Wasserman or Kahn test.
(d) Complete cytological, bacteriological and biochemical examination of CSF. At least 2 cc. should be collected in a sterile vial and frozen by placing in a deep freeze compartment, to enable virus studies to be conducted at a later date. In the past, attempts to isolate viruses

from the CSF invariably proved to be negative. With the introduction of monolayer cell techniques it has been shown that several viruses including Coxsackie B can be cultured from the CSF.

On the basis of the above information bacteriological infections should have been excluded and virus studies may be continued as follows:

(e) During the acute phase of the illness 15g. of stool should be placed in a sterile jar.

(d) Simultaneously and two weeks later 15 cc of sterile blood should be collected, allowed to clot, the serum separated and forwarded to the laboratory for acute and convalescent phase antibody level determinations.

Below are printed condensed copies of the forms which we use to record clinical and laboratory data on patients with poliomyelitis and other viral diseases of the central nervous system. We include, with these, charts for recording muscle function and sensory nerve loss.

1957;36:1-7.

Virus Study **Departments of Medicine and Bacteriology Dalhousie University Medical School** **Nervous System**

SURNAME Hospital

Initials — Age Sex Case No.

Address Date of Admission

Date of Discharge

Chief Complaints

Date of Onset of Symptoms — (S) —

HPI.

SYMPTOMS and Date of Onset — Headache , Pain

fits , unconsciousness , weakness

visual disburbances , paresthesias

difficulty — breathing swallowing , speaking

Contacts — before

after

Antibiotics and duration —

Physical Examination

General

Urinalysis Kahn

Hgb Wbc Differential

Neurological Examination Hospital.....

o Normal #Abnormal ND — Not done | TOTAL #'s (abnormals)

NAME.....Hospital No.....

.....

Subjective	HEAD Headaches: Colds: Nasal Discharge: Noises in the head.
Objective	(1) Palpable lumps involving scalp of skull: (2) Evidence of trauma: (3) Bruit with stethoscope over temporal or occipital regions.
	CRANIAL NERVES
1 Subjective	Smell: Attacks of bad odour:
Objective	Disturbance of smell with either nostril: (Quantitative olfactory acuity test if indicated)
II Subjective	Vision blurring; Dimness: Scotomata, etc.:
	(1) Visual accuity for print either eye (size of print at 2″; use glasses if worn) SNELLEN chart if indicated:
Objective	(2) Visual fields (confrontation test, perimetric examination) (3) Fundi (discs, vessels and retinae)
III, IV, VI Subjective	Double vision (use red glass if indicated):
	(1) Movements of eyeball: Nystagmus: (2) Pupils equal: React briskly to direct and consensual light:
Objective	Convergence and Accommodation: (3) Ptosis: Enophthalmos: Exophthalmos:
V Subjective	Numbness and sensation over the face:
	(1) Sensation to light touch and pain over three divisions on each side of face:
Objective	(2) Corneal reflex (brisk and equal): (3) Strength of masseters and pterygoid muscles:
VII Objective	(1) Strength of voluntary or emotional movements in facial movements: (2) Taste (if indicated):
VIII Subjective	Hearing: Tinnitus: Vertigo: History of discharge:
Objective	(1) Repeat whispered voice at 2′ (louder if necessary) (2) External meatus: Tympanum:
IX and X Subjective	Swallowing: Voice:
Objective	(1) Elevation of palate: (2) Gag reflex: (3) Sensation on either side of soft palate:
XI Subjective	Head Movement: Shrugging shoulders:
Objective	Sternomastoids and trapezii contraction:
XII Objective	Projection: Atrophy: Deviation: Tremor of tongue:

Neurological Examination — Cont'd Hospital.....

o Normal *Abnormal ND — Not done

TOTAL *'s (abnormals)

NAME.....Hospital No.....

.....

Subjective / Objective

SENSORY SYSTEM

Sensation of

(1) Light Touch
(2) Pin Prick
(3) Two-point Discrimination
(4) Vibration
(5) Joint or Position Sense
(6) Temperature

CHART ABNORMALITIES ON BODY CHART

Subjective

MOTOR SYSTEM

right handed

	Arms		Legs		Body
	R	L	R	L	
(1) Atropy					
(2) Tone					
(3) Power					
(4) Co-ordination					
(5) Involuntary Movements					

Objective

REFLEXES

o—Absent x—Normal xxx—Hyperactive

	Right	Left
Biceps		
Abdominal		
Knee		
Ankle		
Ankle Clonus		
Plantar		

SPHINCTERS

Subjective — Bowel and bladder function

Objective — Rectal Sphincter tone

STANCE AND GAIT

Walking (night and day) Climbing stairs:

Subjective / Objective

(1) Limp
(2) Movement of spine
(3) Deformity of spine
(4) Muscle co-ordination (stand on one foot, heel to toe test)
(5) Deviation on walking
(6) Ataxia
(7) Rombergism
(8) Turning

Speech

(1) Dysarthria (2) Aphasia

IMPRESSION OF MENTAL STATUS

(1) Intelligence (2) Orientation
(3) Co-operation (4) Memory

Virus Study

Departments of Medicine and Bacteriology
Dalhousie University Medical School

Nervous System

SURNAME —

Hospital —

Case No.

Laboratory Data

CSF — Appearance, Chemistry, etc.

Bacteriology virus Lab. ref. no.

Nasopharynx —

Stool —

CSF —

SERUM CF Neutralization Virus

Acute

Convalescent

Rise in Titer

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Primary Atypical Pneumonia – A Review*

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TWO-THIRDS of all illness is respiratory and of this ninety-five percent is of unknown aetiology. (1)

During the past twenty years it has become increasingly apparent that for the majority of respiratory illnesses no aetiological agents have been found. This was true despite careful bacteriological studies and extensive attempts to reproduce these diseases in laboratory animals. Consequently a widespread impression existed that viral agents were responsible. World War II provided a large scale opportunity to study well controlled groups of individuals suffering from respiratory diseases. As these diseases caused great loss of man hours and interfered with vital military programs, much effort was concentrated on studying the aetiological and epidemiological factors involved. Epidemics of respiratory tract diseases were observed and investigated by very competent workers in various parts of the world. Transmissability to volunteers was successful in some instances but the usual laboratory animals were stubbornly refractory to experimental inoculation in nearly all cases. However, with the advent of improved animal and human tissue culture methods for virus studies new and valuable techniques are now being directed at the problem.

As early as 1879 Austin Flint wrote of epidemic bronchitis or influenza as follows, "it not infrequently commences with a chill. The nasal passages, the conjunctival membranes, the pharynx and the larynx are more constantly and to a greater degree affected. There is notably greater fever with pain in the head, back and limbs—loss of appetite and general debility with liability to capillary bronchitis and pneumonia." (Clinical medicine—1879—Henry C. Lea, Philadelphia). Fourteen years later Osler with his profound clinical insight wrote of the pneumonia in influenza—"some times the symptoms may at first be obscure and the pneumonia atypical . . . and it is not until three or four days or even later that the physical signs of a pneumonia appear." (Practice of Medicine—D. Appleton & Co., New York—1893). Price in 1934 wrote of a respiratory type of "influenza leading to bronchiolitis and alveolitis—the dominant feature, a capillary bronchitis with intense pulmonary congestion, more often basal with fine copious rales—the cough is very troublesome and the sputa very considerable." (Practice of Medicine—Oxford University Press—1934).

Primary atypical pneumonia was first described as a clinical entity in 1935 by Bowen—a radiologist with the U. S. Army in Hawaii. He named the condition "acute influenza pneumonitis" and asserted that it was a benign condition or complication occurring in a large percentage of cases with mild influenza. Bowen describes it radiologically as follows: "It involves only a portion of a lobe, usual basal, though it has been seen in upper lobes and involving more

*Presented at the Dalhousie University Post-Graduate Medical Refresher Course, October 15th, 1956.

than one lobe without increase of symptoms. It extends outwards from the hilus well into the parenchyma occasionally reaching the periphery. The X-Ray appearance is that of a confluent mottled fan or rounded area, usually of homogeneous moderate density in the central portion with the border fading into the normal lung. It has the appearance of an exudative infiltration and is usually more localized and of a more even density than the broncho-pneumonias of childhood or those which complicate adult diseases." Clinically, Bowen's cases showed fever, malaise, backache, headache, cough, comparatively little sputum, normal white blood count, a few râles and occasional signs of consolidation." (2)

Up to this time broncho-pneumonia was the term used to cover all pneumonias not lobar and not suppurative in character. It was felt by some authorities that classification on a more scientific basis, perhaps that of etiology, was urgently required. Since primary atypical pneumonia is now presumed to be of viral origin, it is not surprising that studies of etiology on a bacteriological basis were completely unrewarding. From 1935 to 1939 there are several references in the literature to this disease under such names as: atypical pneumonia (3), (4), (5), acute interstitial pneumonia (6), benign circumscribed pneumonia (7), and acute diffuse bronchiolitis (8). With the advent of World War II, the investigation of primary atypical pnelmonia increased very markedly and several excellent large scale studies (9), (10), (11), were conducted. One of the best early reviews was by Dingle and Finland (12).

Because the disease can be passed to volunteers by inoculation with bacteria-free filtrates of respiratory tract secretions (13) and because virus-like effects can be demonstrated in tissue cultures of the same secretions (14) primary atypical pneumonia is now presumed to be due to a virus or a group of viruses. This is further supported by the fact that ordinary bacteriological studies have been consistently uninformative. During the past 2½ years the work of Rowe (15), Hilleman (14) Huebner, (16) Ginsberg, (17) and others in the isolation and culturing of the adenoviruses (18) has shed new light on the subject of non-bacterial respiratory tract disease and there is hope of new developments to follow. An excellent review of this work has been carried out by Dingle and Feller (19). Recently Ch'ien Liu and his associates have used fluorescein-labelled antibodies to demonstrate an antigen-antibody reaction with primary atypical pneumonia virus grown in chick embryos. These antibodies were seen in the convalescent but not acute sera of a significant number of patients in Boston and New Hampshire who were suffering from primary atypical pneumonia. (20)

Primary atypical pneumonia is now defined as an acute respiratory disease characterized by gradual onset, by constitutional symptoms as well as symptoms referable to the respiratory tract, by cough, by sputum, pulmonary infiltration . . . and by relatively prolonged convalescence (21). The onset is usually insidious with flu-like constitutional symptoms predominating—headache, feverishness, aches and pains and chilliness. The incubation period has been given as 7-14 days, (13) (22). As the illness progresses a dry distressing cough develops which later produces mucoid or mucopurulent-looking sputum. The fever is usually moderate and the pulse and respiratory rates are not greatly altered. Slight inflammation of the upper respiratory passages may be seen

and a few fine localized rales may or may not be heard. These become coarser and more widespread as the illness continues. If observation and examination are continued and careful, physical signs will be found in most cases, despite some reports to the contrary.

On X-ray the pulmonary shadows are diffuse, soft, patchy or nodular and poorly outlined. They often begin as hilar enlargements which fan out or are wedge shaped. The lower lobes are more often involved but any lobe or lobes may be affected. Lesions varying from slight stringy peribronchial shadows to extensive infiltration may be seen. The segmental distribution of the lesions in the lung is responsible for the characteristic X-ray appearance.

The stage of fever and acute illness usually lasts for 5 to 8 days, however, very mild or even asymptomatic cases may be seen. A few cases are severe with prostration, cyanosis and dyspnea. Convalescence is relatively prolonged but usually without complication.

The urinalysis, total white blood count and differential are normal. Cold agglutinins (23) (24) (25) are present in 50% of cases, some say 30%, and streptococcus M.G. agglutinins (26) (27) in 25%—the chances of one or both being present increases with the severity of the illness. The role of the streptococcus strain M.G. in the production of primary atypical pneumonia is imperfectly understood. Evidence suggests that streptococcus M.G. is not the causal factor but is merely associated with a certain percentage of cases. Not infrequently the patients serum will show low level agglutinins against this organism with titres varying from 1/8 to 1/128. Likewise, occasionally the patient may exhibit allergic skin reactions to the organism. These two tests are not related serologically and are of greatest value in retrospect with the use of acute and convalescent sera showing a rise in titre. (28).

At this stage the differential diagnosis includes bacterial and influenzal pneumonias, tuberculosis, carcinoma, fungal and Rickettsial infection and Q fever. The bacterial pneumonias may be diagnosed by the isolation from the sputum of the organisms by customary methods and by a high white blood count. The influenza virus may be demonstrated by culture in the fertilized egg. Q fever due to Rickettsia burnetti may be proven by a complement fixation test or by inoculation of mice. It should be mentioned that Q fever exhibits a high degree of contagiousness and often several cases occur in the same household. Appropriate bacteriological studies will show the presence of fungi in the sputum. Tuberculosis may be diagnosed by X-ray and sputum studies. Malignant disease of the lung must be excluded by serial X-rays and continued observation of the patient.

The complications are rare and include bacterial pneumonia, small pleural effusions, meningoencephalitis, myocarditis, hemolytic anemia and bronchiectasis, although it is too early to relate this last finding to such a newly recognized clinical entity. (21).

As to the pathological picture—the bronchoscope shows diffuse inflammation of larynx, trachea, and bronchio. The mucous membranes are reddened and there is mucoid or mucopurulent-appearing exudate. There may be multiple small ulcers covered with a grey yellow exudate. Microscopically the bronchi and bronchioles show infiltration, necrosis and ulceration of the

epithelium. They are often dilated with mucus, exudate, debris, and epithelial cells in their lumina. Their surrounding tissues show round cell infiltration. The alveolar septa are thickened and the alveoli show a mononuclear exudate. The causative organism is presumably a virus with an affinity for the lung.

Prognosis in most cases is very favorable (29) with a case fatality rate of 1:1000 in young adults. It is a more serious disease in the aged and chronically ill. Treatment consists of bed rest, light diet, adequate fluids and humidification of the air. Aspirin and sedatives may be used as required. Narcotics are often needed to control the cough. Oxygen is necessary when dyspnea and cyanosis are present. Bed rest should continue for seven days after the fever falls. The course of the disease is too unpredictable to say whether or not Aureomycin deserves the credit which for a while it enjoyed. (30) (31) (32). It is imperative, however, that when the differential diagnosis between this disease and a bacterial pneumonia is in doubt, full doses of antibiotics should be given for 24 to 48 hours. Otherwise, it is generally felt that antibiotics are neither indicated or justified (22) (33). except to reduce the toxicity due to secondary infections and complications resulting therefrom.

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The Caduceus

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THE caduceus is a wand about which there are two intertwined serpents, surmounted by two wings. It was the emblem of Hermes of Greek mythology, who has been identified with the Roman Mercury and the Egyptian Thoth. Whether or not it has been a contribution from Babylonian culture and can be identified as part of the emblem of Ningishzida, son of the healing deity, Ninazu, 'Lord of Physicians,' is still an open question. Sigerist[12] shows the emblem of Ningishzida in the centre of which there are two snakes entwined around a staff as if in the act of mating. This suggests that it may have been an ancient symbol of phallic worship which seems originally to have been world-wide in its existence as a form of worship. At the present time phallism actively exists as the main principle of the Hindu worship of Siva. In Hindu temples there can still be seen the male emblems called, "*lingam*," and the female termed, "*yoni*." It has been postulated that the ancestor worship of China and the pagodas that tower so conspicuously above so many Chinese cities have been derived from a similar source.

During the latter part of the nineteenth century the practice of phallism in Japan was proscribed by law. Nevertheless in 1926 there still stood the remains of a phallic shrine in the Nikko District three miles from Yumoto on the thickly wooded mountain slope. At that time the Yumoto shrine was visited by peasant pilgrims, especially young women, who, apparently oblivious to and unconscious of the presence of other pilgrims and tourists who happened to be present, prostrated themselves before the stone emblem. On the other hand, Webster [16] defines the Babylonian Ningishzida as "an underworld deity, patron of medicine. His emblem, a snake coiled around a staff, is still the symbol of physicians."

In a 1955 issue of **Glamour**, a magazine published by Condé Nast Publications Inc., Greenwich, Conn., it was stated in an advertisement that "a pair of swivel-back cuff links made of mother-of-pearl ornamented with a gold-colored caduceus would make an appropriate gift to a nurse or resident doctor since the caduceus, the staff of Hermes, is the symbol of the medical profession." Haggard[6] states that "the symbol of Aesculapius, the caduceus--the two snakes twined on a staff—has survived, and is still used today as a medical emblem." Tyson,[15] referring to the erroneous and wide-spread use of the caduceus as an emblem of the healing art, illustrates the facade of the Medical Chambers at 140 East 54th Street, New York, showing the caduceus; the seal of the U. S. Public Health Service—1798—with an anchor and chain at right angles to the caduceus, and finally the caduceus with the letters, M.D., as the insigne frequently seen on the car of a practising physician. For some reason he omitted the caduceus with the large letter, V, and the caduceus with the three smaller letters, D.V.M. These two latter insignia have been seen recently on different cars of the same doctor of veterinary medicine. In the October issue 1951 of the **Sun Life Review**[8] there is the seventh in a series introducing Canadian personalities. "By arrangement with MacLean-Hunter Publishing Company,

Limited," there is published the story of "Sir William Osler: The Great Physician." In a personal letter the editor justified the presence of the caduceus superimposed on the word, Great, by saying that "some of the medical diplomas and fraternity pins of their company's doctors show the caduceus which is the emblem of the medical profession." In 1856 the caduceus appeared as an emblem on the chevrons of hospital stewards of the U.S. Army, and in 1902 on the uniforms of the Medical Corps, U.S. Army. As the result of a nation-wide poster contest in 1928, sponsored by the American Cancer Society, more than one thousand artists competed, including well-known illustrators. George E. Durant won the $800.00 prize with the two-edged sword bearing a caduceus. The accompanying folder explained that "the twin-serpent caduceus, forming the hilt emphasizes the medical and scientific nature of the Society's program. Classically, twined serpents represent healing of the sick and creativity of the healthy." For several years the Canadian Cancer Society used the same insigne as the American Cancer Society. During recent years, however, the error has been corrected. The sword with the single snake of Aesculapius, the Greek god of medicine, now appears on all literature distributed during the annual drive for funds by the Canadian Cancer Society. In personal letters, relevant as to why officers of the U. S. Public Health Service and the Medical Corps, U. S. Army wear the caduceus on their uniforms, the editors of **Time** magazine on August 4, 1952 stated "However, the symbol of the two intertwined snakes (which first appeared in Babylonia) is related to other serpent symbols indicating fertility, wisdom and healing. It is doubtless because of the latter serpent symbolism that the caduceus was chosen by the Medical Corps," and again on May 15th, 1953, "Actually, the medical caduceus is the staff of Aesculapius, the Roman god of medicine. It is used really as an administrative rather than a medical emblem, implying a neutral or noncombatant status." Major[9] says that "shortly after William Harvey's admission to Padua in 1598 as a medical student he had his stemma or coat-of-arms painted on the ceiling of the portico of the main building, where it may be seen today. . . . .It consists of an oval shield on which an arm holds a lighted candle entwined by two serpents." Osler[10] shows a close-up illustration of "Harvey's stemma set in the wall of the university of Padua (with caduceus)." Above the coat-of-arms is the word, *ANGLICA*, and below are the words, *GVLIELMVS HARVEVS ANGLVS*. Neither author comments as to the correctness of Harvey's choice. According to Dorland[3] the caduceus is "the wand of Hermes or Mercury, the messenger of the gods: used as a symbol of the medical profession and the emblem of the Medical Corps, U.S. Army." According to The Blakiston Company[14] the caduceus is "the symbol or insigne of medicine consisting of a staff with two formal wings at the top, and two serpents entwined about the remainder. The latter is not regarded as a medical but as an administrative emblem, implying neutral, noncombatant status." These examples should suffice to point out that the caduceus, an erroneous symbol of the art of healing, is still regarded by not a few of the medical fraternity as the emblem of their profession. This is especially true of the members of the American medical profession, who on account of their numbers, initiative, resourcefulness, excellent laboratory and hospital techniques exert a profound influence on Canadians, who in so many ways depend upon and follow their lead. The one

outstanding and most influential exception is the American Medical Association which in 1912 adopted and still uses the staff of Aesculapius with the single snake as its official emblem.

Aesculapius, the mythical son of Apollo, one of the most versatile of the Olympian Gods, was a physician in Thessaly. He conducted no souls into the underworld. He was killed, we are told, by a thunderbolt. The imaginative Greek saw in this perfectly natural phenomenon something supernatural. The legend was woven that Pluto, the god of the underworld, seeing his realm depopulated by the wonderful medical skill of Aesculapius, begged Zeus, who presided over the gods on the Thessalian Olympus, to strike down Aesculapius with a thunderbolt. After hurling the fatal shaft Zeus felt remorse and elevated Aesculapius to the rank of god of medicine. The cult of Aesculapius gradually spread throughout Greece until more than two hundred temples were known, the most important being those of Epidaurus, Cnidus, Cos, Pergamus and Athens to which city the worship of Aesculapius was introduced in 420 B.C. The Asclepiads had a numerous priesthood in which secret knowledge of the natural forces for curing disease was jealously guarded and handed down from generation to generation. They flourished mostly in places which through climatic and hygienic advantages were natural health resorts. Their favourite spots were on hills or in the mountains, in the shelter of forests, by rivers or springs of pure water all of which were naturally conducive to good health. The vivifying air, the well-cultivated gardens and the magnificant view all tended to cheer the heart with new hope of cure. To the homely altars, erected originally by mineral or hot springs, there were later added temples, pleasure grounds for festivals, gymnasia for physical exercises, baths and living rooms for patients. Access to the shrines was forbidden to the unclean and the impure, to the pregnant woman and the mortally afflicted. In this way contagion was reduced to a minimum and the number of failures to produce cures was reduced. No dead body could find a resting place within the sacred precincts, which meant that the mortality rate would be close to zero. At a distance and in connection with the shrines and temples there were inns and boarding-houses where shelter and food could be found and where cures could be carried out. The suppliants to the temples had to bathe in the sea, river or spring; fast for a prescribed time; abjure wine and certain articles of food They had to be properly cleansed and anointed before they could enter the temples. The preparation, partly dietetic and partly suggestive, was accompanied by a solemn service of prayer and sacrifice, the symbolism of which highly excited the patient's imagination. Undoubtedly the Greeks had taken over from the Babylonians the practice of divination in sleep. Dreams were believed to come from the gods. They foretold the outcome of a harvest, of a military expedition or of a disease. Some dreams were mere wish fulfillments or reflected every day occurrences in the life of the patient. Others were more obscure and required interpretation by the priests. During the incubation sleep of the Asclepiads the priest in the guise of a god presented himself before the patient to give medical advice if he happened to be awake. If he slept, as was usually the case, the advice came in a dream which was afterwards interpreted by the priest, who then prescribed catharsis, emesis, diuretics, diaphoretics, blood-letting or whatever therapy seemed likely to prove

most efficacious. It is not known exactly when the cult of Aesculapius became a national cult in Greece. It must have been well established by 399 B.C. since the last poignant words of Socrates (469-399 B.C.), who died in prison after drinking poison hemlock, Conium maculatum, toxic doses of which cause death by paralyzing the organs of respiration, were, "Crito, I owe a cock to Asklepios: do not forget to pay it." "It shall be done, "replied Crito, his disciple.

The Aesculapian cult was carried to Rome in 293 B.C., sent at the request of the Romans, who were suffering from an epidemic. As the mission sailed up the Tiber one of the sacred snakes, which the Asclepiads always kept and fed in their temples since they included psychotherapy among their other treatments, slithered over the side of the vessel, promptly swam ashore and selected the Insula Tiberina as its home. The Romans forthwith built a temple to Aesculapius on this spot. This was later transformed into a hospital for sick slaves. Emperor Claudius, who ruled from 41 to 54 A.D., decreed that those who recovered were freed from bondage and allowed to enter the City of Rome as free men. Osler[10] shows the "Aesculapian serpent, carved in travertine on the Isola San Bartolommeo in the Tiber, near Rome." Singer[13] shows the "Island of St. Bartholomew in the Tiber at Rome.". . . ."The island was the site of a temple to Aesculapius used as a refuge for worn-out slaves. It is the first known public hospital. The entire island is carved in the form of a ship. On its prow can be discerned the head of Aesculapius and his staff and serpent."

It is probable that the cult of the serpent—so constantly associated with Aesculapius and still used as a medical emblem—was of Minoan origin. Singer[13] shows the importance attached by the Minoan folk (2500-1200 B.C.) in their religion to the serpent by an "ivory and gold statuette of a votaress in a state of ecstasy. In either hand she holds a serpent, illustrating the importance attached to this animal in the Minoan cult." From earliest times the serpent has been held to embody prudence, foresight and wisdom, three essential attributes of the physician. In the pharmacopeia of the old-time Chinese doctor it was listed in the dried and powdered form as a component of many prescriptions. Hart[7] says that the Chinese prescribed "For a fever, the skins of snakes or frogs caught at high noon on the fifth day of the fifth moon, dried and powdered and administered alone or in combination with other ingredients." All Chinese consider the fifth of the fifth lunar month a very lucky day and one of the most important of the year. It is called the Dragon-Boat Festival. The boats used in the races are decorated so as to look like dragons. The racers are supposed to be searching for the body of Chioh Yuan, a patriot, who drowned himself in the Mi Lo river towards the close of the fourth century B.C. Moses (1571-1451 B.C.) "made a serpent of brass, and put it on a pole: and it came to pass, that if a serpent had bitten any man, when he beheld the serpent of brass that he lived" (Numbers 21, 9). Hezekiah, 12th king of Judah who reigned (726-715 B.C.), "brake in pieces the brazen serpent that Moses had made: for unto those days the children of Israel did burn incense to it" (2 Kings 18, 4). The ancients explained the connection of the serpent with Aesculapius by saying that it was the natural symbol of the healing art, since it periodically renews itself by sloughing off its old skin. It was natural to

suppose that a creature which could thus renovate itself could also renew the energies and prolong the life of the sick and suffering. So firmly implanted in the minds of the ancient Greeks and Romans was this association of the renewal of youth with the sloughing of the skin that the Greek, "*geras*," and the Latin, "*senectus*," meaning old age or senility, were also applied to the skin of a serpent that has been shed or is about to be cast off. Tame sacred snakes were always kept in the temples of the Aesclepiads because of their psychotherapeutic value. Of five pictures of Hygeia, the eldest daughter of Aesculapius and the goddess of good health, four show her either holding or feeding one of these snakes. Bettmann[1] shows how "Hygeia and Panacea, daughters of Aesculapius, tend serpents, givers of health." Major[9] in a votive tablet from Oropos, fourth century B.C., shows "the patient Arachinos in three postures—first, holding his right hand upwards in prayer; second, sleeping when the sacred serpent licks his swollen right shoulder; and third, standing while the god treats his shoulder, probably with a salve. He apparently suffered from an effusion from the right shoulder."

Aesculapius was a personage of the hazy dawn of Greek history. After deification as the god of Greek medicine his origin became enwrapped in myths. Mythology credits him with being the son of Apollo by the nymph Coronis. Apollo, learning that Coronis had a lover, was so enraged that he slew her, but rescued Aesculapius by a post-mortem Caesarean section. In art Aesculapius is usually represented as a reverend bearded man of mature age with a mild friendly expression, and with thick long hair, encircled with laurel. He invariably appears standing in a posture as if ever ready to give assistance, with his right shoulder and arm bare and with his robe gathered around his left arm. He is always characterized by the thick knotted staff on which he leans and about which there is always coiled a single snake, which accompanied him wherever he went. In a votive tablet[9] found at Thyrea in Argolis (370-360 B.C.) Aesculapius is shown as he is followed by his two sons Machaon, a famous surgeon, and Podalirius, a celebrated physician, whose reputations as to their ability to heal were such that they were exempt from fighting. However, they declined this privilege and took a leading part in attacks against the Trojans (1192-1183 B.C.). According to Homer's Iliad they worked together harmoniously and showed great skill in extracting weapons, applying soothing drugs and binding up wounds. The two sons are followed in turn by the three daughters Hygeia, goddess of good health, Panacea, goddess of healing, and Jaso, assigned to Aesculapius by later mythology. The four figures, smaller than the gods and goddesses, all standing before Aesculapius, are the grateful family of the patient who has recovered.

The term caduceus or probably more accurately *caduceum*, since neither Cicero, Nepos, Livy nor Pliny use the word in the nominative case, is the Latin adaptation of the Doric or Aeolian word, meaning, "a herald's wand." In the Greek world the caduceus was originally a shepherd's crook, a forked olive branch adorned at first with two fillets of wool, then with white ribbons, and later with two intertwined snakes with heads meeting at the top.[11] This was the magic wand of Hermes, the heavenly messenger of the gods. It was the distinctive mark of heralds and ambassadors whose persons it rendered inviolable. The caduceus itself was not used by the Romans, but the derivative,

caduceator, occurs in the sense of, "a herald sent to the enemy, an officer with a flag of truce." The association of the olive with a favourable message is also of ancient origin. "And he stayed yet other seven days, and again he sent forth the dove out of the ark; and the dove came in to him in the evening; and, lo, in her mouth was an olive leaf pluckt off: so Noah knew that the waters were abated from off the earth" (Genesis 8, 10-11). Brewer[2] says, "the caduceus was a white wand carried by Roman officers when they went to treat for peace. The Egyptians adorned the rod with a male and female serpent twisted about it and kissing each other. (. . . . .) In mythology a caduceus with wings is placed in the hands of Mercury, the herald of the gods; and the poets feign that he could therein give sleep to whomsoever he chose; wherefore Milton styles it 'his opiate rod' in Paradise Lost XI. 133."

The Greek Hermes is identified with Mercury of Roman mythology. He was the son of Zeus and Maia. A late myth makes him half-brother of Aesculapius, the Greek god of medicine, whose daughter, Hygeia, the goddess of good health, he is said to have married. This is about the extent of his connection with the art of healing, unless, indeed, the promotion of fertility and the lulling to sleep, that is, the sleep of death of the giant, Argus, fabled to have had one hundred eyes, can be considered as therapeutic. In Tanagra, an ancient town of Greece now known as Grenada, however, he is credited with having averted a pestilence, but this was an action common to more than one of the Olympians. Hermes was dexterous, cunning and mischievous, characteristics which he exhibited in his early childhood and not aways in the most praiseworthy manner. On the first day of his life according to Seyffert[11] he attached strings to the shell of a tortoise and evolved the lyre. There is a myth that on the fourth day after his birth he escaped from his cradle and stole fifty head of oxen from Admetus, king of Thessaly. These were guarded by his elder brother, Apollo, the protector of flocks and herds. Hermes concealed them in a cave so successfully that they were never recovered and he even impudently denied the theft. By his music on the lyre he so enchanted Apollo that the latter forgave the thief and became reconciled to his younger brother. In return for the gift of the instrument Apollo gave Hermes the ambassadorial portfolio as messenger between the gods and men, and the caduceus as an insigne of his office. Hermes is variously represented in art. At times he is a mischievous little thief with a purse in his hand as the god of gain. At other times he is represented carrying the strigil or scraper as the god of athletics. It was customary for Greek athletes when preparing for their exercises to smear their bodies with oil and sand and then cleanse themselves by the strigil or scraper. Most frequently, however, Hermes is represented as a slim virile youth with tranquil features and with a graceful and charming manner. He is invariably running and carries in his left hand the caduceus, surmounted by two wings, symbolizing his incredible speed, and adorned with a male and female serpent intertwined, associating him with the idea of fertility, which, as just stated he was believed to promote. In his right hand there is always a well-filled purse since he was the god of commerce and big business and the protector of travelling salesmen and the bestower of prosperity. He wears a broad-brimmed, two-winged traveller's hat, and has two wings on each stout sandal or buskin.

Hyginus, the Roman grammarian and librarian who lived about 10 B.C., said that "Mercury saw two serpents entwined in mortal combat. Separating them with his wand, he, thereby, induced a state of peace. As a result of this episode the caduceus came to be regarded as a symbol of peace on account of its efficacy in calming the passions and stilling contention." Facciolatus and his pupil Forcellinus[4] cite Macrobius, a Latin grammarian and governor of Spain (399-400 A.D.), as saying that "the two serpents were *non dimicantes sed coeuntes*," that is, not fighting but mating. This immediately suggests the idea of fertility and the probability that originally the caduceus may have been an emblem of phallic worship.

How singularly inappropriate is the use of the caduceus as an emblem of the art of healing may be realized by recalling some of the functions and characteristics of the Greek Hermes who has been identified with Mercury of Roman mythology. As an intermediary between the gods and men Hermes was the **god of eloquence.** As a herald he must of necessity be able to state his message clearly and on occasion plead the cause of those who sent him. As an adroit speaker his silver-tongued eloquence could always make the worse appear the better cause. From this point of view the caduceus would be a more suitable emblem for medical quacks and mountebanks than for straight-thinking, straight-speaking therapeutists. Evidently Shakespeare appreciated the respective functions of Mercury, the messenger, and Aesculapius, the physician. In **The Merry Wives of Windsor** Sir John Falstaff, impatiently waiting for a message from Mistress Ford, addressed Mistress Quickly, their internuncia or go-between, "But what says she to me? be brief, my good she-Mercury," (Act II. Sc. ii. L. 81-82), and in (Act II. Sc. iii. L. 29) the host of the Garter Inn asks Dr. Caius, a French physician, "But what says my Aesculapius?". As **conductor of the dead to their subterranean abode** the chrome-plated torches encircled by two serpents, seen frequently as an adornment on either side of modern funeral cars seem more appropriate than does the caduceus with the letters,M.D., on the rear of a car of a practising physician, or with the letters, D.V.M., on the car of a doctor of veterinary medicine. The caduceus would be in order on the facade of a crematorium but certainly never on the keystone of an arch over the entrance of any hospital for the healing of human beings or domestic animals. "The cock was sacred to Mercury and appears sometimes as an attribute in the images of Mercury."[11] Even today the Chinese call the cock the "chicken that leads the soul." Until the late 1920s at least, Chinese mourners, who could afford it, always arranged to have a rooster tethered to and sitting quietly on the coffin of the deceased relative as it was borne through the streets on the shoulders of the coolies to its final resting place. This was because the Chinese had the belief that the cock could drive all evil spirits from the route of the funeral procession and bring the soul safely to its destination. Since Hermes was the **god of commerce** the Canadian Bank of Commerce is justified in placing the caduceus as an official emblem on its bank books and buildings. Hermes was the **protector of travelling salesmen.** Knowing this function, marine architects have used the caduceus to decorate the pillars in the salon of the ferry Princess Helene of Canadian Pacific Steamship Services, which plies between Saint John, N. B. and Digby, N. S. An up-to-date and recently-erected garage on Carling Avenue, Ottawa, Ontario has

an enormous caduceus high above the main entrance through which all patrons must drive their cars. In 1914 the Florists' Telegraph Delivery adopted the Mercury emblem, showing a nimble young man with wings on his hat and sandals, symbolizing the **incredible speed** with which he delivers flowers to his many customers. During that year the first delivery wagons, carrying the FTD emblem, appeared on the streets of Detroit. In 1929 the Mercury emblem was copyrighted as an official trademark of FTD. Each member of the association must display at all times the FTD emblem on a window or front door.[5] Hermes was the **patron-god of thieves and liars.** At an early age he showed the sinister quality of his character by escaping from his cradle, stealing the oxen of Admetus, guarded by Apollo, his elder brother and then impudently denying the theft. Seyffert[11] suggests that if he had so desired he could have explained the mysterious disappearance of the belt of Venus, the goddess of love, and the tongs of Vulcan, the god of forging and smelting. Hermes was the father of Autolycus, the master of thieves, whom he taught how to metamorphose himself and all his plunder so as to render them invisible and thus preclude the possibility of recognition and identification. With great ingenuity and dexterity having evolved the lyre from the shell of a tortoise, he became the **god of invention.** When to the creative imagination so necessary for invention is added the gift of oratory it is easy to see how in time he came to be regarded as the **god of literature.** The most plausible explanation of his name, Hermes, seems to be the Greek word, "*ermes*," signifying the demon that haunts or occupies a pile of stones or simply a stone, set up by a roadside for some magical purpose. As the **god of gates, streets, boundaries and the marketplace** his images (called *hermae*) have been set up as boundary stones. "From early times Hermes has often been shown as a mere stone, having a human head carved at the top and a phallus half-way up it. The latter is, indeed, associated with this god who bestowed the blessing of fertility on the pastures and herds and who was happiest spending his time among shepherds and nymphs, the attendants of the gods, by whom he had numberless children including Pan.[11]" If such a sinister individual had been obliged to subscribe to the lofty ethical code embodied in the Hippocratic Oath surely he must have done so with reservations. In whatever capacity, good or bad, Hermes is exhibited with two serpents, male and female, his relationship to the art of healing is near absolute zero.

How did the wand of Aesculapius, the Greek god of medicine, encircled by a single snake become confused with the caduceus of Hermes, since most of the positive attributes of the latter are wholly alien to the noble profession of healing? Probably the earliest instance of confusion was that of the Swiss medical printer, Johann Froben (1460-1527),[15] who evidently familiar with the caduceus of Hermes and also with the New Testament, pictured in his publications a two-serpented wand, surmounted not by wings but by doves: and over all, as obviously excellent advice for physicians, the Greek original of the saying of Christ, "be ye therefore wise as serpents, and harmless as doves." Evidently Johann Froben, constructing his own symbolism for his emblem, set a precedent because Sir William Butts, physician to Henry VIII (1491-1547), employed the same erroneous emblem. In 1844 it appeared on the title-pages of the medical publisher J. S. M. Churchill of London. This seems to have

been the last use of the symbol in England since the true staff of Aesculapius with the single serpent is still used today by the Royal Army Medical Corps. The seal of the U.S. Public Health Service, bearing the date of 1798, shows the caduceus placed at right angles to an anchor and chain. This was the year after the inauguration of John Adams (1735-1826), the second President of the young Republic. In 1855 the two snakes appeared on the chevrons of hospital stewards of the U.S. Army, and in 1902 on the uniforms of the U.S. Army medical officers. From the time that the caduceus, superficially so similar to the staff of Aesculapius, came to be used by all medical officers of the United States Government, irrespective of whether or not they originally intended this non-medical emblem to have any medical significance, the use of the erroneous emblem came to be generally regarded as a symbol of the American medical profession, including even for a time the internationally-recognized American Medical Association. In 1912 the latter organization, after much discussion, adopted and still uses as its official emblem the one-serpented staff of Aesculapius, whom all physicians of the Western world revere, not only as the Greek god of medicine, but also as the fabled ancestor of Hippocrates the Second or the Great, the father of medicine, who included in his writings the Hippocratic Oath with its high ethical precepts. To commemorate World Health Day, April 7th, the World Health Organization issued a special United Nations stamp. The design, executed by a member of the United Nations Secretariat, shows a single snake entwined about a staff with the globe and the laurel wreath of the United Nations emblem as a background.

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RESUME OF MINUTES
EXECUTIVE COMMITTEE
THE MEDICAL SOCIETY OF NOVA SCOTIA
November 19, 1956

1. The Chairman, Doctor A. G. MacLeod, called the meeting to order at 9.20 a.m.

2. Present were: Doctor A. G. MacLeod, Chairman; Doctor J. R. McCleave, President; Doctor A. L. Murphy, Vice-President; Doctor C. H. Young, Treasurer; Doctor C. J. W. Beckwith, Executive Secretary; Doctor David Drury, Cumberland Medical Society; Doctor A. W. Ormiston and Doctor H. J. Martin, Cape Breton Medical Society; Doctor Samuel Marcus, Lunenburg-Queens Medical Society; Doctor J. A. MacCormick, Antigonish-Guysborough Medical Society; Doctor A. F. Weir, Western Nova Scotia Medical Society; Doctors W. A. Murray, D. I. Rice and N. B. Coward, Halifax Medical Society; Doctor H. C. Still, Editor-in-Chief, Nova Scotia Medical Bulletin. There was not any representative from the Valley Medical Society or the Colchester-East Hants Medical Society. Doctor R. O. Jones, Immediate Past President, had expressed regret at being absent from the city.

3. Minutes of the last Executive meeting (September, 1956) were accepted as published in the October, 1956 issue of the Bulletin. The Chairmen and members of the sixteen Standing Committees were read. (The membership for these committees was published in the December Bulletin.).

4. **Committee on Civil Disaster.** Doctor Morton reported that a Civil Disaster Committee was a necessity as evidenced by the demand for immediate medical service at the Springhill Mine Disaster. He lauded the quick response of the profession and the part played by the Victoria General Hospital. He felt that a member of the Provincial Department of Health or the Victoria General Hospital should be on his committee. The report was adopted. During discussion, the Secretary stated that he had offered in a telegram the services of The Medical Society to the Chief of Staff of the All Saints Hospital, Doctor J. R. Ryan. This action was approved.

5. **The Report of the Committee on Medical Economics** was read and adopted. Doctor A. L. Sutherland, Chairman, stated there would be a meeting of The Canadian Medical Association Committee in Toronto, December 7th and 8th, which he would attend.

6. **The Report of the Managing Editor of the Bulletin** was read and adopted. Doctor Beckwith reported that the Editorial Board is meeting twice monthly, that the "dead line" for the monthly issue is the fifth of each month, and that the monthly issues should be in the mail not later than the 21st of each month. Review of financial aspects indicated that each issue, except that of October, had shown a profit. The October issue had contained the complete proceedings of the annual meeting, the retiring Executive and the incoming Executive Committees. Discussion led to the decision to continue publishing the proceedings in a single issue.

7. **Report of the Editor-in-Chief.**

"Your Editorial Board during the past month has given a good deal of thought and had much discussion on the status of the Nova Scotia Medical Bulletin.

"In broad outline the Editorial Board is of the opinion that the objectives of the Bulletin should be:

1. To record the affairs of The Medical Society of Nova Scotia both with regard to its business and membership.

2. To keep the medical practitioners of the Atlantic Provinces informed of current thought in the whole field of medicine with particular reference to developments in the Atlantic Provinces.

"With these objectives in mind the Board recommends that the Bulletin be made available by annual subscription to any medical practitioner not at present a member of The Medical Society of Nova Scotia.

"The Editorial Board furthermore seeks authority from the Executive to explore possible changes in format and printing and to investigate new avenues of revenue."

(Sgd.) H. C. STILL.

Doctor Still moved the adoption of his report which was seconded by Doctor D. I. Rice. Carried.

Discussion of the report led to the following; moved by Doctor J. R. McCleave, seconded by Doctor D. I. Rice and carried that—"The Editorial Board be given authority to investigate format of the Nova Scotia Medical Bulletin from economic and other viewpoints and recommend any changes they deemed advisable for action by the Executive. And that they also recommend a subscription rate for non members of The Society."

8. The Report of the Rehabilitation Committee, Doctor W. D. Stevenson, Chairman, was as follows:

"This is an interim report of The Medical Society of Nova Scotia's Committee on Rehabilitation.

"With the expansion of facilities for rehabilitation in the province, there has developed a shortage of therapists, both in Physiotherapy and Occupational Therapy, especially the latter. While there are some students in training, it is felt that the numbers who will be available for this work in the province in the next few years will be far too few, unless the present rate of registration is significantly increased.

"The first recommendation of your Committee, therefore, is that The Medical Society of Nova Scotia write to the Department of Education requesting that they in turn write to the Principals of the High Schools and Vocational Schools in the province, acquainting them with the need for more therapists, and also telling them of the availability of speakers to acquaint the High School students with the facts and the opportunities in this profession. Some of the members of your Committee, as well as speakers from the Physical and Occupational Therapy Societies would be pleased to undertake this service.

"Secondly, we would also request that The Medical Society make available funds for the drawing of posters, to publicize this occupation, which could be used in the schools.

"The Rehabilitation Committee would like to point out once again the urgent necessity for a Brace Shop which can provide braces and prostheses for adults. Our third recommendation, therefore, is that The Medical Society of Nova Scotia should make strong representation to the Provincial Government that provision for making braces and prostheses for adults is an urgent neces-

sity. It is suggested further that this occupation might also receive publicity in the schools, in that trainees are sought and that bursaries are available to them for this training. It is suggested that the approach in regard to brace making might be made in the voational schools, or in the lower grades, manual training classes, etc., and in the other High Schools where there might be more interest in technical training.

"The work of the Rehabilitation Centre is continuing. The staff is expanding, and patients' services increasing steadily. An official opening is planned for the near future. The provision of in-patients' services is also under study."

Respectfully submitted,
Doctor Arthur Shears,
Doctor G. J. H. Colwell,
Doctor John F. L. Woodbury,
(Sgd.) W. D. Stevenson, M.D., Chairman.

Doctor Beckwith moved the adoption of the report, which was seconded by Doctor A. F. Weir.

Doctor H. J. Martin felt that there should be an orthopaedic surgeon on the Rehabilitation Committee and moved that Doctor B. F. Miller be added to the Committee on Rehabilitation. This was seconded and carried.

Discussion of recommendation No. 2 led to the following motion by Doctor W. A. Murray, seconded by Doctor A. F. Weir, and carried that—"This Society go on record as approving in principle any plan to publicize this need through high schools and that this Society would welcome discussion with the above group and the Department of Health to facilitate the needs of the Rehabilitation Committee."

Discussion of recommendation No. 3 led to the following motion made by Doctor A. W. Ormiston, seconded by Doctor J. A. MacCormick and carried that—"The suggestion of the Rehabilitation Committee that the Provincial Government undertake to set up a shop for making braces and prostheses for adults in the province be endorsed by The Medical Society of Nova Scotia and that this Committee take this matter up with the Department of Health."

9. **Report of the Advisory Committee on Health Insurance** was read and adopted. It referred to the "Brief of the Planning Committee on Hospital Insurance" which was submitted to the Chairman of the Planning Committee on October 30, 1956. This brief is published in toto on page 36 of this issue of the Bulletin.

10. **Report of Committee on Traffic Accidents.** Doctor A. L. Murphy, Chairman of the Committee gave a verbal report for his Committee. A hospital questionnaire had been drawn up having to do with Traffic Accidents, which had already been sent to three hospitals in Nova Scotia with good results. It is probable that The Canadian Medical Association will use this form as well. Doctor Murphy proposes to send the questionnaire to Hospitals in Nova Scotia.

This completed the reports of committees.

11. **Delegates to General Council, C.M.A.** The delegates from Nova Scotia include the President of the Division and the Secretary; also the member from this Division on the Executive of The C.M.C. and the member from this

Division on The C.M.A. Nominating Committee. This leaves five delegates to be named. Discussion re naming the other five delegates revolved about the principle of making up the most effective "team" which should include some continuity of experience, but also include rotation of delegates.

Doctor J. R. McCleave moved that—"The President, the past President and the Vice-President be members of the representatives to General Council." This was seconded by Doctor C. H. Young. Carried.

Doctor D. I. Rice moved that—"The Vice-President serve as a representative to C. M. A. General Council in the capacity as member-at-large; that the President continue in his present capacity, and that the Past President be the nominee for the Nominating Committee of The C.M.A." This was seconded by Doctor Samuel Marcus. Carried.

Doctor C. G.Harries stated that alternates could be selected. The General Council meets once a year at the time of the annual meeting.

Doctor H. C. Still moved that—"The remaining four delegates be selected from the Branch Medical Society at present unrepresented on the Committee." This was seconded and carried.

Doctor C. G. Harries suggested that a briefing meeting be held before the General Council met as a preparation for the representatives.

Doctor MacLeod appointed Doctors C. G. Harries, H. J. Martin and S. Marcus a Committee to bring in names of four members to act as delegates to the General Council of The C.M.A. This Committee subsequently submitted the following names: Doctor G. R. Douglas, New Glasgow; Doctor A. W. Ormiston, Sydney; Doctor J. P. McGrath, Kentville, and Doctor D. M. Cochrane, River Heber.

12. **Committee on Nursing.** As a Committee onNursing had not been appointed, it was moved by Doctor H. J. Martin and seconded by Doctor C. H. Young that this Committee be re-appointed, and that it be left as a special committee for the time being. Carried. The names of the Committee are Doctor H. F. McKay, Chairman, New Glasgow; Doctor C. J. W. Beckwith, Halifax, and Doctor J. C. Murray, Springhill.

13. **Crippled Children's Registry.** Action taken on the letter issued to members of The Society from the Crippled Children's Society over the signature of G. B. Wiswell, M.D., Medical Director, was discussed and endorsed.

14. **The Canadian Medical Association Meeting in Halifax, June 15th-19th, 1958.** A review of this subject indicated that it had been agreed in 1954 that the Atlantic Divisions, i.e. New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland would sponsor this meeting to be held in Halifax. New Brunswick would be the "Host Division." The only definitive responsibility at present for the Nova Scotia Division is to appoint a Chairman of the Housing Committee. Doctor M. R. Macdonald had consented to chair this committee. The Secretary reported that Doctor Whitehead, Secretary of the New Brunswick Division had had a discussion relative to the 1958 meeting.

15. **Representation on Board of Registration, Nursing Assistant's Act.** The Deputy Minister of Health had requested representation from The Society on the Board of Registration. The Chairman of the Executive Committee had requested that the Secretary submit his name.

16. **Membership in The Society.** To November 19, 1956, there were 28 new members in The Society. As of October 31st there were 84 members with unpaid dues for 1956. As of November 19th this number had been reduced to 67, this resulting from a circular letter. (Note: As of the end of December the number of unpaid membership dues has been substantially reduced.)

17. **Advisory Committees on Laboratory and Radiological Provincial-Federal Grants.** A letter from Doctor G. G. Simms, Assistant Deputy Minister of Health, relative to this subject advised that the Advisory Committee on Laboratory Services and that on Roentgenological Services were now separate and distinct committees. In addition to these there is a Consultant Advisors Committee which is a special Department of Public Health Committee made up of heads of the various laboratory services.

18. **Re: Changes in Workmen's Compensation Board Fees.** The communication from the Board, addressed to Doctor J. V. Graham, had been sent to all members of The Society. A communication from Doctor N. H. Gosse, relative to the schedule was read. This indicated the desirability of the Workmen's Compensation Board recognizing a scale of fees, rather than deciding what is to be paid for any particular service. The principle involved was endorsed by the Executive.

19. **Re: Group Disability Insurance.** A communication from Mr. Leo F. McKenna of Blaker, Hearns and Company was read. Mr. McKenna was invited to appear before the Executive Committee. The following is a summary of the discussion which took place. He answered many questions and discussed many points brought forward by members of the Executive. Doctor Rice asked about the advantages of **this** Group Disability Insurance. There were several advantages said Mr. McKenna:—Such as the premium being 35 to 50 per cent less than for individual policies on an equivalent basis; coverage to age 70 instead of 60 or 65; confinement in the house is not required to collect benefits for either sickness or accident disability; the policy once issued cannot be changed; coverage for any individual member is non-cancellable as long as the Group Plan remains in force. In answer to a question re long disability from a heart condition, for example, such disability is covered for five years under the contract, and if a person were to return to work for a period of six months, he would be reinstated with reference to that particular condition, and if he were to have another such episode claim disability again for the same condition.

It was agreed that 50 per cent of "ordinary members" as of 1956 would be the basis for making the contract fully operative. When this 50 per cent is reached, all members of The Society will be notified by **his** office that there is a period of 60 days from receipt of the notification during which members under 70 years of age may apply without proof of insurability. On the basis of the application form it was possible that some with a poor health record might be offered Plan B or C coverage, but if such were the case the premium would correspond to the particular plan. It was Mr. McKenna's opinion that, in the few cases where this might apply, the individuals covered could not obtain any disability insurance through any other plan. Mr. McKenna stated that his Company has been in this field for 15 years and that the Executive could be assured of the Company's primary desire to maintain excellent relations with the profession.

(Note: As of December 13th, 1956, the number of member applications satisfied the 50 per cent required to make the plan completely operative.)

20. **Canadian Medical Association Committees.** As a result of a request from The Canadian Medical Association for the names of Chairmen of Divisional Committees to act on The Canadian Medical Association Standing Committees, it was seen that the Nova Scotia Division has no Committees on Medical Education, Ethics, Archives or Nutrition.

The following members of The Society have been requested to represent this Division on the respective Canadian Medical Association Committees.

Committee on Archives—Doctor K. A. MacKenzie.

Committee on Ethics—Doctor H. D. O'Brien.

Committee on Nutrition—Doctor R. M. MacDonald.

Discussion relating to the Committee on Medical Education resulted in the following motion by Doctor W. A. Murray, seconded by Doctor H. C. Still, and carried, that—"Doctor C. B. Stewart be nominated Chairman of a Special Committee on Medical Education."

21. **Inquiries re Practices in Nova Scotia.** The Secretary reported that many letters of inquiry are received from abroad, and requested an expression of opinion of the policy to be followed when replying.

Doctor H. J. Martin moved, seconded by Doctor H. C. Still, and carried that—"The Executive Committee does not lay down any policy or directive relative to inquiries concerning practices in Nova Scotia."

22. **Re: Printing New Constitution.** It was moved by Doctor D. I. Rice, seconded by Doctor C. H. Young, and carried, that—"The matter of printing and circulating the new constitution be deferred."

23. **Re: Requests for list of members of The Medical Society.** It was moved by Doctor D. I. Rice, seconded by Doctor W. A. Murray, and carried, that—"The Society be prepared to send a list of members to medical groups."

24 **Re: Issuing Schedule of fees on request.** The Secretary reported there had been four requests for the schedule of fees including one from the General Secretary of The Canadian Medical Association that two copies be sent to Doctor C. C. Misener of D.V.A. A full discussion of the matter resulted in the following:

(a) Moved by Doctor A. W. Ormiston, seconded by Doctor D. I. Rice, and carried—"That whereas our Provincial schedule of fees is under revision at the present time we therefore recommend the present revised D.V.A. schedule of fees be adopted for the next three years."

(b) Moved by Doctor C. G. Harries, seconded by Doctor H. C. Still, and carried—"That the Secretary be authorized to write these organizations that our Provincial Society's schedule of fees is at present under revision and that when finalized a copy of same will be forthwith submitted."

25. **Re: Overlapping of Terms of Reference of the Standing Committee on Medical Economics and the Standing Committee on Fees.** The following memorandum was submitted to the Executive for consideration.

A motion at the Annual Meeting, September, 1956, made by Doctor F. M. Fraser and seconded by Doctor A. M. Marshall and carried, reads:

"A Standing Committee on Fees representing all branches of the medical profession to be appointed to establish an equitable schedule of fees, to review this schedule annually, to receive representation from groups or individuals at that time, with power to set a schedule and alter it according to the cost of living index or other circumstances."

The terms of reference for the Medical Economics Committee are:

1. Social legislation which includes medical services or benefits presumably for medical service.
2. Remuneration of physicians by the public and employment and remuneration of physicians by lay bodies, hospitals or official bodies including Federal, Provincial and Municipal bodies.
3. Medical care and other forms of medical insurance.
4. To maintain close contact with the Committee on Economics of The Canadian Medical Association.
5. To report upon its activities, with such recommendations as it may see fit to make to the Executive Committee.

It is obvious that there is overlapping of terms of reference for these two committees.

The Executive Committee has "power to establish Standing Committees" and "shall also provide or vary their (Standing Committees) terms of reference." The preamble for the Committee on Medical Economics states—"It shall be the duty of the Committee on Medical Economics **excepting where otherwise provided** to deal with "items as listed above. It is therefore possible to have the Committee on Fees carry out its important functions. However it appeared desirable to attempt to clarify the functions of each of these committees. Consequently, on October 18, 1956, Doctor A. L. Sutherland, Chairman, Committee on Medical Economics, Doctor F. Murray Fraser, Chairman of the Committee on Fees, and the undersigned had a discussion and submit the following for consideration by the Executive Committee.

(1) That, of necessity, there must be close liaison between the Chairman of these two committees.

(2) That anything to do specifically with fees shall be referred to the Committee on Fees.

(3) That all other matters pertaining to Economics shall be referred to the Economics Committee.

Thus under terms of reference for Committee on Medical Economics.

Item 1. The fees to be set under the "Welfare Fund" would be the responsibility of the Committee on Fees. All else would be the responsibility of the Committee on Economics.

Item 2. The fees for professional services rendered would be determined by the Committee on Fees. The matter of salaries for full-time physicians, etc. would be for the Economics Committee when approached by such groups.

Item 3. The fees for professional services rendered would be determined by the Fees Committee. All else would be referred to the Committee on Economics. Thus the principle of liaison between the two Committees would be the specific matter of fees to be the responsibility of the Committee on Fees, and other matters in the terms of reference of the Medical Economics Committee to remain as at present.

Doctor Murray Fraser stated that he had intended to give more mature thought to the wording of his motion, but due to pressure was required to write his motion while attending the meeting.

He wishes to have the wording altered as follows, and this has the approval of the seconder, Doctor A. M. Marshall: "A Standing Committee on fees be appointed to establish an equitable schedule of fees, to review this schedule annually, to receive representation from groups or individuals at any time and with power to set a schedule of fees and alter it according to the cost of living index or other circumstances."

The difference is simply that the motion approved required the Committee to have representation from all branches of the profession, which would make it extremely unwieldly, whereas the intent was the Committee would expect representations to be made to it by individuals or any branch of the medical profession.

Doctor Fraser also suggested that the words "according to the cost of living index or other circumstances" might be advantageously dropped. Doctor Marshall agrees with this.

(Sgd.) C. J. W. Beckwith,
October 25, 1956.

Discussion of this memorandum brought out the opinion that one motion relative to the report of the Committee on Tariffs at the annual meeting had not appeared in the printed minutes. (Note: A review by the Secretary showed that this was so. A correction appeared in the December issue of the Bulletin, p. 434 "Erratum Minutes Annual Meeting 1956".)

This memorandum was rece ved and adopted on motion of Doctor D. I. Rice, seconded by Doctor A. W. Ormiston and carried.

26. **Re: Workmen's Compensation Board Committee.** The Secretary stated that this committee had not been reconstituted at the annual meeting. (Note, this committee has been in existence since 1933.) With the formation of a Standing Committee on Fees it was possible for the chief function of the Workmen's Compensation Board Committee to be absorbed in the terms of reference of that committee.

Doctor A. W. Ormiston moved, seconded by Doctor D. I. Rice, that—"The work of the Workmen's Compensation Board Committee be turned over to the Standing Committee on Fees." Carried.

27. **Re: Annual Meeting, Digby, August 29, 30, 31, Thursday, Friday, Saturday.** A general discussion resulted. It was decided that the Executive Committee meeting would be held on Wednesday, and that every effort would be made to have business completed so that members would be available for the annual meeting starting on Thursday.

The Secretary emphasized the desirability of additional stenographic assistance during the annual meeting so that Mrs. Currie's knowledge and capabilities might be more available to the Society, and to reduce the time between taking minutes and having them available in typed form. The Executive wished to have the cost explored and a further report.

28. **Pharmaceutical Exhibits at Annual Meeting.** Following discussion Doctor D. I. Rice moved, Doctor H. C. Still seconded and carried—"That the matter of future participation of drug exhibitors at annual meeting

be referred to a special committee with the recommendation that in the future methods other than the customary exhibits be employed." The Chairman named Doctor D. I. Rice and the Secretary with power to add as the Committee.

29. **Re: Expenses Associated with Annual Meeting.** Discussion disclosed that there was no definite policy as to sharing cost or assuming the obligation. The pattern seemed to be that the host Society assumed the costs of entertainment. At the suggestion of Doctor D. I. Rice the Chairman passed this matter for study to the Committee on Exhibits just appointed.

30. **Re: Remuneration of Executive Committee Members.** The Secretary was instructed to make a study of this and report to the next Executive meeting.

31. **Re: Definition of "Specialist."** Discussion resulted in a motion by Doctor A. W. Ormiston, seconded by Doctor H. C. Still, and carried—"That this matter be deferred."

32. **Re: College of Physicians and Surgeons of Nova Scotia.** Discussion resulted in a motion by Doctor A. W. Ormiston, seconded by Doctor W. A. Murray and carried—"That the Secretary and Doctor Wickwire continue to secure information re a local College of Physicians and Surgeons and that this information be tabled."

33. **Re: Canadian Medical Association Membership Fees.** A letter from the General Secretary, Canadian Medical Association, was read which made certain corrections in the fees having to do with Canadian Medical Association membership classification.

Discussion emphasized that a physician practising in Nova Scotia could not become a member of The Canadian Medical Association without being a member of the Nova Scotia Division, **unless,** such application to Canadian Medical Association had the approval of the Executive of the Nova Scotia Division. If such an application is received by The Canadian Medical Association it is referred back to the Division for recommendation.

34. **Re: Classification of Terms in reference to Membership Classification Nova Scotia Division.**

(1) Moved by Dr. A. F. Weir, seconded by Doctor A. W. Ormiston and carried that first year in practice following graduation mean to December 31st of that year.

(2) Moved by Doctor H. C. Still, seconded by Doctor J. R. McCleave and carried that the conjoint membership be $10 for the first year of practice; $5 for Canadian Medical Association and $5 to be paid to the Nova Scotia Division which shall be passed on to the Post-Graduate Committee.

(3) It was agreed when a physician starts post-graduate studies immediately following graduation that on his return to practice he shall be classified as "First year in practice."

35. **Re: Membership File.** The Secretary brought to attention the necessity of more information on members, and a more practical system of filing. After discussion Doctor W. A. Murray moved, seconded by Doctor H. J. Martin that such a system be considered and taken up with the Finance Committee.

36. **Other Matters.** The Secretary was authorized to obtain the cut required for the crest of The Society to be printed on the correspondence paper.

Authorization was given to present C.M.A. House with a suitable flag of Nova Scotia for the Board Room.

It was decided to hold the next Executive Committee meeting in March.

The meeting adjourned at 6.40 p.m.

Resume of Minutes compiled by C.J.W.B.

Personal Interest Notes

The fourth Maritime Hospital Association Institute meeting was held in the Victoria General Hospital during the past week. This meeting had a large attendance, and a wide variety of subjects pertaining to hospital administration were discussed. One recommendation was that the nurses working the rotation shifts in the afternoon and evening should receive an additional ten dollars a month. It is hoped that this increase will be approved.

Dr. Gordon Fryer of the Department of National Health and Welfare of Ottawa spoke on the subject of "disaster planning" for all hospitals, large and small. He referred to theSpringhill disaster of a few weeks ago in stressing the importance of hospital preparedness. Some coloured slides were used to illustrate his talk.

Dr. M. R. Macdonald, Assistant Superintendent of the Victoria General Hospital spoke on the problem of staphylococcus infections in hospitals, and the measures required to control this complication should it break out and the measures which should be taken to prevent its occurrence.

Thursday, November 29, was the occasion of the Annual Dinner of the Victoria General Hospital Medical Staff held at the Lord Nelson Hotel. The guests at the head table were, the Honourable Richard A. Donahoe, the newly appointed Attorney General and Minister of Health, and Gordon S. Cowan, Q.C., M.P., Chairman of the Board of Hospital Commissioners.

Dr. Judson V. Graham was honoured at this dinner on the occasion of his retirement from the active staff of the Victoria General Hospital. Dr. Harry O'Brien expressed the appreciation and best wishes of the staff of the Victoria General Hospital; to this Dr. Graham replied in an appropriate manner.

The medical fraternity of Halifax welcomes Dr. J. T. Balmanno to our midst. Dr. Balmanno is a graduate of Dalhousie University and has spent the last four and one-half years as Senior Resident in the Boston City Hospital where he was doing post-graduate study in general surgery. Dr. Balmanno was recently certified by the Royal College of Surgeons of Canada and will be associated with Dr. John Merritt. He is married and is the father of two children.

Brief of The Medical Society of Nova Scotia
To
The Planning Committee
Hospital Insurance and Diagnostic Services

IN accordance with the request of the Planning Committee on Health Insurance of the Nova Scotia government dated April 16, 1956, The Medical Society of Nova Scotia presents the following brief as being representative of the thinking of the medical profession of this province.

We wish to thank the Planning Committee for the privilege of naming a representative on the committee and for the opportunity to present this brief. We also wish to re-affirm the offer of the services of our committee on Health Insurance. Since the proposed plan includes some medical services, we feel it is important there should be adequate consultation with the medical profession, particularly on this aspect of the Plan.

The Medical Society of Nova Scotia will present its views under three headings: (A) Administration, (B) Diagnostic Services, (C) Hospitalization Insurance.

(A) ADMINISTRATION

(1) The Medical Society of Nova Scotia endorses the principle of The Canadian Medical Association that all health insurance programmes which are subsidized by government funds should be administered under the authority of an independent non-political commission, representative of those giving and those receiving the services.

(2) The number of commissioners should be not less than three and not more than five and should include one from nominations made by the Nova Scotia Hospital Association and one from nominations made by The Medical Society of Nova Scotia.

(3) Since the commission will be largely concerned with the provision and utilization of both hospital care and diagnostic medical services, The Medical Society of Nova Scotia feels the commission should employ as managing director, a medical doctor preferably with the following qualifications: (a) a graduate of at least ten years; (b) have adequate experience in clinical practice and medical administration; (c) be in good standing with The Medical Society of Nova Scotia.

(4) The executive officer should supervise the administration of the programme on behalf of the commission.

(5) Careful consideration should be given to making use of existing non-profit organizations. It is specifically recommended that the agency for medical services should be Maritime Medical Care, Incorporated.

(6) The Medical Society of Nova Scotia would offer its services in an advisory and consultative capacity to the commission.

(B) DIAGNOSTIC SERVICES

The Medical Society of Nova Scotia would emphasize that diagnostic services are medical services whether performed in or out of hospital. Radiology and clinical pathology are specialties in medicine and have the same academic standing with The Royal College of Physicians and Surgeons of Canada as any other specialty in Medicine and Surgery.

The following paragraphs present some views of this Society on Diagnostic Services:

(1) It is the aim of the radiologists and clinical pathologists of Nova Scotia to provide all residents of the province with as complete and as high a standard of service as possible. To accomplish this will require an adequate number of well trained personnel and the provision of a budget related directly to the volume of diagnostic service and separate from the budget for hospital services.

(2) Diagnostic services should be available to patients out of hospital. This should receive careful consideration and not be instituted until there is sufficient trained personnel (professional and technical) to provide the desired standard of service.

(3) The Medical Society of Nova Scotia recommends that payment for services be on a fee-for-service basis for radiology, and in so far as this is possible, for clinical pathology; that the tariff of The Medical Society of Nova Scotia be the basis for fee-for-service payment and that the physician be paid directly for all professional services by the agency employed by the commission. There may be special circumstances such as sparsely settled areas, etc., where it will be necessary to consider remuneration in addition to the fee for service.

(4) Since some of the proposed services are now performed by physicians in private radiological and clinical pathological practice and in offices of other medical practitioners, these services should be included in any insurance plan.

(5) The Nova Scotia Association of Radiologists through The Medical Society of Nova Scotia is willing to assume responsibility for setting up standards to ensure the quality and accuracy of diagnostic radiology as practised in Nova Scotia.

(6) The Medical Society of Nova Scotia is willing to assist in designing measures to control the utilization of the services in any way possible, but it feels some co-insurance will be necessary, taking care to see that no hardship would be imposed upon the medically indigent.

(7) The administration could be by a hospital insurance commission as mentioned under "Administration" paragraph 1. We do not believe that medical services should be administered by such a commission. Nevertheless, for practical purposes and as a temporary measure only, the above may be necessary during the transition period. The "medical" as distinct from the "hospital" nature of the services must, however, be kept in mind and the budget for each type of service should be kept separate.

(C) HOSPITALIZATION INSURANCE

The medical profession is interested in hospitalization because doctors are responsible for the care of their patients while in hospital as well as out, and the profession also shares the responsibility with the administrators and the superintendents of nurses for the day to day operation of the hospital. Accordingly, The Medical Society of Nova Scotia recommends:

(1) That hospitalization insurance be available to all residents of Nova Scotia for general ward care. The latter to include nursing care as required, meals, and special diets, the use of operating and case rooms, including anaesthetic supplies and equipment, blood and plasma, surgical dressings and casts, formulary drugs, etc.

(2) That such insurance be applicable to semi-private and private wards, with additional payment for such accommodation.

(3) That persons receiving the benefits of such insurance co-operate in the clinical training of medical students, nurses, technicians, etc.

(4) That medical functions of the hospital be delegated to the medical staff.

(5) That the medical staff be organized so that, in so far as possible, it will fulfil the requirements of Hospital Accreditation.

(6) That there be a joint conference committee for liaison between the governing board of the hospital and the medical staff.

(7) That part of the duties of the medical staff be to assist in the control of admissions and length of stay in hospital.

(8) That physician services are not part of hospital services and shall not be treated as such.

(9) That in an effort to control over-utilization of hospital service, a deterrent or some principle of co-insurance should apply to hospital admissions. Care must be taken to see that no hardship is imposed upon the medically indigent.

(10) That adequate financial provisions be made initially to permit high quality hospital services, and that the budget be adjusted periodically according to need.

(11) That any subsidized scheme ensure that the patient will receive the increasing benefits associated with the advancement of medical science by providing for research, teaching, adequate physical facilities and properly qualified personnel. A specified portion of the budget should be set aside for these purposes.

Respectfully submitted,

F. J. Barton, M.D.
H. F. McKay, M.D.
H. J. Devereux, M.D.
H. E. Christie, M.D.
C. B. Stewart, M.D.
N. H. Gosse, M.D.
D. M. MacRae, M.D., Chairman.

October, 1956.

Dalhousie Medical Research Committee

TOPICS FOR CLINICAL RESEARCH MEETINGS — JANUARY THROUGH MARCH 1957

5 p.m., Outpatient Dept. Conference Room, V. G. Hospital

Date	Name of Speaker	Topic
January 9	Dr. D. J. Tonning	Urinary Pepsin Excretion In Endocrine Disorders.
January 23	Dr. I. A. Perlin & W. T. Wong	X-ray Measurements of Certain Pelvic Angles.
February 13	Drs. M. G. Tompkins, L. Stewart & W. I. Morse	Suppression of Adrenal Function In Amenorrhea and Sterility.
February 27	Dr. D. L. Roy	Electrocardiographic Changes In Myxedema In Rabbits.
March 13	Drs. J. E. Stapleton, J. Wakely, J. Cairns & W. I. Morse	Studies On Iodine Metabolism Using Radio-Active Iodine.
March 27	Dr. G. W. Bethune	Endocrine Therapy of Metastatic Breast Cancer.

Dalhousie Clinical Research Meeting, October 10, 1956

Diseases of the Male Breast, with special reference to Gynecomastia.

Michael J. Randon and W. A. Taylor
Department of Pathology, Dalhousie University and Province of Nova Scotia.

In a recent two-year period, during which the laboratory served a male population of 325,000, there had been diagnosed one lipoma, one angioma, two carcinomas and 78 cases of gynecomastia in the male breast. This gave gynecomastia a much higher incidence than was generally suspected. It was stated in texts that gynecomastia was about three times as common as male breast cancer; the incidence of carcinoma in this series, however, was at the expected rate of about one per cent of female breast cancer; gynecomastia was thirty times commoner than male breast cancer in the Province and thus ten times as common as was generally taught. It was suggested that most published series were from large American surgical centres and did not refer to typical populations. This would explain also the high incidence in these papers of gynecomastia secondary to testicular tumours and severe liver disease; the method of selection in the present series would tend to exclude such cases. There seened no reason for believing that mastectomy was more frequently re-

sorted to in Nova Scotia than elsewhere; it was probably commoner in Armed Service Hospitals than in general hospitals but service personnel accounted for only seven cases in this series and affected the incidence in only a narrow age-group. Contrary to general belief, the incidence varied little with age and one-third of the cases were from men over the age of fifty.

The gross and microscopic anatomy were as described in the texts but it was important to note that gynecomastia did not give the male breast the contour of the female as does eunuchoid enlargement.

In older age-groups there was an apparent association with cardiorespiratory diseases and particularly with digitalis-therapy. It had been suggested that imperfect detoxication of digitalis alkaloids in congested livers could result in the formation of steroids which would have oestrogenic activity. The results of this study, which had been supported by the Postgraduate Committee of the Faculty of Medicine, Dalhousie University, are to be published in full elsewhere.

Dalhousie Clinical Research Meeting, November 28, 1956

Haemorrhage from Peptic Ulcer

R. C. Dickson, M.D., and K. G. Ellis, M.D.

A series of 338 admission to the Victoria General Hospital because of haemorrhage from peptic ulcer is reviewed. Nineteen (19) of the patients died giving a mortality rate of 5.6 per cent. In sixteen (16) of the fatal cases, haemorrhage was repeated or persistent. All deaths occurred in patients over 40 years of age and 73.7 per cent had serious co-existent disease. Neither chronicity nor the number of previous episodes of haemorrhage appear to bear any significant relationship to the mortality. There were 85 gastric ulcers, 134 duodenal ulcers, 28 others (esophageal, anastamotic, multiple) and 91 in which the ulcer site was undetermined. The mortality rates in these groups were 3.6, 8.9, 3.6 and 3.3 per cent respectively.

COLLEGE OF GENERAL PRACTICE OF CANADA

FIRST NATIONAL ANNUAL SCIENTIFIC CONVENTION

Monday, Tuesday and Wednesday, March 4, 5 and 6, 1957

Sheraton-Mt. Royal Hotel, Montreal

All general practitioners whether members of the College of General Practice or not will be welcomed at this Convention. The programme as drawn up includes speakers of note from both Canada and the United States who will discuss a variety of timely subjects.

Dr. J. F. McCreary, Professor of Paediatrics, University of British Columbia—Paediatric News.

Dr. A. B. Stokes, Professor of Psychiatry, University of Toronto—Selection and Management of Emotional Disorders.

Dr. R. Ian MacDonald, Director, Division of Post-graduate Education, University of Toronto—Medical Emergencies in the Aged.

Dr. J. Lewis Dill, Division of Otolaryngology, Henry Ford Hospital, Detroit, Mich.,—Hearing Problems in Childhood.

Dr. Arthur C. Curtis, Dept. of Dermatology and Syphilology, University of Michigan, Ann Arbour,—Tips on Managing Skin Disorders.

Dr. Wm. A. Lange, Detroit, Michigan—Plastic Surgery for the General Practitioner.

Dr. Louis A. Buie, Professor Emeritus, Mayo Clinic—Proctology for the General Practitioner.

Dr. H. B. Atlee, Professor of Obstetrics and Gynecology, Dalhousie University —The Immediate Handling of the Newborn Infant.

Dr. R. A. Davison, Dept. of General Practice, University of Tennessee—A Medical School Department of General Practice.

Dr. Lennox Bell, Dean of Medicine, University of Manitoba—To be announced.

Dr. Paul David, Director, Montreal, Cardiological Institute—Selection of Patients for Cardiac Surgery.

Dr. Hans Selyé, Professor of Experimental Medicine, University of Montreal—Subject to be announced.

Col. K. R. Swinton, General Manager, Thomas A. Edison of Canada Ltd. Modern Business Methods in a Doctor's Office.

Dr. H. L. Nadeau, Professor of Diatetics, Laval University—Subject to be announced.

Dr. Richard Lessard, Professor of Medical Pathology, Laval University—To be announced.

Dr. Oswald Hall, Dept. of Political Economy, University of Toronto,—To be announced.

It is expected that a representative of the College of General Practice of France will both attend the meeting and participate in the programme. A representative of the College of General Practitioners of England has been invited to attend.

There will be three panel discussions:

1. Diabetes — Chairman: Dr. Lillian Chase, Toronto
   Members include: Dr. H. S. Everett, Dr. Stephen's, N. B.
   Dr. Gordon D. Brown, Edmonton, Alberta.

2. The Ataractid Drugs:
   Chairman: Dr. G. J. Sarwer-Foner, Consultant in Psychiatry, Queen Mary Veteran's Hospital, Montreal.
   Members include: Dr. H. E. Lehmann, Ass't Professor of Psychiatry, McGill University
   Dr. Lennix Bell, Dean of Medicine, University of Manitoba
3. The Use of Sera and Vaccines:
   Chairman: Dr. Henri Charbonneau, Medical Director, Hôpital Pasteur
   Members to be announced.

The panel discussions will be practical and stimulating and each will allow for question and answer periods.

Other features include:

The luncheons in the Normandy Room on the three days of the Convention which will have as respective speakers:

Monday: The Honourable Paul Martin
Tuesday: Dr. Jean Charbonneau, Montreal
Wednesday: Dr. John S. Detar, President, American Academy of General Practice.

The annual business meeting of the College which will be held on Monday evening, the first day of the convention at 8 p.m. This will be followed at approximately 10.30 p.m. by a Vin d'Honneur at which all doctors and their wives will be welcome.

The annual dinner and dance will be on Tuesday evening beginning at approximately 6.30 p.m. and will provide first rate entertainment for the evening.

An interesting ladies' programme is being planned by our Montreal Committee. The details of this will be announced later.

Please direct your request for housing accommodation to:

Chairman of Housing Committee,
Dr. J. Y. Tremblay,
3244, rue Beaubien,
Montreal, P.Q.

Secretary's Page

STANDING COMMITTEE ON FEES

The Standing Committee on Fees under Chairmanship of Doctor F. Murray Fraser has had its first meeting. This committee was set up at the Annual Meeting 1956.

This committee is now anxious "to receive representations from groups or individuals" relative to schedule of fees. The importance of finalizing a schedule is indicated by the fact that five requests have been received for such a schedule. The committee must have the "representations" not later than April, 1957, but the earlier the better for the best results from the committee.

Doctor Fraser's address is 8 Prince Arthur Street, Halifax.

This matter is referred particularly to Branch Societies. The Executive Secretary will be pleased to do anything possible to assist in this matter.

Health and Welfare Contract

One hundred and forty thousand non-operating railway employees of the C.N.R., C.P.R. and certain other railways are now covered through Trans-Canada Medical Plans. This represents about 350,000 persons receiving benefits. Maritime Medical Care Incorporated is providing the prepaid medical care in Nova Scotia and the Maritime Hospital Association is providing hospitalization in the four Atlantic Provinces. The plan is effective January 1, 1957.

This is probably the largest single contract yet negotiated in Canada, and there is little doubt that it forecasts a trend that nation wide organizations will have similar interests.

Maritime Medical Care Incorporated has issued a statement to physicians dated December 22, 1956 which serves to explain its position in the plan.

Post-Graduate Education

A recent communication from the Chairman of the Post-Graduate Committee states that physicians visiting Halifax who wish to have information or make arrangements relative to visiting hospitals should telephone the Post-Graduate Committee office, Tel. 3-8700, or the Chairman, Doctor L. C. Steeves, Tel. 3-7984, as soon after arrival as possible so that individual "tailored" arrangements can be made. It would, of course, be preferable to write in advance to the Post-Graduate office. The address is Room No. 204, Dalhousie Public Health Clinic.

Locum-Tenens, etc.

It is not too early for physicians to think of plans for the year which might include vacation time, or time out for post-graduate work, etc. The Society is desirous of assisting to provide a "relief" for those physicians who may wish it. If early notification is sent to the Secretary expressing the desire to have a locum tenens he will give such assistance as is possible. The Secretary intends to have contact with the members of the graduating class.

The Secretary receives a surprising number of inquiries concerning practices in Nova Scotia.

Annual Meeting — 1957

It is not too early to draw to your attention that the annual meeting will be held in Digby at the Pines Hotel on Thursday, Friday and Saturday, August 29, 30 and 31 The facilities of the Hotel will be available Sunday, September 1st. The Executive Committee will hold its sessions on Wednesday, August 28, with the hope that it will complete its business so as to be available for the general meeting starting Thursday. The programme, etc. will be published in a later issue, but please make note of these dates now, your attendance will mean a successful meeting and your pleasure associated with a stay at The Pines.

Brief from The Medical Society of Nova Scotia to the Planning Committee of the Government of Nova Scotia on Hospital Insurance.

This Brief is published elsewhere in this issue. It is an important document and represents a tremendous amount of work on the part of that committee under the Chairmanship of Doctor D. M. Macrae. The Brief presents The Society's thoughts on this matter and represents the result of discussions with the groups specifically concerned. The Brief was approved by the Executive Committee and The Society at its annual meeting 1956. It is printed in its final form with the recommendation that it be studied by individual members and Branch Societies.

Senior Membership

Notification from The Canadian Medical Association has been received having to do with nominations for Senior Membership. The Constitution is quoted as follows:

"Chapter VI — Section 1 (c) — Senior Members

"Any member of The Association in good standing for the immediate preceding ten-year period who has attained the age of seventy years is eligible to be nominated for senior membership by an ordinary member of The Association. He shall be approved by the Executive of the Division in which he practised, but he may be elected only by the unanimous approval of the members of the Executive Committee in session present and voting. Not more than eleven such senior members may be elected in any one year. Senior members shall enjoy all the rights and privileges of The Association but shall not be required to pay any annual fee."

Nominations for Senior Membership in The Canadian Medical Association must be submitted to the Executive Committee of The Canadian Medical Association in time for its meeting on February 22nd, 1957, i.e. not later than February 15th.

It will be noted that any nominations must be approved by the Executive Committee of the Division. Your Secretary will appreciate notifications of such nominations, if any, at an early date.

College of General Practice

The first National Annual Scientific Convention of the College of General Practice is to be held at the Sheraton Mt. Royal Hotel, Montreal, March 4, 5 and 6, 1957. The programme appears elsewhere in this issue and your attention is directed to it. Please note that all general practitioners are welcome whether or not they are members of the College.

Harvey Tercentary Congress

Notification of and the programme for this important Congress has been received. The Congress will be held at the Royal College of Surgeons, London, England. The occasion for the Congress is the Tercentary of the death of William Harvey, who discovered the circulation of the blood. The main theme will be "A Review of the Present Knowledge of the Circulation." Your Secretary will provide the details of the programme to those interested. The dates are June 3rd-June 7th, 1957.

Post-Graduate Activities

During the year July 1, 1955 to June 30, 1956, the Dalhousie Post-Graduate Committee sponsored, in co-operation with various Branch Medical Societies in Nova Scotia, thirty-eight lectures by thirty-four Faculty Members. These lectures, presented in series of four to six full evenings, once every week or two, have had an average attendance of twenty-three per lecture. One Branch Society has had an average attendance of approximately 85 per cent of their membership.

C.J.W.B.

CORRECTION

The Canadian Medical Association meets in Halifax June 15th-19th 1958. A recent announcement in Press and on Radio stated that this meeting was to be in 1957. This was an error.

Society Meetings

ANTIGONISH-GUYSBOROUGH MEDICAL SOCIETY

The annual meeting of the Antigonish-Guysborough Branch of The Medical Society of Nova Scotia was held at St. Martha's Hospital on November 11th, 1956, at 3.30 p.m. with Doctors R. C. Griffin, O. C. MacIntosh, J. A. MacCormick, S. B. Donigiewicz. J. J. Carroll, T. B. Murphy, R. Sers, T. W. Gorman and C. N. MacIntosh in attendance.

The minutes of the previous meeting were read and adopted. Following the disposal of several items of correspondence, the report of the Treasurer was submitted and accepted.

A motion was passed establishing the yearly Society dues at two dollars with an additional levy for this year of three dollars to cover outstanding accounts. It was also decided that the annual meeting of this Society would be held on the first Sunday of each June and a request was made that the Secretary of The Medical Society of Nova Scotia be notified of the decision, so that, if possible, an agenda for the annual meeting of The Medical Society of Nova Scotia might be in the hands of our representative on the Executive for discussion at that time.

The following officers were elected:

President—Doctor Rolf Sers, Goldborough.

Vice-President—Doctor R. C. Griffin, Antigonish.

Secretary-Treasurer—Doctor C. N. MacIntosh, Antigonish.

Representative on Executive of The Medical Society of Nova Scotia—Doctor J. A. MacCormick, Antigonish; alternate, Doctor C. N. MacIntosh.

Executive—Doctor T. W. Gorman, Antigonish; Doctor G. L. Silver, Sherbrooke; Doctor S. B. Donigiewicz, Antigonish.

It was the unanimous decision of the meeting that Doctors John Waters, W. Guzlziol and D. N. Chisholm be elected honorary members of this Society.

Following the business meeting, dinner was served through the kindness of the Sisters of St. Martha's Hospital. The meeting then moved a vote of thanks to the Sisters for a most enjoyable meal.

Meeting adjourned.

CARMEN N. MACINTOSH, M.D., Secretary.

WESTERN NOVA SCOTIA MEDICAL SOCIETY

The Grand Hotel was host to twenty-six members of the Western Nova Scotia Medical Society for a dinner meeting, Thursday, December 6th, under the chairmanship of Doctor B. J. D'Eon of Yarmouth. Following an excellent meal served in the Private Dining Room where the speaker for the evening, Doctor C. J. W. Beckwith, Executive Secretary of The Medical Society of Nova Scotia, was introduced by Doctor D'Eon. Doctor Beckwith devoted his talk to economic problems affecting the medical profession, and provoked an interesting discussion.

Doctors Williamson and Morton spoke feelingly on the chair left vacant by the untimely passing of Doctor G. Victor Burton and the meeting observed the customary moment of silence in sorrowful tribute.

Doctor Beckwith left many pertinent suggestions for improvement in Society matters and we hope to become more active under his expert guidance.

D. F. Macdonald, M.D., Secretary.

Obituary

Dr. George Victor Burton, age 55, passed away in the Yarmouth Hospital on Thursday, November 29. He had been ill but a few days, and had suffered an attack of coronary thrombosis at his summer home at Eel Brook.

He was born in Yarmouth in 1901, and was a graduate of the Acadia University and the Harvard University Medical School. He had spent almost his entire professional life in Yarmouth as a general practitioner and surgeon. In his college days he was a star athlete, being prominent in foot-ball and in base-ball. For many years he was a member of theYarmouth Curling Club. Dr. Burton had always taken a keen interest in community affairs. A staunch Rotarian, he was a past-president of the Yarmouth club. He seldon missed its weekly meetings. He was a member of the Zion Baptist Church, and the Masonic order. As a hobby he loved the woods, being especially fond of fishing and hunting. A keen bird hunter, he had for many years hunted in the Eel Brook area where he had his summer home.

Dr. Burton is survived by his wife, the former Gretchen Gardiner; and two sons, Dr. George V. Burton, Jr., and Paul, of Yarmouth; and two daughters, Mrs. Paul R. Chagnon of Arlington, Virginia, and Diane, of Yarmouth.

AN APPRECIATION

An impressive tribute was paid to the memory of G. Victor Burton on Sunday, December 2nd, when Zion Church in Yarmouth was filled to overflowing by many friends and patients to pay their last respects. His colleagues acted as pallbearers.

Vic Burton was more than a good doctor. He gave of his time beyond the call of duty and was both family doctor and counseller to many in his home area, and for several years, President of the Yarmouth Hospital Medical Staff.

Born in Yarmouth, Vic was an outstanding student and athlete, a graduate of Acadia and Harvard Medical School. Following post-graduate training in Boston he returned to Yarmouth and quickly gained a large practice and excellent reputation as a physician and surgeon. He continued his interest in athletics in a less strenuous manner, serving several years as president of the Yarmouth Amateur Athletic Association. For relaxation he enjoyed hunting and fishing centering around a fine residence in the Eel Brook area to which only recently, after several years of preparation, he permanently settled. He was a staunch Rotarian, a Mason and a member of Zion Baptist Church and above all a specialist in friendship. Leaving us at the early age of fifty-five, his passing cast a gloom over the entire area. The Nova Scotia Medical Society extends its sincerest sympathy to Mrs. Burton and family, one of whom, Dr. George V. Burton, practises medicine and surgery in Yarmouth.

D. F. Macdonald.

In Memoriam – Miss Florence Fraser

The flag on the Dalhousie University grounds, if observed from day to day, should be evidence enough of the uncertainty of life. Often it is at half-mast, and we know that another associate and friend has died. This week the Angel of Death chose a shining mark when Miss Florence Fraser, Superintendent of the Dalhousie Public Health Clinic was called away from the uncertainty of this life to the surety of a state of eternal duration.

Miss Fraser had been in fairly good health and her sudden death on January 2nd, 1957, was an occasion for sadness. Many former patients, many nurses whom she had trained and many medical students and doctors who have been associated with her and have benefited by her wise counsel will share in the sadness.

Miss Fraser was born in Matapedia, Que., the daughter of the late Mr. and Mrs. James Ritchie Fraser. She came to Halifax in 1913 and in 1916 she was graduated in nursing from the training school of the Victoria General Hospital.

She was supervisor of the operating rooms at the Victoria General Hospital during the dark days of the Halifax Explosion in 1917. Her work at that time was beyond praise.

Later she joined the R.C.A.M.C. and was a nursing sister at Camp Hill Hospital until 1919. Aftr a period of private duty nursing, Miss Fraser was strongly recommended by the late W. W. Kenny for the position of staff nurse to the Dalhousie Public Health Clinic when it opened in 1924. The remainder of her life was spent in that institution, as staff nurse and during the past few years as the Superintendent of the Clinic. The good work that she did there is well known to the numerous nurses, medical students and doctors who have been her associates in the work carried on by the Clinic over so many years.

The writer, in more than twenty years of intimate association with the Dalhousie Clinic, may be in a position to assess the many noble qualities of the late Superintendent of that institution.

The three major characteristics of her personality were (1) an unusual degree of devotion to the welfare of the patients under her care, (2) Very strong political convictions in which she and I were at variance, and (3) A proud and loyal adherence to the noble traditions of her Highland ancestry and her membership in one of the premier clans of Scotland.

A typical day at the Clinic was not ended until every patient was looked after. If time allowed, a political discussion followed in which Miss Fraser was usually the victor; but all differences melted away when the next subject was discussed, that of our Highland ancestry. Our clans espoused the same cause and unsheathed their claymores side by side, for the right cause at the ill-fated but glorious engagement in 1746 on Culloden Moor. On that theme we were friends once more.

Miss Fraser has had a fine career and she has given her whole life to the betterment of humanity. She has lived up to, and exemplified her belief in this tenet of the faith of her fathers'—

"And what doth the Lord require of thee
but to do justly, and to love mercy and
to walk humbly with thy God."

Jan. 5/57. J. W. MacINTOSH

The Bulletin extends sympathy to Doctor R. H. Stoddard of Halifax on the death of his wife, Effie Jean, on December 19th, 1956, a former nursing sister, who served overseas with the Canadian army in World War One.