

The NOVA SCOTIA MEDICAL BULLETIN

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EDITORIAL

THE PRICE OF FREEDOM

Living today in the socialized democracy which we recognize as Canada, any discussion of freedom must be relative. Absolute freedom, and that perhaps more in a philosophic sense, is only given to the true believer and servant of God "whose service is perfect freedom" as the prayer book so beautifully states it.

Certainly the lot of the physician in the future, whatever shape or form medical services may take, is unlikely to approach this ideal. Nevertheless, we must all strive to obtain what we feel to be the best for the community we serve and at the same time seek to uphold the freedom of our profession.

If we accept the fact that some form of comprehensive medical service available to all is desirable, and this would seem to be both the wish of the majority of Canadians, if the results of the recent Saskatchewan election can be taken as a pointer, and also the official view of the Canadian Medical Association, then surely this is the time, and urgently, that the medical profession in Nova Scotia should be making plans to meet this challenge.

Glancing back at the recent Annual Meeting of The Medical Society of Nova Scotia (1960) at White Point Beach, envisaging the frenzied activity on the golf course, the highly successful beach party and well-attended banquet and other social functions, one cannot but be a little disturbed that out of a total membership of nearly six hundred doctors a mere handful of thirty or forty at the most saw fit to attend any of the vitally important business sessions of the Society.

The Medical Society of Nova Scotia is the voice of the profession in this province. Is the active, intelligent and considered interest of each and every member of the profession in Nova Scotia too high a price to ask in order that our chosen representatives may be well equipped and prepared to present to those interested, including government, a plan for insured medical services which has the full and united support of us all and which has the strength to with-hold pressures which may seek to enslave us?

The cynic may say, "But what's the use?", the fool like the ostrich may bury his head in the sand and ignore the many warnings of the shape of things to come. The lazy man may "leave it to George."

It is our belief that given the whole-hearted support of their profession, The Medical Society of Nova Scotia can succeed in retaining in this province a large measure of the traditional ideals and freedoms of practice within the framework of a comprehensive medical service available to all who wish to participate.

H. C. Still

THE MEDICAL SOCIETY OF NOVA SCOTIA

NOVA SCOTIA DIVISION
OF

THE CANADIAN MEDICAL ASSOCIATION

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CUMBERLAND - - - - -	D. R. Davies
HALIFAX - - - - -	D. M. MacRae, J. W. Merritt & J. F. Barton
LUNENBURG-QUEENS - - - - -	S. B. Bird
PICOU COUNTY - - - - -	M. F. Fitzgerald
VALLEY - - - - -	D. MacD. Archibald
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NOVA SCOTIA ASSOCIATION OF PATHOLOGISTS - - - - -	J. H. Cooper

Transactions

4TH REGULAR MEETING EXECUTIVE COMMITTEE

MAY 9TH, 1960

LORD NELSON HOTEL, HALIFAX

The following members were present:—

PRESIDENT	-	-	-	-	-	-	-	-	-	-	W. A. Hewat, M.D.
PRESIDENT-ELECT:	-	-	-	-	-	-	-	-	-	-	F. J. Granville, M.D.
CHAIRMAN, EXECUTIVE:	-	-	-	-	-	-	-	-	-	-	D. I. Rice, M.D.
HON. TREASURER:	-	-	-	-	-	-	-	-	-	-	A. W. Titus, M.D.
EDITOR, BULLETIN:	-	-	-	-	-	-	-	-	-	-	S. J. Shane, M.D.
EXECUTIVE SECRETARY:	-	-	-	-	-	-	-	-	-	-	C. J. W. Beckwith, M.D.

Representatives from Branch Societies:

ANTIGONISH-GUYSBOROUGH	-	-	-	-	-	-	-	-	-	-	T. W. Gorman, M.D.
CAPE BRETON	-	-	-	-	-	-	-	-	-	-	H. F. Sutherland, M.D.
COLCHESTER-EAST HANTS	-	-	-	-	-	-	-	-	-	-	S. G. MacKenzie, M.D.
CUMBERLAND	-	-	-	-	-	-	-	-	-	-	D. R. Davies, M.D.
HALIFAX	-	-	-	-	-	-	-	-	-	-	D. M. MacRae—A. M. Marshall—J. W. Merritt
LUNENBURG-QUEENS	-	-	-	-	-	-	-	-	-	-	S. B. Bird, M.D.
PICTOU COUNTY	-	-	-	-	-	-	-	-	-	-	M. F. Fitzgerald, M.D.
VALLEY	-	-	-	-	-	-	-	-	-	-	D. MacD. Archibald, M.D.
WESTERN COUNTIES	-	-	-	-	-	-	-	-	-	-	C. K. Fuller, M.D.

Observers

Dr. R. A. Dunsworth, M.D. Chairman for the Committee on Public Relations

Dr. A. L. Sutherland, M.D. Chairman for the Committee on Medical Economics.

The morning session convened at 9.40 a.m. and recessed for lunch at 1 p.m. The afternoon session convened at 2 p.m. and adjourned at 7.20 p.m.

The Chairman welcomed the members to the Fourth Executive Meeting of the current year and in particular Dr. C. K. Fuller of the Western Counties Medical Society. The Chairman stated that Dr. Fuller is the nominee from the Western Counties to the Executive for 1960-61; he added that the time of taking office is not yet clear to all Branch Societies. In explanation he remarked that the present Executive, i.e. for 1959-60 does not retire until after the election of Officers and Executive representatives at the Annual Meeting, after which the new Executive Committee for 1960-61 is convened.

The Chairman reviewed the Agenda. He recommended that time be designated during this meeting to discuss the responsibility of the Executive in handling the business of the Society and to review the whole subject of branch representatives' responsibilities. The Chairman remarked that there was no report from the Health Insurance Committee re modification of the plan for remuneration of Radiologists, but that correspondence and discussion was resulting in clarification of certain points and that the Health Insurance Committee is awaiting a request from the N.S.A.R. for a meeting on the subject.

Minutes of the Previous Meeting

It was moved by Dr. Archibald and seconded by Dr. Titus that these be adopted as printed carried.

Business Arising from the Minutes

Office Space. The Secretary reported that discussions with the Dean of Medicine had resulted in assurance that office space will continue to be available in the Dalhousie Public Health Clinic. The Secretary also reported a change in office personnel.

Group Disability Insurance. Dr. J. W. Merritt, Chairman of this Special Committee reported that enquiries were continuing but no specific recommendations could be placed before the Executive Committee. Debate resulted in the following resolution:—

"That we defer any decision until information and proposals can be obtained and studied."

Carried.

Items from Agenda February 1st, 1960**Letter from Vice-President of the Nova Scotia Veterinarian Association**

The principle outlined in the letter was endorsed and that Association is to be so notified.

Letter from Institute of Pastoral Training

This letter requested the co-operation of the Medical Society of Nova Scotia in furthering the objectives of the Institute to improve the appreciation of evidence of clinical illness by clergymen in discharge of their pastoral duties.

Discussion resulted in the following resolution:—

“That The Medical Society of Nova Scotia endorse the proposition of the Institute of Pastoral Training that members of the clergy work in close co-operation with the medical profession in those fields of endeavour where their aims are closely allied.”

Carried.

Revision of C.M.A. policy on Health Insurance

It was agreed that as information continues to be gathered on this matter, discussion would be postponed to the next Executive Committee Meeting.

Responsibilities of the Representative to the Executive Committee and the Executive Committee

The subject was introduced by the Chairman who stated that this discussion had been prompted by remarks of some of the members, a formal discussion at the Valley Medical Society, a special meeting called by the Cumberland Branch Society and the action of the N.S.A.R. in by-passing the Executive Committee and going directly to Branch Societies. He outlined the composition of the Executive Committee prior to the adoption of the present by-laws in 1955 and stated the authority vested in the Executive Committee by the by-laws; in effect that the Executive Committee has authority to conduct the business of the Society between Annual Meetings.

The Chairman gave as his view that each representative has the responsibility (a) to present to the Executive the views and opinions of a Branch Society on any subject and (b) to keep the membership of the Branch Society informed of the business transacted by the Executive Committee. When debate on any subject results in the presentation of a resolution, he believed that representatives should be free to vote as each sees fit on the basis of all information available which would include the views of the Branch Society as well as additional information provided to that session of the Executive. He believed it is not desirable nor practical for any representative to be bound by a directive from his Branch Society and that, for the proper functioning of the Executive, it is necessary to have clarification of the principles involved.

The Chairman remarked that, following the Executive Meeting of February 1st, 1960, when the recommendations of the Health Insurance Committee had been approved, the N.S.A.R. had forwarded to Branch Societies communications which should properly have been presented to the Executive Committee. The reason had been misinterpretation of the action of the Executive, which had adopted the report of the Health Insurance Committee, which included the principle of remuneration on the basis of fee-for-service.

The actual recommendations approved were as follows:—

1. “That the principles and concepts relating to remuneration of physicians providing insured services, as previously enunciated and approved by the Society and as contained in this report, be re-affirmed.
2. That the Health Insurance Committee should not be responsible for proposing or preparing specific plans for the remuneration of any group of the medical profession, but only for considering whether the plans or proposals of various specialty groups fit into the general pattern or concepts enunciated by The Medical Society of Nova Scotia and The Canadian Medical Association and thus protect the future of the profession as a whole.

3. That the plan proposed by the N.S.A.R. in its brief should not be supported by The Medical Society because it does not adhere to these concepts.
4. That any optional plan which may be presented by the N.S.A.R. and which does incorporate these principles and concepts be supported by the Medical Society.
5. That the Medical Society recognize the right of any individual radiologist or group to negotiate remuneration according to plans other than that approved by The Medical Society on the distinct understanding that if such a plan does not incorporate the principles and concepts of the Medical Society, no support or help in such negotiations would be provided by the Society."

The adoption of this report had been interpreted by the N.S.A.R. as rejection of the principle of "fee-for-service" by the Executive Committee and the N.S.A.R. had then proceeded to circulate Branch Societies with a memorandum looking for Branch Society support to force the issue, presumably through Branch directions to Executive representatives. This could be interpreted as an act of non-confidence in the Executive Committee on the part of the N.S.A.R.

The opinion of the Executive had been that the proposals for remuneration submitted by the N.S.A.R. were not acceptable to medicine as outlined in the brief of October, 1959, and further that if acceptable proposals were forthcoming, such would have the backing of The Medical Society of Nova Scotia. The Chairman expressed the belief that such acceptable proposals based on "straight fee-for-service" might be expected.

It had been this specific matter which had led to the present examination of the function of the Executive Committee and the representatives.

The subject was then opened for discussion with the majority expressing personal views and some the views of their Branch Societies. The consensus of opinion supported the views of the Chairman. No vote was taken.

Examination of the subject did disclose that it would be desirable to have Branch Society meetings scheduled so that the representatives could review, with the membership, the agenda for the Executive Meetings, or at least to review it with the Branch Executive. The following resolution was carried:—

"That this Executive recommends that meetings of the Branch Societies be held previous to the meetings of the Executive, in order that problems affecting the profession be discussed and the representative to the Executive be instructed as to the opinions held by member of their Branch Societies."

The Executive Secretary remarked that several difficulties would have to be overcome to implement this resolution.

It was agreed that future meetings of the Executive Committee would be held on Saturdays.

Reports of Committees

Committee on By-Laws: Chairman Dr. H. J. Devereux

Dr. Rice stated that Dr. Devereux had telephoned this morning to say he was unable to attend; the report would therefore be presented to the next meeting.

Committee on Legislation and Ethics

The report was regularly moved and seconded for adoption and discussed. The report was chiefly informative. A communication from the Chairman of the C.M.A. Committee on Ethics to Dr. Smith as Divisional Chairman was discussed in detail viz:—

That at the next printing of the Code of Ethics (C.M.A.) the second sentence of para. 6 of the section dealing with "fees and commissions" be deleted in its entirety and be replaced by the following:—

"It is highly desirable for a physician to adhere strictly to the practice of his profession, disassociating himself entirely from the dispensing of all commodities relating to the practice of medicine and the profits derived therefrom. In places

where those with special training or qualifications are not available dispensing of such commodities may be undertaken."

Dr. Smith explained the background stating that his Committee approved the statement and that he wished to have the approval of the Executive. A communication from a Cape Breton member of his Committee was read.

The Executive approved the report with an added resolution as follows:—

"That the Committee on Ethics of Canadian Medical Association be made aware of the feelings of The Medical Society of Nova Scotia with regard to contract practice, necessary dispensing of commodities, drugs etc."

Carried.

Committee on Annual Meeting, 1960

Dr. Hewat reported that Dr. L. MacLeod is Chairman of the Housing Committee, Chairman of Entertainment is Dr. John Wickwire and the Chairman of the Programme Committee is Dr. J. Fraser. Dr. Hewat emphasized that the deadline for applications for housing is May 15th. He then gave an outline of the meetings to be held, panel discussions, luncheon speakers and entertainment.

Committee on Annual Meeting, 1961

Dr. Granville, President-Elect, outlined the information obtained by the Secretary. After discussion the following motion was carried:—

"That the 1961 Nova Scotia Medical Society meeting be at Keltic Lodge during the week of 11th June, 1961."

After further discussion re Annual Meetings it was regularly moved and seconded

"That our Special Committee on Annual Meetings prepare a schedule of Annual Meetings for the next ten years based on the schedule of the C.M.A. and available accommodations for approval at the next Executive Meeting."

Carried.

Committee on Public Relations Dr. F. A. Dunsworth

This report emphasized the importance of a Mediation Committee for each Branch Society.

A suggestion was made that consideration be given to the appointment of a part-time Public Relations Officer. Discussion resulted in the following resolution:—

"That the Public Relations Committee bring in a report and suggested plan of public relations for The Nova Scotia Medical Society."

Carried.

Committee on Medical Economics Dr. A. L. Sutherland

The recommendation was adopted that the Society accept the amount of \$1.30 per recipient per month to provide medical services to the "Welfare Group" from April 1st, 1960 to March 31st, 1961 under the agreement with the Department of Public Welfare.

Report of Representative to C.M.A. Executive—Dr. R. O. Jones

Dr. Jones being absent, the Secretary stated that the reports covering C.M.A. Executive meeting of April 22nd and 23rd, 1960 is included in the Agenda for this meeting and that the report covering the meeting of February 26th and 27th had been distributed in March—on motion both reports were adopted.

Correspondence

1. A communication from C.M.A. re Canadian Disease and Therapeutic Index was for information and tabled.

2. A communication from Dr. S. B. Bird, representative to the Executive from Lunenburg-Queens had been dealt with under discussion of functions of the Executive when it had been agreed to have the Executive Committee meetings on Saturday.

3. A communication from the Editor of The Canadian Medical Association Journal. This was a request to review the matter of Divisional Correspondents to the C.M.A.J. The C.M.A.J. believes that liaison can be improved. The following resolution was carried—

“That the appointment of a divisional correspondent for the C.M.A.J. be the responsibility of the Editor of The Nova Scotia Medical Society Bulletin.”

4. In response to a letter from the General Secretary, C.M.A., Dr. R. O. Jones was nominated as Divisional representative to C.M.A. Executive for 1960-61 and Dr. W. A. Hewat as alternate. These nominations are subject to election at the Annual Meeting.

5. A communication from C.M.A. Committee on Organization proposed zoning Canada for the purpose of receiving nominations for President-Elect of the C.M.A. The zones suggested are—

- (a) Newfoundland, Prince Edward Island, Nova Scotia and New Brunswick
- (b) Quebec
- (c) Ontario
- (d) Manitoba, Saskatchewan, Alberta and British Columbia

Since it was requested that we “undertake the necessary consultation with your neighbours” and advise the General Secretary, the communication was tabled for further reference. There was no objection to the proposal.

New Business

Resolutions from Branch Societies

1. Valley Medical Society—the following resolution which had been passed in August, 1956 was re-affirmed at a meeting on April 20th, 1960 and received May 5th, 1960.

“That this Branch Society recommend to the Executive of The Medical Society of Nova Scotia that a change in the voting procedure in The Medical Society of Nova Scotia be made to allow the vote of the delegate of each Branch Society to be equal to and counted as ten (10) votes, and that the vote of each individual member present be counted as one (a) vote.”

It was regularly moved and seconded that this resolution be forwarded to the Committee on By-Laws

2. Resolution from Halifax Medical Society Meeting of March 23rd, 1960

“That The Medical Society of Nova Scotia be advised to seek information from the Department of National Revenue regarding their interpretation of their proposed scheme of remuneration for Radiologists.”

Following discussion the following resolution was passed:—

“That this resolution from The Halifax Medical Society be recognized and that it be indicated to them that the information is being procured but not necessarily directly from the Department of National Revenue.”

3. Resolution from Halifax Medical Society Meeting of March 23rd, 1960.

“That The Halifax Medical Society go on record again expressing their whole-hearted support of the N.S.A.R. in their continued efforts to obtain payment on a “fee-for-service” basis.”

It was regularly moved, seconded and carried that this resolution be "accepted."
 4. Consideration of a resolution from a meeting of the Board of Directors, M.M.C. Inc., on April 27th, 1960 was deferred in the light of subsequent correspondence.

Other Business

Recommendations of Health Insurance Committee re Psychiatrists

The Nova Scotia Division of the Canadian Psychiatric Association requested a meeting of representatives with the Health Insurance Committee which took place on April 1st, 1960. Resulting from that meeting the Health Insurance Committee submitted the following recommendations to the Executive which were approved.

(a) That The Canadian Medical Association be asked for information concerning incomes of Canadian physicians by region and by type of practice, and in particular that information on salaried physicians be obtained.

(b) That the Executive be asked to set up a committee to study the problems of the remuneration of psychiatrists and to co-operate insofar as possible with the Nova Scotia Division of the Canadian Psychiatric Association. This committee might be the present committee on salaried physicians or such other body as the Executive may decide.

(c) That the Health Insurance Committee considers this a matter of urgent importance and offers the services of our Committee to assist in any way that may be possible in the work of the Executive or of the committee to which the Executive allocates this problem.

Representatives to C.M.A. General Council, 1960

The Secretary reported that the following would be attending General Council as Divisional Representatives:

Dr. W. A. Hewat, President of N. S. Division, Lunenburg

Dr. H. R. Corbett, Sydney

Dr. D. MacD. Archibald, Kingston

Dr. D. F. MacDonald, Yarmouth

Dr. W. A. Cochrane, Halifax

Dr. F. A. Dunsworth, Halifax

Dr. F. Murray Fraser, Halifax

Dr. C. B. Stewart, Halifax

Dr. C. J. W. Beckwith, Halifax

Dr. R. O. Jones, Representative to C.M.A. Executive will also be present.

The difficulties of having a meeting of all representatives to examine the "Reports to General Council" prior to leaving for Banff were outlined. The "Reports" were not expected to arrive prior to May 25th and some members were leaving as early as June 6th; a further report on what transpired will be made.

Senior Membership in The Medical Society of Nova Scotia

The Secretary reported that response had been poor to the request directed to Branch Societies for nominations to Senior Membership. It was agreed that the responsibility for such nominations is that of the Branch Societies.

Re Interpretation of E.K.G.'s

The Chairman reported that this subject continues to have the attention of the Health Insurance Committee.

The date for the 5th Regular Meeting was set for June 25th at White Point Beach.

On motion the meeting adjourned at 7.20 p.m.

CURRENT CONCEPTS IN BONE METABOLISM*

J. E. BETHUNE, M.D.**

Halifax, N. S.

The past decade has been witness to fundamental advances in the basic concepts of bone chemistry, physiology and disease. The purpose of this discussion is to review these changes in the light of previous theory and to summarize briefly newer aspects of the metabolic diseases of bone.

Bone is composed of four basic elements: mineral, collagen, matrix and water. For many years the inconstant calcium-to-phosphorus ratio (Ca/P) found in bone (1.3 - 2.0) was difficult to reconcile with any concept other than that more than one crystal was present in the mineral phase of bone. It is now clear however that one crystal, hydroxyapatite, does have this peculiar property of a varying Ca/P ratio and because of its very small size it exists as a colloidal particle of varying dimensions.⁽¹⁾ Because of this, the surface area is disproportionately large; one gram of this crystal having a surface area of 100 square yards. In a normal 150 pound male this would represent a total bone crystal surface area of 100 acres. The residual surface charge of the calcium, phosphate and hydroxyl ions of the hydroxyapatite molecules within the crystal binds a layer of hydrated calcium, phosphate and water to the crystal surface and this bound hydration-layer in turn loosely binds a layer of water which is in intimate contact with the extracellular fluid of the body. Each crystal volume binds about two volumes of water in these layers. There is thus a large area of fluid and crystal surface in bone with which ions of the extracellular fluid can equilibrate. Cation and anion penetration of the crystal water layers, crystal surface and crystal interior is dependent on the ion involved and on its extracellular concentration. These facts are shown in Table I. Note that the heavy metals, which are released in large amounts from nuclear explosions penetrate to the depths of the crystal where, as the crystal ages, they become more firmly bound and become sources of prolonged internal radiation. Fluoride also has this peculiar ability to penetrate the crystal lattice of hydroxyapatite, either by displacing a calcium phosphate or hydroxyl ion in the structure or by filling a space left vacant in the lattice (as frequently occurs in young crystals) and leads to greater stability of the crystal. This enhances the hardness of tooth enamel if the correct proportion of fluoride is present, fluoride in excess can disrupt the molecule and lead to mottled enamel. Those ions in the outer layers of the bound hydration shell such as potassium and chloride are much less strongly bound and are freely exchangeable with the extracellular fluid. If the extracellular concentration of a particular ion such as sodium, potassium or chloride increases, more is absorbed into the crystal layers, or contrariwise, if the extracellular concentration falls, ions are released from bone to establish equilibrium. In a purely passive fashion bone acts as a buffer to prevent inordinate changes in electrolyte equilibrium protecting the body against sudden drains or excesses of electrolytes.

*Presented at the first Clinical Meeting of the Society of Internal Medicine of Nova Scotia, Kentville, N. S., March 4, 1960.

**Assistant Professor, Faculty of Medicine, Dalhousie University.

The hydroxyapatite crystal is arranged in and around bone collagen fibrils and is in turn surrounded by matrix in such a fashion as to resemble a structure of bricks and mortar. Electron microscopic studies have shown the collagen molecule to resemble a bamboo rod with nodes and short internodal spaces. The collagen has the ability to form a template which can act as a "seed" for the precipitation of the hydroxyapatite crystal on the collagen fibril, particularly at the internodal areas.⁽²⁾ The mechanism of this precipitation is poorly understood. The collagen fibril, strengthened by the arrangement of crystal and matrix, is aligned in a spiral fashion in the classic Haversian canal system. Since the water content of this material falls from 60% when young to 10% with increasing age, the buffer effect of the bone is partially maintained even in old age by the continuous removal and replacement of some old canals by younger Haversian systems.

Of fundamental importance to an understanding of bone formation is the fact that serum and extracellular fluid calcium and phosphorus are in a state of supersaturation with respect to the crystal of bone. This means that the body is engaged in a constant struggle to prevent blood mineral from precipitating into bone. Thus, in contrast to earlier views a mechanism is required to remove calcium and phosphorus *from bone* rather than to precipitate these minerals *onto bone*. Citrate, which as shown in Table I penetrates to the crystal surface, is postulated by several investigators to be this calcium carrier.⁽¹⁾ By virtue of its ability to bind calcium and to lower pH it tends to dissolve calcium and phosphorus away from bone into extracellular fluid. Citrate also has the virtue of being rapidly metabolized by non-bony tissues and it does not accumulate after its period of usefulness to bone is over. It is postulated that citrate is produced near the crystal surface and is made available from the metabolism of glucose by a mechanism that inhabits coenzyme 11. This would divert the glycolytic and Krebs cycles to the production of citrate in bone but inexplicably not in other tissues. A substance that would inhibit this enzyme would thus increase the bone surface concentration of citrate and lead to increased resorption of bone. This substance is probably parathyroid hormone (PTH).

It has long been held that the main action of PTH was mediated via the inhibition of renal tubular phosphate reabsorption.⁽³⁾ This action lowered blood phosphorus and led to a reciprocal rise in serum calcium by simple dissolution from bone to blood. Present theory holds that PTH through its effect on citrate production acts principally, if not entirely, on bone. Several investigations have failed to demonstrate a consistent effect on the renal tubule but for theoretical reasons alone it must have at least a minor phosphaturic action on the kidney. It has no known action on the gut. An impediment to the resolution of this problem is the continued inability of research workers to produce a pure parathyroid hormone. Some evidence would suggest the presence of two hormones, each exhibiting different effects: one on bone, the other on kidney. The purest material available seems to be homogenous and to have a molecular weight between 6000 and 8000.⁽⁴⁾ It is very probable that PTH is only one substance.

It has been long known that vitamin D is intimately concerned in the proper formation of bone. Despite this, a remarkable lack of agreement on even its grossest effects is apparent in the medical literature. Although there is general agreement that it enhances the absorption of calcium across the wall of the upper small intestine, it is not certain whether it has a direct

effect on bone in physiological concentrations. It may be that it enhances bone formation merely by maintaining serum calcium levels by gut absorption though this seems unlikely. In high concentration vitamin D promotes bone dissolution by direct action on bone. It is likely that vitamin D promotes proper bone formation by a direct effect on bone through an influence on citrate metabolism. Thus a common point of action between vitamin D and PTH may exist. Both a phosphaturic and phosphate-retaining as well as a calcium diuretic effect of vitamin D on the kidney have been suggested but not confirmed.⁽³⁾ The supersaturated state of blood calcium and phosphorus requires an ion pump to maintain a concentration gradient across the intestinal wall. This pump is probably vitamin D and undoubtedly represents a major action of the vitamin.

It was first suggested by Robison in 1923 that alkaline phosphatase was produced by the osteoblast in growing bone.⁽⁵⁾ This enzyme split organic phosphate esters leading to a momentary increase in the concentration of phosphorus at the bone surface. The released phosphorus then united with calcium to form a precipitate of calcium phosphate in bone. It has been shown that serum calcium and phosphorus is always supersaturated with respect to bone and that crystal formation occurs by some unknown mechanism onto bone collagen fibrils. Robison's theory is no longer tenable. What then is the position of alkaline phosphatase in present theory? Its level in the serum remains a good clinical indicator of bone formation and it must be involved in the process at some stage. Neuman has suggested the most likely of several alternate actions for alkaline phosphatase is an action on bone matrix formation. The weight of experimental evidence supports his view but further data are necessary before the physiological action of alkaline phosphatase may be stated with certainty.⁽¹⁾

Calcium exists in blood plasma in the three states shown in figure 1. PTH controls only the ionized fraction. About a third of the mineral is bound to protein and is metabolically inert. In states of hyper- or hypo-albuminemia this fraction must be taken into account when considering a value for measured total serum calcium.

Although the past decade has seen a revolution in theories of bone metabolism it has not witnessed much change in established concepts of bone disease. However, several new diseases have been described and knowledge of several of the metabolic bone disorders has improved. The metabolic diseases of bone comprise four principal groups: hyper- and hypo-parathyroidism, osteomalacia, renal osteodystrophy and osteoporosis.

The principal problem in hyperparathyroidism is the establishment of the diagnosis in the borderline case. An abnormally elevated serum calcium is the most important feature and most often leads to the diagnosis. An awareness of the possibility of the disorder in obscure bone disease, intractable peptic ulcer and in every case of renal lithiasis, will uncover other cases with startling frequency. Over 5% of the first attacks of renal stone and up to 25% of recurrent stones have hyper-parathyroidism as their underlying cause. Unfortunately, the measurement of serum calcium is subject to great error and at least three normal (under 10.5 mg. percent) values should be obtained before hyperparathyroidism is dismissed as the cause of the stone or bone tumor. A consistently elevated serum calcium over 10.0 mg. percent in the presence of renal stones should be highly suspect and calls for further study of the serum phosphorus level and phosphate

clearance. The latter measurements, though of less value than serum calcium, are unlikely to be normal in the presence of hyperparathyroidism and may add confirmatory evidence to a borderline serum calcium value.⁽⁶⁾ The absence of the lamina dura around the roots of the teeth as shown by X-ray examination is a far less reliable indicator of hyperparathyroid bone disease than the presence of sub-periosteal erosions noted in the middle phalanges of the hands. X-rays of the hands should be done in all patients suspected of this disorder. The presence of sub-periosteal erosions is diagnostic. The measurement of the ionized fraction of the serum calcium may become practical in routine laboratories in the future and lead to a diagnosis in the presence of a normal total serum calcium. This would simplify the recognition of the borderline case.

Of interest has been the development of the concept of hypersensitivity to vitamin D and the description of a new rickets-like disease. It has long been known that a minority of patients with sarcoidosis have a high serum calcium. Because of its resemblance to hypervitaminosis D and its rapid correction by cortisone therapy it has been suggested that this aspect of sarcoidosis is due to an exaggerated response to a normal body content of vitamin D.⁽⁷⁾ This hypersensitivity mechanism has also been invoked to explain the signs and symptoms of idiopathic infantile hypercalcemia, a disease first described in 1952.⁽⁸⁾ It is characterized by a failure to thrive, anorexia, vomiting, constipation and hypotonia in the age group of 3 to 12 months. The serum calcium is 12-15 mg. percent, the phosphorus high normal or low, the urea nitrogen elevated and cholesterol high. In severe cases mental defectiveness and congenital abnormalities of the cardiovascular system are added features. It may be fatal but is more often self-limited. It has been seen more frequently in Great Britain than in North America and because the clinical features are similar to hypervitaminosis D, an increased sensitivity to this substance was postulated as the cause. At that time milk, distributed free to infants by governmental agencies, was fortified by the addition of vitamin D. This coupled with an almost complete absence of the disease in breast-fed babies suggested an abnormal sensitivity as well as a possible excessive vitamin D intake in the affected individuals. Indeed administration of a small dose of vitamin D to some of these children produced an inordinate rise in serum calcium and seemed to confirm the stated hypothesis. Since this early observation, however, the majority of patients so tested do not have an abnormal response. The etiology remains unproved.

Another disease, hypophosphatasia, has been more clearly described in the past few years.⁽⁹⁾ It is characterized by the bone changes of rickets of variable severity, a low or absent alkaline phosphatase in serum and tissue and the excretion of a pathognomonic substance, phosphoethanolamine in the urine. Although described principally in children, adult cases have been reported. The very low level of alkaline phosphatase in some cases with only minimal bone lesions emphasizes the minor role of alkaline phosphatase in bone formation.

The renal osteodystrophies have been separated into two groups: those due to tubular failure and those due to glomerular failure.⁽¹⁰⁾ The first group includes those with renal dwarfism and rickets caused by the inability of the tubules to reabsorb bicarbonate or excrete hydrogen ion, phosphate and amino acids. Such bone changes are seen in renal tubular acidosis, vita-

min D resistant or phosphate-losing rickets and the Fanconi syndrome. The bone lesion is usually rickets or occasionally secondary hyperparathyroidism. These disorders are not ordinarily associated with uremia.

The group due to renal glomerular failure and resultant uremia have been classically attributed to hyperparathyroidism secondary to the lowered blood calcium present in uremia. The bone disease may be vitamin D-resistant osteomalacia rather than osteitis fibrosa. A third lesion not uncommonly described is osteosclerosis. It is manifest by an increase in the density of bone in the pelvis and lumbar vertebral bodies. The significance and etiology of these three types of bone reaction is unknown but an occasional uremic patient with bone pain may be relieved by the cautious use of vitamin D therapy.

The last and commonest of these metabolic bone diseases is osteoporosis. Unfortunately little more is known about it now than was known one or even two decades ago. There seems to be a multiplicity of causes—many of them hormonal in nature—which apparently affect only matrix formation. Calcification is said to be normal. The severest forms of this disease are seen in Cushing's disease and in idiopathic osteoporosis. The former is the only type of generalized osteoporosis in which therapy has ever been shown to improve the density of bone by radiographic measurement. A new theory has recently been suggested to explain some of the causes of senile osteoporosis, and perhaps other types excluding those due to the post-menopausal state. It is known that a low calcium diet in dogs and kittens leads to osteoporosis and not to rickets. Detailed metabolic balance data accumulated by Malm in Sweden and Nordin in Glasgow have lead them to believe that a failure of the gut in the aged to adapt to a lower intake of calcium can lead to a prolonged negative balance of calcium which is expressed as osteoporosis and not, as might be expected, osteomalacia.⁽¹¹⁾ This theory lacks substantiation but it is at least an attempt to get out of the theroretic doldrums. Certainly, advances in the theory of the causation of osteoporosis will result in better treatment.

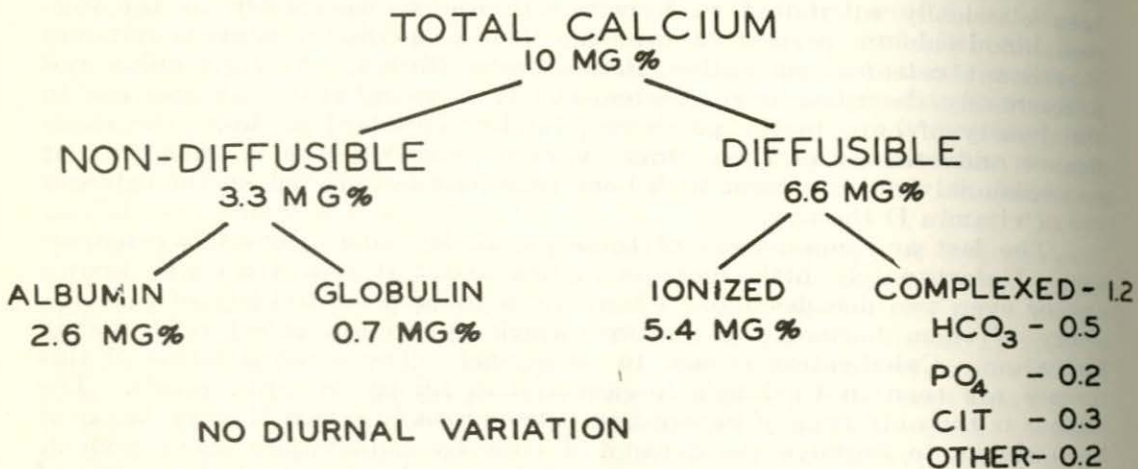
It can be appreciated that the rapid increase in the knowledge of bone physiology that has occurred in the past decade has outdistanced comparable advances in the knowledge of bone disease, particularly in the important therapeutic aspects of metabolic bone diseases. It is probable that the next decade will witness a closing of the gap between clinical ignorance and laboratory knowledge and that a study of these diseases, one of which affects 10% of the older population, will be much more than a mental exercise.

TABLE 1. THE PENETRATION OF LAYERS OF BONE CRYSTAL BY EXTRACELLULAR IONS

Layer	Loosely Bound Water	Bound Hydration Layer	Crystal Surface	Crystal Interior
Ion	All	Potassium Chloride	Sodium Phosphate Citrate	Radium* Strontium* Calcium* Lead Fluoride Phosphorus Hydroxyl

*radioactive isotopes

STATE OF CALCIUM IN PLASMA



QUESTIONS AND ANSWERS

1. DR. W. I. MORSE: Is the treatment of certain types of osteoporosis, such as that associated with disuse and scurvy, as hopeless as you suggest?
- ANSWER: In these two types it certainly is not hopeless but, by and large, there is little that can be done to improve the strength of osteoporotic bone.
2. DR. D. DENTON: I have recently seen a patient with severe osteoporosis and was very surprised to later learn that her sister has very severe Paget's disease. Is there any significance in this?
- ANSWER: To my knowledge, no connection between the two has been shown. They are both common diseases and a fortuitous association would not be unexpected.

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THE FAMILY DOCTOR LOOKS AT PUBLIC RELATIONS

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From time to time I see articles in the press and in magazines which suggest that a sour note has crept into the harmony usually present in the attitude of the general public toward the medical profession.

Unfortunately the doctor basically is a man or woman differentiated from his fellows chiefly by the discipline of an intense training in the field of human disease. If sometimes he tends to assume the qualities of divinity it is not because they are his by nature, but because the doctor is part of a profession which is still an art, and which occasionally tempts him to self-veneration. In any case the combination of circumstances inevitably makes him highly individualistic.

Before considering any differences which may be present between the profession and the public it might be well to look for evidence of the lack of harmony that exists in our own ranks. This I can do from only two points of view, if indeed I can do it at all. First as a doctor in a small community whose referrals are chiefly to specialists in larger urban centres, and secondly with regard to the relations within our own profession. Just as the definition of public relations is a difficult one so is the definition of a specialist. A generation ago men graduated and went directly into practice. When they found a particular branch of Medicine which held their interest and was within their abilities, they studied in that branch intensively; thus many became specialists and teachers of medicine after a background of general practice. Today no such background exists although the last C.M.A. Executive report by Dr. R. O. Jones indicates a move in this direction is being considered.

At present little concerted effort is made to determine what teaching and training is best suited to the student who will remain in the Maritime Provinces. Instead, the dictates of a group called the Royal College of Physicians and Surgeons of Canada are dutifully followed. The untried graduate does not have an opportunity to test his qualifications and interests before he is exposed to preparation in a limited field under specialist-teachers.

What has this to do with the subject under discussion? First, because he has little knowledge of practice in the home, the specialist usually returns the patient to a state of health adequate only to the more or less stable conditions of hospital environment. Secondly, he has a tendency to overlook the less serious conditions which nevertheless are very annoying to the patient. In the small community the conditions which are neither serious nor fatal frequently present the biggest headaches to the practicing physician. In part perhaps, this explains why the liaison between the referring doctor and the hospital group is not close enough. Much of the fault is attributed to those of us in small communities and rural districts. It is quite true that the referring doctor should provide the relevant points in the family and personal history of the patient together with his findings and treatment to date. Even though at times we feel that the information provided is either forgotten or ignored it should be supplied. A source of annoyance to the family physician is the situation created when his patient is discharged from the

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referral hospital and returned home without his (the physician's) knowledge. Too often (a week or more after the patient returns home— I hear an irate voice on the phone wanting to know why I haven't been in touch with him or I hear from one of the patient's neighbours or friends some interesting information about the patient's present condition of which I was not informed. It seems to me that this point could be covered very easily by having a card already printed to which only the name of the patient and the date of discharge need be added. A supply of these could be kept in the hospitals and the specialists offices, so that they could be immediately mailed. This would be a great help in providing better feeling between the referring doctor and the specialist or hospital.

I think that the professional relationship between the men practicing medicine in this area is good. I have asked the opinion of a number of citizens and they agree with this statement. We have adopted a plan whereby there will be two on call to attend the emergencies which may occur over weekends and holidays throughout the summer months. By calling the hospital, patients can find out who is on call and this information is published in the local press as well. Several of us whose families have grown up have our office telephones connected with the Hospital P.B.X., so that calls are automatically received there when no one is available to answer the office phone.

Let us now consider the patient. Generally speaking sickness either personal or within the family is the most continuous reason for close association between the physician and patient or patient's family. Sickness in itself is an undesirable attracting force because it engenders in the patient, and those about him, the emotion of fear. With fear, tension mounts usually in direct relation to the severity of the symptoms, the length of the illness, or the length of time before medical advice becomes available. To-day there is a greatly increased tendency for patients to move from one place to another in the course of their employment. They often give too little attention to the means whereby medical service may be obtained in a given locality. On the other hand too little attention may be paid by local physicians to this segment of practice, i.e., the provision of prompt emergency service. In the case of long illness the more frequent use of a consultant will go a long way to help relieve the fear and tension of those surrounding the patient and of the patient himself. To get to the patient as quickly as possible and to be as pleasant as possible when one arrives are difficult but desirable attributes.

It is evident that an effort should be made to educate the public, and particularly strangers to the community, with regard to the best method of obtaining prompt emergency service. This should be done through the most effective medium of publicity in any given community. One of the best of these would probably be in the telephone directory immediately under the list of pay-station outlets.

Having made suitable arrangements whereby the patients seeking aid can obtain it, other problems arise which may be a source of dissatisfaction. For one thing most patients want to know what is wrong with them and how long they will be laid up. In spite of the inherent difficulties, the doctor must explain to the patient as much as he can understand in the simplest possible English. This is true particularly in the case of the long, incurable but not necessarily fatal illnesses where a long-range plan is imperative. In

the case of illnesses which will probably be fatal I think the seriousness of the disease rather than its possible fatal outcome should be stressed. This gives the patient an opportunity to put his affairs in order while he is still mentally alert. I find that time is necessary for the doctor to assess the trend and for the patient to realize it. Then when it becomes necessary to say that recovery is too improbable to be expected the verdict is usually accepted with surprising fortitude.

Not all patients will be happy with the individual doctor's decisions and treatment. Sometimes their uneasiness can be detected and eliminated by a consultation but at other times (without giving warning) they will call in another doctor often to the embarrassment of all concerned. Part of the public's education should consist in being taught that there is an ethical and normal way to obtain a consultation. If mutual confidence and co-operation have deteriorated very seriously there is a recognized way of obtaining the services of another physician.

The cost of medical care seems high to many patients and it is worthwhile to point out that the charges are not made in a haphazard manner but are based on long and careful study by a committee. The basic charges have been tabulated and issued to each doctor in booklet form. In a small town the charge for various procedures is soon known and accounts based on the rate set are seldom questioned. One exception occurs with the patient who has sickness and accident insurance. Too often it has been implied by the insurer or his agent that the money received by the insured or sent directly to the doctor will cover the account in full. This of course is rarely the case and it has frequently been a source of disagreement between patient and doctor. Many accounts which could (and should) be paid drag on until they are also a source of embarrassment to both parties. For some reason patients seem to feel that they should wait until they can pay their account in full; despite the fact that they are buying many things on an installment plan and installments would be acceptable to their doctors. Many patients will ask to which drug store they should take their prescriptions. It seems that in the minds of many there is some financial or other tie-up between members of the medical and pharmaceutical groups. Because it is difficult to explain that no such agreement exists when the name of one or other druggist appears prominently on the slip given the patient, I have made it a practice to have my own pads printed.

Personally I have found that the majority of my patients are very co-operative. They have developed a tendency to respect my need for time-off at night, on holidays, and on Sundays (so that I can waste mine writing and yours reading such stuff as this). Nevertheless they cannot choose their time to be sick. If I am called to a patient at a time during which I had planned to do something else and add a sense of irritation to their tension it is certain that I am doing little to maintain the illusion that I had been sitting waiting for the patient's call, an illusion shared by many patients. In the small community a reasonable amount of freedom for recreation can be attained by the physician without neglecting the needs of the patients. This can be achieved in various ways. A formal agreement between members of the profession in the community to take calls on certain days which generally include Sundays and Holidays or informal agreements between physicians to take their calls on days they intend to be away and, when feasible, to have the telephone connected to the Hospital P.B.X.

There is another method which might be mentioned and it would be particularly useful in covering long absences. Physicians taking post-graduate training might be released to take over the practices of doctors who wish to take a post-graduate course which might last several months. The advantage to each is obvious. The roadblock is the Royal College which refuses to release a resident and credit him with the time so spent. This raises the question whether or not the Maritime Provinces and Nova Scotia in particular should not take steps to regain control of its medical system. Under the British North America act matters of health are the prerogative of the province, I can see no reason why we need be subservient to the Montreal-Toronto axis to the detriment of our provincial medical standards. Whichever method is chosen the patients are covered in event of emergency and this should be publicised.

CONCLUSION

A closer liaison between the referring doctor and the one to whom the patient is referred is desirable. The obvious reason why it is not closer is the added paper work. But many reports are filled with irrelevant information which could be reduced to a few lines. We are only interested in the data essential to the diagnosis, the treatment given, and the treatment to be given at home.

A more co-operative and better co-ordinated intra-professional relationship is the first step to improve public relations between the profession and the public.

Finally we are dealing with two groups of human beings. The fundamental characteristics of each individual in the group vary in intensity and variety. As a result complete harmony is impossible but sufficient harmony should obtain so that those who give and those who receive medical attention can, as groups, have mutual respect for one another.

EPIDEMIOLOGY OF GROUP-A B-HEMOLYTIC STREPTOCOCCI AS RELATED TO ACUTE RHEUMATIC FEVER IN FLORIDA. A Six-Year Study. Saslaw, M. S., and Jablin, J. M., *Circulation*. 21: 679, (May) 1960.

This study discloses that rheumatic fever and rheumatic heart disease are infrequent in Dade County, Florida.

However, in this area, B-hemolytic streptococci are recovered frequently, particularly from the throats of children 6 to 9 years old.

The juxtaposition of these two findings suggests that the relationship between group-A B-hemolytic streptococci, clinical illness, and rheumatic illness may be different in South Florida from elsewhere in the United States.

SYMPOSIUM ON OEDEMA*

PART I. INTRODUCTION AND GENERAL CONSIDERATIONS

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Though oedema as a clinical state has been recognized since the dawn of medicine, it is only relatively recently that the basic principles leading to oedema formation have been described (Starling 1895). However, it soon became clear that there must be a number of factors in oedema formation that had eluded detection for a long time. The last decade has seen the discovery of some of these factors, but the last chapter of the mechanism of oedema formation is still far from being written. This introduction to a symposium on oedema is confined to a general outline of the condition and a review of the factors at present held responsible for oedema formation.

By definition *oedema is a clinical state resulting from an increase in the volume of the extravascular compartment of the extracellular fluid.* In other words, it is the accumulation of excess of fluid in the intercellular spaces. The swelling of the cell itself does not fall into this classification. In assessing the factors leading to a particular type of oedema, the clinician is faced with a number of mechanisms. An understanding of the relative importance of these factors is necessary for the etiologic diagnosis and successful treatment of this condition.

In the paper "On the Absorption of Fluid from the Tissue Spaces," published in 1895 in the *Journal of Physiology*, E. H. Starling laid down basic principles that have been since confirmed by a number of investigators and still form the main pillars of our knowledge about oedema formation. In their present form these principles can be expressed as follows:

1. **Hydrostatic pressure at venous and arterial end of the capillary.** According to H. Dawson, capillary pressure in man expressed in cm. of water is 43.5 and 16.5 at the arterial and venous end of the capillary respectively and it is this arterio-venous difference that allows water to leave at the arterial and re-enter at the venous ends of the capillary. An imbalance of this relation with a relative increase at the venous end must result in an increased filtration and decreased reabsorption of the fluid. An increase of pressure at the venous end will force more fluid out at the arterial end of the capillary and at the same time prevent its reabsorption.

2. **Oncotic pressure of the plasma proteins.** A decrease in the plasma proteins, especially those of smaller molecular weight will further facilitate the loss of fluid to the tissues. However, the accumulation of such a protein or any product of the breakdown of tissues capable of exerting osmotic pressure in the interstitial fluid would tend to prevent the reabsorption of the fluid filtered back into the vessels which normally occurs as the hydrostatic pressure falls towards the venous end of the capillary.

3. **Capillary Wall.** The condition of the filtering membrane is important insofar as its filtering capacity is concerned. In the case of the capillary, it appears that the cement substance binding the cells forming the capillary walls plays the major role. Any damage to this substance removes the

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barrier to the leakage of protein and fluid from the capillary into the tissue spaces.

In summary, the three major factors responsible for the orderly exchange of fluid between intravascular and extravascular compartments of extracellular fluid are: hydrostatic pressure, the level of the plasma proteins and state of the capillary wall. Any imbalance in relation between these factors may lead to oedema.

This outline would be incomplete without mention of certain studies that described factors, whose full significance in oedema formation is not as yet clear. Flexner, in 1942, described the movement of water and solutes resulting from diffusion. By using heavy water he was able to show that in guinea-pigs, 73% of water in the blood moved across the capillary membrane by diffusion every minute without changing the net transport of water in either direction. In other words, about the same number of the molecules of water moved out of the capillary as had moved in and the total balance remained essentially unchanged. It is not difficult to visualize the impact that a disturbance of this mechanism would have on the distribution of water between the different compartments of the body.

Another interesting fact was revealed by the study of movement across the capillary wall of labelled plasma protein. Wasserman in 1951 estimated that 0.1% of the plasma albumin leaves the vessels each minute and returns to the blood, mostly via the thoracic duct. This so-called "internal circulation of protein" could be deranged by the obstruction of the lymphatics with eventual accumulation of protein in the interstitial fluid. It is important to stress that these mechanisms differ quantitatively in different tissues and organs, and that protein content in interstitial fluid of different organs varies, being highest in the liver where it approaches that of plasma.

In view of these and other recent discoveries, the factors involved in oedema formation are classified in 2 groups. The first group includes those related to Starling's hypothesis involving:

A. PRESSURE

1. Increase of hydrostatic pressure of the venous end of the capillary—e.g. venous obstruction.
2. Action of force of gravity—e.g. dependent oedema.
3. Counter-pressure exerted by the tissue itself, which is capable of resisting mechanically further accumulation of fluid—e.g. the periorbital tissues offer little resistance to oedema accumulation.

B. OSMOTIC

1. Decrease in protein (especially albumin) content of serum—e.g. hypoproteinemia.
2. Obstruction of the removal of filtered protein from the tissue—e.g. lymphatic block.
3. Accumulation of osmotically active substances in the tissue—e.g. tissue breakdown products.

C. FILTERING SURFACE

1. Filtering surface depends on the size of capillary bed available for filtration. This in turn depends on the action of arteriolar and pre-capillary sphincters, and the number of capillaries—e.g. inflammatory oedema.

2. State of intercellular cement—most of the factors involved in the integrity of the cement substance are still unknown but general nutrition and availability of Ca^{++} and the C vitamin seems to be necessary for its normal formation and function.

The second group includes a number of factors some of which are still ill-defined and incompletely understood and whose action is finally expressed through the kidneys and to some degree through the connective tissues. This group operates through derangement of normal mechanisms of metabolism of Na^+ , K^+ , Cl^- and water and promotes retention of excess fluid in the body, resulting finally in detectable weight gain.

A. Factors finally expressed through the kidneys:

1. Adrenal cortical steroids especially desoxy-corticosterone and aldosterone, both of which play a very important role in regulation of Na^+ , K^+ , Cl^- and water exchange in the renal tubules.

2. ACTH may be mentioned here insofar as it can control the formation of some cortical steroids but not aldosterone.

3. Anti-diuretic Hormone. Though this hormone is an important factor in water exchange, insofar as it promotes reabsorption of water in both the distal convoluted tubule and the collecting ducts, its role in oedema formation is still very obscure.

B. Factors finally expressed through the connective tissues:

1. Thyroid-stimulating hormone. By promoting formation and accumulation of mucopolysaccharides in the interstitial spaces this hormone provides the substance capable of binding and retaining water in some tissues—e.g., myxoedema.

2. Oestrogens - e.g. cyclic oedema (premenstrual oedema)

3. Other hormones

Many of the factors mentioned in the second group are concerned with the regulation of the total amount of fluid within the body, and this is the essential point where they differ from the factors outlined by Starling. It is beyond doubt that both groups of factors play important roles and that their interrelationship determines the type of oedema that develops in particular clinical circumstances.

If we attempt to assess the factors responsible for oedema formation and its perpetuation in different conditions, the following scheme results.

(A) clinical classification of oedema and factors instrumental to its genesis:

TYPE OF OEDEMA	FACTORS RESPONSIBLE FOR OEDEMA FORMATION AND ITS PERPETUATION
1. INFLAMMATORY:	<ul style="list-style-type: none"> a. Protein leakage from dilated capillaries. b. Accumulation of osmotically-active tissue breakdown products. c. Local rise in venous pressure.
2. OBSTRUCTIVE:	<ul style="list-style-type: none"> a. Venous obstruction. b. Lymphatic obstruction. c. Force of gravity in dependent areas resulting in increased hydrostatic pressure.

3. CARDIAC:

- a. Sudden redistribution of fluid—e.g., pulmonary oedema.
- b. Increase in total body water—congestive failure.
 - (1) increase in venous pressure.
 - (2) increase in capillary permeability.
 - (3) factors expressed through kidneys (Na^+ , Cl^- , water retention).

4. PULMONARY:

- a. Increase in pulmonary capillary pressure.
- b. Change in the size of filtering surface.
- c. Increase in pulmonary capillary permeability.

5. RENAL:

- a. Increase in capillary permeability.
- b. Disturbed renal mechanisms (Na^+ , Cl^- , water retention).
- c. Plasma protein loss.
- d. Congestive heart failure factors.

6. FAMINE, HUNGER:

- a. Factors expressed through kidney (Na^+ , Cl^- , water retention out of proportion to amount of wasted tissue).
- b. Hypoproteinemia (only in some and only very late in the course)

7. CYCLIC

(Premenstrual)

- a. Oestrogens?
- b. Corticoids especially aldosterone?

8. MYXOEDEMA

Retrobulbar and

Circumscribed pretibial

- a. TSH action.

This scheme emphasizes some of the important factors involved in the genesis of the particular type of oedema. It is not intended to be used as a rigid classification for there is nothing rigid about any of these biological phenomena. An overlap of different factors exists and their interrelationship is often complex, one mechanism merging into another with the action of one promoting that of another. Often a cycle is created which can be broken only by restoring to normal the initiating factor, and this is often not possible. It is obvious, for example, that the basis of cardiac oedema is the diseased heart and if the myocardium could be restored to a normal state, one could dispense with bed rest, salt restriction and diuretics. However, since digitalis and other treatment cannot achieve this perfect state, our efforts are directed to the next best, counteracting other factors involved. It is at this point that familiarity with these factors and appreciation of their relative importance is often decisive in the success or failure of the management of the patient.

In the analysis of the different types of oedema that will follow, an attempt will be made to assess the factors involved, single out the basic defects and try to expose the points at which the cycle could perhaps be broken and further progress of the disease arrested or even reversed.

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SERUM GLUTAMIC OXALACETIC TRANSAMINASE (SGO-T) IN CONGESTIVE HEART FAILURE. Clinical Study and Review of the Literature. Fragge, R. G., Kopel, F. B., and Iflauer, A., *Ann. Int. Med.* 52: 1042, (May) 1960.

In this study, the SGO-T level was frequently elevated, often markedly, in patients with acute congestive failure or acute exacerbations of chronic congestive failure. This fact applies in cases of right, left or combined congestive failure. The highest SGO-T values were found in chronic lung disease with secondary right heart failure.

This elevation may be correlated with other abnormal liver function tests and the pathologic findings of centrilobular atrophy and necrosis. The rapidity of onset of the failure is an important factor. This is further substantiated by the absence of SGO-T elevation in an outpatient group. In these patients the degree of failure was static and of long standing. In addition, there has been demonstrated marked elevation of SGO-T in patients with rapid arrhythmias resulting in the sudden onset of acute hepatic congestion. Liver damage, with concomitant SGO-T elevation, is even more likely to occur in chronic lung disease with cardiac decompensation and pulmonary insufficiency, since both anoxia and passive congestion are present. This was clearly demonstrated in this and previous studies.

There is need for a clinicopathologic study of patients with acute pulmonary edema and elevated transaminase levels, without clinical or electrocardiographic evidence of acute myocardial infarction. This is necessary to define more clearly the significance of SGO-T elevation in this condition, and the role of congestion in its production.

S.J.S.

THE OLDER PATIENT AS AN OPERATIVE RISK**

CLARENCE L. GOSSE, M.D.*

Halifax, N. S.

One might very well ask at the beginning: How old is "old" or "older", "elderly" or "aged"? This seems a rather difficult question to answer. We know that in some individuals, degeneration may begin in the forties, while in others it begins many years later. One often wonders how much control one has over degenerative processes. When somebody we know dies of a degenerative disease, at an early age, we often try to associate it with an "abnormal" way of life. Yet I am sure we all know of deaths at a similar age where the entire span of life was in keeping with all the ideals that we normally associate with longevity.

Cicero once said, "One must become an old man in good time if he is to be an old man long"—suggesting that one can actually prepare himself by one means or another to live a longer span of life. Shakespeare said, "Give me a staff of honour for mine age, not a sceptre to control the world"—suggesting that one should live quietly when old age comes, and do away with the tensions and desires of greater responsibility. We know that some men wield the sceptre in the belief that veneration is their due. Such an attitude often prevents reconciliation within the limitations that may be necessary for the maximum span of life.

If we believe, then, that man, to some extent, can control his destiny, and if we think we know the means whereby this can be brought about, surely one should take into account general habits and way of life in assessing the older patient as an operative risk.

Now, I am not suggesting that old age is being discovered for the first time. I do suggest, however, that the problem of the patient over 60 is a greater challenge than ever before, and I have no doubt that the demands made on physicians by this group of patients will be ever increasing. Eversole, formerly chief anaesthetist at the Lahey Clinic, stated that, since 1900, the general population has doubled, but the number of people living past the age of 65 has quadrupled. He deduced quite logically that since there are more elderly people alive, there must be more elderly people sick. He further stated that a man living to 60 years of age can expect to reach 76, and at 70 he may expect to celebrate his 80th birthday.

REASONS FOR SURGERY IN THE AGED

Let me begin by making this general remark, which I shall then try to justify: It has been proven beyond all doubt that the older individual may undergo surgery with relative impunity; therefore, *restoration or improvement of physiological function should never be denied an older person.* A diseased gall bladder, an incapacitating hernia, a painful peptic ulcer, and urinary habits which disturb rest and well-being, are but a few of the common disorders, the treatment of which is too often delayed. It is very easy to adopt the all too widespread attitude that "the patient is too old and hasn't long to live anyway."

*From the Departments of Urology, Victoria General Hospital and Camp Hill Hospital, Halifax.

**Delivered to the Annual Meeting, Newfoundland Medical Society 1959.

When one looks at the growing figures of the older age group, one must realize that economics assumes large proportions. Apart from being non-productive, many disabled elderly people will have added to the general load the expense of institutional care, or at least require the help and the energies of another individual. The ability to feed oneself and to keep clean relieves society of many man-hours of labour. These older patients desire to be physically self-supporting; they desire to be clean. They also desire to be dry—a desire which is as old as the individual, a desire which manifested itself as a lusty cry in the first few hours of life.

It is our experience that older persons tolerate elective surgery nearly as well as do the young. However, generally speaking, emergency operations are fraught with at least three times the mortality rate of elective procedures. Because of this fact it is good medical practice, to treat diseases in our older patients before an emergency develops.

I would therefore list the reasons for surgery in the aged under three headings:

1. Emergencies—Of this there is no doubt.
2. Malignant disease—An urgent and clear indication.
3. Elective procedures, in order to—
 - (a) Relieve suffering—which Lord Moynihan said is “often as important as rescue from impending death.”
 - (b) Forestall a later emergency operation, thus preventing a higher complication and fatality rate.

I do not suggest that we can operate on these patients at random and without discrimination. All cases for prospective surgery must be carefully screened and evaluated.

ASSESSMENT OF A RISK

While there is ample proof that surgery should not be avoided because of age, nevertheless all the aforementioned generalities apply only if the whole programme includes meticulous assessment, detailed preparation, and the utmost in precise management. How does one go about the physical evaluation of the older patient? By and large, most patients who walk into hospital under their own power and have been reasonably active prior to their admission, can undergo successful surgery with minimum concern. Much more information, however, is desirable—indeed necessary—in order to assess fully all patients, in all aspects, and to determine the type of pre-operative assistance that may be so helpful to the outcome.

It is our practice to admit an older patient to hospital two, three, or even more days prior to operation. This is done to give the patient time to calm down, and to dispel the fear which may have grown up with him from childhood—that older people go to hospital to die.

During these few days, simple basic laboratory studies are carried out. These include urine studies, hemogram, blood urea nitrogen, and blood sugar determinations. When there is a question of electrolyte imbalance, practically all the electrolyte studies are done. If the patient has lost weight or shows some tissue changes on physical examination, the serum proteins are checked. A roentgenogram of the chest and a serological examination are carried out on all admissions.

Electrocardiography is routine, though its advisability is debatable. We question if the internist finds it of any real value in assessing a patient

as an operative risk, except possibly when there is some history of recent cardiac disease. If, however, post-operative trouble occurs, we have a tracing with which to compare. Herein possibly lies its greatest value; for example, comparative electrocardiograms may be of help in determining whether or not post-operative hypotension is due to or results from acute myocardial insufficiency. They are useful also in detecting certain post-operative electrolyte disturbances—particularly changes in potassium balance.

An intravenous pyelogram is a pre-operative must on all urological patients, and should be more frequently used prior to all abdominal operations when the diagnosis is in any doubt. A pre-operative pyelogram materially allays the concern of the surgeon who unexpectedly finds a questionable renal lesion at operation, or encounters post-operative oliguria or anuria.

Apart from all these adjuncts, and I use the term adjuncts purposely, there is no substitute for the judgment of the surgeon—a judgment based, for the most part, on simply talking to the patient for a few minutes each day before operation. During these days the surgeon, both consciously and subconsciously, gains information on which to base later decisions, and in addition, creates in the mind of the patient a feeling of warmth and confidence, both of which are necessary to the optimum outcome.

Finally, and a most important factor, is the internist. Without his help I doubt if I would enjoy discussing this subject. His pre-operative appraisal of the patient enables the surgeon to proceed with greater assurance and confidence, and his post-operative assistance often spells the difference between success and failure.

The procedure followed on the Urological Service of the Victoria General Hospital is now given in some detail.

IMMEDIATE PRE-OPERATIVE ASSISTANCE

The whole principle of pre-operative preparation, and indeed also post-operative care, is carried out with a constant awareness of the possible complications, the assumption that these complications may occur, and the taking of all possible means to prevent their occurrence. This phase can be summarized as follows,

1. Hydration.
2. Protein and vitamin build-up.
3. Correction of anaemia.
4. Keeping patient fully informed; that is, explanations are given pre-operatively of some of the procedures that will be carried out post-operatively, when the mind is clear, rather than when under post-operative stress and sedation.
5. Minimal pre-operative medication or none at all. All patients over 65, with few exceptions, go to the operating room without sedation, and therefore with a stable blood pressure.

DURING THE OPERATION

Here the anaesthetist plays the major role.

1. Minimum anaesthesia—spinal wherever possible.
2. The maintenance of a stable blood pressure, or preferably, a slight degree of hypotension.
3. Adequate oxygenation.
4. The shortest operative time compatible with efficient surgery.

5. A minimum of intravenous fluids; blood only if absolutely necessary, and only for actual blood loss of more than 500 cc. Blood is used in less than 10 per cent of our major operations.
6. Avoidance of extreme positioning of patient.

POST-OPERATIVE CARE

I believe the greatest strides in the past decade have been made in this phase of the surgical programme. As in pre-operative care, our programme is aimed at anticipating complications and believing that they will definitely occur if we do not actively take measures to prevent them. We believe that all older patients who have been carefully and adequately prepared for surgery will give the surgeon one fair chance at a successful outcome. If that chance is missed, and a complication ensues, the chance of a fatality is increased manifold. Furthermore, one complication often leads to another, for example, complications are often fraught with a rise in temperature; this causes the patient's mental faculties to deteriorate and he pulls at his stomach tubes or catheters, and creates additional complications by his inability to react normally.

Some of the factors that we employ to ensure a smooth post-operative course are,

1. **ANTIBIOTICS.** Penicillin is routinely used for 5 days to minimize chest complications. The comparative result has been almost a complete disappearance of post-operative chest infections.
2. **BED EXERCISE**—started immediately—leg and arm movements.
3. **EARLY AMBULATION**—up same evening or next morning.
4. **MINIMAL SEDATION**—prevents lethargy, minimizes bowel distension.
5. **DIETS, VITAMINS, etc.**
6. **MAINTENANCE OF BALANCED ELECTROLYTES**—frequent laboratory checks when clinically suspicious.

Finally, as I am sure we all know, success or failure in these older people is largely determined by the efficiency of the nursing service. Key nurses, in both the operating room and on the ward, are an integral part of any adequate nursing service. Nurses unfamiliar with particular post-operative procedures must be briefed in detail about each particular case, since, by errors either of omission or of commission, they may unwittingly do irreparable harm to the patient. At the Victoria General Hospital, we have a large public ward service. We have been fortunate in having many of our nurses for several years. They have therefore become most efficient in the operating theatre and in geriatric nursing. Because of this, we by-pass the hospital recovery room, and return our elderly post-operative patients to quiet rooms near the nursing station. This area is also adjacent to our interne-resident work room, around which our whole service revolves. There is therefore constant vigilance by a fully trained, capable and experienced group of nurses, residents and internes—a clear-cut necessity in specialized post-operative care. Before we developed this system, and with the same pre-operative preparation and similar surgery, we had too many post-operative fatalities. Since the inauguration of this service, however, a post-operative fatality has become a rarity.

In the post-operative care of older people, meticulous attention to detail, the anticipation and recognition of the early signals of complications, and the constant reassurance of the patient that everything is going smoothly, are absolutely necessary to a successful outcome. In order to accomplish this, one has to instil into all members of a departmental team a strong desire to provide the utmost in efficiency, and pride in producing a good result.

RESULTS IN GERIATRIC SURGERY

(Using prostatectomy as an example).
Consecutive Cases:

	No. Cases		Mortality
Davis & Lee (Nebraska)			
Perineal	2350	(66)	2.80%
Transurethral	1050	(13)	1.20%
Milner (Albany, N. Y.)			
Transurethral	600	(0)	Nil
Campbell & Blue (Saskatoon)			
Retropublic	1000	(24)	2.40%
Thompson (Mayo Clinic)			
Transurethral	1000	(6)	0.60%
Davis (Philadelphia)			
Transurethral	385		
Perineal	116		
Retropublic	1		
Total	502	(0)	Nil
Gosse (Halifax)			
Retropublic (Simple)	280		
Retropublic (Radical)	24		
Suprapubic	30		
Transurethral	266		
Total	600	(1)	0.20%
Average age 69.5 years.			

SUMMARY

1. Most patients, regardless of age, tolerate elective surgery well.
2. Those who are mobile and active require very little preparation.
3. Inactive patients are a greater problem, but with the help of the internist, can usually be adequately prepared.
4. Emergency surgery presents the greatest risk, and every effort should be directed to reducing the number of emergency procedures by not delaying elective procedures unduly.

Let us adopt the attitude that:—

Older patients should not only survive, they should also thrive.

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MARITIME MEDICAL CARE INC.

The annual Meeting of the Board of Directors, Maritime Medical Care Inc., took place on April 27th, 1960. Immediately following this the first meeting of the new Board of Directors was held.

BOARD OF DIRECTORS M.M.C. INC., 1960-61.

DIRECTOR	PHYSICIAN MEMBERS, BRANCH MEDICAL SOCIETY REPRESENTED	TERM OF OFFICE
Dr. T. B. Murphy -	- ANTIGONISH-GUYSBOROUGH MEDICAL SOCIETY -	Apr. 1960-62
Dr. G. C. MacDonald -	- CAPE BRETON MEDICAL SOCIETY - - -	" 1960-62
Dr. J. A. MacDonald -	- CAPE BRETON MEDICAL SOCIETY - - -	" 1959-61
Dr. R. F. Ross -	- COLCHESTER-EAST HANTS MEDICAL SOCIETY -	" 1959-61
Dr. D. R. Davies -	- CUMBERLAND MEDICAL SOCIETY - - -	" 1959-61
Dr. F. Murray Fraser -	- HALIFAX MEDICAL SOCIETY - - -	" 1960-62
Dr. J. McD. Corston -	- HALIFAX MEDICAL SOCIETY - - -	" 1960-62
Dr. H. A. Fraser -	- LUNENBURG-QUEENS MEDICAL SOCIETY - -	" 1960-62
Dr. A. A. Giffin -	- VALLEY MEDICAL SOCIETY - - -	" 1959-61
Dr. D. F. MacDonald -	- WESTERN COUNTIES MEDICAL SOCIETY - -	" 1960-62

LAY MEMBERS

Mr. J. A. Walker, Q.C.
Mr. J. Noble Foster

One more lay member to be named.

The Board of Directors elected:

Dr. F. Murray Fraser — President
Dr. H. B. Whitman — Vice-President

The Executive elected are the Officers and —

Dr. A. A. Giffin
Dr. R. F. Ross
Mr. J. A. Walker
Mr. J. Noble Foster

It is to be noted that the only change from 1959-60 in the Board of Directors is Dr. H. A. Fraser for Lunenburg-Queens Medical Society who replaces Dr. W. A. Hewat. Five of the nine Branch Societies were entitled to name representatives to the Board for the term 1960-62.

C. J. W. B.

MARITIME MEDICAL CARE
INCORPORATED
PRESIDENT'S REPORT
TO
ANNUAL MEETING
BOARD OF DIRECTORS M.M.C. INC.
APRIL 27-1960.

Gentlemen:

I welcome you to this, the eleventh Annual Meeting of Maritime Medical Care Incorporated.

It is gratifying to report to you that 1959 was the most successful year of our history. Enrolment increased by 17 percent over the previous year while gross revenue reached a record 37 percent over the previous year. Apart from the expansion in enrolment, a significant factor in the rise in revenue was the increase in subscriber dues which went into effect on July 1, 1959. The increase was quite well received by our subscribers and the cancellations attributable to this were fewer than anticipated.

The effects on enrolment of the Provincial Hospital Plan, noticed first in the late months of 1958, continued to be felt throughout 1959. Money spent previously on hospitalization was channelled into other welfare fields, including medical benefits, to the obvious advantage of your Plan.

The Railways Contract was renewed for a further two-year period which would indicate that the employees found the benefits provided by Maritime Medical Care were meeting their needs. Here again the Provincial Hospital Plan benefited us in that the monies formerly allotted to purchase of hospitalization coverage were used to broaden the Basic medical benefits to a marked degree compared to those provided under the previous contract.

On July 1, 1959, the Corporation adopted the 1958 Schedule of Fees of The Medical Society of Nova Scotia. However, utilization of services continued to be heavy, and this factor, coupled with increased payments to doctors and some improvement in subscriber benefits, prevented us from raising the proration from the 85 percent figure we had been paying for the last sixteen months.

Early in 1959, the Federal Government announced a new Health Plan for all federal employees, including the Civil Service, the Armed Forces, R.C.M.P. and Crown Corporations, the plan to be voluntary and subsidized by the Government to the extent of 50 percent of the cost. Specifications were issued, and all major insurance companies and the Trans-Canada Medical Plans, including your Plan, were invited to submit quotations. This was an important development for Maritime Medical Care as upwards of 25 percent of our business comes from the Federal Government. The specifications were studied and certain inflexibilities were noted, such as a national fee schedule, which would have introduced special administrative difficulties so far as Trans-Canada Medical Plans were concerned. The Federal Government, however, would not permit any modifications and we regretfully withdrew from the negotiations. It has now been confirmed that the plan will be underwritten by a syndicate of commercial insurance carriers and will come into effect on July 1, 1960. It is worth noting that the plan, in its final form, departs significantly from the original specifications, and the standard commercial insurance devices of deductibles and co-insurance are

of course introduced. As a result, it bears little resemblance to the comprehensive service medical program offered by Maritime Medical Care. It is too soon to predict our ultimate loss in subscribers to this plan, but early indications are that it may not be too severe.

As of July 1, 1959, a contingent Reserve Fund was established by setting aside 2 percent of our gross monthly subscription revenue. At December 31st the balance in this account stood at \$30,401.44.

The Corporation sustained a grave loss in the resignation of the General Manager, Mr. D. C. Macneill, due to ill health. Mr. Macneill, as our first General Manager, piloted the Corporation through its early infancy to sturdy maturity, introducing many sound Plan features that have stood the test of years. He was a capable administrator and will be greatly missed.

During the year 1959, one hundred and seventy-six new physicians signed participating agreements with the Corporation. A large percentage of these were New Brunswick and Prince Edward Island doctors, reflecting the growing popularity of the comprehensive program offered by Maritime Medical Care. Ten participating physicians were lost in 1959—seven died, one moved to another province and two cancelled their agreements.

To the staff of Maritime Medical Care Incorporated who have so ably carried out their duties during the year we express our sincere thanks and appreciation for their continued support and co-operation.

F. MURRAY FRASER, M.D.,
President.

PHYSICIAN WANTED

Physician, with or without Diploma in Public Health, is required by the Department of Health, City of Halifax. Duties will be those of the Director of Maternal and Child Health which include school work and well baby clinic.

For details contact:

Dr. Allan R. Morton,
Commissioner of Health,
Halifax, N. S. (Tel. 3-7075)

SITUATION WANTED

Graduate with resident training requires position as locum tenens anywhere in Nova Scotia from January 1, 1961, to March 15, 1961, or any part of this period.

Write—Locum c/o Executive Secretary, The Medical Society of Nova Scotia, Dalhousie Public Health Clinic, University Avenue, Halifax, N. S.

MARITIME MEDICAL CARE INC.

FINANCIAL STATEMENT, DECEMBER 31, 1959

AUDITORS' REPORT

We have examined the balance sheet of Maritime Medical Care Incorporated as of December 31, 1959 and the statement of income and expenditure and general reserve for the year ended on that date and have obtained all the information and explanations we have required. Our examination included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as we considered necessary in the circumstances.

In our opinion, and according to the best of our information and the explanations given to us and as shown by the books of the corporation, the accompanying balance sheet and statement of income and expenditure and general reserve are properly drawn up so as to exhibit a true and correct view of the state of the affairs of the corporation as of December 31, 1959 and the results of its operations for the year ended on that date, in accordance with generally accepted accounting principles.

PEAT, MARWICK, MITCHELL Co.,
Chartered Accountants.

Halifax, N. S.,
April 27, 1960.

NOTES TO FINANCIAL STATEMENTS December 31, 1959

1. Effective January 1, 1959 the Corporation entered into a two year contract, in conjunction with similar medical service plans in Canada, to provide medical coverage for the employees of Canada's railways. The contract provides that at its termination the experience of the participating plans will be reviewed in order to determine the net gain or loss from the contract. The experience of each plan is then related to the experience of the group as a whole, and the appropriate financial adjustments made among the plans. Based on the 1959 experience of the Corporation on this contract it is estimated that a refund to the participating plans of approximately \$26,000 will be required. The previous two year contract which terminated on December 31, 1958 was reviewed and adjusted during 1959. As a result of this adjustment the Corporation received \$57,607.27.
2. For the year ended December 31, 1959 participating physicians rendered claims in the amount of \$2,931,800. These claims, after eliminating those which pertained to persons who were not subscribers of the plan, were related to the Nova Scotia Medical Society fee scale and approved for \$2,783,400. The participating physicians were paid 85% of the approved fees, or \$2,365,900. The balance of \$110,900 paid for subscribers medical care was paid directly to the subscribers to reimburse them for services received from non-participating physicians.
3. Under the terms of the agreement between the Corporation and the participating physicians the Corporation may, after the expiration of a twelve month period, cancel any unpaid balances outstanding on approved claims. The Board of Directors has passed the necessary resolution to cancel all such unpaid amounts to December 31, 1958. The unpaid balances of approved claims for 1959, amounting to \$417,500. have not been reflected in the financial statements.

MARITIME MEDICAL CARE INCORPORATED

Balance Sheet December 31, 1959

ASSETS

Cash on hand and in banks.....		\$ 466,191.95
Accounts receivable:		
Subscriptions.....	\$ 37,966.43	
Other.....	829.26	38,795.69
Accrued interest on investments.....		4,630.18
Investments at cost (Approximate market value \$395,560).....		423,975.28
		935,593.10
Inventory of supplies at cost.....		10,799.33
Furniture and office equipment at cost.....	36,751.83	
Automobile at cost.....	2,418.00	
	39,169.83	
Less accumulated depreciation.....	16,960.36	22,209.47
		\$ 968,601.90

LIABILITIES

Medical claims payable.....		\$ 557,063.48
Unpresented medical claims, estimated.....		75,000.00
Accounts payable.....		7,269.32
Trust funds—Province of Nova Scotia Welfare Plan.....		9,808.98
Revenue from railway contract in excess of allowed deductions, estimated (note 1).....		26,000.00
Subscriptions received in advance.....		90,400.38
		765,542.16
Total liabilities.....		
Funds retained by the corporation:		
Reserve for stabilization of claims.....	\$ 30,401.44	
General reserve, per statement attached.....	172,658.30	203,059.74
		\$ 968,601.90

STATEMENT OF INCOME AND EXPENDITURE
AND GENERAL RESERVE

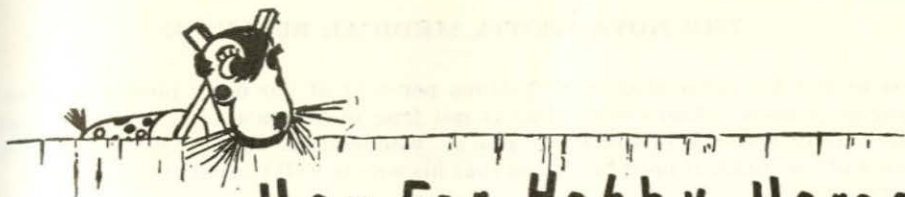
Year ended December 31, 1959

Income:	
Subscriptions	\$ 2,866,957.01
Administration fee, Province of Nova Scotia Welfare Plan	8,780.57
	2,875,737.58
Expenditure:	
Medical care for subscribers (note 2)	2,476,801.59
Administration costs, schedule "1"	265,345.16
	2,742,146.75
Operating income	133,590.83
Income from investments	20,496.11
	154,086.94
Net income for the year	154,086.94
Adjustment of 1957-1958 railway contract (note 1)	57,607.27
	211,694.21
Appropriated to reserve for stabilization of claims	30,401.44
	181,292.77
Appropriated to General Reserve	181,292.77
Deficit, January 1, 1959	8,634.47
	172,658.30
General Reserve, December 31, 1959	\$ 172,658.30

NOTICE

The office of The Medical Society of Nova Scotia will be moved from the ground floor, rear, to the east wing, third floor, Dalhousie Public Health Clinic, University Avenue, not later than the middle of August, 1960.

C.J.W.B.



Hay For Hobby Horses

SOMETHING FOR AUGUST

August is a part-time gardener and a patron of the arts. He finds it hard to believe that anyone who drives a broken-down four-year old Morris is a doctor so he has put me down as a minor functionary at the university who cleans typewriters, fills orders for stationery, foolscap and the like and writes odds and ends to help support his family. August put a lawn in for me this spring and offered to knock off 10 per cent from his bill if I would put him in print. This is the nearest thing to payola that has ever been offered to me and I have had a secret longing to be tempted by big money for a long time. As Professor Hulme said in *The Search*, "My chief sorrow is that no industrial people have ever thought it worth while to buy me. I have never had any scope for dishonesty in all my life; and I'm sure I should have been good at it." Who knows, after August may come Imperial Tobacco and the big drug houses? Well, to earn my \$8.50 here it is; my patron August Wittkower Lohrenz was born in Bad Schussnigg, near Schneeberg of lung cancer fame, on August 3, 1898. He came to Canada in 1905 and has lived happily ever after, never having married. His greatest achievement as a Bavarian is learning to like local beer and his greatest pride is his ability to do instantaneous translations of Omer Blondahl. (This appearance in the *Bulletin* may be a disappointment to August because he rather hoped I would get his name into the *Atlantic Advocate* or, joy abounding, into the yellow pages of *MacLean's*.)

Let me warn you now—there will be little of the usual painstaking craftsmanship that marks this column when Sham Sane is at his editorial post. Sham is living it up in London town and I am on holiday—Speaking of London, the Angel at Rotherhithe has a narrow terrace from which you can, drink in hand, admire the view with Tower Bridge in the distance and St. Paul's beyond. (Sham, you might like to pop over to *The Yacht* at Greenwich. It is in a cul-de-sac near the Royal Naval College. While you're there do try Mrs. O'Geary's Scotch egg—these two pubs are perfectly proper for Phyllis and the children—.)

Several entertaining books have come to hand in the last few months, mention of them should reward that small but indefatigable band who have been faithful readers of *Hay* these last 18 months. Incidentally, my friend August might be persuaded to extend his patronage to cover a dinner in the fall for the Friends of Timothy. August will pay your expenses to Halifax—stage a big feed for you at his brother-in-law's rathskeller and afterwards the four of us can play bridge.

The first of these books for summer, *The Memoirs of a Cross-Eyed Man* (James Wellard, MacMillan, London, 1956), is a hilarious account of an ugly knight-errant in pursuit of the perfect woman. Try this:

"What an infinite variety of colours and clothes women wear! And what delight they give us! I have heard in my travels that there are husbands who carp at their wives' extravagances in the matter of dress. I can hardly believe that anybody could be so

obtuse as not to realize that seventy-three per cent of our daily pleasures come from looking at women. And even if this is not true in the case of a man's own wife, it certainly is in the case of somebody else's; whence it is up to every husband to sell the shirt off his back, if need be, to see that his wife is well turned out."

Wellard has written six other novels—if they are all as entertaining as this I am a Wellard-booster from this point on.

The next, *The Wild Green Earth* (Bernard Fergusson, St. James Library edition, Collins, London), is the sequel to his *Beyond the Chindwin* and deserves opinions such as this, "Begin this book and you will call neither for food nor sleep until it is finished" or "His military stature is entirely incidental to a piece of writing which is unquestionably important literature." These books should be read with Mike Calvert's "Prisoners of Hope." Here is a fragment from Chapter VIII entitled "Jungle Travel."

"Success in map-reading depends largely on confidence in one's own ability to read it. The results of such confidence are often surprising. There is a tale of a Gurkha, captured by the Japs in the fighting around Imphal, who managed to escape and make his way to the British positions. He was asked how he had found his way. 'Quite easy,' he said. 'I had a compass, and I had a map'; and he pointed out on his tattered map exactly how he had come. Here was this track; here was that mullah; he had dodged round the Japs here, and nearly been caught by a patrol there. The whole story was convincing; the only surprising part of it was that the map was a London street map, torn out of an old A.A. book; but a little thing like that had not daunted the Gurkha in any way at all. He had a map and a compass, and confidence in how to use both."

He who puts me on to a good book does me a great service—but one's tastes in reading are highly individualized and there is a real risk in pressing your favourite books on your friends. "The Last Angry Man" is an impressive account of the struggles of a general practitioner in a decaying slum. You may raise your eyebrows at Sam Abelman's ability to take and interpret a full range of skull films in his office but he's quite a man. I understand Gerald Green's father was a physician—he has done his homework well—his picture of general practice comes off very well.

Lastly, here is a book I have not read but want to this summer. (It's obvious, I'm a non-fiction buff): *The Heroes* (Ronald MacKie—Angus and Robertson) is an account of a six-man party which blew up seven ships in Singapore Harbor under the noses of the Japanese. They went back a year later and vanished without a trace. MacKie has reconstructed the story after painstaking research and with the help of Japanese witnesses.

There should be something for the ladies in the midsummer edition. Stories about cute children are fascinating to the doting parents but a bore to most listeners. However, now and then one of these is worth repeating. A five-year old boy in a fashionable New Jersey suburb was impressed to play the part of the inn-keeper in the Nativity play at his Sunday School. He refused the role because he felt the other children would be down on him for turning Jesus' mother and father away. However, he was finally persuaded and his great moment came, with the following exchange before a packed Sunday School:

Joseph (aged 6)—"Is there a place in the inn for my wife, Mary, and I?"
 Inn-keeper (age 5)—"No—There is no room in the inn. You must sleep in the stable. But won't you come in for cocktails first?"

Yours for good summer reading,

BROTHER TIMOTHY.

The following communication has been received from the Nova Scotia Hospital Insurance Commission and is published for information. (Ed's. Note).

June 13, 1960

To All Hospital Superintendents

Attention: Chairman of Board

Re: Necessary Nursing Services

Recent correspondence with hospital administrators and others would indicate the need, at this time, for the reaffirmation and amplification of Commission policy in regard to "necessary nursing service."

1. Principle

For any nursing service in or at a hospital, to be an insured service, it must be

- (1) *Provided to an entitled resident,*
- (2) *Provided by the nursing staff of the hospital, and*
- (3) *medically necessary.*

If any nursing service does not meet with all the above conditions, then such a nursing service is *not* an insured service.

"Private Duty" or "Special Nursing" is not an insured service.

However, subject to the policy of the hospital, a private duty nurse (i.e. a special nurse) may be engaged by or on behalf of the patient.

2. Procedure.

(1) If the *attending Physician* is of the opinion that it is medically necessary for his patient to have nursing services above the average level provided by the hospital, then he should make known and discuss these needs with the Director of Nurses.

(2) *The determination as to how the augmented nursing services are to be provided to the patient is the responsibility of the Director of Nurses.*

(a) She may see fit to reallocate existing staff or;

(b) if staff is temporarily inadequate, she may engage and pay a temporary staff nurse; such a temporary staff nurse will be assigned to such duties as will permit the most effective use of her services.

(3) The hospital authorities may designate the area or areas (e.g. the "intensive care unit") in which such augmented nursing services may be provided.

(4) One of the responsibilities of the *Hospital Standards Committee* is to study and advise the hospital board on the utilization of nursing services. All cases in which unusual nursing services are being or have been rendered, should be reviewed by this committee.

NOTE:—Four copies of this release are being forwarded: two for the Information and Procedure Folder; one for the Director of Nurses; and one for the doctors' bulletin board.

Yours very truly,

Signed G. GRAHAM SIMMS, M.D., D.P.H.
Executive Director.

PERSONAL INTEREST NOTES

Since the last issue of the Bulletin, when we tabulated the various professions of those in various provincial legislatures, it was pointed out to me that a great many physicians have participated in the Nova Scotia Legislative Assembly. The following table, provided by the office of the Provincial Secretary, might appeal to those who are politically inclined:

LIST OF DOCTORS WHO WERE MEMBERS OF THE LEGISLATURE OF NOVA SCOTIA SINCE CONFEDERATION

NAME	COUNTY	DATE	
BROWN, Edward L.	Kings	1867-1871	
MURRAY, George	Pictou	1867-1871	
CAMPBELL, Duncan	Inverness	1872-1881	
FARRELL, Edward	Halifax	1874-1878	
MCLENNAN, Angus	Inverness	1883-1885	
MUNRO, Charles Henry	Pictou	1882-1889	
HALEY, Allen	Hants	1882-1889	D.D.S.
BETHUNE, John Lemuel	Victoria	1886-1896	
MACKAY, William	Cape Breton	1886-1889	
		1894-1897	
KENDALL, Arthur S.	Cape Breton	1897-1900	
		1904-1911	
BISSETT, Charles Peter	Richmond	1901-1916	
ELLIS, James Fraser	Guysborough	1904-1920	
MACMILLAN, C. E.	Inverness	1906-1911	
MARCH, Henry Arthur	Lunenburg	1906-1910	
COVERT, Archibald M.	Kings	1911-1916	
REID, James William	Hants	1911-1925	
SMITH, Jordan W.	Queens	1911-1925	
MACDONALD, John A.	Richmond	1916-1926	
LEBLANC, Benjamin A.	Richmond	1916-1928	
MELANSON, Amadee R.	Yarmouth	1920-1923	
REHFUSS, Wallace Norman	Lunenburg	1925-1928	
MCISAAC, John L.	Antigonish	1925-1942	
MCGARRY, Moses Elijah	Inverness	1928-1940	
MORRISON, Michael E.	Guysborough	1928-1933	D.D.S.
MORTON, Angus McDonald	Halifax	1928-1933	
PROUDFOOT, James A.	Inverness	1928-1933	
MURPHY, George H.	Halifax	1930-1933	
DAVIS, Frank Roy	Lunenburg	1933-1949	
DEVEAU, George Raymond	Richmond	1933-1937	
LOGAN, George Murray	Halifax Centre	1933-1937	D.D.S.
PATTON, Weldon Wood	Cape Breton West	1933-1937	
FORREST, William Duff	Halifax Centre	1937-1940	
MACLELLAN, Robert A.	Hants	1945-1949	
MCMILLAN, C. L.	Victoria	1949-	
BELLIVEAU, P. E.	Clare	1953-	
LANGILLE, J. A.	Cumberland East	1953-	
MACLEOD, W. A.	Pictou East	1956-1960	
MACMILLAN, Duncan	Halifax East	1956-	
REARDON, C. Henry	Halifax West	1956-	
O'BRIEN, Willard C.	Yarmouth	1956-	
MACARTHUR, E. D.	Kings West	1960-	
MACKEOUGH, Thomas	Cape Breton North	1960-	

HALIFAX MEDICAL SOCIETY

Dr. H. L. Scammell, Executive Director of the Alcoholism Research Commission, spent four weeks at the Laboratory of Applied Biodynamics, Yale University.

Dr. Nicholas Destounis recently opened an office for the practice of Psychiatry at 191 University Ave., Halifax.

Dr. W. M. D. Robertson recently returned from England where he was taking a short course in Obstetrics and Gynaecology.

Drs. Hugh Bacon and Blaike Smith recently joined the staff of the Nova Scotia Hospital, Dartmouth, July 1, 1960.

Several general practitioners have recently opened offices in Dartmouth:

1. Dr. A. R. Hansen 271 Portland St., Formerly practicing in Bathurst, N. B. Graduate of Ottawa University.
2. Dr. D. Robert Patton 180 Portland Street, Dartmouth (Medical Centre).
3. Dr. Rita Bistevens 108 Ochterloney Street, Dartmouth.
4. Dr. John Barteaux 114 Tacoma Drive, Westphal.

Dr. Arthur W. Elliott (Dalhousie, Class '51) now practicing Diagnostic Radiology in Bellevue, Ontario, in association with Dr. Peter Loder, another Dalhousie Graduate, was recently a visitor to Halifax. In addition to having a wife and two children, he also seems to be the only member of his class driving a Cadillac.

LUNENBURG-QUEENS MEDICAL SOCIETY

Dr. J. C. Wickwire, Liverpool, has recently been appointed to the newly formed Rowe Royal Commission to inquire into the Nova Scotia Liquor Commission Control Act.

VALLEY MEDICAL SOCIETY

Dr. Malcolm Robertson Elliott was made a senior member (in Absentia, due to ill health) of the Canadian Medical Association at the recent annual meeting of the Nova Scotia Branch of the C.M.A. at White Point Beach. Born at Clarence, Annapolis County, N. S. on February 14, 1884, he was a 1912 graduate of Harvard Medical School, and since 1913 has practiced medicine in Wolfville, N. S. He served as Governor of Acadia University since 1924, and Chairman of the Board from 1930 to his recent retirement in 1959. He was elected to Senior Membership in the Medical Society of Nova Scotia in 1956.

WESTERN NOVA SCOTIA MEDICAL SOCIETY

Dr. L. M. Morton has returned from wintering in Florida and California.

Dr. S. W. Williamson appeared on the T.V. program, "Gazette" recently, on the occasion of his 92nd birthday. His recommended use of spirits in medicine, was not sponsored by the industry. (Ed. Note: Which industry)?

On the night of his re-election as M.L.A. for Yarmouth, Dr. W. C. O'Brien was called to the opposition headquarters to repair a celebration wound in the scalp of one of his Tory patients.

UNIVERSITY

The Canadian Life Insurance Officers Association has made its third annual grant to Dalhousie University to provide financial support for the cardio-pulmonary unit at the Medical School.

Dr. Ramkhelawan Mahabir (Dalhousie, Class '60) of San Fernando, Trinidad has recently been granted a Canadian Life Insurance Research Fellowship for work on carbohydrate metabolism in obesity, under direction of Dr. R. C. Dickson and Dr. W. I. Morse, Department of Medicine.

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

BIRTHS

To Dr. and Mrs. Donald C. Brown, a son, Donald Scott, at Highland View Hospital, Amherst, June 19, 1960.

To Dr. and Mrs. C. D. Chipman, a son, Grace Maternity Hospital, July 10, 1960.

To Dr. and Mrs. John Darroch (nee Peggy Morrison), a daughter, Sally Anne, Grace Maternity Hospital, June 30, 1960.

MARRIAGES

Dr. Kervin J. Tompkins, Dominion, (Dalhousie, Class '60) married Miss Mary Shepperd, Halifax at St. Theresa's Church on July 5, 1960. The couple sailed for England, July 7, 1960 where Dr. Tompkins will take post-graduate studies in Obstetrics at the University of Oxford.

COMING MEETINGS

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

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

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

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

DALHOUSIE UNIVERSITY — FACULTY OF MEDICINE

GRADUATES IN MEDICINE 1960

NAME	HOME ADDRESS	PLANS	PRESENT LOCATION
ARCHIBALD, Douglas Ward	Wolfville, N. S.	*G.P.	Queen Charlotte City, B.C.
BACON, Hugh MacRae	Halifax, N. S.	P.G.	29 Shirley St., Halifax, N. S.
BARTEAUX, John Wallace	Kentville, N. S.	G.P.	114 Tacoma Dr., Westphal, Hfx. Co., N. S.
BISTEVINS, Rita	Halifax, N. S.	G.P.	64A Hazelhurst St., Dartmouth, N. S.
BONNELL, John Cranston	Charlottetown, P.E.I.	G.P.	Box 3500, Charlottetown, P.E.I.
BRIDGER, Spencer Moody	Windsor, Nfld.	G.P.	Bay Medical Group, Glace Bay, N. S.
CALLAGHAN, Regis Louis	Halifax, N. S.	P.G.	Oakwood Hospital, Dearborn, Michigan
CARROLL, Norris Cameron	Boiestown, N. B.	G.P.	Boiestown, N. B.
CHURCHILL, Margaret Elizabeth	Hubbards, N. S.	P.G.	Hubbards, N. S.
COGSWELL, David Laverne	Berwick, N. S.	P.G.	St. John's General, St. John's, Nfld.
CURTIS, Arthur Christopher	St. John's, Nfld.	G.P.	Oromocto, N. B.
DANSO-DAPAAH, Joseph E. K.	Bekwai-Asante, Ghana		Ghana
ELMAN, Murray David	Sydney, N. S.	G.P.	Banff Springs Hotel, Alberta
GOLDBERG, Edwin Harris	Glace Bay, N. S.	P.G.	Queen Mary Veterans, Montreal
GROVER, Benjamin Downey	Kentville, R.R. No. 1., N. S.		R.C.A.M.C.
HAWKINS, David G. P.	St. John's, Nfld.	P.G.	St. John's General, Nfld.
HILL, John Donald	Halifax, N. S.	G.P.	Cincinnati General, Ohio
HORRELT, Otto Henry	Dalhousie, N. B.	G.P.	Petite Riviere, N. S.
JOSELSON, Gerald Alan	New York City, N. Y.		U.S. Navy
KANTER, Yale Conrad	Saint John, N. B.	P.G.	119 East King St., St. John, N. B.
KAPLOW, Sheppard	Coner Brook, Nfld.		11 Burke's Rd., Corner Brook, Nfld.
KARPATI, George	Halifax, N. S.	P.G.	Montreal Neurological Institute, Mont.
KEYES, Sean Alphonsus	Halifax, N. S.		Lancaster, N. B.
KING, William L. M.	Bedford, N. S.	G.P.	Weymouth, N. S.
MCCULLY, James A. Y.	Stellarton, N. S.	G.P.	Amherst, N. S.
MACDONALD, Clive Stanley	Summerside, P.E.I.	G.P.	Wolfville, N. S.
MACKAY, Mary Calder	Halifax, N. S.		435 Oxford St., Halifax, N. S.
MCKIGGAN, John James	Halifax, N. S.	P.G.	Victoria General, Halifax, N. S.
MACKINNON, Bernard Leo	Kentville, N. S.	G.P.	New Waterford, N. S.

GRADUATES IN MEDICINE 1960—Continued

MCLEAN, John Douglas	Black's Harbour, N. S.	P.G. Provincial Hosp., Lancaster, N. B.
MACMASTER, Duncan Raymond	New Waterford, N. S.	G.P. New Waterford, N. S.
MACRAE, Emerson Earle	Hunter River, P.E.I.	G.P. Hunter River, P.E.I.
MAHABIR, Ramkhelawan N.	San Fernando, Trinidad	P.G. V.G. Hospital, Halifax, N. S.
MARTIN, Ross Lloyd	Corner Brook, Nfld.	P.G. St. John's Gen. Hosp., Nfld.
MATULONIS, Algis	Providence, R.I.	State Sanatorium, Wallum Lake, R.I., U.S.A.
MILFORD, Donald Murchison	Liverpool, N. S.	G.P. Yarmouth, N. S.
MOORES, William Graham	St. John's, Nfld.	G.P. Neil's Harbour, N. S.
NICHOLSON, Donald Maxwell	Summerside, P.E.I.	P.G. V.G. Hospital, Halifax, N. S.
PATTON, Donald Robert	Montreal, P.Q.	G.P. 180 Portland St., Dartmouth, N. S.
PECKHAM, Gerald Baxter	St. John's, Nfld.	P.G. St. John's Gen. Hosp., Nfld.
SAUNDERS, James Leo	Kensington, P.E.I.	G.P. 257 Pleasant St., Summerside, P.E.I.
SLIPP, Leslie Brundage	Woodstock, N. B.	G.P. Moser's River, N. S.
SOMERVILLE, Josephine H. M.	Glace Bay, N. S.	Bristol, N. B.
SOMERVILLE, Glasier Mitchell	Bristol, N. B.	G.P. Bristol, N. B.
THISTLE, Howard George	St. John's, Nfld.	Camp Hill Hospital, Halifax, N. S.
WALTERS, Brian, H. V.	Gander, Nfld.	G.P. Banff Springs Hotel, Alberta
WONG, Wai Lin	Hong Kong	P.G. 5410 Connecticut Ave., N.W., Wash., D.C.
WONG, Wai Tuen	Hong Kong	P.G. 5410 Connecticut Ave., N.W., Wash., D.C.
YABSLEY, Reginald Herbert	St. John's, Nfld.	P.G. Toronto Gen. Hosp., Toronto, Ontario
YARN, James Cecil	Corner Brook, Nfld.	G.P. Corner Brook, Nfld.

*G.P.—General Practice

P.G.—Post-Graduate Training

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

Diseases	NOVA SCOTIA				CANADA	
	1960		1959		1960	1959
	C	D	C	D	C	C
Brucellosis (Undulant fever) (044)	0	0	0	0	8	16
Diarrhoea of newborn, epidemic (764)	0	0	2	0	3	6
Diphtheria (055)	0	0	0	0	2	2
Dysentery:						
(a) Amoebic (046)	0	0	0	0	0	0
(b) Bacillary (045)	0	0	0	0	166	57
(c) Unspecified (048)	0	0	0	0	26	8
Encephalitis, infectious (082.0)	0	0	1	0	9	7
Food Poisoning:						
(a) Staphylococcus intoxication (049.0)	0	0	0	0	0	0
(b) Salmonella infections (042.1)	0	0	0	0	0	0
(c) Unspecified (049.2)	60	0	0	0	206	35
Hepatitis, infectious (including serum hepatitis) (092, N998.5)	95	0	20	0	355	387
Meningitis, viral or aseptic (080.2, 082.1)						
(a) due to polio virus	0	0	0	0	0	0
(b) due to Coxsackie virus	0	0	0	0	0	0
(c) due to ECHO virus	0	0	0	0	0	0
(d) other and unspecified	0	0	0	0	10	5
Meningococcal infections (057)	0	0	0	0	14	19
Pemphigus neonatorum (Impetigo of the newborn) (766)	0	0	0	0	1	0
Pertussis (Whooping Cough) (056)	7	0	9	0	432	568
Poliomyelitis, paralytic (080.0, 080.1)	0	0	0	0	13	6
Scarlet Fever & Streptococcal Sore Throat (050, 051)	97	0	108	0	1509	2422
Tuberculosis:						
(a) Pulmonary (001, 002)	19	2	23	2	342	546
(b) Other and unspecified (003-019)	12	0	4	0	122	122
Typhoid and Paratyphoid Fever (040,041) (Paratyphoid—1)	0	0	0	0	21	97
Veneral diseases						
(a) Gonorrhoea—						
Ophthalmia neonatorum (033)	0	0	0	0	0	0
All other forms (030-032, 034)	21	0	33	0	1008	1175
(b) Syphilis—						
Acquired—primary (021.0, 021.1)	0	0	0	0	0	0
—secondary (021.2, 021.3)	0	0	0	0	0	0
—latent (028)	1	0	2	0	0	0
—tertiary — cardiovascular (023)	1	0	0	0	0	0
— „ — neurosyphilis (024, 026)	0	0	0	0	0	0
— „ — other (027)	0	0	0	0	0	0
Prenatal—congenital (020)	0	0	0	0	0	0
Other and unspecified (029)	2	0	3	0	118*	204*
(c) Chancroid (036)	0	0	0	0	0	0
(d) Granuloma inguinale (038)	0	0	0	0	0	0
(e) Lymphogranuloma venereum (037)	0	0	0	0	0	0
Rare Diseases:						
Anthrax (062)	0	0	0	0	0	0
Botulism (049.1)	0	0	0	0	0	0
Cholera (043)	0	0	0	0	0	0
Leprosy (060)	0	0	0	0	0	0
Malaria (110-117)	0	0	0	0	0	0
Plague (058)	0	0	0	0	0	0
Pssitacosis & ornithosis (096.2)	0	0	0	0	0	0
Rabies in man (094)	0	0	0	0	0	0
Relapsing fever, louse-borne (071.0)	0	0	0	0	0	0
Rickettsial infections:						
(a) Typhus, louse-borne (100)	0	0	0	0	0	0
(b) Rocky Mountain spotted fever (104 part)	0	0	0	0	0	0
(c) Q-Fever (108 part)	0	0	0	0	0	0
(d) Other & unspecified (101-108)	0	0	0	0	0	0
Smallpox (084)	0	0	0	0	0	0
Tetanus (061)	0	0	0	0	0	0
Trichinosis (128)	11	0	0	0	0	0
Tularaemia (059)	0	0	0	0	0	0
Yellow Fever (091)	0	0	0	0	0	0
N.S.U.	3	0	1	0	0	0

C — Cases

D — Deaths

*Not broken down

REMARKS:

ASSISTANCE TO DIABETICS

The Department of Public Health wishes to announce that plans have now been completed for carrying out a program of assistance to diabetics of the Province whose incomes are \$3600.00 per year or less. The program will begin operating June 1, 1960. This assistance will take the form of:

- (1) Payment for insulin and/or oral medications as may be required by the patient for the control of his or her diabetes as certified by the family physician.
- (2) Payment for urine testing materials used by the patient in the daily control of his or her condition. This will include Clinitest and Acetest tablets only.

Alcohol syringes, etc., will not be included in this program.

It is planned that this program will operate as follows:

All physicians and hospitals will be supplied with application forms. When assistance is required, the patient or near relative or guardian (in case of a child) will complete part one of the application form and the family physician will complete part two. The application form will then be forwarded to the Department of Public Health and upon receipt of this completed form, the Department of Public Health will issue the patient a card stating that he is eligible to receive medications and testing materials free of charge. On presenting this card to the druggist, along with his doctor's prescription, the druggist will be able to supply him with the required materials. All materials will be supplied by prescription only. Of course, a new prescription will not be required every time the patient needs a fresh supply. If the doctor changes his treatment, however, he will be required to write a new prescription and to again complete part two of the application form which will be forwarded to the Department of Public Health. This will not entail much extra work on the part of the doctor since part two of the application form is very short.

When the druggist supplies materials to diabetic patients free of charge, he will record this on a form supplied by the Department of Public Health. At the end of each month, the druggist will forward these forms to the Department of Public Health retaining a carbon copy for his records. At the end of every three months, the Department of Public Health will reimburse the druggist for materials supplied.

It is hoped that the above plan will relieve many diabetic patients of a serious financial burden and at the same time will ensure the doctors that their patients will be able to obtain the medications that they need at all times.

The Department of Public Health solicits the co-operation of all physicians which is so necessary to make this plan a success.