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# *Cancer of the Uterus

H. B. Atlee, M.D., Halifax, N. S.

CANCER strikes the human uterus with a devastating frequency. The records of the Cancer Clinic at the Victoria General Hospital show that, apart from the mouth, it is the organ most frequently affected. Twenty per-cent of all cases admitted to the Clinic are cancer of the uterus.

Because of this fact, and because of the equally important fact that cure depends largely on the earliness with which the condition presents itself, I am going to deal to-day mainly with diagnosis. It is an unfortunate fact that the vast majority of cases of cancer of the uterus come to the Clinic in either a moderately or far advanced stage. This is true not only of carcinoma of the body but of carcinoma of the cervix, but particularly of the latter, since it is a faster growing cancer. If we are to improve out cure-rate, it is absolutely essential that we get the disease in an earlier stage than we now do.

The fault of tardiness lies both with the patient and the doctor. Because a woman is used to seeing blood issue from her vagina, she does not recognize it as a danger signal as readily as she would if it came from any other organ. What is more a considerable group of cases develop their symptoms at about the time of the menopause when women regard irregular bleeding as part of the menopausal syndrome. Some of the fault lies with the doctor. I should say that about 40% of the cancer patients admitted to our service did not have a vaginal examination when the symptoms first presented themselves, but were given some medicinal treatment. A considerable number have not been examined vaginally at all before admission. Furthermore, it is a regrettable fact that we have several cases on our records where (1) a subtotal hysterectomy was done on a woman with cancer of the cervix without this having been recognized prior to operation and (2) a total hysterectomy was done where a diagnosis of carcinoma of the cervix had been made. In this connection I should like to make two observations (A) a subtotal hysterectomy should never be done without a previous speculum examination of the cervix—and why the subtotal operation should be done for any condition I don't know. (B) The death rate for carcinoma of the cervix in which the traditional total hysterectomy is done, is 100%.

The only rational approach to a better cure-rate in these conditions consists in constantly warning women that any irregular or unusual bleeding may be the result of cancer, and in examining thoroughly, or sending to someone who will so examine them, all irregularly bleeding women. I make this statement to my students, and I keep repeating it so that now when I start with the phrase: "Any woman who bleeds irregularly from the cradle to the grave—" they immediately respond in loud unison: "—has cancer of the uterus until you can prove that she hasn't." It is very gratifying to hear that ironical shout, but it would be more gratifying if they carried it with them into practice. I'm sorry to say some of them don't. Despite my constant reiteration of this cancer-theme, there is not a year goes by that I do

*Paper delivered at the Dalhousie Refresher Course, Halifax, N. S., August 31st, 1939.

not get a case of cancer of the uterus from one of my old students who was not examined when she presented herself with her first irregular bleeding.

I think one of the reasons they fall down is because of the teaching that cancer of the uterus is a disease of middle or old age. This is unquestionably true of the common form of cancer of the body, but it is absolutely false about one form of cancer of the body—chorionic cancer, and about cancer of the cervix. Chorionic cancer affects young women in the child-bearing age, but is, of course, a rare disease. Cancer of the cervix, in my experience, is a young woman's disease. The records of my service will show that a large proportion of the women with cancer of the cervix are in their thirties, that some of them are in their twenties, and that on at least one occasion it has occurred in the teens. I have heard several men say: "But she's only thirty-two! I thought she was too young to have cancer!" She is not too young to have cancer *if she is bleeding irregularly.* Whenever an irregularly-bleeding woman presents herself to a doctor, he should reach at once for his vaginal speculum, and he will find that cancer of the cervix is in ninety percent of cases one of the easiest of diseases to diagnose—even without a biopsy.

How does one go about diagnosing cancer of the cervix? Well, first of all, here is the woman bleeding irregularly. On the other hand it may be a woman *who does not say she is bleeding.* She may go to her doctor complaining only of a discharge. She may not even volunteer that sometimes it is bloodstained, or that it stains her clothes brown. I look upon any woman complaining of a discharge that stains her clothes brown just the same as I do on the one complaining of irregular bleeding.

Here's another thing to be on guard against: a woman bleeding irregularly during pregnancy. Usually such bleeding is due either to a threatened abortion, and in the later months abruptio or placenta previa. But last year we had two cases where such irregular bleeding occurring in the later months of pregnancy was due to cancer of the cervix. It is all the more necessary to have this fact firmly in mind since cancer extends much quicker in the rich-blood-supplied organs of the pregnant woman.

I do not think that there is anything else important in the history of the woman apart from bleeding and discharge. If she does have other symptoms it means that the growth is quite far advanced. But with the history of irregular bleeding or brown-staining discharge the next thing is to examine the woman.

I don't think it is enough to examine only with the gloved finger, although a large number of the cases can be diagnosed that way alone. What one may feel with the finger are three things. (1) an excavating ulcer with hard edges the palpation of which leaves blood on the examining finger, the base of which may or may not be mushy. (2) a proliferating, polypoidal growth which is friable and bleeds easily, and, when firm in consistency, may be mistaken for a degenerated fibroid polypus. (3) Nothing may be felt abnormal about the cervix, this being sometimes the case in intracervical carcinoma which has not yet broken through into the vagina.

In making this digital examination you will, in moderately advanced carcinomas, invariably find yourself wrong about the actual location of the lips of the cervix. You will feel something which you take to be the lips of the cervix, but when you come to examine with a speculum, you find that what you took to be cervix was the piled up edge of the growth which has already invaded the vaginal walls. This is a mistake which everyone will

make who depends on digital examination to determine the extent of the growth. What will help you in some cases to overcome this error will be the presence or absence of fixation of the cervix. If what you feel is fixed, it is not cervix but the heaped up edge of the growth. If it is not fixed, but moves freely about the pelvis it is lip of cervix you are feeling.

You get a much better idea of the amount of fixation, or the amount of extension of the growth laterally into the pelvic connective tissue planes by doing a rectal examination. I make a point of always checking my vaginal in these cases with a rectal. It is surprising what a different impression you get sometimes when you do a rectal after a vaginal. In addition to feeling for induration in the connective tissue planes close to the cervix, it is important to examine the lateral walls of the pelvis. If you feel for the spine of the ischium and then palpate the bony pelvic wall just above it, you will frequently feel a glandular cancer mass in moderately advanced and advanced cases.

Abdominal examination does not as a rule yield any information. On only one occasion have I felt per abdomen a gland mass in the region of the external iliac vessels. In far advanced cases, of course, one is sometimes able to feel abdominal secondary masses, particularly when they involve the omentum.

Speculum examination is a much more certain method of diagnosis, and should establish a diagnosis in all but a very few cases. We very rarely find it necessary to do a biopsy because the speculum has failed to reveal sufficient signs. There are three types of cases in which difficulty will be experienced. (1) Suspicious cervices, where the diagnosis lies between an aggravated simple erosion and carcinoma. Occasionally one gets a simple erosion that causes irregular vaginal spotting, particularly after coitus and the passage of a stool. This type bleeds immediately it is touched. If, however, the bleeding surface is scraped with a small sharp curette, one is unable to get away mushy growth and the scraped area feels like gristle. Where there remains any doubt a biopsy should be done immediately. (2) Intracervical carcinoma. Here the speculum may reveal an apparently normal looking cervix, but every woman bleeding irregularly with an apparently normal looking cervix should have the cervical canal explored with a small sharp curette. This requires no anaesthetic and can be done as part of the routine speculum examination. If the curette brings away mushy material, she has carcinoma. (3) A type of fibrous carcinoma where there is very little bleeding, where the cervix feels hard as gristle but one detects no mushy area, and where there is little bleeding on examination. I have found it impossible sometimes to diagnose this type without a biopsy, although when later one examined the cervix under anaesthetic at the time of insertion of the radium, there was no doubt as to the condition.

The polypoidal, exuberant type of carcinoma may sometimes look like a pedunculated fibroid and vice versa, but usually it is so friable and bloody that a diagnosis is clear. In any case it is a very simple matter to tear away a piece of the growth for biopsy.

A word might be said here about such things as the Schiller test, and examination of the cervix with the type of speculum fitted with colposcope. These methods of examination are touted for early suspicious cases. Personally I use neither. The Schiller test will not tell you whether you are dealing with an erosion or a cancer. It will pick up areas of leukoplakia—as

will the magnifying glass—but my contention is that if a cervix looks suspicious, it should be biopsied—and then you know exactly where you stand.

The diagnosis of carcinoma of the body presents the problem of determining the cause of irregular bleeding and discharge in a woman with a normal cervix and cervical canal. In effect she is a woman on whom you have carried out the examination for carcinoma of the cervix and found nothing. What should be done with such a woman?

She is usually at or past the menopause. Particularly she is past the menopause. Carcinoma of the body is definitely, except in the rare chorionic cancer with which I will not deal to-day, a disease of elderly women. A woman past the menopause who begins to have a bloody discharge certainly has carcinoma until you can prove that she hasn't. A woman at the menopause with irregular bleeding should be considered in the same category, although she is not as likely to be cancerous as the woman past the menopause.

The situation that one is confronted with in these cases is as follows: Either at the menopause or afterwards the woman started to bleed irregularly. Your examination reveals no evidence of carcinoma of the cervix. The uterus may feel normal in size or may be slightly enlarged—usually you are unable to detect enlargement. What, I repeat, should be done with such a woman?

My own practice is to perform a vaginal hysterectomy on all such cases. My reasons are these: (1) A vaginal hysterectomy is an operation associated with a very low mortality—I have performed 150 consecutive vaginal hysterectomies with only one death—and that from pneumonia on the 19th day. (2) A diagnostic curettage is confirmatory if it is positive, but if the scrapings do not show carcinoma, you cannot be sure the patient has not got carcinoma. I have seen at least a dozen cases in which such a diagnostic curettage, some of them done by expert gynecologists, failed to remove cancerous material in cases that later were proved by hysterectomy to be cancerous. (3) Of my last 23 cases of women presenting the above picture, 14 had carcinoma, 3 had a small subserous fibroid, and 7 had no definite pathology and were probably endocrinal in origin. I believe that when you are dealing with a situation where it is certain that there is a 50-50 chance of it being carcinoma, and can remove the condition by an operation with a mortality of less than 1%, you do better by your patients than frittering time away with diagnostic curettages.

I do not propose to say much about the treatment of carcinoma of the cervix. In effect it consists of a preliminary course of deep-therapy X-ray treatments and the insertion of radium into the uterus and crater of the growth. The results from an absolute cure standpoint are, of course, disappointing —only about 20% surviving for five years. But what we should not lose sight of is the fact that in the vast majority of the other 80% this treatment causes a considerable amelioration and lengthening of life. As a rule the local condition clears up completely and death is due to glandular extension in the pelvis and abdomen. This type of death is not, as a rule nearly as distressing as when the local condition recurs or is untreated.

The worst symptom is pain. Sometimes this pain is the result of the radiation: if so, it will pass away in from two to six months. Otherwise it is due to nerve involvement in extending growth. I believe it important in the after treatment of cancer cases to keep them as comfortable as possible. There seems to be a phobia in so many medical men's minds about develop-

ing a morphia habit, but surely one who has an extending cancerous growth in whom there is no longer any hope of cure, deserves enough morphia to keep her comfortable—and that means a steadily increasing dose of the drug. But to withhold morphia in such cases is needlessly cruel. I stress this point because I am constantly being rung up or written to by hopeless cancer cases who are not getting enough opiate for their pain. If the pain is very severe an intrathecal injection of absolute alcohol is worth trying in hopeless cases, but it has to be done with great care and there is considerable danger of interfering with the nerve-supply of the bladder with resulting incontinence.

Occasionally radiation causes a vesico-vaginal fistula. This is a very distressing complication and may occur where the local growth afterwards clears up. What I have done in such cases is to turn the upper half of the vagina into the bladder and make a thick bolster of vaginal tissues beneath it. Even where the patient has subsequently died, the increase in comfort was well worth while.

One of the important, indeed vital, factors in the treatment of cancer of the cervix—in fact of all cancers—is the follow-up. It is still an unfortunate fact that, despite notification, patients will not return as frequently as they should for a check-up. What we try to achieve is the return of all cancer patients every three months for the first two years and at least twice a year for the next three. The first return is most important since at that time all cases receive additional X-ray treatment. But unless the patients keep coming back at regular intervals, we are unable to deal with early recurrences. Very often when they do return, it is because they have begun to suffer symptoms—due usually to a hopelessly advanced recurrence. If you have a cancer patient who has not been sent for by the Clinic for more than six months, and who has not yet passed the five-year period, you would be doing her a favor by writing in to the hospital to find out why she has not been sent for.

In conclusion permit me to repeat the Dalhousie Medical School Female Sanguinary Slogan: *Every woman who bleeds irregularly from the cradle to the grave has cancer of the uterus until you have proved she hasn't.*

# *Things to Fight For

## (To Harmonize with the Times)

V. C. MacDonald,

Dean of the Law School, Dalhousie University, Halifax, N. S.

I INTEND to speak to you to-day on the essentials of our democratic system. My speech could be called "The Political Duties of the Citizens of a Free Government"—it could be called "The Axioms of Democracy"—it could be called "Our British Way of Life"—it could even be called "Things to Fight For". However entitled it would remain what it is intended to be, a reminder of some of the rights, privileges and duties which pertain to our British and Canadian citizenship in times of peace. At first blush it takes some hardihood to discuss such things in this mad hour of omens and uncertainties. But surely it is precisely at such a time that we should remember the achievements we have won in peace, when we should remind ourselves of our heritage, when we should appreciate those achievements and cherish that heritage. Fleets, armies and aircraft are but means to protect ideals which our race has built up from the ways of life of generations of ancestors. If we do not live up to those ideals of government, if we do not continue to live according to our traditional way of life, then British democracy will fail within its embattled walls, as surely as if those walls should fall before the assault of a conqueror. As Dr. Sandwell has said: "Liberty has made our country. Let us not fail to guard our heritage of liberty in the mistaken belief that we can be permanently better off or safer or nobler without it." Not less than in times of quiet, but more in times of war, must we preserve *in domestic practice* those fruits of the victories of peace which the poet tells us are more renowned than those of war. Surely it is eternally true, that it is when the human spirit is treading a dark road, that we must seek, as at no other time, to keep the lamps of reason and the torch of internal liberty, trimmed and burning at their brightest. In that belief at all events I proceed to discuss *without reference to war* those things which have produced, and which characterize, the democratic way of life, with which we have been blessed, which other peoples have been denied, and which will be in deadly peril at home as well as abroad if war does strike.

I take as my immediate text the words of my great predecessor Dr. Richard Chapman Weldon—spoken fifty-six years ago. "In our free government we all have political duties, some higher, some humbler, and these duties will be best performed by those who have given them the most thought."

As Weldon said, we live in a free government, in a Parliamentary democracy, wherein a constitutional monarch reigns, but the people rule themselves, by representatives selected by, and ultimately responsible to them. This Canada of ours is a part of the British Empire, or as we now say, a member of the British Commonwealth of Nations. Of the evolution of our status within that Empire I need not speak. But I may recall to you the historic

*Address given before the annual dinner of the Dalhousie Refresher Course at the Lord Nelson Hotel Halifax, N. S., August 29th, 1939.

spirit of the whole of which we are a part, by quoting to you the tribute of General Smuts, himself a representative of a conquered people, in words spoken to the British Parliament, and applicable to Canada: "All the empires that we have known...are founded on the idea of *assimilation*, of trying to force different human material through one mould so as to form one nation. Your whole idea and basis is different...These younger communities, the offspring of the Mother Country—or territories like that of my own people, which have been annexed after various vicissitudes of war—all these you want to develop according to the principles of self-government and freedom and liberty. This is the fundamental fact, that the British Empire, or this British Commonwealth of Nations...stands for a fuller, a richer and a more various life among all the nations that compose it. And even nations that have fought against you, like my own, must feel that they and their interest, their language, their religions, and all their cultural interests are as secure...as those of the children of your own household and your own blood."

We are, then, in Canada a free people governing ourselves without external control. We govern ourselves under a Constitution which itself expresses its purpose as directed to the creation of a federal union "under the Crown of Great Britain with a *constitution similar in principle to that of the United Kingdom*". Our Constitution is underlain by the constitutional usages, political principles and theories and habits of representative and responsible government, whereby the English people have attained to government of the people, by the people and for the people.

A political democracy means a system wherein government is carried on in accordance with the will of the people as to how, and by whom, they shall be governed. Such a system rests on the assumption of the *personal worth* of every individual citizen, and his right to a voice in the management of the State. It is founded on the belief that such a system is the best method of securing the twin objectives of the highest degree of *Personal Freedom* and the most adequate kind of *Social Justice*. We seek to secure these objectives on the theory that the people will best know, how to fashion and administer the laws necessary to give each individual the maximum liberty of expression and action, and the assurance that justice will be meted out to all impartially. This involves the right of all to participate in the work of government—the great principle of *equality* of *citizenship*. Obviously not all can engage *directly* in the management of the country and so has arisen the idea of a *representative government*. If all are to be governed by a few representatives, then all must be entitled to participate in selecting them, and so has arisen the idea of *popular suffrage*, gradually extended so as to take in the whole adult population, without regard to race or creed, birth or rank, riches or poverty.

But unless organized and related to concrete matters the voting at public elections may result in the expression of a mere chaos of personal views. Hence in every democracy appears the *party system* as a vital principle. Together, the political parties focus public opinion upon public issues so that the people in the mass may deliver an intelligible verdict as to the policies by which, and the men by whom, they desire to be governed and represented. The dominant party in the Legislature selects from its members an Executive Committee, or Cabinet, to manage the various departments of government. The Cabinet remains responsible to the elected representatives of the people —including those of opposing Parties—and if it loses their support will be turned out of office.

On the other hand, democratic government implies more than the mere right to vote. Elections after all are mere devices for discovering the public will at a given time. If we are to have government by opinion, each citizen must have the right to express his own opinions, to discuss those of others, to organize with others for the propagation of those opinions he believes to be right. He must be able to think freely, speak freely, dissent from majority views freely, associate freely, and be free to seek to convert the majority. Again we come back to *Personal Freedom* as the very basis of our system. Thus in a recent judgment, the Chief Justice of Canada said, with regard to a statute challenged as curtailing the freedom of the Press: "The B. N. A. Act contemplates a Parliament working under the influence of public opinion and public discussion. There can be no controversy that such institutions *derive their efficacy from the free public discussion of affairs*, from criticism and answer and counter criticism, from attack upon policy and administration and defence and counter-attack; from the freest and fullest analysis and examination from every point of view of political proposals. This is signally true in respect of the discharge by Ministers of the Crown of their responsibility to Parliament, of members of Parliament of their duty to the electors, and by the electors themselves of their responsibilities in the election of their representatives. . . Freedom of discussion means freedom governed by law. Even within its legal limits it is liable to grave abuse; but it is axiomatic that the practice of this right of free public discussion of public affairs, *notwithstanding its incidental mischief*, is the breath of life of parliamentary institutions."

In Canada, as in England, all citizens have freedom of thought, freedom of speech, freedom of association in the form of principles of the ordinary law of the land which defines the limits of permissible freedom so generously as to impose little restraint on the most eager citizen. In addition we have the machinery to make our views effective in directing and controlling our government. These are mere aspects of the principle of *personal liberty* which is part of the texture of our system of government, a disciplined liberty, resting ultimately on the supremacy of the *ordinary law*, and the impartiality of our legal administration.

So much I have said by way of emphasizing the very trite fact that our democracy is a system of popular government representative of, and representative to, public opinion. It is significant tribute to the *dynamic force of public opinion*, freely formed and freely expressed, that though every dictator has directed himself to the suppression of freedom of opinion, and the elimination of any real opportunity to express opposing views, he has invariably insisted upon great *demonstrations* of apparent popular approval. How different in our system which recognised in its legislatures an *Opposition Party*, fundamentally opposed to the government of the day, and which, so far from being repressed as treasonable, is called *His Majesty's Loyal Opposition* and the Leader of which in the Dominion Parliament, at least, is paid the salary of a Cabinet Minister, out of public funds.

Now government by opinion, based on freedom of thought and debate and action, requires a unity of belief in the fundamentals of government and a toleration of dissenting opinions. Lord Balfour has said, "Our whole political machinery presupposes a people so fundamentally at one that *they can safely afford to bicker*; and so sure of their own moderation that they are not dangerously disturbed by the never-ending din of political conflict." And as Jennings

says, a democratic state is one "where criticism of the government is not only permissible but a positive merit, and where parties based on competing policies and interests are not allowed—but encouraged". And as Wickham Steed has said, "freedom to criticize carries with it as a main attribute—toleration of unpalatable opinions, for *intolerance is the one thing we cannot tolerate* if we are to remain free".

Our Parliamentary democracy does secure to the citizen the right to vote, the right to criticize, the right to persuade and convert others, and otherwise to mould public opinion. But *rights* are ineffective if they are not exercised, and of no value if they are not exercised intelligently. Bryce truly says that "among the conditions requisite for the formation of a wise and tolerant public opinion, the intelligence of the people and the amount of interest which the average citizen takes in public affairs, are the most important". For successful democracy does demand that the citizen shall take seriously and intelligently his public duty.

The character of the democracy, and its efficiency as a form of government, must vary with the intellectual character of its citizens, and their capacity for sound judgments. To the extent that the electorate of a Democracy possesses that capacity it will be reflected in the government it selects, to the extent that it lacks that capacity it will have to be content with inefficient government. For it must be admitted, that a people, free to govern itself, gets exactly the kind of government it deserves. Education, then, is of direct and controlling effect upon the public opinion of the democratic nation and, through that opinion, upon the character of the people's government.

Every *right* I have mentioned involves a correlative *duty*. The right to vote is a duty to vote, the right to discuss public affairs is a duty to become informed about them, the right to participate in government is a duty to to participate in it directly, or, more remotely, in the development of public opinion. The burden of ruling rests no more upon those in office than upon the individual citizen. As the Chief Justice of England has said, "the foundation of democracy is the distribution of responsibility throughout the whole body of citizens". Never has this idea been better expressed than by Earl Baldwin when, speaking out of long experience in the practice of popular government, difficult because it requires for its perfect functioning the participation of all the people in the country. It cannot function well, unless everyone, men and women alike, feel their responsibility to their State, do their own duty, and try and choose the men who will do theirs. Freedom can only be maintained by a constant vigilance. A democracy can only be maintained when every man and woman in it, seeks to do everything in their power to make community better and freer." And, as a great Canadian has remarked, all our hopes for the future preservation of democracy rest on the maintenance of freedom of discussion and of the franchise "so hardly won" and "so precariously held". We must realize, therefore, that though participation in government is a right and privilege of every citizen it involves a correlative duty and responsibility. It is our duty to take an interest in all matters effecting the common welfare, and to seek to aid in the solution of our country's problems. It is our responsibility to contribute to the intelligent and wise solution of those problems.

This responsibility can only be discharged fittingly, by those who have given their political duties the most thought, as Weldon said. Moreover,

since parliamentary government "demands prolonged apprenticeship in the art of self-government", its success depends on citizens who have educated themselves for effective citizenship by doing as well as by thinking, by engaging, however humbly, in the actual practice of government. If all so discharge their political duties, we will have brought to the discussion of public matters, and to the ballot box, a public opinion truly educated in, and for, Democracy. We may thus be able to say in years to come, what George the Fifth said in a public message to his people some years ago: "The system bequeathed to us by our ancestors, again modified for the needs of a new age, has been found once more, as of old, the best way to secure government by the people, freedom for the individual, the ordered strength of the State, and the rule of law over governors and governed alike."

# *Post-operative Thrombosis

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POST-OPERATIVE thrombosis is that vascular accident which occurs under certain conditions after various surgical operations. Coagulation of the blood in the vessels and consequent formation of the thrombus may take place in various parts of the venous system. Thus thrombosis may occur in various veins—the axillary, the cavernous sinus, mesenteric plexus, etc., but the most common site is in the iliac and femoral veins following operations in the abdomen and pelvis. The term post-operative thrombosis is usually applied to this condition when it occurs in these regions. Emboli from the thrombosed veins are carried to the lungs and produce pulmonary infarcts, the seriousness of which depends on the size and nature of the embolus. Our remarks will be confined to the thrombosis, found as a complication in the surgery of the abdomen and pelvis.

It is always a serious event, often a tragedy in the progress of a patient towards recovery, and the frequency with which it follows abdominal surgery makes it of great surgical importance. Its seriousness depends on the position of the affected vein. In many cases, if the short or long saphenous veins are involved, the venous circulation of the leg is very little disturbed and a week or ten days of elevation of the limb together with hot packs over the area, will clear it up. Thrombophlebitis of the iliac or femoral veins is a more serious event and there is much more circulatory disturbance. Here there is diffuse congestion of all the superficial veins of the leg, pitting oedema, tenderness along the course of the vein in Scarpa's triangle and the popliteal space. Usually there is a rise of temperature and pulse—the latter, however, is rarely above 102 F.

According to Barker and Counsellor (Mayo clinic), once the signs and symptoms of femoral and iliac thrombophlebitis appear, the larger danger of pulmonary embolism is comparatively small. "In a statistical study of 116 consecutive cases of fatal post-operative embolism, thrombophlebitis of the femoral and iliac veins which could be recognized clinically, was present in only five cases." In one case, the pulmonary embolus appeared the day after the onset of thrombophlebitis. In the other cases, embolism was demonstrated at autopsy actually to have come from a *fresh* thrombus in the iliac vein of the opposite leg in which the thrombosis had been present earlier. Conversely in a series of 54 cases of post-operative thrombosis, fatal pulmonary embolism occurred in three other cases. The danger of pulmonary embolus in clinically recognizable post-operative femoral and iliac thrombosis, therefore usually seems to be dependent on a new process in a different vein.

It has been shown that three factors are involved in the development of a thrombus at any site:

1. Changes in the intima.
2. Physio-chemical changes in the blood by which clotting in the vessel takes place with greater facility than normal.

*Delivered at the Annual Meeting of the Medical Society of Nova Scotia, at "The Pines", Digby, N. S., July 6th, 1939.

3. "Local changes in the rate of flow-changes in the heart cavities or valves due to disease or changes in force and rhythm of the beat, and associated with these changes the endocordium is usually damaged, thus providing two of the necessary factors for clotting. Under these conditions, platelets are precipitated and agglutinated at some point on the endothelial surface of the damaged intima. In the presence of platelets, fibrin may be formed, entangling the red and white cells, and the mass may grow rapidly." (Gordon Murray).

The physio-chemical changes in blood that occur in general systemic diseases (pneumonia, diabetes, syphillis, streptococcal infection, eclampsia, etc.), may account for thrombosis formation in the heart and blood vessels in the presence of other factors i.e. changes in rate of flow (Venous Stasis) and existing damage of intima in the vascular tree.

The above factors are frequently present in pelvic and abdominal operations when thrombi are formed in the femoral and iliac veins. Post-operative thrombosis is not known to follow goitre operations when the factor of venous stasis would not be present.

The time when thrombosis begins is uncertain "but if stasis changes in the composition of the blood, the patient, under an aesthetic with a lowered B.P., in shock, and in a cramped position on the operating table, or in bed, is under ideal conditions" for the beginning of the process.

The embolus may be septic or bland. If septic, abscesses may occur at the site to which the embolus is carried by the circulation. If the embolus is bland, ischemia will result and infarction takes place as in the lung, or if any branch of the arterial tree is completely blocked, gangrene occurs. Pulmonary embolus and consequent infarction are frequent because the embolus which originates in the veins or right auricle will be arrested in the pulmonary artery and branches in its course in the lungs. Post-operative emboli may be: 1. A large mass which blocks the pulmonary artery causing sudden death, after acute respiratory distress, in a few minutes. 2. Medium sized emboli which produce infarction. 3. Small emboli which give rise to symptoms of sudden pain in the side and spitting of blood, but no physical signs.

The accident usually occurs in the second week of convalescence, but may come on the first two or three days after operation. It may occur during the puerperium or is the result of thrombosed varicose veins. Belt, (Toronto General Hospital), in a recent study, has shown that pulmonary emboli are even more frequent than suspected. By careful dissection he was able to demonstrate emboli in 10% of recent autopsies. No other post mortem finding was so easily missed. In at least 60% of the cases examined, emboli were from thrombi in the veins of the leg and pelvis, most of which were unrecognized during life. Coronary, rheumatic or hypertensive origins accounted for the largest group. "It is possible that many of the unexplained aches, pains, sudden rises of temperature, mild lung complications, etc., that occur after operations are due to small emboli, as described above, whose source is undiscovered and a definite diagnosis cannot be made." (Boyd).

**Incidence.**

The frequency with which pulmonary occlusion follows operations, especially in the female pelvis, is apparent from following figures from the Toronto General Hospital. While the incidence of pulmonary embolism is about 1 in 400 operations, yet when minor procedures such as transfusion,

excision of cysts, etc., are eliminated and special groups of more major operations are considered, the figures are different, e.g.

| | | | | | |
|---|---|---|---|---|---|
| Partial and complete gastrectomy | 2.2% | died | of | pulmonary | embolism. |
| Resection of colon | 3 % | " | " | " | " |
| Abdomino-perineal rectal excesion | 6 % | " | " | " | " |
| Fracture of neck of femur | 4.3% | " | " | " | " |
| Prostatectomy | 7 % | " | " | " | " |

Mayo Clinic reports 1.6% in all laparotomy cases, which does not include minor procedures as seen in the Toronto General figures. Boyd says one large clinic reports that 7% of all operative deaths were due to pulmonary occlusion.

Treatment is: (a) preventive and (b) active.

**I. Preventive.**

1. Every effort should be made to prevent or reduce nausea and vomiting in order to keep the abdominal field quiet. The Levine tube should be passed through the nostril whenever vomiting occurs to any degree.

2. Tight abdominal dressing should be eliminated. In these days when Gatch beds are used so much, a firm dressing becomes a tight one in the half sitting position.

3. Dehydration should be treated vigorously. Even in uncomplicated cases, the excessive loss of fluids in the first 48 hours is very great. Therefore, continuous intravenous administration of fluids should be kept up until the patient can take enough by mouth.

4. According to Bancroft (N. Y. Hospital) who has carried out extensive investigations in this condition, the blood should be examined as to its clotting index. If a high index is shown, either pre- or post-operatively, the patient is given a high carbohydrate diet, limiting fats and proteins. This has been shown experimentally to diminish the bleeding factors, while the diet rich in protein and fats causes a marked increase. If bleeding factors are still high, he advises in addition sodium thiosulphate, 10 cc. of 10% solution intravenously for 3 days, repeating after interval of one day. He reports under this treatment as follows: In 1646 cases in 5th Avenue Hospital, N. Y., treated by Bancroft and his associates, there were only 3 fatal accidents from embolism, (one non-fatal, or approximately .02%), and only 6 cases of phlebitis occurred.

German observers and surgeons in a recent report in Archiv. Fur Gynakologie say that in a period from Jan. 1, 1935 to June 30, 1936, not one thrombosed leg or pelvic vessel occurred, and *no* deaths from pulmonary thrombosis in 500 obstetrical operations. These remarkable results were obtained since the principle of raising the foot end of the bed after each operation had been carried out. In 8 years before this procedure, there had been 81 cases of thrombosis of the leg and pelvic vessels in 2463 major pelvic operation (3.3%), and 22 deaths from pulmonary occlusion. With equal consideration there should have been 23 cases of thrombosis and 2 to 7 deaths in the 500 cases treated as above. It is not maintained that raising the foot of the bed after an operation is a safe guarantee in *all* cases against thrombosis and embolism. However, it is undoubtedly of great importance where it has succeeded so effectively in reducing the incidence of the condition. In the above German report over 18 months' period, no essential changes from the procedures of the eight preceding years were made, except raising the foot of the bed; pre-operative

preparations, anaesthesia, operative technique, and post-operative treatment were the same. The foot of the bed was raised ten inches immediately after the operation and kept this way for four days. The position of the patient half way between sitting and lying in half sitting posture as carried out in the Fowler position has been given up entirely. The discomfort which many patients have because of the lower position of the upper part of the body can be relieved by pillows. In any case, blood circulation and breathing give less occasion for worry than before. Conditions of shock disappear more rapidly than when body was in normal position. The favorable influence of the raised position of the lower part of the body is explained by the fact that there is a better circulation obtained thereby in the vessels of the legs and pelvis. It is important that the patient is placed in this position *immediately* after the operation and not hours or days later. By means of this procedure it is apparently possible to prevent the main cause of embolus, i.e., thrombosis and thereby to limit considerably the possibility of fatal emboli. In a recent series of 600 consecutive cases at the Free Hospital for Women, Boston, there were only four pulmonary infarcts and no deaths—less than 1% mortality. Raising the foot of the bed as above for 72 hours was carried out in all cases as the only preventive treatment for post-operative thrombosis.

**Heparin.**

The use of heparin in post-operative thrombosis has been brought prominently to the notice of the medical world in the last two years by the brilliant researches of the Department of Physiology in Toronto, under Best and Murray.

Howell in 1916 isolated from the liver this substance which he named heparin. He found that it possessed marked powers of preventing coagulation of the blood. The Toronto workers developed a purified form which is non-toxic. By their experimental work on animals, they showed that when heparinized previous to the injection of coagulating agents directly into the veins of dogs, it was not possible to produce thrombi. So far it has been used safely in 400 patients in the Toronto General Hospital. The policy pursued there by Murray and McKenzie in the Department of Surgery is to select cases in which hospital statistics show the incidence of post-operative embolism is relatively high. In none has there been any evidence of pulmonary embolus or thrombophlebitis. In the Toronto General Hospital there was a mortality of 2.2% in all operations for stomach resection. Operations on abdominal and pelvic conditions had mortality up to 7.5% for prostatectomy from pulmonary occlusion before the use of heparin. Since then it has been used on 335 consecutive cases in that hospital, pulmonary occlusion or thrombophlebitis have not been observed. It seems therefore that heparin is an important advance in the prevention of post-operative thrombosis, but "it should be thoroughly appreciated that there is as yet no proof that heparin will prevent the formation of a thrombus in the human subject." (D. G. W. Murray). However, the problem is being studied and the use of heparin is at present restricted to clinics where accurate records of the incidence of post-operative thrombosis, with a reasonably constant type of post-operative care, have been kept.

**II. Active.**

Active treatment should be carried out, say for three weeks, and will consist of rest in bed, elevation of limb, heat applied by hot moist packs and

short wave radiation. After the temperature subsides and tenderness over vein has gone, the patient should be allowed up. There is no value, perhaps harm, in keeping him in bed a long time. The possibilities of detachment of a thrombus with subsequent pulmonary infarction or embolism are no greater soon after temperature has subsided and tenderness gone, than after prolonged rest in bed. If and when patient is allowed up, the sole problem is one of support to prevent oedema. The best way to do this is by a rubber bandage, 3 inches by 5 feet, applied over a lisle stocking with two turns about foot, making a figure eight about ankle and up the leg to just below knee, applied tightly but not enough to interfere with the circulation. The bandage is removed at mid-day to allow patient to lie down. One day a month is used as a test period without bandage. Never discard bandage until oedema is gone. This requires 2 or 3 months, sometimes years.

The following case report will illustrate the course of a severe pulmonary thrombosis following thrombophlebitis of the femoral and iliac veins. It will also show what adventures a patient may have and finally recover.

A woman, aet. 48, with a history of a "lump" in abdomen for six years, was operated on November 16, 1939, for fibroid of uterus. A sub-total hysterectomy showed a mass about the size of a football. The operation was not unduly prolonged and no large amount of blood was lost. The anaesthetist noted on the chart at the end of the operation—"fairly good condition, color good, skin warm and perspiring". She had a rise of temperature for the next three days 102°—102°—101°. Pulse rate in same period did not rise above 100. This disturbance subsided on the 4th day, but during the night of the 9th day after operation the abdominal incision ruptured suddenly (after a slight movement of her body in bed), the whole length of the wound gave away, although the intestines were not extruded. The wound was resutured by thro and thro silk worm gut. The patient recovered from the anaesthetic well and returned from the operating room in fairly good condition. There was a moderate rise of temperature and pulse for a few days after the accident.

Next day she complained of pain and soreness under the left knee (popliteal) and the following day (11th after first operation and third after resuture) she had a pain which she called a "knot" in the left leg, with some swelling. She perspired freely, but her general condition was fairly good—T 100, R 20, P 80. On the 15th day after operation and six days after resuture of the incision, she was seized with burning pain in the epigastrium, distress in the chest, and complained of chilly feelings, and the hands and face were cyanosed. T 100.4—Pulse 130-140, R 32. Her general condition was now bad, however, although she survived and gradually improved from the serious situation (pulmonary embolism) and went on to the development of a large pulmonary infarct. The following notes from her record will give the course of her adventures in the *Valley of the Shadow*:

Dec. 12th. Pain in right chest. T 103, R 32, P 120. Coughing with blood tinged mucus.

14th. Chills. T 101, R 28, P 120-140. General condition poor. Lips and nails livid, although face is pale. No breath sounds in right chest. Flat percussion note from level of mid scapula to base.

15th. Aspirated 20 cc. reddish fluid, diagnosis pulmonary infarct. Pulse during distress periods often 140+.

20th. Coughing brought red sputum, more pain in chest and epigastrium. She is apprehensive and in constant dread of more attacks of pain.

31st. Left leg still swollen.

Jan. 5th. T 94.4, R 22, P 104. Feeling better.

10th. Up in chair.

14th. Discharged two months after operation. Left leg still swollen.

This patient after a three-day rise of temperature (max. 102 F) immediately after operation, seemed to be doing well when the abdominal incision ruptured suddenly on the 9th day (as you know, the usual time for this accident to occur). There was no evidence of sepsis at the operation for resuture, as the edges of the incision and the rectus muscle were infiltrated with blood clot and no apparent effort toward healing had taken place. The next day she complained for the first time of pain in the leg (popliteal space) but no swelling was noted at the time. The thrombophlebitis evidently developed after incisional rupture, when insult was added to injury. In this case as you will note, the pulmonary accident (embolism) occurred after the clinical signs and symptoms of femoral thrombophlebitis appeared. This is contrary to the experience at the Mayo Clinic as mentioned at the beginning of the paper.

**Summary:**

I. Post-operative thrombosis has occurred in the past as high as 7% after abdominal and pelvic operations (Toronto General Hospital), but due to changes in prophylactic treatment the incidence has been greatly reduced. (Bancroft, N. Y. Hospital, 1646 operations, 3 fatal pulmonary emboli, 1 non-fatal—.02%.)

II. The condition, we know, is due to:

1. Changes in the vascular intima;
2. Physio-chemical changes in the blood from sepsis, pneumonia, diabetes, etc.;
3. Local changes in the rate of flow, as seen in venous stasis. Predisposing causes are dehydration and trauma from long and difficult operations, or infection.

III. **Treatment**—Important advances in prophylactic care have been made

**Prophylactic.**

1(a). Bancroft, after pre- and post-operative examination of blood clotting time, recommends that those who show a high clotting index should be given a high carbohydrate and fluid diet.

Preoperative Proteins and fats which cause experimentally a marked increase of blood coagulation are withdrawn. If clotting index is still high, he advises, in addition, sodium thiosulphate, 10 cc. 10% intravenously.

(b). Heparin an anti-coagulant has also given remarkable results —no deaths or thrombophlebitis in 335 consecutive cases which have been previously "heparinized".

2(a). Tight binders avoided.

(b). Nausea and vomiting avoided by prompt treatment with Levine tube, etc.

(c). Dehydration avoided by intravenous salines, continuously.

(d). Raising the foot of the patient's bed for 72-96 hours after operation has given remarkably good results, as reported by observers in Germany and Boston Free Hospital for Women. This last simple expedient carried out as routine seems to promise a great improvement in the incidence of post-operative thrombosis. Gatch beds may disappear from Gynecology wards(?).

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# Medical Relief in the Province of Ontario*

T. C. Routley, M.D.,LL.D.,F.R.C.P.(C)

THERE are some things in life that are taken for granted. Throughout the history of the present civilization, it has been taken for granted that members of the healing arts were always willing to give their services without fee and without price to those members of society who were unable to pay for such services. From time to time, statisticians in various parts of the world have attempted to place a monetary value upon such free services, but it is doubtful if any such computations have ever approached anywhere near the mark. Certainly, the medical profession itself has never reduced such services to cold figures but has continued on its way cheerfully serving the poor without any financial compensation.

Readers of the Red Gap stories will recall the interesting personality known as Uncle Egbert. One of his pet expressions, it will be remembered, was "I'll just be pushed so far". The medical profession, in at least certain parts of the world, found themselves in Uncle Egbert's position as year after year of an unprecedented economic depression pressed in upon them, and the number of the poor, or at least those citizens unable to pay for medical services increased to the point where the burden became too heavy for the medical profession to carry by itself. While this became true in many parts of the world, I propose to confine the remarks which follow to one section of Canada, namely, the Province of Ontario. Similar experiences to what will be related have been recounted in other sections of Canada and have been reported upon from time to time through the medical press.

In 1932, the Ontario Government provided by Order-in-Council that certain financial help would be available to the municipalities in the Province for general relief of unemployed persons and their dependents. It was permissible for a municipality to provide medical care for its relief population with a certain portion of the funds so expended being recoverable from the Provincial Government. Very few municipalities, however, took advantage of this provision as they were not willing to spend any part of their own municipal funds for medical services even though the higher authority was prepared to match their dollars, two for one.

In January, 1935, the Ontario Medical Association approached the Provincial Government and strongly urged that a provincial plan be developed whereby medical services to unemployed persons and their dependents would be mandatory upon all municipalities of the Province. After weeks of negotiation, the Provincial Government passed an Order-in-Council which, briefly, was as follows:

1. The Ontario Medical Association was to be made responsible for organizing and administering a plan of unemployment medical relief for the entire Province.
2. The Government would provide to the Association 25 cents per person per month for all persons registered as eligible for relief in the Province.

*An Address Given at the Annual Meeting of the Nova Scotia Division of the Canadian Medical Association, July, 1939.

3. For this sum, the medical profession would render general medical services in the patients' homes and in Doctors' offices, and confinements outside of hospitals.

So far as was known, the plan was without precedent, whereby a Provincial Government entrusted to a Provincial Medical Association the complete administration of medical relief; and it should be interpolated here that at that time the number of relief recipients in the Province was approximately 400,000. The Ontario Medical Association recognized that the sum of money available would no doubt be quite inadequate to cover the cost of services which would be required. At the same time, the Association recognized that here was a golden opportunity for organized medicine to demonstrate its ability to handle a major medical problem without the intervention of a third party.

The Order-in-Council was dated March 1st, 1935. Within thirty days the Association had set up throughout the Province 96 Medical Relief Committees, each committee consisting of from three to seven doctors, a druggist and a Medical Relief Officer; and to each committee was entrusted the responsibility of administering the scheme in the local area.

A Central Medical Relief Board was set up with full authority to administer the scheme. To every registered practising physician in the Province was sent a letter and a contract form. It might be interesting here to recite the regulations as set forth in that letter:

1. The Ontario Medical Association has undertaken the administration of Unemployment Medical Relief in the Province in the full belief that, by so doing, the best interests of the medical profession of Ontario will be served.
2. In every municipality in the Province receiving money in aid from the Government for unemployment relief, medical aid is included.
3. Every qualified physician in the Province who desires to cooperate may do so by signing the necessary contract.
4. Each relief patient may choose his physician.
5. Each physician has the right to choose his patients.
6. Possession by the relief patient of a relief card or voucher (for the month) represents the necessary authority for the doctor to treat that patient.
7. Treatment includes home and office calls and necessary drugs.
8. Whether you dispense or prescribe through a drug store, you are responsible for the cost of the drugs for your patients.
9. For every municipality where medical relief under this plan is operable, there will be a Medical Relief Committee nominated by the Medical Society. On this Committee will be a druggist and the local relief officer, plus three or more doctors.
10. On or before the 5th of the month, the doctor will submit his accounts for the preceding month to the Medical Relief Committee.
11. Accounts will be passed for payment by the Medical Relief Committee on the basis of the Ontario Medical Association minimum tariff, that is $2.00 for an office call; $3.00 for a house call; and $25.00 for a confinement. Any other items to be included must be agreed upon by the Medical Relief Committee in each municipality.

NOTE: Heretofore general relief included the provison of food, fuel, shelter and clothing. Now we have a Government definitely recognizing medical care as an integral part of relief.

12. Accounts, when passed by the Medical Relief Committee will be forwarded (in summary) to the Ontario Medical Association for payment.
13. The Ontario Government has undertaken to provide the Ontario Medical Association each and every month with 25 cents for each person on relief at any time during the month in the municipality. Each municipality is a separate entity for relief purposes.
14. The Association is undertaking to administer the funds on a 4 per cent basis; that is, one cent of each twenty-five cents is deductable for administration.
15. The medical accounts will be paid in this way:

*Illustration*: 4,000 people on relief in the municipality. 4,000 x 24c. makes $960 available for medical aid and drugs for the month. 20 doctors' accounts total $1,200.00.

Therefore, each doctor would be paid 960/1200 or 4/5 of his account.

Where a doctor in this group has incurred drug accounts, the amount of the account owing the druggist (as passed by the Medical Relief Committee and submitted with the accounts for the month) will be deducted and paid direct to the druggist.

To further illustrate:

Doctor A's account for the month is $120.00.
As pro-rated above, according to money available, he would be paid 4/5 of his account which is.....$96.00
But Doctor A incurred drug accounts during the month which were approved for payment in the amount of.....$16.00
Therefore, an Ontario Medical Association cheque would issue to Doctor A for the amount of.....$80.00
And to the druggist or druggists, an amount of $16.00 would be paid, thus closing out the account for that month.

In this manner, all accounts are similarly dealt with and the entire money available for the month in the municipality is allocated. In case of a surplus, that money will be carried forward for that municipality, and is available for the succeeding months' medical aid accounts.

Each doctor signing a contract placed himself in the hands of the Medical Relief Committees and agreed to abide by such rules and regulations as would be set up from time to time by the Committees. The doctor further agreed that, should the Relief Committees not consider him to be playing the game, his name could be removed from the list of doctors entitled to collect accounts in respect to medical relief under the scheme. With further reference to the regulations, it was agreed that, in the unorganized outlying districts of Northern Ontario, the sum of money available would be 50 cents for each relief recipient per month, and that special mileage rates for transportation would be permitted.

Thus in the spring of 1935, there was launched in the Province of Ontario a unique scheme. The medical profession cooperated most heartily and, indeed, one could not be too high in praise of the spirit in which the profession accepted the experiment and demonstrated its willingness to give it a fair trial.

The following points are noted in respect to the first year's operation:

Total sum of money received from the Government, $1,430,075.30.
Average number of persons on relief per month, 387,000.

Amount of doctors' gross accounts as taxed, $2,631,973.24.
Amount paid thereon, $1,190,213.02.
Paid on taxed accounts, 45.221 per cent.
Total number on relief, 4,898,650.
Total number of patients, 589,037.
Morbidity rate, 12.776 per cent.
Total number of doctors' accounts, 30,792.
Average doctors' gross accounts per month, $85.48.
Average amount paid a doctor per month, $38.65.

A resume of the situation at the end of the first year satisfied both the Provincial Government and the Ontario Medical Association that the service was worthy of continuation, although the Association pointed out to the Government that it was quite obvious from the statistics available that the medical profession were being poorly remunerated with an average of 45.221 per cent of their taxed accounts being paid. As the Provincial Government did not see its way clear to increase the emoluments, the same financial arrangements were entered into for the second year.

Comparing the figures with the first year, it is noted that doctors' gross accounts as taxed were $2,286,274.28.

Amount paid thereon, $881,214.03.

Percentage paid, 38.543.

(Note a reduction here from the already low percentage of the first year.)

The total number of patients in respect to the total number on relief increased, presenting a morbidity rate of 14.371 per cent as compared to 12.776 per cent for the preceding year.

At this juncture, the Association made strong representations to the Provincial Government that the per capita rate should be increased. The Government in turn, having carefully reviewed the two years' operation of the scheme, and apparently being quite satisfied with the way it was being handled, agreed to increase the per capita monthly rate from 25 cents to 35 cents, out of which increased sum six cents per person per month was to be set aside as a separate fund to pay for drugs.

For the past two years, the thirty-five cents per capita rate has prevailed, during which time the following statistics have been compiled:

| | |
|---|---|
| 1938—Total number on relief | 2,718,354 |
| Total number of patients | 418,514 |
| Morbidity rate | 15.40 per cent. |
| Percentage of taxed accounts paid the doctors | 51.73 |
| 1939—Total number on relief | 2,851,734 |
| Total number of patients | 457,927 |
| Morbidity rate | 16.18 |
| Percentage of taxed accounts paid the doctors | 49.30 |

The following table covering four years' operation of the schedule is of interest:

| | 1936 | 1937 | 1938 | 1939 |
|---|---|---|---|---|
| No. of patients | 589,037 | 565,894 | 418,514 | 450,927 |
| Morbidity rate | 12.78% | 14.37% | 15.40% | 16.18% |
| Percentage of taxed accounts paid Doctors | 45.221% | 38.543% | *51.73% | 49.30% |

*Note: The increase is due to the thirty-five cents per capita per month rate takng effect this year.

The scheme is now in its fifth year and appears to be working reasonably satisfactorily although the profession still feel, as is borne out by the statistics, that they are being called upon to make a very heavy contribution to the medical care of this large group of citizens, the medical contribution equalling if not exceeding that being provided by the Government; and it will be noted that this is in excess of $1,000,000 per year.

A further examination of the statistics presented will disclose some interesting facts which are worthy of consideration, particularly having in mind the possibility of some form of health insurance being suggested to the profession at some time in the future.

I would like particularly to draw to your attention the morbidity rate which has gone up from 12.78 per cent in the first year to 16.18 per cent in the fourth year. There are no doubt many factors entering into this increase, but the fact does remain that there has been a steady increase. The service being free perhaps is one determining factor. Then, too, the relief population, with the passing of the years, has perhaps seen a lowering in the general health level of the whole group. It must be mentioned, however, that an examination of all health insurance and state medicine schemes shows that the morbidity rate has tended to go up; and, indeed, in every instance known to the writer, is very much higher than was anticipated in the actuarial basis underlying the financial set up of such schemes. This is a fact which should always be kept in mind by our profession when and if the time comes that we have to negotiate for some form of health insurance.

## Conclusions

The medical profession has demonstrated its ability to organize and administer for upwards of 400,000 people a plan of medical care which has been reasonably satisfactory to the medical profession, to the relief recipients, and to the Government, as judged by the fact that the scheme is now in its fifth year. This is a fact of great significance to the medical profession, proving as it does, the ability of the profession to handle a task of this magnitude, without the intervention of a third party.

Morbidity and cost statistics which are now available will be of great value to the profession when and if any form of health insurance is under discussion.

Governmental authority has recognized that medical care is worthy of inclusion in general relief plans.

One would like to pay tribute to the medical profession as a whole for its enthusiastic cooperation, and particularly to that large number of doctors who have been willing to give of their time and thought, working through the many relief committees, in order that the multitudinous detail associated with the scheme might be handled with the greatest of care and expedition. The Medical Relief Committees have not hesitated, in taxing accounts, to cut them wherever they felt that such cutting was justified; and yet one is glad to be able to say that the percentage of practitioners who showed any disposition to pad their accounts or to overcharge, was indeed very small.

# Minutes of the Semi Annual Meeting of the Executive of the Medical Society of Nova Scotia, 1939

THE meeting of the Executive of the Medical Society of Nova Scotia was held at the Dalhousie Public Health Clinic, Halifax, N. S., on Thursday, October 5th, 1939, at 8.15 p.m.

Dr. H. K. MacDonald, of Halifax, presided. The Branch Societies in the Province were represented as follows: Dr. C. F. Messenger and Dr. L. E. Cogswell, Valley Medical Society; Dr. S. G. MacKenzie, Colchester-East Hants Medical Society; Dr. J. S. Munro, Dr. M. G. Tompkins and Dr. J. J. Roy, Cape Breton Medical Society, Dr. P. E. Belliveau, Western Counties Medical Society; Dr. J. S. Brean, Antigonish-Guysboro Medical Society; Dr. J. W. Sutherland, Cumberland Medical Society; Dr. C. E. Kinley, Dr. D. J. MacKenzie, Dr. C. M. Bethune, Dr. H. D. O'Brien, Dr. A. G. MacLeod and Dr. K. M. Grant, Halifax Medical Society; Dr. W. L. Muir, Treasurer, Dr. H. G. Grant, Secretary,and Dr. J. R. Corston,the representative of the Medical Society of Nova Scotia on the Executive of the Canadian Medical Association.

The President called the meeting to order and told the members of the executive that the semi-annual meeting had been called earlier than usual in order to deal with a request from the Canadian Medical Association regarding the registration of physicians in Nova Scotia. The usual routine business would also be dealt with.

The first item to be considered was the annual meeting to be held at Halifax in 1940. It was moved by Dr. D. J. MacKenzie and seconded by Dr. M. G. Tompkins that the annual meeting of the Medical Society of Nova Scotia be held in conjunction with the annual meeting of the Dalhousie Refresher Course, and that the business of the Medical Society of Nova Scotia be carried out in three days. Carried. It was moved by Dr. C. F. Messenger and seconded by Dr. J. S. Munro that the annual dinner be a mixed one. It was decided to have a dance following the dinner, with refreshments suitable to the occasion preceding the dinner; also to hold the annual golf tournament, with the usual letters to pharmaceutical firms for prizes.

Letters of appreciation from Dr. W. R. Dunbar of Truro and Dr. J. J. Cameron on being made honorary members of the Medical Society of Nova Scotia at the annual meeting in Digby were read: also letters of appreciation from Dr. O. R. Stone and Miss Nancy Forrest. A letter from Dr. Thomas Parran, Surgeon General of the United States Public Health Service mentioning the visit of Dr. R. C. Williams to our annual meeting at Digby was next read.

The next item was a letter from Dr. J. J. Heagerty, Ottawa, which was read by the Secretary.

Ottawa, August 2, 1939.

Dr. H. G. Grant,
Secretary,
The Medical Society of Nova Scotia,
Halifax, N. S.

Dear Dr. Grant:

You will recall that the Canadian Broadcasting Corporation was opposed to venereal disease broadcasts and it was only as a result of representations made by a Committee of the Dominion Council of Health to the Broadcasting Corporation that

it was agreed venereal disease broadcasts would be permitted when reviewed by this Department. Without having a copy of Dr. Strong's broadcast it would not be possible for you to obtain a clear picture of the deletions that were made by this Department, and I regret that I haven't a copy I can forward you. However, the words deleted were "brothel", "bawdy house", "prostitute" and "prostitution". It was considered that such words, although suitable for a lecture to an adult audience, should not be used in a broadcast as they would prove embarrassing. There is a great deal of difference between a lecture to adults who attend the lecture of their own free will and the uninvited broadcast which enters the home. The broadcast dealt with prostitution and segregation as practised in some parts of Europe and, in this respect, the Broadcasting Corporation, although approving of broadcasts on venereal disease, did not approve of radio broadcasts on the subject of prostitution, prostitutes, brothels and bawdy houses.

I have noted Dr. Strong's remarks in regard to Vick's Vatranol. Dr. Strong is extremely peeved because deletions were made from his broadcast and he is endeavouring to find some hole in the armour of the Department into which he may thrust a weapon. There is no relation between broadcasts of Vick's Vatranol and the broadcast on venereal disease. In view of this, I do not consider that I should be called upon to reply to his reference to Vick's Vatranol.

I may say that I was very modest in making my deletions in Dr. Strong's broadcast. Frankly, the entire broadcast was most unsuitable. Even though the radio audience was composed exclusively of adults interested in the subject of venereal disease, I would still consider the expressions used unsuitable and the broadcast as a whole could not but have been embarassing to listeners in the home and injurious to children. When I was engaged in the work of venereal disease control and lecturing on the subject, I made many mistakes but in no case did I ever make use of a terminology of such bad taste. I suggested substitute words to Dr. Strong but he was insistent on the use of the words mentioned above. In reviewing broadcasts on venereal disease, I am cognizant of my responsibility and do not go to extremes.

Yours truly,

(Sgd.) J. J. Heagerty, M.D.,
Director,
Public Health Services.

It was decided that no further action need be taken on Dr. Strong's letter of February 27th, 1939.

A letter was then read from Dr. T. C. Routley, General Secretary of the Canadian Medical Association in which he asked for provincial representatives for Standing Committees of the Canadian Medical Association.

The following representatives were nominated:

| | |
|---|---|
| Committee on Archives | Dr. H. L. Scammell. |
| Committee on Cancer | Dr. C. E. Kinley. |
| Committee on Constitution and By-Laws | Dr. J. R. Corston. |
| Committee on Economics | Dr. H. B. Atlee. |
| Committee on Credentials and Ethics | Dr. M. R. Elliott. |
| Committee on Legislation | Dr. J. G. MacDougall. |
| Committee on Maternal Welfare | Dr. C. S. Morton. |
| Committee on Medical Education | Dr. H. G. Grant. |
| Committee on Nutrition | Dr. G. B. Wiswell. |
| Committee on Pharmacy | Dr. J. H. L. Simpson. |
| Post Graduate Committee | Dr. M. G. Tompkins. |
| Committee on Public Health | Dr. P. S. Campbell. |

The Secretary advised that Mr. C. A. Edwards of Toronto, the Canadian representative of the Canadian Medical Association Journal, had been employed on commission to secure advertising for the MEDICAL BULLETIN. Mr. Edwards was recommended by Dr. T. C. Routley.

The following were recommended for senior membership in the Canadian Medical Association; Dr. H. V. Kent of Truro; Dr. L. M. Silver of Halifax; Dr. J. J. Cameron of Antigonish; Dr. C. A. S. McQueen of Amherst, and Dr. A. S. Kendall of Sydney.

It was moved by Dr. J. S. Brean and seconded by Dr. J. W. Sutherland that Dr. J. R. Corston be the representative to the Executive Committee of the Canadian Medical Association. Carried.

Dr. J. R. Corston then spoke on the memorandum from the Executive of the Canadian Medical Association re registration of physicians and the establishment of medical cooperative committees.

The following is a copy of a memorandum received from Dr. T. C. Routley, Secretary of the Canadian Medical Association, dealing with the special activities of the Canadian Medical Association since the outbreak of war.

"On Friday, September 1st, 1939, by means of telegrams to the Honourable the Prime Minister, the Minister of National Defence and the Minister of Pensions and National Health, the Canadian Medical Association offered its services in this time of national emergency, in any manner which would properly come within the Association's scope.

"The Association was invited on September 19th to outline its proposals specifically to the Government. The following two proposals were accordingly set forth:

(a) To prepare a Register of the medical profession of Canada, which Register would embody the following data:

1—Age, marital status, number of dependents.

2—Medical qualifications including military experience.

3—Positions now held—university, hospital, governmental, either whole or part time.

4—Type of military service at home or abroad, whole or part time, which each doctor is willing to perform.

(b) To set up within its organization a national committee with district representation; this committee to cooperate with the governmental authorities in meeting military and civilian needs in order that medical services may be used most advantageously."

At this stage these officials felt they needed a meeting and an emergency meeting of the Executive Committee of the Canadian Medical Association was called by wire on September 19th to meet on September 25th.

"On September 25th, at a full meeting of the Executive Committee held in Ottawa, the Honourable Norman McLeod Rogers, Minister of National Defence, accompanied by some of his staff officers, sat in with the Executive Committee to discuss the proposals. The Honourable Mr. Rogers very frankly stated that he personally appreciated the offer of service on the part of the Canadian Medical Association and that his colleagues in the Government view the proposals similarly. Mr. Rogers suggested two things:

1. That he would take the matter up with the Cabinet Council that afternoon; and

2. That officers of his Department sit in with members of our Executive Committee on the following day to discuss plans in detail.

"On the afternoon of Monday, September 25th—after the Cabinet Council—an official communication from the Government stated that the Government appreciated the offer of the Canadian Medical Association and were taking immediate steps to discuss the plan further, in detail, with the Canadian Medical Association.

"On Tuesday, September 26th, a Committee of the Executive Committee consisting of Doctors T. H. Leggett, Frank S. Patch, Duncan Graham, Leon Gerin-Lajoie and T. C. Routley, met with Major General Ashton and Colonel Linton representing the Department of National Defence, and Dr. R. E. Wodehouse, Deputy Minister of the Department of Pensions and National Health, representing that Department. Growing out of that conference, the following proposals were approved for re-submission to the Governmental Departments concerned:

1. To conduct a survey of the medical profession of Canada as previously outlined.
2. To establish Medical Cooperative Committees, national and provincial, to transmit to the Departments of Government concerned, both central and local, advice based on the information acquired from the questionnaire.
3. To perform any other service of which the Association may be capable, when and if invited to do so.

It was anticipated that the Government would accept our proposals—which in fact they have done—and the Executive Committee after spending many hours in careful discussion of the whole project, unanimously agreed upon the following:

1. That the Executive Committee, representing the nine Provinces, constitute itself as a National Medical Cooperative Committee (N. M. C. C.), to be responsible for the carrying out of all services which the Association might be called upon to render in the present national emergency.
2. That there be established within the N. M. C. C. a smaller central committee (which later adopted as its name, The Canadian Medical Advisory Committee (C. M. A. C.) composed of the following members, Doctors T. H. Leggett (Chairman), Frank S. Patch, Duncan Graham (President-elect), Leon Gerin-Lajoie, and T. C. Routley.
3. That there be established in each province a Divisional Advisory Committee to be nominated by the Provincial Division and to include within its personnel the following:
   (a) The Division's member or members on the Executive Committee, who shall be the contact representatives between the Divisional Advisory Committee and the N. M. C. C. It was also proposed that the Executive Committee members be the contact men with the respective District Medical Officers.

NOTE: This is not to be construed as in any way dictating to the Divisions, but is merely a suggestion from the Executive Committee, after long discussion, having regard to the advisability of a closely knit organization, where the flow of information back and forth may be carried on most expeditiously. There

may be reasons best known to the Division why the Executive Committee member should not be the contact man with the D. M. O., and this must be left to the discretion and interpretation of the Division. In any event, your Provincial representative on the N. M. C. C. must be in full possession of all information within the Province if he is to give adequate representation to the Province on the N. M. C. C.

(b) The representatives previously nominated by this Association to the Department of National Defence. Their names are listed on the accompanying sheet, (Reference No. N. M. C. C. 101).

(c) An official representative of the Department of Health of the Province.

(d) Such other representatives as the Division may desire.

(e) Sub-Committees of the main Advisory Committee if required in a province where more than one Military District is to be found.

"Where Military Districts embrace areas involving two Provinces, the advisory Committees of the respective Provinces will collaborate to avoid overlapping and, at the same time, to provide the necessary cooperation.

"Advisory Committees will report to the C. M. A. C. from which committee they will also receive their instructions. The C. M. A. C. will be in touch with national headquarters who in turn will transmit information and instructions to their advisory medical officers. In this manner, the flow of information and instructions from the periphery to the centre and vice versa, both medical and military, will provide parallel lines of communication.

"It is recommended by the Department of National Defence that one medical representative (with provision for alternate or substitute) be named as the contact man to each D. M. O. If it is found convenient for this one contact man to be, at the same time, the Province's contact man with the Central Committee, namely, the member of the Executive Committee from the Province, it is believed that the transmission of information and the carrying out of all duties will be clarified and expedited. (Reference has been made previously to this suggestion.)

"Divisions will proceed at once to set up their Committees, advising the General Secretary of the personnel.

### Survey by Questionnaire

"It was agreed that the questionnaire survey should be proceeded with at once, and the following plan was adopted:

"That the C. M. A. should provide the questionnaires, envelopes and accompanying letter, and that all this material would be sent to the respective Divisional offices from which it would be sent and to which it would be returned, each Division being responsible for addressing the envelopes and for postage within the Division, both ways. *Immediately* upon receipt of this material, the Division will please proceed to send it out.

"As the questionnaires are returned, the Division is at liberty to compile such information from the returns as it desires, but all questionnaires are then to be dispatched with as little delay as possible to the central office of the Association, 184 College Street, Toronto, where a national compilation will be made.

**Provincial Matters**

"It is recognized that each Provincial Medical Committee (or Committees) will have matters to deal with under instructions of its own Division of the Association. This of course is a matter entirely in the hands of the Divisional authorities, but it is recommended that, as far as possible, all matters which obviously have a national application be dealt with in a national manner, believing that the best interests of the country and the profession will be served thereby. It is believed that no difficulty will arise in the minds of the Divisions as to the line of demarkation between those things which are Provincial and those which are National.

**Notes**

"Questionnaires, envelopes and letters will be shipped on Saturday, September 30th.

"This memorandum has been prepared in great haste. The central office or your representatives on the Executive Committee will be glad to clarify any points which may be raised.

"In further correspondence, please refer to Reference No. N. M. C. C. 100."

Dr. Corston explained that the President of the Canadian Medical Association and the Secretary were making their official visits to the Western Provinces at about the time this matter came up and they told the Western Provinces at their respective annual meetings what the Canadian Medical Association proposed to do, and all the Western Provinces officially approved of it and agreed to take part. The Ontario Medical Association fell in with the scheme and incidentally provided $500.00 expenses for their committee. The Quebec Medical Association had a questionnaire of their own and had sent it out. This being the case, when they took the roll of the Provinces he felt there was nothing for him to do as our representative but to say the Medical Society of Nova Scotia would fall in with the scheme, and endeavor to make the questionnaire a success, and also appoint a Divisional Advisory Committee. He also explained that as the matter was considered urgent the registration cards had already been sent out. As the memorandum was prepared in haste, Dr. Corston offered to clarify any questions dealing with registration or the duties of the Provincial Advisory Committee.

The Secretary stated the object of the meeting was to appoint the Provincial Advisory Committee and endorse the action taken by Dr. Corston.

It was moved by Dr. J. W. Sutherland and seconded by Dr. C. E. Kinley that the action of Dr. J. R. Corston, the representative of the Medical Society of Nova Scotia on the Executive Committee of the Canadian Medical Association committing the Medical Society of Nova Scotia to the carrying out of the questionnaire in the manner indicated and the appointing of a Divisional Advisory Committee be approved. Carried.

Dr. Corston advised that the suggestions were that the Divisional Advisory Committee shall include among other people, the Division's member or members on the Executive Committee of the Canadian Medical Association, (Dr. J. R. Corston), the member of the Advisory Committee to the Department of National Defence, (Dr. K. A. MacKenzie), and a representative of the Department of Public Health, and such other officers as the Executive Committee may desire.

Regarding the personnel of the Advisory Committee the Secretary stated he felt that this Committee should be representative of the whole Province, but at the same time not too large. He suggested two members representing Cape Breton; one representing Cumberland, Pictou, Guysborough and Antigonish; one representing the counties from Hants to Yarmouth, and one along the South Shore.

Dr. C. E. Kinley felt that as the executive changed from year to year the committee should be composed of senior men and also men who had had some overseas service, and that Dr. Grant's suggestion was an excellent one.

Dr. J. R. Corston thought that it would be a wise thing to have wide representation from the Province.

Dr. H. G. Grant suggested there could be a large committee, provided a small executive were appointed to act for the whole committee. He felt each Branch Society should be represented.

Dr. J. R. Corston asked what the Society was in a position to do in respect to paying travelling expenses of the representatives.

Dr. W. L. Muir advised that the semi-annual executive meetings cost the Society somewhere over $230.0 for travelling expenses, and that the Society could not stand much of that.

Dr. J. S. Brean asked what the suggested duties of the committee were.

Dr. J. R. Corston said they would confer with the D. M. O. on matters of policy and personnel with respect to medical services of the Army and public Health matters. As the thing expands and Canada sends a sizable army there will be much work for such a committee to do.

Dr. J. W. Sutherland thought that there would be certain advantages in having representatives from each Branch Society.

It was finally moved by Dr. J. W. Sutherland and seconded by Dr. C. F. Messenger that in addition to the three members of the committee mentioned by Dr. Corston that the committee consist of a representative from each Branch Medical Society, and that they form their own subcommittee. Carried.

It was decided to appoint the personnel of the committee, one member from each Branch Society, and the following were elected.

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|---|---|
| Cumberland | Dr. J. H. L. Simpson. |
| Lunenburg | Dr. H. A. Creighton. |
| Pictou | Dr. A. E. Blackett. |
| Antigonish | Dr. J. S. Brean. |
| Western Counties | Dr. L. M. Morton and Dr. A. B. Campbell. |
| Cape Breton | Dr. W. W. Patton and Dr. L. R. Meech. |
| Colchester-East Hants | Dr. S. G. MacKenzie. |
| Valley | Dr. L. B. W. Braine. |
| Halifax | Dr. W. L. Muir. |

It was moved by Dr. H. G. Grant and seconded by Dr. H. D. O'Brien that Dr. J. R. Corston be appointed chairman of a provisional sub-committee, the other members being Dr. K. A. MacKenzie, the representative of the Health Department, Dr. W. L. Muir, Dr. S. G. MacKenzie of Truro and Dr. H. A. Creighton of Lunenburg. Carried.

Dr. J. R. Corston thought that the Society should ask each President of the Branch Societies to get the profession generally to take the questionnaires

seriously, as the national organization, the Canadian Medical Association, wants this to be a real thing, and they want it to be of some service to the Department of National Defence.

Dr. J. W. Sutherland thought it would be a good idea to send in a list of the delinquents in about ten days to each Branch Secretary asking him to contact them.

It was moved and seconded that the same rate as previously, that is ten cents (10c.), one way, be paid to members attending the executive meeting from outside of Halifax. Carried.

As there was no further business, the meeting adjourned at 11.05 p.m.

# The Nova Scotia Medical Bulletin

Official Organ of The Medical Society of Nova Scotia.

Published on the 20th of each month and mailed to all physicians and hospitals in Nova Scotia. Advertising forms close on the last day of the preceding month. Manuscripts, preferably typed and double-spaced, should be in the hands of the editors on or before the 1st of the month. Subscription Price:—$3.00 per year.





Vol. XVIII. November, 1939 No. 11

SCHEMES for defraying the cost of medical care vary from the humble lodge practice to full blown state medicine. It would be wearisome to even attempt to indicate the special feature peculiar to this or that plan. It would appear that people the world over are seeking a solution to this problem of securing adequate medical service at minimum cost. Tax spending bodies try to get the most for as little as possible for that part of a population for which a governing body feels responsible, be it the county home or H. M. Forces; whilst those of comfortable although limited means tend to group themselves in voluntary organizations prepared to pay more and expecting more in return. The fundamental requirement of all plans, in so far as is feasible, and insisted upon by both patient and doctor, is that of freedom on the part of the patient to select the physician of his choice. Even in this era of the ultra ultra scientific the doctor consciously, the patient intuitively, realize the importance in the curative process of that mental state which we call "faith".

The tax-payer, i.e. the State, has for some years acknowledged and assumed a degree of responsibility for the unemployed and their dependents so far as fuel, shelter and food are concerned, but has taken it for granted that one-tenth of one per cent of the population should look after the medical care of the less fortunate citizens without money and without price and, in addition, pay their share in providing the three other necessities. Why should a physician day after day give not only of his time and skill, but of his substance in the form of fuel and wear and tear on his car and often times provide medicine and appliances, whilst nine hundred and ninety-nine of his fellow citizens believe it is nothing more than he ought to do when carrying on the tradition of the profession to care for the poor?

The burden became so onerous to our colleagues in Ontario that they finally determined to break with tradition and the story of the resulting economic experience is told in this issue of the Bulletin by Dr. T. C. Routley, General Secretary of the Canadian Medical Association.

Medical men are generally looked upon as easy marks, lacking all business sense, their heads always the victims of their hearts. This experiment de-

monstrates that administrative ability lies latent. Men always respond to the stimulus of responsibility. The Province said to the Ontario Medical Association, here is the money, it is yours without strings, administer it in the best interests of those entitled to your aid and with fairness within your membership. The medical men of Ontario are neither better nor worse than ourselves and they executed the plan in a manner so satisfactory to all concerned that an increase per capita for those entitled to this form of relief has already been made.

H. W. S.

# Resolutions Passed by The Canadian Medical Advisory Committee

184 College Street,
Toronto 2, November 8th,
1939.

Doctor H. G. Grant,
Secretary, Nova Scotia Division,
Canadian Medical Association,
Halifax, N. S.

Dear Doctor Grant:

At a meeting held in Toronto on Saturday, November 4th, the Canadian Medical Advisory Committee which is a sub-committee of the National Medical Cooperative Committee set up to advise the Government on affairs medical during the present war,—passed the following resolutions which are being forwarded to the Divisions for information and, where indicated, the appropriate action:

**1—Protection of Positions and Appointments.**

*That*, in the opinion of this Canadian Medical Advisory Committee, every effort should be made to protect official appointments and positions vacated by Doctors enlisting for military service; and that, where such positions have to be filled, it be done on a temporary basis; and that every effort be made, upon the return to civilian life of the officers concerned, to reinstate them in their former positions; and that copies of this resolution be forwarded to each of the nine Divisions with the request that the resolution be publicized in the most effective manner.

**2—Protection of Private Practices.**

*That, whereas* it has been recommended to this Committee that steps should be taken to protect the private practices of Doctors enlisting for military service; and

*Whereas* this Canadian Medical Advisory Committee believes that every legitimate effort should be made to so protect members of the profession who enlist;

*It is recommended* to each of the nine Divisions of the Association that this matter be carefully studied and that appropriate steps be taken in regard thereto.

**3—Membership Fees of Doctors Who Enlist.**

*That*, during the progress of the war in which Canada is now engaged, this Canadian Medical Advisory Committee recommends that the membership in the Canadian Medical Association of Doctors who proceed overseas on active service in the army, in any branch of the service, shall be continued in good standing without the payment of any fee, this to take effect at the expiration of the last calendar year for which the fee has been paid; but that, unless specifically requested by the Doctor so carried, the Journal shall not be sent to such Doctor during the period of his absence from Canada; and that a copy of this resolution be published in the Journal and also sent to each Division.

Yours sincerely,
T. C. ROUTLEY,
General Secretary.

# OBITUARY

## Wallace Norman Rehfuss, M.D. (McGill), F.A.S.C.

PERHAPS no member of the profession had so intimate a knowledge of Wallace Rehfuss as the writer—a friendship which had extended over 25 years, unbroken by a single serious disagreement, and fortified by the fact that for the last 6 years he was a member of the family circle and assisting, so far as health would permit, in the solution of some of the doctor's medical problems.

I am thus in a position to assess my old friend's standing, both as a man and as a practitioner.

He was utterly and devotedly absorbed in his work—a devotion which wore him out before his time, and which was in evidence to almost the last hours of his life.

If, asked to name Wallace Rehfuss' outstanding gift as a practitioner of medicine, I should select his real flair for diagnosis and for *rapid* diagnosis.

Now this is admittedly a dangerous gift; yet one was often surprised at the frequency with which his rapidly moving mental processes would select the essentials from a tangle of signs and symptoms in a case, and reach a result that was later shown to be correct and consistent with the ascertained facts.

His chief leanings were to the surgical side, and he had made himself a sound and careful operator, as a host of grateful patients in his home county can testify. He had the ideal equipment for an *emergency* surgeon—courage, coolness, rapid clear thinking and reasonable speed. Apart from his work his chief interest was in politics. Of this phase others are more competent to write. Politics were in his blood and for many years he was a power in the Conservative party, and wielded great influence in the local organization of Lunenburg County. He was a frequent and forceful speaker on both local and general issues.

This strenuous political life, part of the time as member of the Rhodes Government, together with the effort required to keep up with a large and ever growing practice took its toll in time of even his cast-iron physique.

Another of his great interests was sport in all its forms. Himself a noted college athlete with a physique that few could rival, he kept his keenness for curling, hockey, boxing and other branches up to quite his later days. The necessity, in later years, of restricting his curling was a blow to him, and his enthusiasm and generous financial support will be sadly missed in every local sporting enterprise.

My friend had a striking personality. He was the typical "extrovert", with an enormous zest for life in its many aspects. Whatsoever he found to do, in work or in play, he did it with his might.

A man so virile, dominant and forceful was bound to arouse some antagonisms, as well as to make a host of friends; yet to those who knew him best, there emerged another Rehfuss with a warmth, an open handed generosity, and a strangely boyish naivete that was quite appealing and evoked real affection. This was the facet in his make-up that *held* his friendships.

One had to study him apart from the hurly-burly of politics and the strenuous competition of a large general practice to get the rounded picture—

to see him surrounded by family and friends, putting life and zest into some little party. Then there could be no dulness, for his spirits, his anecdotes and his flow of conversation were inexhaustible.

To a man of Wallace Rehfuss' temperament a prolonged convalescence from the illness which had struck him down (a coronary accident sequential to a severe motor smash about five years before death) would have proven a terrible trial.

He simply could not damp down his urge to be up and doing. So, in a sense, Providence was kind to him, in that he passed away suddenly after the last acute illness had lasted only a fortnight. He almost succeeded, as he had wished, in dying in harness. But he leaves a gap that will be very hard to fill in his native county, where all his active professional life had been spent. A small army of grateful patients remain to mourn him, and to look back on a career of strenuous work in the public service, and a fine devotion to duty. May he rest in peace.

ARTHUR BIRT.

N.B.—The writer joins with the Editors of the BULLETIN and the whole profession of Nova Scotia in sincere and respectful sympathy with his wife and family circle.

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## DR. W. R. MORSE

Dr. William Reginald Morse, well-known medical missionary and writer, and a native of Lawrencetown, died suddenly in Boston on Saturday, after being in poor health for some years.

He had served as a missionary in China for many years, retiring in 1937 because of ill health. Since then he has been engaged at Harvard University in arranging a large amount of material on the anthropology of Chinese in Schegwan.

He made eight anthropological expeditions into the borderland country in and around Tibet. His accumulation of data thus obtained is a large and important contribution to the study of the Chinese and Tibetans.

He was born in Lawrencetown, August 30, 1874. After completing public school work he obtained a teachers' license in 1893 and taught for one year. He graduated from Acadia University in 1897 with honors in chemistry. His medical course was at McGill University and he graduated from there in 1902.

Dr. Morse began practising in Nova Scotia at South Ohio, Yarmouth County, and then after five years, moved to Providence, R.I. After two years practice in that city he went to China as medical missionary with the American Foreign Missionary Society in which service he continued until 1937 when ill health compelled him to retire.

During his life in China he was very active, and among the pioneers who were largely instrumental in the establishment and growth of the medical schools and hospitals in connection with Union University at Chengtu.

He held many appointments dealing with the faculty of medicine of Union University.

Surviving are his wife, formerly Annie Kinney of Yarmouth and one daughter, Marjorie, wife of Dr. Allen Crunden, of Jersey City also two sisters, Dr. Ellen Morse of Detroit, and Mrs. V. D. Shaffner, Lawrencetown and three brothers, Dr. L. R. Morse, of Lawrencetown, Dr. Garnet Morse, British Columbia and Walter at home.

# Department of the Public Health

## PROVINCE OF NOVA SCOTIA

Office—Hollis Street, Halifax, N. S.

MINISTER OF HEALTH - - - - HON. F. R. DAVIS, M.D.,F.A.C.S., Halifax

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| Divisional Medical Health Officer - - - | DR. C. J. W. BECKWITH, D.P.H., Sydney. |
| Divisional Medical Health Officer - - - | DR. J. J. MACRITCHIE, Halifax. |
| Divisional Medical Health Officer - - - | Dr. J. S. Robertson, D. P. H., Yarmouth. |
| Statistician and Epidemiologist - - - | Dr. Harold Robertson, C. P. H., Halifax. |
| Director of Public Health Laboratory - - | DR. D. J. MACKENZIE, Halifax. |
| Pathologist - - - - - - - - - - | DR. R. P. SMITH, Halifax. |
| Psychiatrist - - - - - - - - - - | DR. ELIZA P. BRISON, Halifax. |
| Sanitary Engineer - - - - - - - | R. DONALD MCKAY, B Sc., A.M.E.I.C. |
| Superintendent Nursing Service - - - | MISS M. E. MACKENZIE, Reg. N., Halifax. |

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| DR. T. R. JOHNSON - - - - - - - - - - - - - - | Great Village |

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## MEDICAL HEALTH OFFICERS FOR CITIES, TOWNS AND COUNTIES

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Hall, E. B., Bridgetown.
Braine, L. B. W., Annapolis Royal.
Kelley, H. E., Middleton (Mcpy. & Town).

### ANTIGONISH COUNTY

Cameron, J. J., Antigonish (Mcpy).
MacKinnon, W. F., Antigonish.

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Fraser, R. H., New Waterford.
Francis, Bernard, Sydney Mines.
Sutherland, Harvey, Glace Bay.
McLeod, J. K., Sydney.
O'Neil, F., Sydney (County, South Side).
Murray, R. L., North Sydney.
Townsend, H. J., Louisbourg.
Gouthro, A. C., Little Bras d'Or Bridge, (Co. North Side).

### COLCHESTER COUNTY

Eaton, F. F., Truro.
Havey, H. B., Stewiacke.
Johnston, T. R., Great Village (Mcpy).

### CUMBERLAND COUNTY

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Gilroy, J. R., Oxford.
Hill, F. L., Parrsboro, (Mcpy).
Cochrane, D. M., River Hebert (Joggins)
Withrow, R. R., Springhill.
Stuart, C. E., Parrsboro.

### DIGBY COUNTY

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DuVernet, Edward, Digby.
Rice, F. E., Sandy Cove, (Mcpy).

### GUYSBORO COUNTY

Chisholm, D. N., Port Hawkesbury (Mulgrave).
Sodero, T. C. C., Guysboro (Mcpy).
Moore, E. F., Canso.
Monaghan, T. T., Sherbrooke (St. Mary's Mcpy).

### HALIFAX COUNTY

Morton, A. R., Halifax.
Forrest, W. D., Halifax (Mcpy).
Payzant, H. A., Dartmouth.

### HANTS COUNTY

Bissett, E. E., Windsor.
MacLellan, R. A., Rawdon Gold Mines (East Hants Mcpy).
Reid, A. R., Windsor, (West Hants Mcpy).
Shankel, F. R., Windsor, (Hantsport).

### INVERNESS COUNTY

Chisholm, D. N., Port Hawkesbury.
Grant, T. E., Port Hood.
Proudfoot, J. A., Inverness.
McNeil, A. J., Mabou, (Mcpy).

### KINGS COUNTY

Bishop, B. S., Kentville.
Bethune, R. O., Berwick, (Mcpy).
de Witt, C. E. A., Wolfville.
Moreash, R. A., Berwick.

### LUNENBURG COUNTY

Marcus, S., Bridgewater (Mcpy).
Donkin, C. A., Bridgewater.
Donaldson, G. D., Mahone Bay.
Zinck, R. C., Lunenburg.
Zwicker, D. W. N., Chester, (Chester Mcpy).

### PICTOU COUNTY

Blackett, A. E., New Glasgow.
Chisholm, H. D., Springville, (Mcpy).
Bagnall, P. O., Westville.
Crummey, C. B., Trenton.
Dunn, G. A., Pictou.
Parker, V. H. T., Stellarton.

### QUEENS COUNTY

Ford, T. R., Liverpool.
Smith, J. W., Liverpool, (Mcpy).

### RICHMOND COUNTY

Deveau, G. R., Arichat, (Mcpy).

### SHELBURNE COUNTY

Corbett, J. R., Clark's Harbour.
Fuller, L. O., Shelburne, (Mcpy).
Dinsmore, J. D., Port Clyde, (Barrington Mcpy).
Lockwood, T. C., Lockeport.
Churchill, L. P., Shelburne, (Mcpy).

### VICTORIA COUNTY

MacMillan, C. L., Baddeck, (Mcpy).

### YARMOUTH COUNTY

Hawkins, Z., South Ohio, (Yarmouth Mcpy).
Caldwell, R. M., Yarmouth.
Lebbetter, T. A., Yarmouth, (Wedgeport).
LeBlanc, J. E., West Pubnico, (Argyle Mcpy).

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Those physicians wishing to make use of the free diagnostic services offered by the Public Health Laboratory, will please address material to Dr. D. J. MacKenzie, Public Health Laboratory, Pathological Institute, Morris Street, Halifax. This free service has reference to the examination of such specimens as will assist in the diagnosis and control of communicable diseases: including Kahn test, Widal test, blood culture, cerebro spinal fluid, gonococci and sputa smears, bacteriological examination of pleural fluid, urine and faeces for tubercle or typhoid, water and milk analysis.

In connection with Cancer Control, tumor tissues are examined free. These should be addressed to Dr. R. P. Smith, Pathological Institute, Morris Street, Halifax.

All orders for Vaccines and sera are to be sent to the Department of the Public Health Metropole Building, Halifax.

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**Report on Tissues sectioned and examined at the Provincial Pathological Laboratory, from October 1st., to November 1st., 1939.**

During the month, 267 tissues were sectioned and examined, which with 26 tissues from 6 autopsies, makes a total of 293 tissues for the month.

| | | |
|---|---|---|
| Tumours, simple | 36 | |
| Tumours, malignant | 36 | |
| Tumours, suspicious of malignancy | 1 | |
| Other conditions | 194 | |
| Tissues from 6 autopsies | 26 | |
| | | — 293 |

**Province of Nova Scotia Division of Vital Statistics**

## Provisional Monthly Report—September 1939

| | September 1939 | | | | August, 1939 |
|---|---|---|---|---|---|
| | Total | Male | Female | Rate | Rate |
| No. of live births | 1,056 | 532 | 524 | 23.4 | 20.2 |
| No. of stillbirths | 35 | 20 | 15 | 32.1** | 37.8** |
| No. of deaths | 420 | 232 | 188 | 9.3 | 7.7 |
| No. of deaths under 1 year of age | 59 | 31 | 28 | 55.9* | 44.6* |
| No. of deaths from puerperal causes | 5 | ... | 5 | 4.7* | 4.2* |

| Causes of Death | Int. List No. | September, 1939 | | | | August, 1939 |
|---|---|---|---|---|---|---|
| | | Total | Male | Female | Rate | Rate |
| Typhoid Fever | .... | .. | .. | .. | ..... | ..... |
| Measles | .... | .. | .. | .. | ..... | ..... |
| Scarlet Fever | .... | .. | .. | .. | ..... | ..... |
| Whooping Cough | 9 | 10 | 5 | 5 | 22.2 | 21.5 |
| Diphtheria | .... | .. | .. | .. | ..... | ..... |
| Influenza | 11 | 7 | 4 | 3 | 15.5 | 6.4 |
| Pulmonary Tuberculosis | 23 | 29 | 17 | 12 | 64.4 | 60.2 |
| Other forms of Tuberculosis | 24-32 | 7 | 4 | 3 | 15.5 | 6.4 |
| Cancer and other Malignant tumors | 45-53 | 63 | 29 | 34 | 139.9 | 111.7 |
| Cerebral homorrhage, thrombosis and embolism | 82a, 82b | 7 | 4 | 3 | 15.5 | 25.8 |
| Diseases of the Heart | 90-95 | 80 | 41 | 39 | 177.6 | 122.5 |
| Diseases of the Arteries | 96, 97, 99, 102 | 27 | 16 | 11 | 59.9 | 83.8 |
| Pneumonia (all forms) | 107-109 | 15 | 9 | 6 | 33.3 | 25.8 |
| Diarrhea and Enteritis under 2 yrs. of age | 199 | 10 | 5 | 5 | 9.5* | 6.4* |
| Nephritis | 130-132 | 16 | 9 | 7 | 35.5 | 40.8 |
| Diseases of Early Infancy | 158-161 | 25 | 15 | 10 | 23.7* | 13.8* |
| Accident | 175-195 | 24 | 23 | 1 | 53.3 | 55.9 |

* Rate expressed as number of deaths per 1000 live births.
**Rate expressed as number of stillbirths per 1000 total births.

## Provisional Monthly Report of Births and Deaths September, 1939.

| | BIRTHS | | | | | | | | | DEATHS | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total Births | Live Births | | | | | Still Births | | | Total | All Causes | | Maternal | Under 1 year of Age | Whooping Cough | Influenza | Pulmonary Tbc. | Other forms of Tbc. | Cancer | Cere. hem. Embolism Thrombosis | Heart Disease | Disease of the Arteries | Pneumonia All Forms | Diarrhea under 2 years | Nephritis | Diseases of Infancy | Accident |
| | | Total | Legitimate | | Illegitimate | | Total | | | | M. | F. | | | | | | | | | | | | | | | |
| | | | M. | F. | M. | F. | | M. | F. | | | | | | | | | | | | | | | | | | |
| Nova Scotia | 1091 | 1056 | 499 | 486 | 33 | 38 | 35 | 20 | 15 | 420 | 232 | 188 | 5 | 59 | 10 | 7 | 29 | 7 | 63 | 7 | 80 | 27 | 15 | 10 | 16 | 25 | 24 |
| Annapolis | 25 | 28 | 15 | 12 | 1 | .. | .. | .. | .. | 12 | 8 | 4 | .. | .. | .. | .. | 1 | .. | 1 | .. | 6 | 2 | .. | .. | .. | .. | .. |
| Antigonish | 29 | 28 | 17 | 11 | .. | .. | 1 | 1 | .. | 10 | 5 | 5 | 1 | .. | .. | .. | 4 | .. | 1 | .. | 2 | 1 | 1 | .. | .. | .. | .. |
| Cape Breton | 216 | 208 | 101 | 95 | 8 | 4 | 8 | 5 | 3 | 67 | 39 | 28 | 1 | 10 | 1 | 1 | 5 | .. | 12 | 1 | 14 | 4 | 4 | 4 | 1 | 2 | 4 |
| Colchester | 54 | 53 | 19 | 30 | 2 | 2 | 1 | 1 | .. | 27 | 13 | 14 | .. | 4 | .. | 1 | .. | .. | 2 | .. | 7 | 2 | 2 | .. | 2 | 2 | 2 |
| Cumberland | 76 | 73 | 31 | 33 | 2 | 7 | 3 | 1 | 2 | 31 | 19 | 12 | .. | 2 | .. | .. | 2 | .. | 4 | .. | 9 | 3 | 1 | .. | 4 | 1 | 1 |
| Digby | 32 | 31 | 15 | 15 | .. | 1 | 1 | 1 | .. | 22 | 10 | 12 | .. | 5 | .. | .. | 2 | .. | 3 | .. | 1 | 6 | 1 | 1 | .. | 3 | 1 |
| Guysboro | 40 | 39 | 12 | 24 | 2 | 1 | 1 | .. | 1 | 7 | 2 | 5 | .. | 3 | 1 | 1 | .. | .. | 1 | .. | 1 | .. | .. | .. | 1 | 2 | 1 |
| Halifax | 242 | 230 | 112 | 102 | 7 | 9 | 12 | 6 | 6 | 92 | 47 | 45 | 2 | 16 | 8 | .. | 9 | 2 | 12 | 2 | 11 | 6 | 3 | 2 | 4 | 3 | 4 |
| Hants | 56 | 56 | 29 | 23 | 2 | 2 | .. | .. | .. | 16 | 9 | 7 | .. | 2 | .. | 1 | 1 | .. | 2 | .. | 3 | .. | .. | 2 | 2 | .. | 1 |
| Inverness | 34 | 32 | 14 | 17 | .. | 1 | 2 | 1 | 1 | 19 | 12 | 7 | .. | 4 | .. | 1 | 1 | .. | 2 | .. | 2 | .. | .. | 1 | .. | 3 | 1 |
| Kings | 45 | 45 | 22 | 21 | 1 | 1 | .. | .. | .. | 13 | 8 | 5 | .. | .. | .. | 2 | 1 | 1 | 2 | .. | 2 | .. | .. | .. | .. | .. | 2 |
| Lunenburg | 52 | 52 | 28 | 21 | 1 | 2 | .. | .. | .. | 31 | 15 | 16 | .. | 2 | .. | .. | .. | 1 | 8 | 2 | 8 | 1 | 2 | .. | 2 | 1 | 1 |
| Pictou | 66 | 63 | 29 | 31 | 1 | 2 | 3 | 3 | .. | 42 | 27 | 15 | .. | 9 | .. | .. | .. | 2 | 10 | 1 | 8 | 1 | 1 | .. | .. | 6 | 2 |
| Queens | 21 | 21 | 10 | 10 | 1 | .. | .. | .. | .. | 3 | 1 | 2 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 |
| Richmond | 11 | 11 | 7 | 4 | .. | .. | .. | .. | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. |
| Shelburne | 28 | 28 | 14 | 10 | 2 | 2 | .. | .. | .. | 5 | 2 | 3 | .. | .. | .. | .. | 1 | .. | 2 | .. | 1 | .. | .. | .. | .. | .. | 1 |
| Victoria | 9 | 9 | 3 | 5 | .. | 1 | .. | .. | .. | 3 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Yarmouth | 54 | 49 | 21 | 22 | 3 | 3 | 3 | 1 | 2 | 18 | 11 | 7 | 1 | 1 | .. | .. | 2 | 1 | 1 | .. | 4 | 1 | .. | .. | .. | 1 | 3 |

Note: These figures are based on the Birth and Death certificates received by the Division of Vital Statistics, Halifax, N. S., up to and including October 10, 1939 and represent the number *registered* with the Division Registrars during the month of September, 1939.

# Personal Interest Notes

DR. H. W. Schwartz has been granted the certificate of the American Board of Otolaryngology and was admitted to membership in the American Academy of Ophthalmology and Otolaryngology which met in Chicago early in October. On his way home he attended the meeting of the American College of Surgeons at Philadelphia, and when in New York acquainted himself with the World of Tomorrow. Mrs. Schwartz accompanied her husband.

Dr. Arthur E. Doull, Sr., accompanied by Mrs. Doull attended the meeting of the American College of Surgeons in Philadelphia and subsequently visited their son, Robert, and family in Montreal before returning home early in November.

Dr. C. W. Holland of Halifax received the degree of Fellow of the Royal College of Physicians of Canada at the recent convention held in Ottawa some few days ago.

Dr. and Mrs. H. V. Kent of Truro have returned from a motor trip to Upper Canada and the Eastern States.

Dr. E. M. Curtis of Truro has been taking post graduate work in Boston and New York.

Dr. K. K. Blackadar, surgeon with the Canadian National Steamships, who has been ill in Montreal for several months has returned to Yarmouth. He is convalescing at the home of his parents.

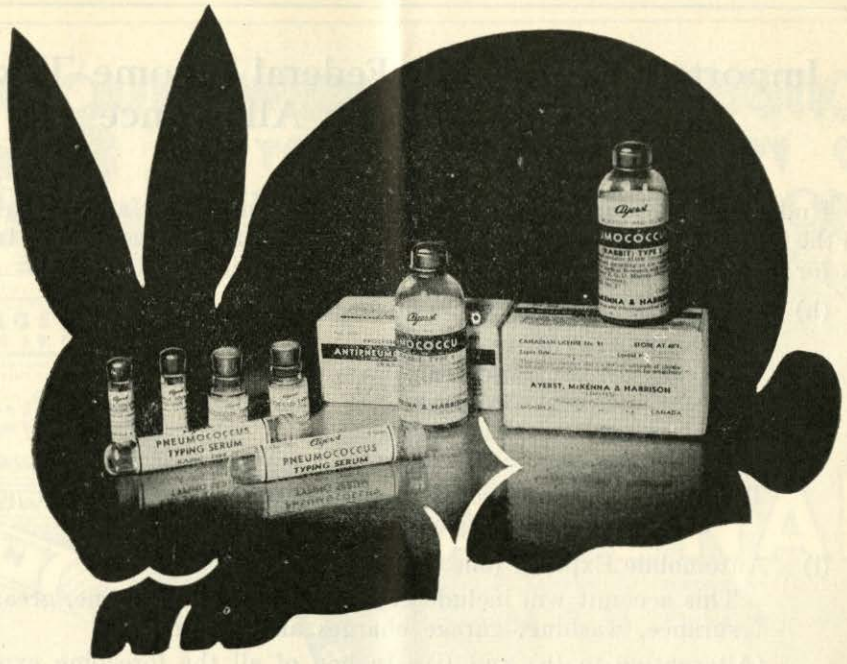
Dr. D. K. Murray of Liverpool, who was in hospital at Halifax suffering from a mild septicemia, has returned home and we believe is making a good convalescence.

The marriage took place of Dr. Peter Darling Crynock, Morgantown, West Virginia, and Louella Wilson, R.N., of Fairmount, West Virginia, in Newman Hall on the campus of West Virginia University on November 4th.

Congratulations to Dr. and Mrs. N. B. Coward on the birth of a son at the Halifax Infirmary October 28th.

The marriage took place on November 4th at Stellarton of Mima Cumming, daughter of Mr. and Mrs. Ira C. Grant. and Dr. Frederick C. Day, New Glasgow, son of Dr. and Mrs. F. B. Day, Thorburn. Dr. and Mrs. Day left on a motor trip to New Brunswick and on their return will reside in New Glasgow.

Dr. E. T. Granville, who is convalescing from his recent illness at the home of his brother at Stellarton, is planning to return to Bedford.




# SEROTHERAPY or CHEMOTHERAPY ?

Finland, Spring, Lowell and Brown*, and others, have shown that, in the treatment of pneumococcal pneumonias, both forms of therapy are essential to ensure optimum results.

In treating a group of elderly patients of a high bacteremic incidence of fifty per cent, they* obtained a mortality rate of only 22% through the combined use of specific sera and sulphapyridine . . . in similar groups treated without specific sera or drugs they had previously found that a fatality rate of between 75% and 90% was to be expected.

Since the reported mortality rate in such groups is usually between 50% and 60% when either specific serum or sulphapyridine is used alone, it can be fairly stated that combined serotherapy and chemotherapy offer the most effective therapeutic approach yet devised for the treatment of pneumococcal pneumonias.

*Finland, M., Spring, W. C., Lowell, F. C., and Brown, J. W.: Ann. Int. Med. **12**:11, 1816 (May) 1939.

Ayerst

**ANTIPNEUMOCOCCUS SERUM (RABBIT)** is available in 25 c.c. vials for Types 1 to 8 and 14. Vials of Type 1 contain 50,000 International Units; vials of other types contain 20,000 International Units.

**PNEUMOCOCCUS TYPING SERUM (RABBIT)** for typing by Neufeld reaction, is available for Types 1 to 8 and 14. Supplied in packages containing five individual capillary tubes and also in 1 c.c. vials.

**NOTE:** All types of Antipneumococcus Sera and Pneumococcus Typing Sera not specified above can be supplied by our laboratory on request.

***Prepared and standardized according to the method developed at the Rockefeller Institute for Medical Research and supplied with the approval and assistance of Professor E. G. D. Murray, Department of Bacteriology and Immunity, McGill University.***

## AYERST, McKENNA & HARRISON LIMITED

**Biological and Pharmaceutical Chemists**

**MONTREAL, CANADA**

# Important Notice Re Federal Income Tax Automobile Mileage Allowance

Under date February 28th, 1933, the Department of National Revenue and the Canadian Medical Association jointly issued a memorandum re Income Tax for medical practitioners, from which the following is extracted:

(h) Depreciation on motor cars on cost:

Twenty per cent. 1st year;
Twenty per cent. 2nd year;
Twenty per cent. 3rd year;
Twenty per cent. 4th year;
Twenty per cent. 5th year;

The allowance is restricted to the car used in professional practice and does not apply to cars for personal use.

(i) Automobile Expense (one car)

This account will include cost of license, oil, gasoline, grease, insurance, washing, garage charges and repairs;

(Alternative to (h) and (i)—In lieu of all the foregoing expenses, including depreciation, there may be allowed a charge of 10 cents a mile for mileage covered in the performance of professional duties.) If chauffeur is employed so that in the result he is substantially used for business purposes (although incidentally used for personal or family use) the expense will be allowed.

In 1936, this 10 cent rate, as set forth above, was reduced to 8 cents.

The Department of National Revenue now advises that, taking effect on January 1st, 1940, the mileage rate allowed will be reduced to 6 cents. Income tax returns made in 1940, relating to the year 1939, may be shown at the rate of 8 cents.

Please give this matter the widest possible publicity in your Division.

# PHYSICIAN WANTED

The secretary has received a letter from Father Ronald McLellan of the village of Lampman, which is in the south east corner of Saskatchewan, pointing out the need of a physician in that district. Further information may be obtained at this office.

### Golf and Infant Feeding

It is possible to play over the entire course with a single club and bring in a fair score. But playing with only one club is a handicap The best scores are made when the player carefully studies each shot, determining in advance how he is going to make it, then selects from his bag the particular club best adapted to execute that shot.

For many years, Mead Johnson & Company have offered "matched clubs", so to speak, best adapted to meet the individual requirements of the individual baby.

We believe this a more intelligent and helpful service than to attempt to make one "baby food" to which the baby must be adapted.

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### Whooping Cough Vaccination Reduces Number and Severity of Cases

Vaccination against whooping cough received a good rating in a report by Dr. Pearl Kendrick, of the Michigan State Department of Health, and Dr. Anthony K. Borowski, of Mount Clemens, Mich., made to the American Public Health Association. The number of cases that developed in 1,815 vaccinated children was 52, whereas there were 348 cases among 2,397 unvaccinated children. The vaccinated children that developed whooping cough had less severe attacks than those who were unvaccinated.—From *The Diplomate*, March, 1939.

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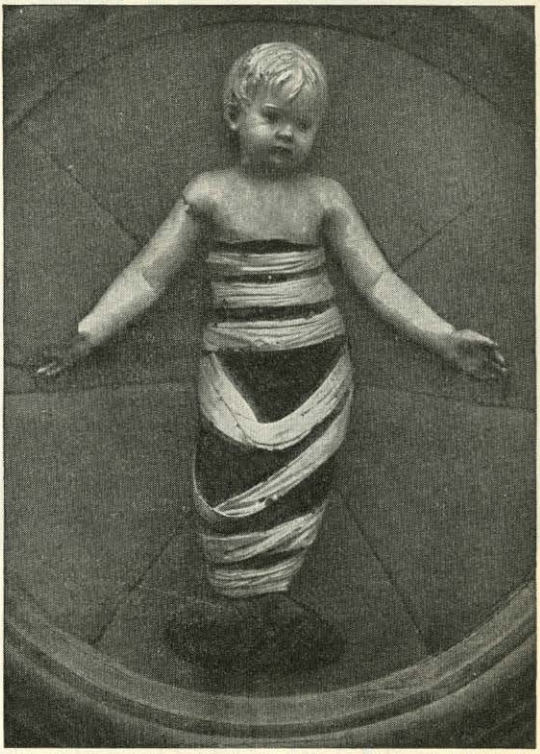
# STRAPPED FOR RICKETS



*A bambino from the Foundling Hospital, Florence, Italy,—A. della Robbia*

The swaddled infant pictured at right is one of the famous works in terra cotta exquisitely modeled by the fifteenth century Italian sculptor, Andrea della Robbia. In that day infants were bandaged from birth to preserve the symmetry of their bodies, but still the gibbous spine and distorted limbs of severe rickets often made their appearance.

SWADDLING was practised down through the centuries, from Biblical times to Glisson's day, in the vain hope that it would prevent the deformities of rickets. Even in sunny Italy swaddling was a prevailing custom, recommended by that early pediatrician, Soranus of Ephesus, who discoursed on "Why the Majority of Roman Children are Distorted."

"This is observed to happen more in the neighborhood of Rome than in other places," he wrote. "If no one oversees the infant's movements, his limbs do in the generality of cases become twisted. . . . Hence, when he first begins to sit he must be propped by swathings of bandages. . . ." Hundreds of years later swaddling was still prevalent in Italy, as attested by the sculptures of the della Robbias and their contemporaries. For infants who were strong Glisson suggested placing "Leaden Shooes" on their feet and suspending them with swaddling bands in mid-air.

How amazed the ancients would have been to know that bones can be helped to grow straight simply by internal administration of a few drops of Oleum Percomorphum. What to them would have been a miracle has become a commonplace of science. Because it can be administered in drop dosage, Oleum Percomorphum is especially suitable for young and premature infants, who are most susceptible to rickets. Its vitamins A and D derived from natural sources, this product has 100 times the potency of cod liver oil.* Important also to your patients, Oleum Percomorphum is an economical antiricketic.

**Oleum Percomorphum offers not less than 60,000 vitamin A units and 8,500 vitamin D (International) units per gram. Supplied in 10 and 50 c.c. bottles, also in boxes of 25 and 100 ten-drop soluble gelatin capsules containing not less than 13,300 vitamin A units and 1,850 vitamin D units (equal to more than 5 teaspoonfuls of cod liver oil*).**

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Please enclose professional card when requesting samples of Mead Johnson products to cooperate in preventing their reaching unauthorized persons.