The Canadian Army Speeds Up

C.A.M.C. USING MODERN METHODS

Mechanized units are the order of the day. It is only logical that they should speed up in every department of the army. The Canadian Army Medical Corps have now adopted Scabanca in the treatment of scabies. The modern army of Canada naturally swings to the "Modern Treatment of Scabies"—Scabanca. The 45 minute ambulatory scabies lotion. Weeks of time are saved, and hospital beds are now available, which, in the last Great War contained sufferers of scabies. Anglo-Canadian Drugs are grateful that they should be, in this small way, instrumental in thus accelerating the battle against Hitlerism.

CONTENTS

Mind and War

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THE term "Mind" connotes much more than the activity of the brain. So blended are the emotions and temperament with the reactions of the physical body, through the sympathetic nervous system and the endocrine glands, that any experience of the former is reflected in the latter. E.G. the emotion of Fear may result in raised blood-pressure and accelerated heart-action. "Mind" includes the adjustment processes of the whole personality, and it is being noted that an integral part of several diseases formerly considered as purely physical is located in the mind of the patient, requiring treatment as well as the physical symptoms.

During the last war, psychiatric casualties were responsible for 1/7 of all discharged as unfit in the British Army, and there were many examples to prove that purely psychological factors can produce mental illness.[1] At first, functional mental disability was erroneously believed due to "Shell-Shock", that is due to air-concussion or direct injury. This was an natural error, since it is very difficult to discriminate between actual neurological effects, and superimposed neurotic reactions, also, the degree of trauma is no index of the amount of neurological injury.

Under this term were collected not only actual cases of concussion, but forms of hysteria, anxiety states, psychoses, and malingering, until the term fell into such disrepute that its use has been discontinued. Six thousand cases of "Shell-Shock" were admitted annually to British hospitals during the war, and statistics of Canadian casualties show that nervous and mental diseases contributed 10% of the total disabled, this including psychoses, psychoneuroses, and mental defectives. In the United States Army, of 1917-18,[2] 3,500,000 conscript recruits underwent neuropsychiatric examination, and 70,000 (or 20 per thousand) were found to have mental disability. Of these, the largest groups numerically were—Mental Deficiency, 31.5%, Psychoneuroses 16.5%, Psychoses 11.4%. These high percentages occurred largely because the drafts included frequently the worst type of psychopathic individuals, yet, (and here is a point of interest to us now) the percentages tended to be even higher in the volunteer corps. The explanation suggested is that many men sought solution of pressing personal problems, emotional conflicts, etc. by voluntary enlistment, and failed.

The psychoneuroses, while not always clearly distinguished from the various forms of insanity, or psychoses, are forms of functional mental illness in which there is no outward change of the personality, reality is not changed to the patient, language is not disturbed, and the actions never descend to the primitive level of the psychotic. In the terminology of Meyer, who classifies the different types of insanity as different types of "reactions", it is a "part reaction" rather than a "whole reaction."

Clinically, a psychoneurosis may imply: 1. Some bodily disturbance without structural lesion, or 2. A mental disturbance not the result of any bodily

disease, usually taking the form of morbid fears or persistent ideas. The bodily changes may be motor, therefore observable, and appear as paralysis, tics, tremors, postural deformities, anomilies of gait, and visceral disturbances such as vomiting, diarrhoea, polyuria. Also, the changes may be sensory, therefore subjective, appearing as anaesthesias, hypereasthia, pains, headaches, palpation, breathlessness, etc., but no less real to the patient. Purely mental disturbances may also be present, such as fears of all kinds, troublesome thoughts, or acts which the patient feels compelled to do.

Different schools have classified the psychoneuroses in various ways, but a convenient clinical grouping includes under this heading:

Neurasthenia. Anxiety States. Hysteria. Obsessive-Compulsive Psychoneuroses.

During war, workers found that they had to be continually on the alert for malingerers, and physical fatigue was commonly a complicating factor.

The last war provided many examples to prove that symptoms such as paralysis, tremor, delerium, disordered action of the heart, could have a purely psychical rather than organic origin. Recovery was often sudden and could often be brought about by persuasion or suggestion. Figures furnished by Ireland illustrate this dramatically. He reports 2,500 "Shell-Shock" cases from the U. S. Army who were awaiting transportation to the States from France, when the Armistice was signed. Within two days, 2,100 had recovered.

In the psychoses, the types occuring in the war did not differ from those in peace, and the causative factors were similiar. Traumatic psychoses, due to brain injury, were the exception, and the functional psychoses (manic-depressive and dementia praecox) usually appeared in personalities who would probably sooner or later have become ill in civil life. No doubt the war sometimes precipitated a psychosis which would otherwise not have been suspected. Sometimes more care should have been taken to prevent a man with a psychopathic predisposition from enlisting. Even if they recovered, the policy of returning them to the front was found to be a failure.

As indicated by the popular term, "War of Nerves" this war will probably result in severe mental strain for soldiers and civilians alike, and psychiatric casualties are to be expected. They will result from more simple and obvious factors than those operating in time of peace, and involve failure to adapt to military conditions at any time from enlistment to actual fighting. The recruit first solves a conflict between domestic ties, social obligations, and self-interest. He must then adjust himself to his comrades and a different mode of life, and on arrival at the front his self-preservative tendencies conflict with his idea of duty, loyalty, and his valuation of the respect of his fellows. For civilians coming under fire in the war zones, the problem is even greater. They have not the sustaining regimental morale, nor the opportunity of fighting back, and forgetting fear by converting it to fury.

It appears that the Canadian civilian has little cause to fear that this country will become a war zone, yet our lot is bound up so inextricably with that of the British that their concern over the possibility devastating effects of civilian bombardment must become ours.

The best experimental evidence available, on which to base an estimate of the effects of bombardment on the minds of the besieged, seems to be the reports of Emilio Mira,[3] formerly professor of Psychiatry at the University of Barcelona, later Psychiatric Inspector to the Spanish Republican Army. His

findings are encouraging. He states that Spanish civilians quickly adjusted themselves to air-raids, and fewer were killed in this way than in street accidents. Although there were air-raid shelters for only 10% of the population, these were never crowded. Many persisted in going out into the street to see the fighting, and others took only the precaution of keeping away from windows. He reports that far more important psychologically than bombardment was the ever increasing hunger, and the fear of economic ruin because of the falling value of Republican money. The most timid and sensitive left for the country, and those remaining confessed to no more than a "normal anxiety". A few hysterics were found wandering around in a stupor but the rarest of all forms of injury was actual damage to the brain, or concussion.

At the time of enlistment, any of these Spanish soldiers who reported psychoneurotic symptoms were referred to a psychiatrist, who sorted the worst cases into non-combatant services. Mira believes this step was more important than anything that was done for the treatment of psychiatric casualties. Soldiers who showed abnormal anxiety, or other symptoms, were withdrawn to a safe distance behind the front, and in a special hospital, a routine lumbar puncture was first done, to rule out increased intracranial pressure, haemorrhage, etc. For the first half-hour, a special nurse employed reassurance ("lie quietly"—"breath deeply") and sedation was then given to the point of light narcosis, although not sufficient to prevent them swallowing fluids. Average recovery time was 7 days, resistent cases being followed up by occupational therapy. He believes that more elaborate therapy does more harm than good, and on return to the front there were few relapses. He believes that beds for psychiatric cases will always be filled, because the supply creates the demand, and a man's companions were quick to notice if he did not return, with a resultant increase in the number of cases. Mira's suggestion for prophylaxis is interesting—"The best antidote to war neurosis is a campaign of political information to inspire devotion to the subject for which the war is being fought."

The Lancet, of July 15th, 1939, reports a conference at which the problem of psychoneurosis in the Services was discussed by various people, indicating that those responsible are aware of the importance of the situation, and are preparing to combat it.

Surgeon Vice-Admiral Nicholls speaking for the Royal Navy, stated that psychoneuroses among sailors were about half as frequent as among soldiers, but that most cases that did occur were lost to the Service. He predicts that in this war the problem will be greater, because of insecurity from air-raids, even in harbour, and because of added worry concerning relatives. Major-General Priest said that the Army had begun to apply the suggestions of Prof. Mira, and a movement to decide where a man shall serve, on the basis of his past history, is underway. He plans to have officers receive some training in mental disorders, and believes that if they receive advance notice, mental cases can be returned to the front more rapidly. Good and regular feeding should act as a prophylactic.

The statements of Group-Captain Burton indicate that in the Royal Air Force, the situation is good. Although nervous and mental disease is the commonest cause of invaliding in that Service, they number only 2.1 per thousand. Unsuitable men are weeded out early in their training, and those dismissed because of temperamental defects account for 80% of the total. He finds that there is another group who pass the preliminary tests successfully,

and who have a commendable flying career of some length, but who break down through lack of confidence following some accident or private trouble. Nearly all these men are lost to the Service. Medical Officers receive a short course in pyschiatry, and are encouraged to watch for signs of mental stress, to discuss the mens troubles with them, and to offer advice.

In Canada, the National Committee for Mental Hygiene began on Sept. 15 to collect information, in collaboration with the Dept., of National Defence, and other Governmental agencies, designed to strengthen arrangements for caring for the mental health of the military forces and civilian population. They have prepared a complete index of psychiatrists, neurologists, and nurses with training in the care of mental cases, and are prepared to cooperate in the provision for military needs.

With the Canadian Army is the No. 1 Neurological Hospital, staffed with neurologists, neurosurgeons, and psychiatrists, to the total of 14, with 21 nurses, who will care for cases of mental illness exclusively. In this important work, the needs of the present are well provided for, and provisions for expansion exist to care for the needs of the future.

Since last September, there have been several civilian cases admitted to the Nova Scotia Hospital whose past histories indicate that worry and agitation over the war had been a precipitating factor in their psychoses. This is to be expected as there are always psychoses in the making, and almost every event of great general interest may be sufficient to complete the break-down. (Even the Royal Visit had its quota).

We have had seven cases admitted from the Services, of which three were cases of dementia praecox, and four manic depressive psychoses. Two were from the Royal Navy, and were returned to England as soon as they had recovered sufficiently to travel. One is in the Canadian Navy, one the Merchantile Marine, two in the Canadian Air Force, and only one from the Army. We believe that four (the cases of manic depressive psychoses) will recover from the present attacks, but may not be fit for further military service. In the three cases of dementia praecox, the prognosis appears poor, although we hope that some improvement will result from insulin therapy.

REFERENCES

1. Henderson and Gillespie: "Text Book of Psychiatry". Ox. Med. Publications.
2. The Medical Department of the U. S. Army in the World War. Vol. 10, Neuropsychiatry, 1929.
3. Mira—Emilio. "Psychiatric Experience in the Spanish War". British Medical Journal, June 17, 1939.

Treatment of General Paresis at the Nova Scotia Hospital

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(The following is a summary of a paper read before the Halifax Medical Society at a recent meeting).

IN the following paper I shall attempt to give you a synopsis of cases of general paresis treated in the Nova Scotia Hospital during the years 1929-1939 both included.

The attached chart shows that during this period ninety-six cases in all have been admitted, seventy-five men and twenty-one women. It also shows the final results of these cases and so you will be able to judge how the outlook for these, at one time hopeless cases, has improved until now we are able to hold out fairly good hope of recovery. You will see how in the early years of the decade the recovery rate was practically negligible and the death rate very high.

During 1929 the injection of malaria blood was first used here. The recovery that year was a man treated with it and this was our first ray of hope.

In 1930 malaria treatment was again used but as you can see the results were poor. Of the four deaths two were well advanced cases.

In 1931 one case was treated with malaria but did not improve and died later. At this time malarial blood was hard to get. It had to be brought from Montreal in the pocket of a railway conductor. We were not always sure that it was virulent when it reached us and we did not have a sufficient number of cases to keep the strain alive. We also found that in cases where it did react it ran out after a time. With this difficulty and the number of well advanced cases admitted only selected ones were treated.

In 1932 malaria was again used but the results were unsatisfactory.

In 1933 five cases were treated with malaria, of these three recovered and one case recovered with tryparsamide alone—seventy-five injections.

In 1934—typhoid vaccine therapy began to be used and our first recovery was a woman who went home early in 1935 and is still doing well.

In 1935 we used malarial blood but the results that year were poor. Two cases died after treatment and others did not improve. This year six had malaria, three typhoid and two were so far advanced that they only lived a short time. In May 1935 our last case was treated with malaria.

From 1936 on we have used typhoid in all cases except those who were so far advanced that their physical condition would not stand it. Of the total of ninety-six cases admitted here during this period only five cases have been readmitted and two of these have since improved. Since 1936, as the chart shows, the percentage of recoveries has increased while the death rate and the unimproved rate have declined. During the past three years the average recovery rate has been well over fifty per cent of the admission while the death rate has dropped to five per cent.

During 1939—our recovery rate averaged sixty-three per cent of admission and at the time of writing two women have only completed treatment a short time ago so could only be reported as improved.

With typhoid treatment we are able to control the reaction, to give the patient a rest of a few days between if necessary and to produce very high temperatures for several hours at a time. A temperature above 104 and preferably 105 or higher for three or four hours at each treatment is the one of choice.

In many cases the spinal fluid is still positive and the paretic curve present but the mental and physical symptoms have cleared up and the patient is able to carry on as a normal citizen again. In all cases the patient requires follow-up treatment of tryparsamide for a period of time.

With this chart in front of you, you can see what an advance has been made in the treatment of a disease of which a few years ago the only prognosis we could give relatives was that the patient could not possibly recover and would only live two years at the most.

	Admitted			Recovered			Improved			Unimproved			Dead		
	M	W	T	M	W	T	M	W	T	M	W	T	M	W	T
1929.....	7	1	8	1	0	1	2	0	2	1	0	1	3	1	4
1930.....	7	2	9	0	0	0	0	0	0	3	1	4	4	1	5
1931.....	9	1	10	0	0	0	0	1	1	1	0	1	8	0	8
1932.....	3	0	3	0	0	0	0	0	0	2	0	2	1	0	1
1933.....	9	0	9	4	0	4	1	0	1	2	0	2	2	0	2
1934.....	3	2	5	0	1	1	1	0	1	2	0	2	0	1	1
1935.....	7	4	11	2	1	3	1	0	1	1	0	1	3	3	6
1936.....	5	0	5	1	0	1	0	0	0	0	0	0	4	0	4
1937.....	4	5	9	2	3	5	1	2	3	0	0	0	1	0	1
1938.....	13	3	16	7	0	7	6	1	7	0	1	1	0	1	1
1939.....	6	5	11	5	2	7	1	2	3	0	1	1	0	0	0
Total.....	75	21	96	22	7	29	13	6	19	12	3	15	26	7	33
Percentage....	....	...	....	29.3	33.3	30.2	17.3	28.5	19.8	16	14.2	15.6	34.6	33.3	34.3

1939.....83.3 40/63.6

DISCUSSION

Dr. Corston asked if he understood correctly that seventy-five tryparsamide treatments had been given—also he asked for an explanation of the method of treatment.

Dr. Hopgood: The statement seventy-five was correct. Each patient's eyes are examined before treatment and they are watched carefully. As treatment—Typhoid Combined Vaccine (Lederles is used). Dosage begins with 10,000,000 units—increased according to the patient's reaction. Each case takes a different dosage and you have to learn that as you go along. Some cases get good reactions from small doses while others require very large ones, as much as 5000,000,000. We have found that divided doses are best, starting at 8.30 or 9.00 in the morning and two hours later repeating the dose. This is done every second day for twelve or fourteen treatments. The temperature is easily controlled. The patient has a light breakfast and is not given any liquids during treatment.

Dr. MacKay explained that the dose of tryparsamide given is only 1 gram at a time. He also drew attention to the greater value attached to mental and physical improvement in the patient's condition rather than to the results of serological examination.

Dr. MacKenzie spoke of the questionable value of serological findings in view of the fact that one may get a colloidal curve when the case is not paretic.

Dr. MacKay said that cases admitted are certified and all show neurological and mental symptoms of paresis. The curve is simply a confirmation. If the patient recovers the report of the curve matters very little.

Dr. Campbell asked if there was any reason for 1938 being the highest admission year. No explanation could be given for this.

Several others spoke of the great improvement noted in recent years following treatment.

Results of Insulin Therapy in Dementia Praecox*

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IN previous articles and papers on Insulin Therapy I have given the technique of its use in detail. We have been using Insulin for over two years, and although we have occasionally digressed slightly from the regular routine in order to experiment, the technique which we employ to-day is essentially the same as that we started with over two years ago.

Theories with regard to how it works do not as yet give us a satisfactory explanation although there are some factors on which there is fairly general agreement.

(1) It is considered by many that the word "shock" should not be applied and that the treatment acts by providing "rest" not "shock". Insulin coma by abolishing the sub-conscious as well as the conscious mind does according to this theory give the mind a rest beyond that which can be obtained through normal sleep.

(2) At the same time it makes a break in the vicious trends of thought which are so characteristic of mental patients, especially Dementia Praecoxes. We know that there are times when these vicious trains of thought do go on even in sleep, as is demonstrated in dreams and by the fact that changes in a patient's mental or emotional state do occur during sleep. By abolishing the sub-conscious as well as the conscious mind insulin coma makes a break in these trends of thought.

(3) The extra attention which patients get while undergoing Insulin Therapy is also important.

(4) Again we have the psyshic effect. The Insulin Therapy is rather dramatic and makes the impression on the patient's mind that something unusual is being done for him.

(5) The Insulin greatly increases the patient's appetite, increases his weight, and improves his physical health in general which has a reflection on his mental state.

However although our technique and theories have improved but little, we have continued to cure a number of patients and we have learned a good deal about the type of cases which are likely to be benefitted by treatment. For these reasons I intend to concentrate my talk on results.

In general Insulin Therapy has been known for six years—widely experimented with for four years—and has been intensively applied as a therapy for two years. Like any other new type of treatment which shows some success, Insulin Therapy has been over-inflated, but in spite of that it is being applied to more cases to-day than ever before.

Coming from the general situation to the local one. The questions which we have been trying to answer are:—

(1) Do we get results?

(2) Are the results any better than those obtained without Insulin Treatment?

In order to have a standard for comparison we used a controle which was worked out during the early days of our Insulin Treatment and we have used the same one ever since.

The controle consisted of 100 consecutive cases of Dementia Praecox, covering a period of about one year. These 100 cases did not receive Insulin Therapy although they had received other means of therapy chiefly occupational. The results are shown in Table (1).

To date we have completed treatment in 61 cases. A short time 1-3 months after completing the treatment in each case we tabulated the result; as time went on some cases relapsed while others showed further improvement, so that a second table was necessary, which made an interesting comparison with the first.

A tabulation of our results at the present time is given in Table (3). From a comparison of the (1) and (2) tables it would appear that Insulin Therapy has been well worth while. A comparison of tables (2) and (3) would demonstrate that to date our results are holding up very well. When I talked with Dr. Menzies at St. John some time ago he said that in his opinion the groups (Improved) and (Social Recovery) would be of academic interest rather than a matter of practical importance because they would probably through time separate to the right and left. Already we can note a very definite tendency in that direction.

Full Remission—applies to those cases where:—

(1) All psychotic signs and symptoms have disappeared.
(2) Patients have good insight into their illness.
(3) There are no residual changes in personality.
(4) They are able to resume their work at the previous level of efficiency.

Social Remission—applies to those cases where:—

(1) There are no gross or debilitating psychotic signs or symptoms.
(2) Some insight into illness.
(3) Slight residual changes in personality.
(4) Patients are able to carry on with their work, but previous level of efficiency is slightly impaired.

Improved—Patients are more easily managed.

Negative—No improvement.

I would like to show you some of the cases which have recovered but all the cases which are down in Table (3) as full remissions have gone home and also all those down in Table (3) as social remissions.

The remaining question is where will these cases be in 10, 15 or 20 years time. No one will be able to answer that until 10, 15 or 20 years have passed. But even if some cases do relapse, as undoubtedly a number of them will, that is no argument against the effectiveness of treatment now. If you have a patient with organic heart disease, would you refuse to treat him now because you feel that eventually it will kill him anyway?

Selecting Cases

The great majority of Dementia Praecox cases admitted to this institution are unsuitable for Insulin Therapy. We go over our admissions very carefully and pick cases for treatment largely on the basis of the following criterion:—

(*A*) *Early Treatment.*

To have any chance for success the patient must have treatment in an early stage of the disease, which means within six months in most cases. That is within six months of the first appearance of obvious symptoms. In some patients the disease develops very slowly and may be no further advanced in two or three years than it is in some other cases in as many months. It is obvious that the extent to which the illness has progressed is more important than the time factor; although one cannot be dogmatic about this because in many cases the length of time the patient has been ill is a fair indication of the stage to which the illness has advanced.

(*B*) *Intellectual Level.*

As a general rule the higher the intellectual level of the patient the better their chances for improvement. Mental defectives are also subject to Dementia Praecox but they do not benefit by the treatment.

(*C*) *Insight.*

Patients who show some insight into their condition are better subjects for treatment.

(*D*) *Cooperation.*

Insulin Therapy cannot be applied successfully without a fair degree of cooperation from the patient.

(*E*) *A Desire to Get Well.*

Frequently Dementia Praecox patients have no desire to get well. They find their world of phantasy and delusion more comfortable and interesting than the world of reality and do not wish to leave it. Such patients will defeat all efforts to improve their condition. One such patient improved for a time under Insulin Therapy and then started to slip back into his former state. When I talked with him about this matter he listened in a grudging sullen way for a few minutes and then replied—"I do not have to get better if I don't want to". The decisiveness and air of finality with which he made this statement convinced me that he knew what he wanted and intended to stick to it. We completed his treatment but without any success.

Question. Have you tried Metrazol Therapy?

Answer. No, we were preparing to start metrazol therapy about a year ago when the Canadian Mental Hygiene Association reported so many accidents with this form of treatment that we decided against its use.

Question. What about accidents in the use of Insulin?

Answer. We have treated sixty-one cases without any accidents, but accidents do occasionally occur, and we do not expect to escape indefinitely without accidents.

Question. What type of accidents do they get in Metrazol Shock?

Answer. Fractures of the limbs and sometimes of the vertebrae.

Question. What is meant by "insight"?

Answer. The ability of a patient to understand his own condition. This is sometimes very important from the stand-point of prognosis. For example, if a patient realizes the cause of his illness he has a better chance of recovery than a case where the cause is due to some obscure endogenous factors.

Question. How long a time does Insulin Therapy require?

Answer. That depends on the case. Generally from three weeks to two months. Some cases do not recover for considerable time after Insulin Therapy has been completed; but hopeful cases practically always show some signs of improvement within a week or two.

Table I.—Controle

Without Insulin Shock Therapy—one hundred consecutive admissions of Dementia Praecox.

Full Remission	Social Remission	Improved	Negative	Total Number of Cases Treated
3	3	8	86	100

Table II.

Immediate Results—tabulated in each case a short time after treatment was completed.

Remission	Social Remission	Improved	Negative	Total Number of Cases Treated
20	6	16	19	61

Table III.

Results at the present time—same cases as in Table II.

Full Remission	Social Remission	Improved	Negative	Total Number of Cases Treated
27	5	4	25	61

*The University and the Community

President Carleton Stanley,
Halifax, N. S.

Mr. Chairman and Gentlemen:

You must be very, very serious people: not only have you picked the head of the university to give you an after-luncheon address, but you have assigned me a subject which makes it unavoidable for me to talk shop. I am reminded of the couplet about the poet, Shadwell:

> "The mid-wife laid her hand on his thick skull
> And said, 'Thy name is Shadwell, be thou dull.' "

Well then, you and I are for it, and I shall say some serious things—but I promise to be brief.

Never, in my experience, and I might add that never, so far as my knowledge of history goes, has there been a time when men have so questioned themselves, and so searched their own hearts, as in these present days. There have been times, of course, when civilisations have been overthrown, to say nothing of the fall of nations. And perhaps we should not be too certain that our experience is unique, or that our lot is harder than the lots of men in other times. And yet, when all is said, ours is a time when the power of man over nature seems to be more complete than ever before. There is a wag in Shakespeare who speaks of the world being his oyster, which seems almost a blasphemous way of putting it. But we have, in our day, mastered nature and harnessed forces in so many ways hitherto unattained and undreamed of that failure in moral mastery, our failure in mastering ourselves, if you will, seems the more striking; and perhaps justifies my statement at the beginning, that never before have men so searched their own hearts as they do at this hour.

Now, why should the head of a university indulge in such moody statements before a public audience, and, in particular, before you? I hope I am modest; I hope my thoughts are not exaggerated in any way when I venture to say that this is the occasion and that perhaps we are the men for reflection upon such matters. The university and its relations to citizenship have often been described and defined. And you have heard, and over-heard, much discussion of that kind. But some of us in North America, who had some connection with universities in this and other countries before the last war as well as since, have felt, for about ten years now, that a doom was impending over men, largely because too many of them were too easily taking things for granted; and, in particular, that a chasm was yawning between the ideals of the university, or rather between the facts, the historic and scientific facts with which the university deals, and the actual way of life of the community in which the university found itself.

May I take a few moments of your time and may I crave your serious attention while I attempt to be more specific with that subject? You can be

*An address delivered before the Maritime Conference on Industrial Relations, 1940, conducted by The Institute of Public Affairs, Dalhousie University, Halifax, N. S., on April 24th, 1940.

sure, of course, that if things are not going well in any community, that things are also not going well in the university. Which is cause and which is effect is another matter, but the connection is unmistakable and inevitable. Personally I have often felt that those who administer the universities have not been frank enough with their constituencies. You see, opinion is fairly general, or has been fairly general, on this continent, that all was going well. One hears statements made with some complacency that universities are growing, that they are turning out more students, that university men are leaders, and so forth. Some decades ago, Cecil Rhodes bequeathed an enormous amount of money to endow scholarships for Canadians, Australians, for Germans and Americans, so that these men might come under the influence of Oxford University, which, in his opinion, had been a potent influence in the common weal. I am not, of course, offering any comment on the success or failure of that scheme. I use it merely to illustrate the aspirations that men have had about the beneficence of university training on life at large. And I fear that aspirations much looser than those of Cecil Rhodes influence public opinion very much, and that far too little attention has been given to examining whether these aspirations are justified. Yet it is a commonplace that the personnel in politics on this continent is far to seek, or, as some say, politics (meaning municipal and provincial, as well as national politics) is a dirty game, and that good men will not go into it. There is, to be sure, exaggeration in many such statements. Certain it is that in many places on this continent there is a singular inefficiency in the management of public business. The actualities do not in any way mirror the principles that universities indoctrinate in their teaching of history, in their teaching of medical science, in their teaching of law, and in many other things. And you know very well that men laugh about what is called "practical politics"—to use a common expression—and at no time do they laugh so hard as they do when it is suggested about someone that he is a professor turned politician.

Now, perhaps I need hardly tell you that this is a highly dangerous situation: it is dangerous for the university, and dangerous for the community at large. This continent stands aghast at the destruction of humanity and civilisation in central Europe and elsewhere. And I think it is pretty generally known that the destroyers first abolished the universities. These vandals seemed to realise by a sure instinct that if you wish to destroy a society and enslave a people you must destroy its universities. But how many of us are seriously reflecting on our own situation, and on what I have called the chasm between the principles taught by the university and the actual condition of our life? One thing is certain, that, if the public really do not believe in the university, the institution, as we have known it at least, cannot continue. Latterly what the public on this continent have believed in, and have supported, are those departments of the university which deal with science, and particularly with applied science. And, of course, what strikes one about our way of life is the application of science to it. It is being applied to life just now chiefly in order to extinguish it. The Germans have gone to extremes about the matter, but really there is a tendency in the same direction among ourselves. Great is science, and a wise man hopes that it will yet grow and develop. But science does not teach men how to live together in a social way; whereas the study of the humanities, or what is more generally called, on this continent, the studies of a liberal arts college, did aim at that; and in many places, over a long period of time, the aim was successful. As I said before, I am afraid that

the administrators of our universities have not been sufficiently frank with their public. The universities have allowed themselves to be pushed about too much by the demands of the moment and the slogans of the day. They have allowed illiterate and uncultured men to dictate to them with arguments like this: "Of the thousands of men and women who wish to attend university, only a few are interested in these high doctrines of yours, or are capable of profiting by instruction in them. You must, therefore, provide other kinds of courses for these people." I do not mean, of course, that language as direct as that has ever been used; but that sort of consideration has swayed many of our universities, and, in consequence, many university degrees have ceased to mean that the holders of them are interested in things of the mind, or in the public weal; that they are well read in history, or imbued with the principles upon which science itself rests.

You see, I am being frank with you in describing the trends and tendencies in our universities. I wish that others would be frank and admit that there have been grave changes in our way of life. Is it of any significance, for example, that the bookshop, which men of my age once knew as a prominent feature in our cities and even in our larger towns, has almost gone out? And on the other hand—this flood of highly-coloured trash and smut, to be seen in dozens of windows on every Canadian city street—does anyone fail to see that this is both a cause and a reflection of feeble-mindedness, not to say of corruption? I shall not use any further illustrations. I have taken something which is on the very surface of our life, and plain to see, for men whose adult memory goes back twenty-five or thirty years. But if you follow that line of thought, and are frank about it, as I beg you to be, you will see that some of these changes go to the very foundation of our existence. Then, after you have thought of that, you might remember what I have said before, that, if things are not going well in the community, they cannot be going well in the university: that there is an inevitable connection between the two.

Now, some men in the universities, in the last few years, have striven nobly to stem the tide, lifting up their voices, not only in the university, but outside, against materialism, against political inefficiency and chaos, and not least against the dangers to freedom and liberty, which these things are bringing in their train. It is not without significance that these men have been reformers inside the universities, raising standards, and boldly rejecting those hordes of so-called students to whom I alluded a few moments ago. Let me take one example only to illustrate this: George Norlin, President of the University of Colorado, in the period between the last war and the present one. Two or three Americans who have discussed such matters with me, men who are qualified to make such a comparison, think that Norlin is one of the greatest men the United States has produced since Lincoln. He is a great scholar, a great educational reformer, *the* great authority at present on American history and institutions, and he ranks with Franklin Roosevelt as the champion against barbarism. Ah, but, you are thinking, will the Americans respond in time to these champions? That is not my question here. Again I use it merely as an illustration of my thought. The wisest men in universities realise that improvement in the universities, or the maintenance of the universities, is contingent on improving or maintaining things outside them. By the same token, those who are interested in the decencies of our politics, our journalism, our whole way of life, should realise that the university is the great bulwark.

Some of you may recall Plato's description of poetry; God, he says, magnetises the poet; and the poets magnetises the reciters, and the reciters magnetise the audience, the people. But, as he says in other places, a people is sometimes incapable of being magnetised. You cannot, even with God at one end of the chain, magnetise brass, or blubber. Great are those peoples who have great universities, like the universities of Scotland. But on the other hand, great are those universities which spring up at the demand of, and are sustained by, a great people, like the people of Scotland. The University and the Community, the Community and the University: a divine magnetism can exist between them, if there is iron, if there is character, righteousness and intelligence in the hearts and minds of men.

How to be Wrong:
The X-ray a Quick and Easy Method*

H. W. Schwartz, M.D., Halifax, N. S.

RECENTLY one of my associates told me he had x-rayed the accessory nasal sinuses of all his cases suspected of harbouring a focus of infection. Patients not infrequently tell me that their doctors had their sinuses X-rayed and they had been assured that their suspected trouble did not lie in that region. The intern reads from the request for consultation, "this patient has had the sinuses x-rayed and the report is that there is no evidence of infection." The physician, the patient and the intern have as a result of all this x-raying one belief in common, viz., that the focus of infection must be elsewhere. This is an erroneous conclusion. Now the truth of the matter is that all that the radiologist meant was that there was no evidence of disease that the X-ray was capable of revealing at that particular moment in that particular patient with the technique adopted, and that "no evidence of infection" is not to be interpreted that infection is not present.

The first case to which I would direct your attention is that of a young man aged twenty-one who was admitted to hospital in so weakened a condition that he was unable to turn himself in bed. The history was one of fever and profuse nasal discharge for upwards of three weeks. Owing to the extreme illness of the patient routine clinical examination of the nose could not be carried out. Immediately after irrigating his antra pus continued to come in such abundance and presented itself in such positions as led me to believe that no sinus had escaped. An x-ray examination had been made before I had been asked to see him and the report read—"Examination of the accessory nasal sinuses shows extremely large but clear frontal sinuses. Both antra are opaque." Examination of all parts below the level of the shoulders proved to be free from any evidence of disease.

Ten days later he developed over the left brow the acutely tender non inflammatory swelling so characteristic of osteomyelitis. The oedema spread rapidly towards the hair line. Arrangements for operations were promptly made. As an after thought my consultant suggested an x-ray "to anticipate the patient's friends". At the very moment that the -xray was being taken the anterior wall of the left frontal sinus was widely infiltrated with pus. The mucous membrane of both frontal sinuses was oedematous to the point of resembling masses of polypi and the pus present was actually under pressure. The x-ray report read—"Re-examination does not show any evidence of further infection of the nasal sinuses. The antra are still opaque, particularly the left."

Had the least attention been paid to the x-ray findings in this case of fulminating osteomyelitis of the frontal bone, the patient would not be principal of one of our County academies today. That bone can be extensively infiltrated with pus and a sinus a perfect riot of oedematous mucous membrane and pus without the condition being even suggested in a film was well illustrated in this case.

* Read at the Seventieth Annual Meeting of the Canadian Medical Association, Section of Oto-laryngology, Montreal, June 21, 1939.

The next case is also one of a young schoolmaster, E. R., aged thirty-two, whom I saw shortly after the case just referred to. He gave a history of having had a septal resection and that ten days later an acute condition of the frontal sinus developed associated with fever and severe pain. Under treatment the condition subsided in the course of several weeks. About this time a swelling was noticed over the right side of the fore-head extending to the eyelids. Suspecting the possibility of an osteomyelitis the patient was x-rayed on February 3rd., and the report was:

> "There is evidence of some cloudiness in both antra, more marked on the right side. There is definite cloudiness of the right ethmoidal areas, and slight of the right frontal sinus. There is very little infection in them."

Not feeling any too comfortable about the matter our colleague removed the anterior end of the right middle turbinate, hoping thereby to provide better opportunities for drainage and ventilation. As matters were not improving an x-ray examination was made on March 16th, 1935, and the report read:

> "There is haziness of the right ethmoid region. Other sinuses are clear. No evidence of osteomyelitis."

Matters dragged on for two months and on May 18th, 1935, the x-ray was again invoked and the report read:

> "Examination of the frontal sinuses. There is evidence of two areas of bone destruction in anterior wall of right frontal sinus. One is round and near top of sinus. The other is larger and irregular and near roof of orbit. The sinus itself is quite hazy.
> Conclusion: Osteomyelitis of anterior wall of frontal sinus."

The man was admitted to the Victoria General Hospital where an operation was performed on May 25th. An abscess was found in the soft tissues of the forehead. The anterior wall of the right frontal sinus was partially necrossed with an opening (nearly 1 cm. in diameter) into the sinus. The orbital ridge and part of the roof of the orbit were in a similar condition. Fortunately, this was a case of localized osteomyelitis, and is an example of the clinical diagnosis antedating the x-ray by three months.

The next case is one of a young woman, M. W., aged thirty, who was admitted to hospital suffering from a variety of complaints referable to the joints and chest. The x-ray of the accessory nasal sinuses was reported as showing "no sign of infection". Clinical examination showed the presence of muco-pus beneath the right middle turbinate, the right antrum dark to transillumination and muco-pus on exploration and irrigation. A wee trickle of pus beneath the middle turbinate is of greater diagnostic value than a river of films to the contrary.

Not so long ago a case was reported, as a warning, by Mr. W. M. Mollison,[1] who suspected the presence of a frontal lobe abscess which he believed to be secondary to a chronic frontal sinus infection. The report of the x-ray examination was—"both frontal sinuses are clear and equally so", and in consequence the surgeon permitted his clinical examination and accurate diagnosis to be overshadowed by the laboratory aid only to discover at post-mortem—"pus and sloughing mucous membrane in the right frontal sinus; on its posterior side was a small hole connecting with a large abscess in the frontal lobe. The left frontal sinus was normal."

Recently A. Bowen-Davies[2] presented before the Royal Society of Medicine a report on the investigation of the maxillary antra in fifty-five children between the ages of five and fourteen carried out at Guy's Hospital.

Reference will be made neither to the physiological nor the bacteriological parts of this paper but your attention is directed only to the summing up of the results of the x-ray study as contained in the following paragraph.

> "The x-ray photographs were all taken with the patient in the supine position. Of 110 antra sixty-six appeared to be infected on x-ray examination. Of these sixty-six, twenty-seven subsequently proved to be infected and thirty-nine proved sterile. It appears, therefore, that when the skiagram is positive the antrum will probably be sterile. Of the forty-four cases with a negative skiagram thirty-five proved to be sterile and nine to be infected. It is therefore probable that an antrum which appears normal on x-ray examination will be sterile, but there is a possibility (one in five) that it may prove to be infected. Of the twenty-three antra containing mucopus, seventeen appeared infected on x-ray examination and six appeared normal. It has been the writer's experience on several occasions to see a negative x-ray photograph in a case of acute frontal sinusitis in which the sinus was subsequently found full of pus. The skiagram may not demonstrate the presence of mucopus. It will usually show a thickened membrane. It has never been able to demonstrate an organism, and it is in the deduction that a thickened membrane indicates infection that we are wrong."
>
> "The pathology of a thickened membrane without infection is obscure, but sometimes the condition may be of an allergic nature. It seems, therefore, that the x-ray photograph is of little value in the diagnosis of infection in the antrum."

The question naturally arises is the x-ray equally unreliable in adult life? This is probably not so and the reason one would advance is that chronic conditions are more apt to exist in the adult than in children, and in consequence those pathological changes capable of interrupting the free passage of the x-ray have had time to develop.

Many years ago Skillern[3] published what he believed to be "the relative value of assistance the ray gives in disclosing the pathologic condition present in the individual sinuses" as follows: maxillary sinuses 85% efficient; frontal 75%; sphenoid 40%; and ethmoid 25%.

As recently as 1936 Shambaugh[4] in one of his comments writes: "The x-ray is of greatest value in the diagnosis of maxillary sinus infection, is of considerable value in frontal sinus disease, is less often dependable in sphenoid sinus infection and is often unreliable in ethmoidal suppuration."

The maxillary antrum is the one sinus that is sufficiently well developed to harbour infection at almost any stage of life and it is the one in which investigation by the x-ray is at its best. It is not unreasonable to suppose that from the stage "of little value" of Bowen-Davies to the stage of 85% of Skillern, or the comparitive "greatest value" of Shambaugh there must exist all the intervening gradations due to the age factor.

A patient presents himself complaining of headache, nasal obstruction, profuse nasal discharge and giving a history of having "caught a cold" two weeks previously. An x-ray, even if such were dependable in acute cases cannot tell you more than you already know. Even without a formal examination you know that this patient is suffering from a suppurative sinusitis, and after examination you know infinitely more than the best x-ray could possibly reveal.

From the superficially obvious there are all the gradations through the easily diagnosed, the difficult to diagnose, and finally the obscure or suspected. After taking a careful history and employing the routine of palpation, inspection

(preferably with the aid of the naso-pharyngoscope) before and after the use of an agent to shrink the mucous membrane, posturing, gentle suction, trans-illumination and proof puncture, only a comparatively small residue will require other aid in arriving at an accurate diagnosis. The very region (ethmoid) in which the clinician needs the roentgenologist's help most is the very place the x-ray is of the least value and where his help is least often required (antrum) he is at his best. Every abnormal shadow in a film does not necessarily indicate active infection and after all as physicians we are only interested in the active which may be undermining the health or happiness of our patients.

Lillie[5] of the Mayo Clinic is of the opinion that—

"It can be said in general that roentgenologic examination gives more accurate results for conditions other than infections, such as osteoma and malignancy."

"It should be emphasized that roentgenograms must not be relied on for accurate diagnosis in a case of disease of the sinuses but they must be taken into consideration along with the history and the physical findings resulting from competent observation in the case."

Your attention is now directed to the views of men especially well qualified in roentgenology in relation to the accessory nasal sinuses. Widmann[6] points out that clinical and x-ray examinations are not competitive but co-operative, and that "radiography is essentially a supplementary procedure to all rhinological examinations". That in the majority of instances the clinical diagnosis is obvious but in those cases that present sinus symptoms the clinical interpretation of which is border line or indeterminate then in such cases x-ray studies are of great value. He is of the opinion that a diagnosis must be arrived at by co-operation between the clinician and the roentgenologist and in all doubtful cases a second x-ray examination should be made if the interpretation is not in accord with the clinical findings.

"Generally speaking, the roentgenologist should not attempt to specify a pathologic entity. Since the roentgenological interpretation of sinus disease is based entirely upon altered densities of the air cavities and bony walls, the report should portray for the rhinologist the location, the extent and approximate degree of such altered density. This will at once imply disease, or effects of disease, or the effects of previous surgical procedures."

"There is still a great lack of confidence as to the value of the roentgen-ray examination. This may properly be charged to indiscriminate interpretations, both positive and negative; to technically poor films; to failure to correlate clinical and roentgenographic findings; and very often to an over-zealousness on the part of the roentgenologist to interpret pathological entities on the basis of insufficient clinical evidence."

Law[7] wrote:

"So many times a surgeon will submit one or two films and ask for an interpretation. This is an impossibility. For proper interpretation, one must have films made in the 23° angle, the Waters view, the vertex mental view and the lateral. It is imperative that the lateral views be made stereoscopically, and I insist on all views being so made. These should be routine positions and others at different angles to supplement them, in exceptional cases."

More recently the same writer[8] points out that—

"There are factors in the technic, the history and the clinical findings which may influence the interpretation, and unless the interpreter is in possession of these facts he cannot render a helpful decision. A roentgen examination is really a consultation, and the roentgenologist is entitled to all the help he can get."

From the foregoing quotations it would seem that in an orderly and properly conducted investigation of the accessory nasal sinus the x-ray should be

the last move—last not so much because it may not be needed but because the history and clinical findings are essential to the interpretation of the film.

When a stone is demonstrated in gall bladder or kidney it is a question of an opaque body surrounded by a translucent medium, whereas in the case of the nasal air cavities it becomes in most cases a matter of demonstrating changes in a translucent medium, i.e., the mucous membrane or the products of inflammation of varying degree, within a relatively opaque capsule. The difficulties are further aggravated by the fact that from whatever angle they are approached they are wholly or in part complicated by shadows of varying density thrown by the other bony structures of the skull. When you consider the difficulties inherent in the examination of these air cavities the wonder is that the bony configuration can be demonstrated let alone pathological changes within. Probably in no other part of the body must the technique of the x-ray examination be so exacting; such absolute immobilization, such perfect angling, such nicety of exposure and the end result so difficult of interpretation.

If you have not already guessed it this paper is a protest against the disorderly and indiscriminate use of the x-ray in an effort to avoid making or having made a real examination. Expecting a shadow to bear a burden that only a carefully and substantially constructed clinical diagnosis is capable of carrying. It is an attempt to remind you again that diagnosis is an Art, in which short cuts have no place and that there is no one method which alone can be depended upon in making a diagnosis in diseases of the nasal air cavities. The radiologist should be treated with respect but not with reverence, he should be appealed to as a medical consultant not as a magician and he in turn should give heed to the words of St. Paul "not to think of himself more highly than he ought to think; but to think soberly", before making unaided pronouncements as to the presence or absence of infection. Although my remarks have been directed to the nasal air cavities the general principle invoked applies with even greater force to the mastoid process a region in which the anatomy of the part as Hodgson[9] says is of "paramount importance to the surgeon not only from the operative point of view, but from that which he evaluates the patient's symptoms". Having determined the type of bone and the distribution of the cells the radiologist will have contributed his part towards the patient's recovery.

REFERENCES

1. Mollison, W. M.: Journal of Laryng. & Otol. 1934, 49:48.
2. Bowen-Davies, A.: The Paranasal Sinuses in Children, J. Laryng. & Otol., 1938, 53: 723.
3. Skillern, R. H.: The Present Status of Skiagraphic Interpretation as an Adjunct in the Diagnosis of Catarrhal Affections of the Accessory Sinuses, Ann. Otol. Rhin. & Larying., 1922, 31:855.
4. Shambaugh, G. E.: Comments in Year Book E. E. N. & T., 1936, p. 500.
5. Lillie, H. I.: Medical Aspects of Chronic Sinusitis, Medical Clinics of North America, July 1938, (Mayo Clinic number).
6. Widmann, B. P.: The Clinical Versus X-ray Diagnosis of Sinusitis, Transactions of the American Laryngological Rhinological & Otological Society, 1932.
7. Law, F. M.: Evaluation of Roentgenology in Otolaryngology, The Laryngoscope 1932, 42:909.
8. Law, F. M.: Causes of Faulty Interpretation of Roentgenograms of the Sinuses, Archives of Oto-laryngology, October 1935, 22: 435-437.
9. Hodgson, H. Graham: Radiology of the Mastoid Process, Journal of Laryng. & Otol., April, 1939, 54: 187.

Flatulence

L. J. LeBlanc, M.D., Cheticamp, N. S.

UNDER "General Symptoms" H. L. Tidy in his Fifth Edition "Synopsis of Medicine" discusses the subject "Flatulence" and says that gastric flatulence occurs in:

1. (a) Dyspepsia—usually occuring in people of middle age who have defective teeth and hypochlorhydria; (b) may be a prominent symptom in hyperchlorhydria from swallowing air; (c) less constant in dilatation of the stomach.
2. Cardiac pain, agina, gall-stone colic—the origin in these cases is doubtful, but is probably due to swallowed air. Cessation of pain is often associated with copious eructation. In diaphragmatic hernia and is often intense.
3. Air swallowing.
4. In any condition of epigastric discomfort and distension.
5. As a pure neurosis (eructatio nervosa).

In general practice one is often asked by patients, "Why do people with stomach trouble belch gas?" This question, as far as I know, has never been answered completely although books make some reference to flatulence in speaking of stomach trouble. In fact, flatulence, one of the commonest symptoms in dyspepsia, is still to a considerable extent a mystery.

Gastric Flatulence. It is still very widely believed by patients that "wind" in the stomach is the result of fermentation. "This", Robert Dr. Hutchinson says, "is a mistake" for he goes on to say that fermentation is rarely a cause of gastric flatulence, and then only when there is pyloric stenosis and stagnation of the gastric contents. In these circumstances fermentation does take place with the production of marsh gas and sulphuretted hydrogen. The gas brought up is therefore mal-odorous and may be inflammable. "I remember, for instance, a patient with an extremely dilated stomach, the result of a cicatrised duodenal ulcer, who brought up large quantities of offensive gas. On one occasion he happened to eructate just as he was lighting a cigarette, and got the fright of his life when the gas coming out of his mouth burst into flame!"

The greater part of the "gas" in ordinary flatulence appears to be simply swallowed air since by analysis it is shown that this gas is made up mainly of nitrogen, whilst carbon dioxide is present in the same proportion as in the blood gases. In "gas" which has been present for some time in the stomach there is less oxygen then in air, for some of the oxygen has been absorbed into the blood.

We always swallow a certain amount of air with food, it can't be avoided, but more is likely to be gulped with liquids than with solids or when food is eaten quickly than when it is taken slowly. There are again those who secrete much saliva or who suffer from nasopharyngeal catarrh, which makes them swallow continually and in consequence they take more air into their stomachs than others do.

Again, in normal circumstances, the air so swallowed is quietly eructated at the end of the meal or this air passes on through the pylorus into the intestine, and is either absorbed or voided per anum, causing no real inconvenience. There are probably many reasons why dyspeptics suffer so much more from "wind" than healthy persons. Some of the reasons are not well understood. The existence of discomfort in the stomach is apt to cause the patient to swallow more saliva in order to relieve it, and in so doing he swallows more air. The discomfort may be attributed to "gas" and in straining to bring this up he again gulps down air. The stomach in dyspepsia may be more sensitive to the presence of even a normal amount of air than it is in health. Hyperaesthesia might be a cause. Excess of tone may leave little room for swallowed air thus causing undue pressure. And again want of tone in the stomach wall may allow air to accumulate without being expelled, until it expands with the body heat and causes discomfort. Then, the normal absorption of swallowed air may be interfered with by, for instance, catarrh or congestion of the stomach wall.

Some believe than an interchange of gases between the blood and the stomach may take place, and that the giving off of excess gas from the blood is the explanation of much of the flatulence met with in cases of respiratory and cardiac disease. One authority said that this explanation is only probable and that most people think it is false.

It must also be said and remembered that many of the symptoms of flatulence may be due not so much to excess of air in the stomach as to air "locked up" or air in the wrong place. Air may be shut in by pyloric and cardiac spasm or constriction of the stomach wall at any point it is likely to cause distress. Air may get locked up in the oesophagus and may cause a sensation of choking, (globulous) for air has no right to be in the oesophagus.

Now, gas in the stomach tends to accumulate at the fundus. When there in large amount it will likely push the left side of the diaphragm and embarrass the heart. Thus, flatulent patients often complain of "palpitation" (extra systoles or tachycardia); unable to sleep on the left side and even syncopal attacks. Hence many dyspeptics believe themselves to be suffering from "heart disease".

Then, there is the "eructatio nervosa" due to air swallowing. The person who suffers from it can "eructate to order". It has a violent character and produces the same symptoms as ordinary flatulence, e.g., distention, cardiac embarrassment, etc. Then it may be met with in association with functional dyspepsia which is a pure neurosis. This is not to be treated by dieting and carminatives, but by explaining to the patient the nature of the trouble and by forbidding him to try and bring up wind, and by giving bromides.

Intestinal Flatulence. Fermentation has much more to do in the production of flatulence in the intestine than it does in gastric flatulence, because constipation favors its occurrence. The gas which is proven to be largely marsh gas is derived from the fermentation of cellulose. Nitrogen is also present and at times sulphuretted hydrogen as well. Swallowed air, however, which has passed down through the pylorus may account for some cases and defective absorption for others.

This gas may but cause a simple feeling of fulness and distension or may cause annoyance by the frequent passage of flatus, but if the patient is also constipated, colicky pains may be set up as well. The gas has a tendency to accumulate at the hepatic and splenic flexures of the colon and may press

upon the stomach or heart. Then there may be digestive as well as cardiac disturbances the same as in gastric flatulence.

TREATMENT. The treatment of gastric flatulence must be directed chiefly to the treatment of the particular form of dyspepsia with which it is associated. Apart from this the symptomatic treatment should consist, in the first place, in instructing the patient to avoid the habit of air swallowing in the same way as in the cases of eructatio nervosa. The meals should be dry and eaten slowly, and in severe cases it may be advisable for the patient to suck fluids through a tube rather than to swallow them in gulps. An alkaline carminative mixture with a little nux vomica will help in the expulsion of "wind" and it is sometimes of advantage to add some bromide to it. In over-distension of the stomach with gas which is embarrassing the heart a little neat brandy is the best carminative. In some cases the stomach tube may have to be used. In the treatment of intestinal flatulence foods rich in cellulose (vegetables and raw fruits) should be avoided and constipation corrected by a mild laxative. Some claim that intestinal antiseptics are not of much use, but if there is much fermentation along with constipation magnesium salicylate may be given in 15 gr. doses three times a day. If there is flatulence and diarrhoea salicylate of bismuth should be substituted in the same doses. A tablespoonful of charcoal taken once or twice daily is also useful.

Historical Section

Halifax, N. S., April 16, 1940.

To the Editor of the BULLETIN:

The attached memorandum which, I believe, was prepared by the late Dr. W. H. Hattie, of happy memory, many many years ago, was sent to this Department by Dr. J. J. Heagerty of the Department of Pensions and National Health, Ottawa, some five or six years ago. Since it is entitled, "Synopsis of steps leading to organization of the Medical Society of Nova Scotia" the thought occurred to me that you might like to publish it in the BULLETIN.

Yours very truly,
F. R. DAVIS.

Synopsis of steps leading to organization of the Medical Society Nova Scotia

OCTOBER 16, 1844—Medical practitioners of Halifax met at Acadian School for "purpose of devising a plan of raising funds towards the establishment of a General Hospital in furtherance of the same object as was proposed in 1841." Dr. Hume in chair; Dr. Cogswell, secretary. (This meeting was instigated by offer of the Mayor, Honorable Hugh Bell, to contribute his year's salary, £300, towards erection of a lunatic asylum or other public charity. A committee was appointed to consult with the Mayor in this matter.

OCTOBER 22, 1844—Medical practitioners met to receive report of committee, which was to effect that the Mayor's offer would apply to General Hospital if an additional £2,000 were raised and provision made in the hospital for lunatics. Resolved to requisition sheriff to call public meeting relative to this matter. (No further reference is made in minutes to this public meeting.)

OCTOBER 26, 1844—Medical practitioners met to consider letter from Mayor requesting advice relative to proposal to exhume bodies then interred in St. Paul's Cemetery. *Before considering letter, the physicians present formed themselves into the "Medical Society of Halifax."* Dr. Hume was elected president and Dr. Cogswell secretary. (The Society advised against the proposed exhumation—Dr. W. J. Almon dissenting. Dr. Almon asked that his name be withdrawn from the list of members, but there is no minute stating that this was done).

Irregular meetings thereafter, with no record of scientific papers or any result from resolution, until—

MARCH 15, 1854—As only hope of securing justice from legislature lay in "an union of the profession throughout the province" it was resolved to proceed with formation of a provincial association. Dr. D. McN. Parker moved the resolution, which was seconded by Dr. Stevenman of Lunenburg, who with Dr. Johnston of Pictou, happened to be present.

MARCH 17, 1854—Draft of rules and by-laws for proposed provincial association was considered.

MARCH 22, 1854—"At the Chess Rooms in Prince Street" rules and by-laws further considered.

APRIL 3, 1854—Circular letter addressed to all practitioners in province. (No mention is made of arrangement for organization, but seemingly a notice was sent out for an "annual meeting" to be held Oct. 5, 1854. There are minutes of several meetings of "the Medical Society" at one of which (July 7, 1854) a tariff of fees for the Halifax Branch of the Society was adopted).

OCTOBER 5, 1854—The annual meeting of the Medical Society being announced for this day the following members assembled at the Revenue Office in the Province Building at ten o'clock a.m., namely:

Hon. W. Grigor, President.
Dr. C. A. Bent, of Truro. Dr. Jennings.
Dr. Black. Dr. Almon.
Dr. Creamer Dr. DeWolf.
Dr. W. B. Webster, Kentville.

(The industrial Exhibition of 1854 was being opened in the Province Building at this time, and several physicians were unable to gain entrance to the Revenue Office. So the meeting was adjourned at 3 p.m. at the office of Dr. Almon, Hollis St.). At this session twelve physicians were in attendance, all except Dr. William Dennison of Newport and Dr. Bent of Truro being Halifax men. Ten others were represented by proxy. Hon. W. Grigor was *re-elected* President; Dr. DeWolf, Secretary and Dr. Parker, Treasurer, with the following as members of council; Drs. Morris, Hume, Harding (of Windsor), Gilpin, Bent, (of Truro) Jennings, Black, Jacobs, (of Lunenburg) W. B. Webster (of Kentville).

Advances in Public Health

During the past twenty years Public Health activities have developed rapidly both in range and efficiency, more so perhaps than in the century which preceded that period. These developments have not been restricted to certain confined places or bodies but have embraced attempts of many official bodies and voluntary organizations extending over a large portion of the civilized world. The results have been most gratifying. Formerly more than half of the infants born alive, died during the first year of life. This condition of affairs was accepted as inevitable and the usual causes given were inherited weakness and inability to digest food. We now know that an important cause of infant mortality is disease of the intestinal tract, particularly in those artificially fed. Cleanliness in food handling, proper modification of it and the introduction of milk pasteurization have changed the picture. Following the adoption of pasteurization, the results in the reduction of infant mortality were so noticeable that health Officials and others as well are now agreed that the milk supplies of all communities should be so treated. Of recent years there has been a satisfactory decline in tuberculosis mortality, a reduction in the incidence of the other important communicable diseases and an increased relative longevity. It is thought all this is not by chance but that it is the result of sustained effort on the part of all those interested in Public Health endeavours. We are aware that some, at least, of the load due to sickness can be escaped in as much as a fair percentage of the ills from which we suffer is

preventable. A logical procedure then is to begin by preventing sickness in so far as it is possible. This is exactly what Public Health Officials are attempting with considerable success. As a result of activities in the field of preventive medicine, people no longer fear certain diseases which formerly ran a plague-like course. With an extension of facilities, it will, no doubt, be possible to remove fear of others and that at relatively low cost.

For many years practicing physicians were interested almost entirely with the cure of disease, and medical schools taught cure rather than prevention. During the past decade or two there has been a definite tendency towards having preventive and curative medicine combine and present a program designed to care for not only the health of the individual but of the public as well. In the early days of public health extension, in some isolated instances, due to misunderstanding, a certain amount of friction arose between public health authority and medical practitioners. It was held that health Officials were usurping a considerable portion of private practice. It may be said however, that where official campaigns against communicable disease and for the promotion of improved sanitation have been properly conducted, the end result has been not a diminution but, in some instances an actual increase in medical practice. The opinion sometimes put forth, that the practise of preventive medicine is wholly a right of health officials, is a fallacious one. It would be unfortunate indeed if those engaged in private practice, many of whom possess a splendid working knowledge of prevention, were divorced from the public health movement. Every effort must be made to enlist the support of such men and due deference shown to their opinions. Besides the future of the medical profession lies to a considerable extent in the field of preventive medicine. Medical schools are recognizing this fact and many of them now give a prominent place in their curricula to the teaching and practice of preventive medicine. The medical profession itself now realizes that the physician whether engaged in official public health or in private practice should uphold the public health and if he does not do it, the people will not only suffer but will become indifferent to public health practices.

In the development of public health in Nova Scotia many members of the medical profession have taken a conspicuous part. In meeting the ever increasing demands of the public in this regard and in projecting future plans and policies, health leaders look for and have every confidence of securing the sympathetic understanding, assistance and cooperation of the medical profession.

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Official Organ of The Medical Society of Nova Scotia.

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MARITIME CONFERENCE

THE Maritime Conference of the New Brunswick, Prince Edward Island and Nova Scotia Divisions of The Canadian Medical Association held in Moncton, N. B., on April 29th and 30th, was not the first of its kind. It was however, in the opinion of those who attended, the best held to date. The attendance was greater than anticipated, and the delegates from the three divisions showed willingness to co-operate for the good of organized medicine in the Maritimes. This was shown by the manner in which the dates of the annual meetings of the New Brunswick and Nova Scotia Divisions were arranged to facilitate the sharing of the team of speakers to be sent by the C.M.A. It is to be hoped that the Prince Edward Island Division may be able to arrange the dates of their meeting so that they may also receive these speakers on their visit.

Mr. Hugh H. Wolfenden's Report on Medical Economics was the chief business of the conference. He made an excellent impression. His introductory remarks, giving his background as a doctor's son in London, England, his work as an actuary, and his experience in the study of unemployment insurance, gave one an idea of his fitness for the task which has been given him by the C.M.A. His report gave a great deal of information. He offered no solution of the problem, but he outlined the conditions in Canada, beginning at British Columbia, and taking each province in turn. He gave a general idea of conditions in medical practice from the economic viewpoint. Coming to the Maritimes, he frankly stated that he was looking for information. In the round-table discussion which followed, many speakers made clear the economic conditions under which we work in different parts of these provinces. One felt that the Committee on Economics was gathering a great deal of useful information, which, when correlated and studied under the direction of Mr. Wolfenden, would place us nearer a solution of this complex problem.

One point worth mentioning is that this Committee welcomes any information which any doctor, in any part of the country, might care to send along. It should also be stressed that any doctor who has in his district a group of people desiring co-operative medical care, may submit any contract

or agreements to Mr. Wolfenden for his advice. Indeed, no enterprise of this kind should be entered into by any doctor unless he has first secured Mr. Wolfenden's approval of such a contract.

The decision of the conference to hold a joint meeting of the three divisions every third year is a distinct step in advance, and this was passed unanimously. A few delegates were in favor of a union of the three divisions. The chief objection to this would be the inability of many members to attend, so that the number at such a convention would be apt to fall far below the combined attendances at the provincial meetings as now held.

One might say that this conference went far to make for co-operation among the three divisions. It enabled Dr. Patch, Dr. Routley and Mr. Wolfenden to meet delegates from the three divisions, and to make more convenient arrangements for the coming meetings. Such conference could be profitably held at various times in the future. We suggest that earlier notice should be given of actual dates, a longer time given for discussion of various items on the agenda, a general invitation be given to attend, so that every practitioner could feel that in his division and in the C.M.A., he had his place and that he was welcome.

A. B. C.

CASE REPORTS

Report on After Condition of Three Obstetrical Cases

In my student days if anything went wrong, the universal cry seemed to be "blame the nurse"; now I am going a big stronger, and in these cases, blame the patient. And the doctor for not studying his cases more thoroughly.

Mrs. L. P. had a right sided pus tube in 1935, which was treated with gonnoccal filtrate until it became symtomatically cured. Her husband-to-be was treated for Gc. at the same time.

On Nov. 21, 1937 she delivered herself after three hours of morphia-hyoscyne amnesia of an eight pound baby. The placenta was examined, and was intact. Ergot was given for three days. The patient felt fine for three days when her temperature increased to 99. She had some nausea which was relieved by an enema. On the fifth day, the temperature was 101, and the pulse 104, there was no pain, and a normal amount of lochia was discharged. The temperature now became normal till the 13th day, when it rose to 101 on sitting up. On the 16th day the temperature was 103, the patient complained of a stiff feeling between breast and arm, with chills and with pain in breast. The urine was spotted with green; the leucocytes numbered 13,000, the young forms 85%. The cervical smear showed a pure culture of gonnacocci. Nothing abnormal could be felt in the breast.

Sulphanimide, gr. 20 every four hours reduced the temperature to normal in three days, where it remained until discharged from hospital 10 days later with a negative cervical smear.

Mrs. W. W.

Pregnancy at term. A sister had had uremia with convulsions.

The patient had had one miscarriage, one and a half years ago, when her body had been much swollen. She had been miserable for the last three months, but I had missed her, as they always seemed to be somewhere else when I tried to see her. She was admitted to hospital at 10 o'clock, and the baby was born at 10.30. On the next day she complained of "pins and needles" feelings in her legs, and chilly feeling. Sulphanimide gr. 60 daily given. Lochia seemed normal.

On the third day her face and hands turned mottled and blue. She had pain on breathing and in the abdomen above fundus. The sulphanimide was discontinued. On the fifth day, temperature was 100, pulse 110, respiration 24. A blood transfusion was given with good effect.

Sixth to tenth days, temperature, 101, pulse 114, respiration 24. She continued to complain of pains in the hands and feet. Another blood transfusion was given, and liver extract begun. The report from the cervical swab was—"some pus cells, and numerous Gram positive diplococci present."

Then we had a brain storm, and had her chest X-rayed, and there found scattered active tuberculosis involving both apices, with cavity formation behind second rib. She refused sanatorium treatment. The temperature

gradually dropped, and nothing further was heard of the diplococci. Two years later her chest condition was much the same. No vaginal examination was made.

Now for a cheerful one:

Mrs. N. attended the chest clinic when six months pregnant. She was found to have had an early active phthisis involving the right apex between the first and second rib with probable cavity formation behind second rib. I took her to the sanitorium, where she received six weeks pneumothorax treatment. I drove her home in time to have an easy delivery without any rise of temperature. Her baby was sent to the grandparents. Three years later both mother and child are perfectly healthy, the mother showing only some fibrosis where the active leison was situated.

I must thank Dr. Fraser for his consultations in these cases, Dr. MacKinnon and Dr. Ralph Smith for the laboratory work, and Dr. Hiltz for picking up the early tubercular case.

C. B. CAMERON.

The Modern Treatment of Scabies*

D. V. Currey, M.D.
Medical Officer of Health, St. Catherines, Ontario

AMONG the school population scabies has always been a very difficult disease both in regard to diagnosis and control. The fact that it may stimulate other papular eruptions may account for so many early cases escaping diagnosis. The number of cases which occur among school children may be explained because school pupils are in such intimate contact with each other.

In the occurrence of scabies the history is usually quite characteristic. The patient complains of itching of the skin, usually commencing on hands and forearms. After going to bed, or into a warm place, the itching is intensified. Before long other members of the family are infected and commence scratching.

On examination a fine papular rash is seen, most often appearing first in the webs of the fingers. Sometimes children are found with the whole body covered with scratch marks due to the irritation. These scratches may become infected and the rash may appear pustular. Sometimes there is a dermatitis due to overactive home treatment with sulphur. Occasionally impetigo is implanted in the scratch marks.

Scabies, while usually spread by direct contact, may pass from one person to another by clothing, bed clothes or other articles used by someone harboring the itch-mite. If not discovered early, or if inadequately treated, the disease may continue indefinitely. Usually several members of the family are infested. Persons who wash the hands frequently may show few of the characteristic papules between the fingers. In early cases, about 75 per cent have the webs of the fingers involved.

It has been said "scabies is the easiest as well as the hardest dermatologic disease to diagnose". The presence of the itch-mite and its burrows in the skin are pathognomonic, but the itch-mite is often difficult to recognize without the aid of a magnifying glass. Because of this, the school medical officer should always use a hand glass on any suspicious skin case. No child seems to be exempt from this trouble although the child who neglects to wash his hands is more likely to have this disease than the one who keeps the skin clean.

Treatment

Many types of treatment for scabies have been recommended but most have not been very effective. For many years sulphur has been used in the form of ointment or lotion. This type of treatment took a considerable time, and many of the patients were not cured, because if treatment was stopped the disease reappeared. Later Danish ointment was recommended. This seemed to reduce the time lost from school, but in many cases the treatment was far from satisfactory. Both sulphur and the Danish ointments were difficult to apply properly, and left the underclothing and bed linen in a filthy state.

*Presented at the twenty-fifth annual meeting of the Ontario Health Officers' Association, held in conjunction with the twenty-eighth annual meeting of the Canadian Public Health Association, Toronto, June, 1939.

Reprinted from the *Canadian Public Health Journal*, June, 1939.

In many cases a dermatitis, due to the drugs, occurred. From our own experience over a period of years when sulphur ointment alone was used the average length of time the patient lost from school was three weeks. With Danish ointment the time lost from school was ten days. With so many of these children, however, the disease reappeared shortly after the ointment was discontinued and they had returned to school.

Early in 1937 Kissmeyer in an article in "The Lancet" advised a treatment of scabies with benzyl benzeate lotion. It was pointed out that "the treatment of this disease could be ambulatory, inexpensive and would not irritate the already scratched skin". This treatment has been used in the Kommune-hospital, Copenhagen, since 1932. It consists of equal parts of soft soap (B.P. 1932); isopropyl alcohol $(CH_3)_2CHOH$; and benzyl benzoate (C_6H_5.-$COOCH2.C_6H_5$). This treatment appealed to us because in our schools at that time there appeared to be more than the average number of cases of scabies with a great deal of lost time from school. Since then our Department has used exclusively this treatment for scabies. The results have been very good; comparatively few cases have complained of any irritation and the number of repeat cases has been almost negligible. The lost time from school has been an average of three days only.

Whenever a case which is suggestive of itch is discovered in school the child is excluded and sent to the school medical officer or the medical officer of health for an examination. If a diagnosis of scabies is made, the school is notified, the child is sent home and all children in the home are excluded from school. That afternoon the district health nurse calls at the home and supervises the treatment of the case, and contacts. The patient first receives a warm bath (about 100° Fahrenheit) for ten minutes during which he rubs himself thoroughly with soft soap and pays special attention to the affected parts. Then while wet, the body is brushed all over with the solution for five minutes from the neck downwards using an ordinary firm bristle paint brush. Special attention is paid to the parts of the body affected. The lotion is allowed to dry, then the painting is continued for a further five minutes. The body is gently dried with a towel, and the patient puts on the clothing worn before the treatment was started and also uses the same bed clothing that night.

Twenty-four hours later a cleansing bath is taken, clean clothes are put on and the bed linen changed. The underclothing and soiled bed linen are washed out in as hot water as possible or boiled, if this is possible. All other bed clothing is hung outside in the open air, or if woolen underwear has been worn a hot iron is run over these with special attention being paid to the seams.

Not only do we treat the patient himself, but all other children in the family are also painted regardless of whether or not they show any sign of the itch. The parents are also advised to take the treatment. In this way we have practically wiped out this disease among our school population as it is most unusual now to find a case of this troublesome disease. During the first six months of 1939 only twelve families have been treated in a school population of 5,569.

The contacts are readmitted to school by the health nurse, but the case must have a certificate of recovery from the Medical Officer of Health before returning to school.

The new treatment has many advantages over the older types of treatment. It is much cleaner to use, and all the treatment is done at one time.

The length of lost time from school now averages three days only instead of three weeks. Of some four hundred cases not more than twelve have had the treatment repeated, and many of those did not follow the instructions carefully. A comparatively few cases have complained of the solution stinging the skin for some time after the lotion was used. This is to be expected when one considers the state of the skin after a great deal of scratching. In no case have we had any dermatitis following this treatment.

When the lotion was first suggested we prepared it ourselves, but it was found that one of the pharmaceutical houses had a similar formula, and we have found it more economical to purchase it. It was found that when the mixture was left standing the soap separated from the other ingredients and unless care was taken the children complained of irritation of the skin. The original mixture was not clear and this was found to be due to a certain amount of water so that we now advise an anhydrous soap to be used instead of the original B.P. soap. The new solution is quite clear and just as efficacious, and we have had no complaint in regard to irritation of the skin. It would appear that we now have an excellent treatment for scabies. It is inexpensive, in practically every case it will cure the disease in a few days in one treatment, it is one with which any Department of Health may expect uniformly good results.

Written instructions should be given to the parents in each case, and it is very desirable that a public health nurse supervise the treatments in the home, not only of the case itself but of all the other children.

Editor's Note—The preparation used in the above paper was Scabanca, as manufactured by the Anglo-Canadian Drugs Limited, Oshawa, Ontario.

Dr. William Reginald Morse*

A Tribute by a Fellow-Missionary, Dr. Joseph Taylor

THE published facts about Dr. Morse are inadequate to express the size of the man and the richness of his personality. To one who was permitted to be in close association with him as a colaborer in our West China Mission and more particularly in the work of the West China Union University, where he served with distinction as dean of the Medical-Dental College, bald statistics and formal recital of his abilities leave much to be desired. And it is because there has not as yet appeared in print anything that reaches beyond a formal account of our friend down to his inner life that I venture to write this tribute.

Intense Personality

"Reg" was at his best when off guard. To know him simply as a fellow member on a committee or to meet him at a faculty meeting was to be aware of an intense personality. But to sit with him around the stove of an evening and just let him chat was to experience a revelation of the man. He would recount his experiences as a neighbourhood doctor in Nova Scotia, when, after a gruelling day of ordinary practice, he would be called across country to a maternity case and fall asleep with the reins in his hand and trust his horse to take the right turn. Dr. Morse was always available to sick people. The Chinese would seek him out with their ailments and he would leave his meals or his studies to attend to them. He tried to establish "office hours", but it was futile.

As a young man he was captain of the Acadia football team and spared neither himself nor the team when a victory was badly needed. This experience on the football field developed one of the strong traits in a most intense personality. He was ambitious to accomplish that which he had set out to do. And the same driving force took him out on to the Tibetan Marches in pursuit of his favorite avocation—"measuring" folks so as to get abundant data for his studies in anthropology. He got his data and then cured the sick of their ills.

A Surrendered Life

The best monument to Dr. Morse will be the numerous young men and women who have studied under him in the department of anatomy at the Medical School of the West China Union University at Chengtu, West China. He was a member of the original faculty of that institution, and it was in the early days there that "Reg" succeeded in securing a cadaber for his department. The Governor of the province gave him the headless body of a criminal, and Dr. Morse sneaked it into a small building on the campus just as dusk was setting in. Lots of folks feared a riot might break out when it became known that the foreign school was actually carving up a Chinese body. But Morse invited some of the "literati" from the city to come and watch him dissect the body. They came and were at once won over to the risky experiment.

Dr. Morse surrendered his life to Jesus Christ and at once offered himself for service in the foreign field. His individuality was manifested in his conduct

*Reprinted from *The Maritime Baptist*, February 14, 1940.

of religious services. He was keenly interested in the physical fitness of missionaries and once a year would line up the members of our own mission in Chengtu and "shoot" us for small pox and typhoid fever. He was constantly urging the Reference Committee to grant him more funds for serums. And he was impatient when he was told that there were no more funds available for him. He went through a siege of cholera in Chengtu when 10,000 victims died. The city authorities begged him and other doctors to try to stop the scourge, but what could all the medical missionaries do with a plague that felled people on the streets and killed them in twenty-four hours!

Inspired Hope and Courage

What heart-breaking experiences our medical missionaries have to go through. Think of doctors with no more bandages while bus loads of broken men are being brought in from the front lines. Picture, if you can, the scene in an operating room when the ether gives out and there are tens of wounded waiting for relief from their agonies. Yet that is what has been going on in China for over two years.

"Reg" was at his best at the bedside of a sick person. He established hope and courage in his patient. He studied his patient all through and tried to understand him back of his immediate medical need. His classroom students all loved him. Yet he was the only teacher who rigidly locked his classroom door at the hour of study, even if he saw a breathless student hurrying along the road. Some of his women students would plead with tears in their eyes to be let in—all to no avail. Dr. Morse in reply to any criticism on his rigid rule would reply: "A doctor cannot afford to be late."

Tribute to Mrs. Morse

Much of Dr. Morse's success in West China may well be attributed to Mrs. Morse. Indeed, one cannot think of him apart from her. They were wonderfully matched. His interests were hers. When both the mission and the university were unable to make further grants to the doctor, Mrs. Morse would sit down and paint pictures of the Yangtze gorges, sell them, and pass on the proceeds to "Reg", and he would get some piece of equipment for his department of "bones and joints", as he loved to call his study of anatomy. We in the university have lost a very able surgeon and some of us have lost a loyal friend, but Mrs. Morse has lost a true and tried comrade on the journey of life. When the end was near, the husband turned to his wife and said: "Good bye, dear", and slipped away.

Abstracts from Current Journals

MEDICINE

Sobisminol Mass—Oral Treatment of Syphilis in all stages. *Journal A.M.A.*—Dec. 16, 1939.

A large part of this number is taken up with articles and an editorial on a new antisyphilitic agent, with the especial property of effective oral administration. It has been introduced by Hanzlik at Stanford University, and is now accepted as another weapon against the ravages of syphilis. This preparation of bismuth is evolved from the interaction of sodium bismuthate, tri-isopropylamine and propylene glycol. It is prescribed in capsules and given by mouth also in ampoules for intramuscular injection.

Results reports allow the following statements:—

1. Administered by the mouth daily, it is absorbed from the gastro-intestinal tract in a therapeutically active form which brings about involution of active syphilitic lesions of the skin. Involution period compares favourably with that of intramuscular administration. The time required in cases of primary or secondary syphilis is only slightly greater than when neoarsphenamine is used.

2. Sobisminol mass (orally) in daily doses O.84 g.m. of bismuth relieves symptoms of late neuro syphilis in a high percentage of cases and appears better than anything heretofore used.

3. It is well tolerated by most patients.

4. It can be given every day for many months with no cumulative toxic effects.

5. If oral bismuth therapy is approved, great care must be exercised in the control of its distribution. Self medication is worse than no medication.

L. R. M.

Blood Banks—*London Lancet*, Dec. 9, 1939, pp. 1227.

The establishment of blood banks has focused attention on the value of stored blood for transfusion, and much work is now being done on the changes that take place in the blood during storage. Two observers find that red cell tragility increases while the number of granulocytes and coagulation power decrease. They find that only seven minor reactions occurred after 400 transfusions with blood whose age averaged 10 days. Two other observers using placental blood show that haemolysis only becomes marked when sugar in the stored blood falls to a low level. They add glucose to the citrate anti coagulant in 1% content in the blood citrate mixture which greatly prolongs the life of the stored erythrocytes. They observed no ill effects follow its use a month or even two months after storage.

Although MacDonald and Stephens (*London Lancet*) hold the view that transfusion with stored blood is likely to be valueless, there is now a large amount of clinical evidence that blood, stored for a month or more can be successfully used, even as a drip transfusion, and that reactions are few, bearing no relation to the length of storage.

An interesting article (J.A.M.A.) by Novak discusses the sterility of stored blood. He says that the utter disregard for bacteria and their by-products

in relation to transfusion seems unjustified. Many unexplained transfusion reactions may be due to pyrogens or other bacterial by-products in contaminated blood. He suggests *sulfanilamide* as a preservative since the drug does not tend to precipitate proteins. On transfusion of 500 cc. of blood 20 mg. of sulfanilamide, per 100 cc. of blood, may be added. The amount of the drug thus added would be about 1½ gr. an extremely small dose.

General interest in the subject of stored blood is shown by the number of articles in the magazines. The *London Lancet* has two in December 19, 1939, and two papers in one issue of the J.A.M.A. All were on some phase of the problem. One of the writers concludes by saying that while in peace time the blood bank is a convenience, in war time it is a necessity. L. R. M.

Lymphatic Leukaemia. The value of sternal puncture in the diagnosis of atypical cases. *B. M. Journal*, Dec. 9, 1939.

In classical lymphatic leukaemia the blood picture shows diagnostic changes; a typical overwhelming lymphocytosis, 50,000 to 500,000 white cells per c.cm. 90% of which are lymphocytes. The sternal marrow reflects these changes; it is very cellular and often 70% of cells are lymphocytes. But often some of the clinical signs may be missing, and the lymphocytes of the blood may not be significantly increased. In these cases sternal puncture will often provide the clue to the diagnosis. Five case reports are presented of patients with enlarged spleen, glandular swellings in cervical axillary and inguinal regions. The first diagnosis on these cases was not usually lymphatic leukaemia; splenic anaemia, Hodgkin's diseases, or some other condition was suspected. The author's experience was that while lymphocytosis of the bone marrow, that is, 50% or more lymphocytes, is typical of lymphatic leukaemia, it is not usually present in other conditions involving lymphatic hyperplasia. In Hodgkin's disease no lymphocytosis occurs, usually there seems, therefore, to be little doubt that the finding of lymphocytosis of the bone marrow is strong evidence that the patient has lymphatic leukaemia even when the clinical signs and the peripheral blood pictures are atypical. L. R. M.

Vitamin Advertising and the Mead Johnson Policy.

The present spectacle of vitamin advertising running riot in newspapers and magazines and via radio emphasizes the importance of the physician as a controlling agent in the use of vitamin products.

Mead Johnson & Company feel that vitamin therapy, like infant feeding, should be in the hands of the medical profession, and consequently refrain from exploiting vitamins to the public.

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A doctor's residence and office in Halifax either for sale or for rent as the doctor is leaving Halifax. The office is well equipped and is attached to the house. Further information may be obtained on application to the Secretary.

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Bliss, G. C. W., Amherst.
Gilroy, J. R., Oxford.
Hill, F. L., Parrsboro, (Mcpy).
Cochrane, D. M., River Hebert (Joggins)
Withrow, R. R., Springhill.
Henderson, C. S., Parrsboro.

DIGBY COUNTY

Brasset, E. A., Little Brook, (Clare Mcpy).
Dickie, W. R., Digby.
Wier, A. F., Freeport, (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.
Morton, A. McD., 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.
Ratchford, H. A., Inverness.
McNeil, A. J., Mabou, (Mcpy and Town of Port Hood)

KINGS COUNTY

Bishop, B. S., Kentville.
Bethune, R. O., Berwick, (Mcpy).
de Witt, C. E. A., Wolfville.
Cogswell, L. E., 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).
Whitman, H. B., Westville.
Crummey, C. B., Trenton.
Young, J. Fraser, Pictou.
Granville, F. J., Stellarton.

QUEENS COUNTY

Ford, T. R., Liverpool.
Smith, Harry, Caledonia (Mcpy).

RICHMOND COUNTY

Digout, J. H., St. Peters, (Mcpy).

SHELBURNE COUNTY

Corbett, J. R., Clark's Harbour.
Fuller, L. O., Shelburne.
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).
Melanson, F., St. Anne du Russeau, (Argyle Mcpy).

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 aeces 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, New Provincial Building, Halifax.

Province of Nova Scotia Division of Vital Statistics

Provisional Monthly Report—March 1940

	March 1940				March 1939
	Total	Male	Female	Rate	Rate
No. of live births	1107	505	514	23.8	28.3
No. of stillbirths	37	25	12	32.3**	30.2**
No. of deaths	581	304	277	12.5	19.2
No. of deaths under 1 year of age	100	52	48	90.3*	65.3*
No. of deaths from puerperal causes	7	...	7	6.3*	6.8*

Causes of Death	Int. List No.	March 1940				March 1939
		Total	Male	Female	Rate	Rate
Measles	....	..	..	..	.....	.....
Scarlet Fever	....	..	..	..	.....	.....
Whooping Cough	9	7	4	3	15.1	4.3
Diphtheria	10	1	1	..	2.2	8.6
Influenza	11	31	15	18	66.8	281.5
Cerebro Spinal Meningitis	....	..	..	..	.....	.....
Pulmonary Tuberculosis	23	25	12	13	53.9	94.5
Other forms of Tuberculosis	24-32	4	1	3	8.6	8.6
Cancer and other Malignant tumors	45-53	61	31	30	131.4	167.6
Cerebral hemorrhage, thrombosis and embolism	82	22	11	11	47.4	64.5
Diseases of the Heart	90-95	91	48	43	196.1	262.1
Diseases of the Arteries	96, 97 99, 102	56	28	28	120.6	165.4
Pneumonia (all forms)	107-109	38	18	20	81.9	208.4
Diarrhea and Enteritis under 2 yrs. of age	....	..	..	..	.....	.....
Nephritis	130-132	31	15	16	66.8	90.2
Diseases of Early Infancy	158-161	57	31	26	51.5*	23.6*
Accident	176-195	23	18	5	49.6	120.3

* 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 March, 1940.

	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	1144	1107	505	514	42	46	37	25	12	581	303	278	7	100	7	33	25	4	61	22	91	56	38	..	31	57	23
Annapolis	30	29	10	18	1	..	1	1	..	8	3	5	..	2	..	..	..	..	..	..	4	..	..	..	..	2	..
Antigonish	33	31	12	18	..	1	2	2	..	11	7	4	..	..	..	..	1	..	3	..	1	..	..	..	2	..	2
Cape Breton	244	238	114	109	6	9	6	4	2	99	59	40	3	26	3	6	2	..	3	3	10	7	5	..	4	15	8
Colchester	61	57	22	29	3	3	4	1	3	26	11	15	1	4	..	..	..	1	3	1	2	1	4	..	..	2	2
Cumberland	79	79	42	33	3	1	..	..	..	41	21	20	..	6	..	2	2	..	6	2	7	8	3	..	1	3	1
Digby	54	52	22	27	2	1	2	1	1	18	9	9	..	2	..	3	2	..	2	1	2	1	1	..	..	..	1
Guysboro	28	28	13	15	..	..	..	..	..	12	5	7	..	5	..	..	1	..	..	..	2	..	..	..	3	4	..
Halifax	244	234	109	94	13	18	10	6	4	132	68	64	..	22	1	10	6	..	21	4	17	11	12	..	5	10	1
Hants	38	37	14	18	3	2	1	1	..	38	20	18	2	9	1	..	3	1	2	2	8	3	1	..	3	7	2
Inverness	28	28	12	16	..	..	..	..	..	28	12	16	..	4	..	2	1	1	3	2	4	1	1	..	3	4	1
Kings	45	45	21	21	3	..	..	..	..	20	13	7	..	2	..	1	3	..	4	1	4	1	1	..	1	..	..
Lunenburg	47	45	25	17	2	1	2	2	..	41	23	18	..	2	..	6	..	..	1	1	14	7	2	..	1	1	3
Pictou	69	68	33	33	..	2	1	1	..	38	17	21	..	4	..	1	1	..	5	2	7	6	3	..	4	2	..
Queens	33	29	13	13	2	1	4	3	1	8	3	5	..	1	..	..	1	..	1	..	..	2	..	..	2	1	..
Richmond	26	26	12	13	..	1	..	..	..	7	2	5	..	1	..	..	1	..	1	..	1	1	..	..	..	1	..
Shelburne	23	23	10	9	3	1	..	..	..	14	11	3	..	2	..	..	..	..	1	1	3	2	..	..	1	2	1
Victoria	19	19	8	9	..	2	..	..	..	14	7	7	..	4	1	1	1	..	1	1	1	..	3	..	..	1	..
Yarmouth	43	39	13	22	1	3	4	3	1	26	12	14	1	4	1	1	..	1	4	1	4	4	2	..	1	2	1

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 April 10, 1940 and represent the number *registered* with the Division Registrars during the month of March, 1940.

OBITUARY

Dr. Hugh N. MacDonald, Queen's University, 1882, died at his home in Whycocomagh on May 3rd, at the age of eighty-three. Dr. MacDonald was a man of remarkable physique and strength, and while a medical student at Queen's University defeated Lynch, the wrestling champion of America. A day later he won a gold medal for his general all round athletic ability. After his graduation he was gymnastic instructor at the University for three years, and then returned to Whycocomagh, where he practised for forty-eight years. Two years ago he published a booklet giving a detailed sketch of the two Inverness county families from which he sprang, the MacDonalds and the MacKinnons who came to this country about 1820. The roots of the family are traced back to the MacDonalds of Ross-shire and the MacKinnons of the Isle of Skye. Surviving is an adopted daughter and several nephews and nieces. His wife and sons died many years ago. Dr. MacDonald was an honorary member of the Medical Society of Nova Scotia.

Dr. Donald St.Clair Campbell, Dal. '16, died unexpectedly in hospital at Washington, D.C., on May 7th. Dr. Campbell was born in Halifax, May 9th, 1893, a son of the late Duncan R. and Pauline M. Campbell. The late Dr. D. A. Campbell was an uncle. Dr. Campbell served overseas as medical officer with the rank of captain with a New Brunswick regiment during the first Great War, and was wounded at the Second Battle of Amiens. After his return from France he was attached to the medical staffs of Cogswell Street Military Hospital and Camp Hill Hospital until moving to the United States. Dr. Campbell received his D.P.H. degree at John Hopkins University, and had been in the United States Public Health Service since 1926, serving in Virginia and Maryland. Dr. Campbell is survived by his wife, the former Miss N. Glassey of Halifax, and one brother and four sisters. Dr. J. G. D. Campbell of Halifax is a cousin.

Dr. Alfred Thompson, Dal. '99, died suddenly at his home in Vancouver, on April 20th, at the age of seventy-one. Dr. Thompson was a son of the late James A. and Mrs. Thompson of Nine Mile River, Hants County. After graduation he served at the Victoria General Hospital as house-surgeon for a year and then went to the Klondike, where he lived until 1924. He was elected to the Yukon Council in 1902, served there for two years and then won the Yukon federal seat in 1904. He did not run in 1908, but was re-elected in 1911. After the last Great War he was appointed medical superintendent of the Military Hospitals Commission. Dr. Thompson is survived by his wife, the former Miss Elsie Miller of Elmsdale, and daughter, Alfreda.

Personal Interest Notes

DR. G. R. MAHANEY, who has been practising in Granville Ferry since his graduation in 1934, has moved to Bridgetown. Before leaving Granville Ferry Dr. Mahaney was guest of honour at a farewell party given by the Junior Bridge Club when he was presented with a hall tree and radio lamp.

Dr. and Mrs. Sidney Gilchrist have arrived in Pictou on his year's furlough from Portuguese East Africa.

About one hundred and fifty students in the North Sydney High Schools recently received the tuberculin or "patch" test for tuberculosis. Positive reactors are examined by X-ray at the Hamilton Memorial Hospital under the auspices of the local chapter I.O.D.E., which has annually borne the costs.

Dr. and Mrs. W. A. Hewat of Lunenburg have returned home from New York where Dr. Hewat attended the refresher course at the New York Post-Graduate Medical School.

Dr. and Mrs. F. F. Eaton of Truro left early in May for Baltimore, where they will visit their sons, Dr. George and Dr. Drummond Eaton, and they will also visit other American and Canadian cities.

Dr. W. C. O'Brien of Wedgeport assisted by Miss Johnson, the county nurse, recently inoculated a large number of pupils and pre-school children against diphtheria at the local school.

Dr. and Mrs. R. M. Benvie of Stellarton were recent visitors in Halifax.

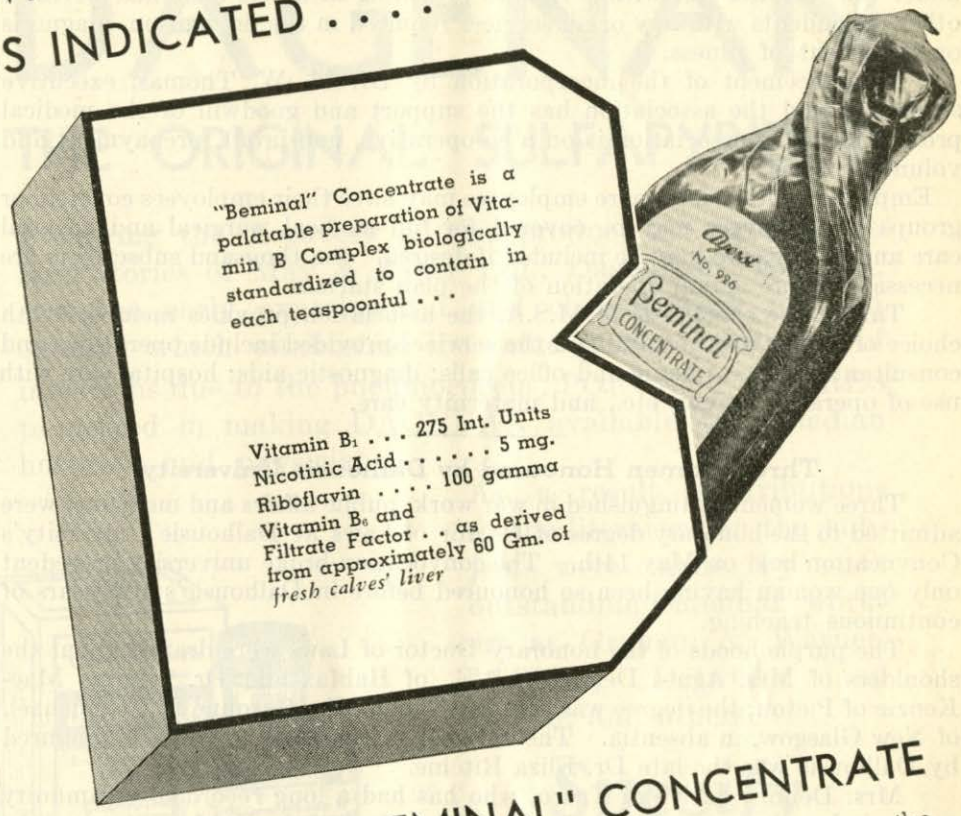
Dr. J. H. Buntain, Dal. '35, who has been practising in Upper Stewiacke, has moved to Pugwash, to take over the practice of Dr. J. A. Langille, who is now in uniform.

Dr. H. L. Knodell, Dal. '37, who has been associated with Dr. M. G. Tompkins at Dominion for some time, has left for Port Hawkesbury, where he has taken over the practice of Dr. J. A. Muir, who is now in uniform. Dr. Knodell has been succeeded by Dr. H. J. Devereaux, Dal. '36, who has been on the staff of the New Brunswick Sanitarium at Riverglade for more than two years.

Dr. and Mrs. T. I. Byrne of Dartmouth have moved to Liverpool where they will make their future home.

Dr. and Mrs. K. K. Blackadar have returned from Montreal to Yarmouth, where Dr. Blackadar has been receiving special surgical treatment, and is much improved in health.

WHERE *B* COMPLEX IS INDICATED . . . .



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MONTREAL • CANADA

New Medical Plan Started in British Columbia

Medical Services Association has been incorporated in British Columbia under the Societies Act with a view to providing members and their wives or other dependents with any or all services required in the prevention, diagnosis or treatment of illness.

Announcement of the incorporation by Dr. M. W. Thomas, executive secretary, said the association has the support and goodwill of the medical profession. The association is on a co-operative, non-profit, prepayment and voluntary basis.

Employers with ten or more employees may have their employees covered, or groups of employees may be covered for full medical, surgical and hospital care and family care may be included if desired. Six thousand subscribers are necessary before actual operation of the plan starts.

Taking the short title of M.S.A. the association provides members with choice of doctor and hospital and the services provided include operations and consultants services; home and office calls; diagnostic aids; hospital care with use of operation rooms, etc., and maternity care.

Three Women Honoured by Dalhousie University

Three women, distinguished in war work, public affairs and medicine, were admitted to the honorary degree of Doctor of Laws at Dalhousie University's Convocation held on May 14th. The convocation broke university precedent only one woman having been so honoured before in Dalhousie's 102 years of continuous teaching.

The purple hoods of the honorary Doctor of Laws were draped about the shoulders of Mrs. Agnes Dennis, C.B.E., of Halifax and Dr. Jemima MacKenzie of Pictou; the degree was conferred upon Miss Caroline E. Carmichael, of New Glasgow, in absentia. The only other woman to have been honoured by Dalhousie was the late Dr. Eliza Ritchie.

Mrs. Dennis, native of Truro, who has had a long record in community service in her city and province, had been president of the Halifax branch of the Victorian Order of Nurses and vice-president of its national council. She collected funds for the Red Cross in the First Great War and was decorated by the Belgian Government with the Order of Queen Elizabeth.

Dr. MacKenzie, who graduated from Dalhousie in 1904, undertook the medical supervision of a school orphanage in India for the Women's American Missionary Society of New York. She retired recently after a long career of service in the mission field.

Thirty-six years after her own graduation, and departure for a life of service in India, Dr. Jemima MacKenzie, Pictou County medical missionary, addressed the graduating class of Dalhousie University and the Alumnae on May 13th, telling them something about her adopted country, and expressing the hope that some of them might become sufficiently interested in India and take up missionary work themselves. Dr. MacKenzie entered Dalhousie Medical School in 1900, graduating in 1904. She went to India in the same year, under the Women's Union Zenana and Medical Society of New York, returning to Canada twice for brief periods. She came back again in June of last year and has settled down in Pictou with her two adopted English boys, aged five and seven years respectively.

Routine Order No. 400 of the Canadian Active Service Force states:

1. Officers and other Ranks, C.A.S.F. whilst on leave of absence or furlough, with Pay, in Canada, will be eligible for medical treatment at Public expense, subject to the following conditions.

2. The officer or soldier to report to the nearest Military authority, who will in every case, communicate with the District Medical Officer of the District in which the officer or soldier is temporarily residing.

3. The District Medical Officer may authorize the employment of a civilian practitioner when military facilities do not exist for treatment to be accorded.

4. Civilian Medical practitioners' accounts for services should be forwarded in triplicate to the District Medical Officer of the Military District in which such services have been rendered.

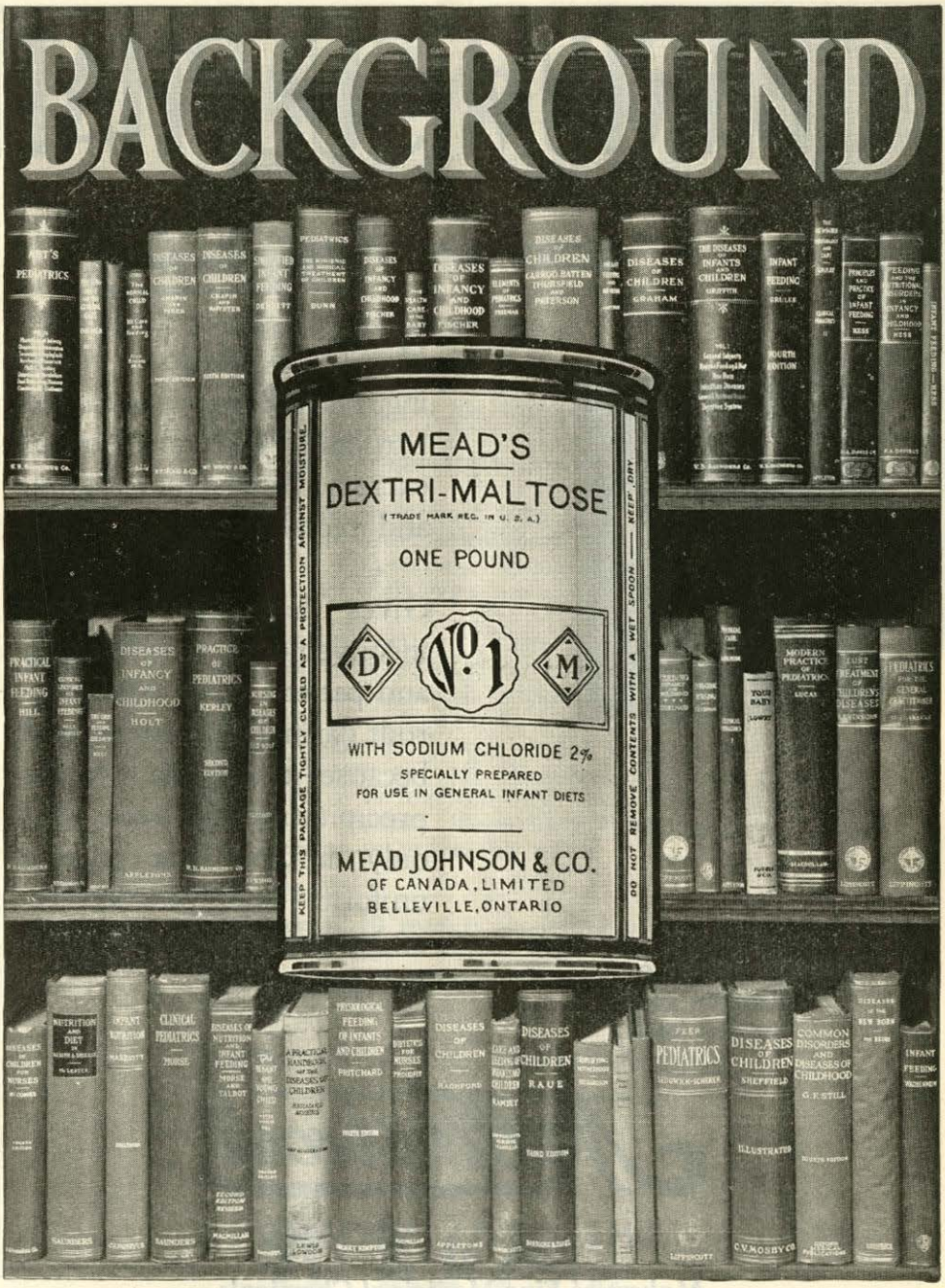
5. District Medical Officers will survey such accounts and recommend them for payment from Public funds in accordance with the schedule of fees paid for similar services by the Department of Pensions and National Health.

6. Commanding Officers will ensure that the personnel under their command are made fully aware of the above instructions.

(b) If the attending physician is a representative of the Department of Pensions and National Health, the patient will be treated in the usual manner and all accounts and documentation passed through that Department. Should hospitalization be indicated, the patient will be admitted under Department of Pensions and National Health arrangements.

(c) If the attending physician is *not* a representative of the Department of Pensions and National Health, the patient will be treated as any civilian patient would be, and the District Medical Officer, Military District No. 6, or the Senior Medical Officer of the Sydney or Mulgrave Fortress, as the case may be, notified immediately, either by telegram or by telephone. Accounts will be submitted in triplicate to the District Medical Officer; the Department of Pensions and National Health schedule of fees being used. Full regimental particulars should be shown on the face of the account.

(d) Military Ambulance Service is available for transporting Military patients to the various Military Hospitals and should be utilized to the fullest extent, but if for any reason, the soldier is admitted to a civilian hospital, he passes under the control of the Department of Pensions and National Health for medical and nursing service, and the account for hospitalization is rendered through that Department.



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