

MCGILL UNIVERSITY
MONTREALFACULTY OF MEDICINE
OFFICE OF THE DEANFebruary 20th,
1931.

A. S. Knight, Esq., M.D.,
Metropolitan Life Insurance Co.,
1, Madison Avenue,
New York City.

My dear Dr. Knight,

Many thanks for your letter of the 11th February. It came to me when I was ill in bed with influenza - hence the delay in my reply.

I cannot tell you how much we have appreciated the opportunities which have been afforded through the grant from the Metropolitan Life Insurance Company to carry on our work in Industrial Medicine.

While it is quite true that the grant was originally intended for a survey of industries in general, nevertheless in conversation with Dr. Wade Wright and Mr. Burnette at the time the plans which we had under way were well known to them, and have met with their endorsement and approval since.

It was our idea that we should, first of all, establish the Industrial Hygiene Department here, and, in the course of time, we would be sufficiently advanced to broaden its scope and - as you will see from the reports we have already forwarded - the interests of industrial hygiene in this way.

I regret very much that we did not send you the annual reports from Dr. Pedley when they were issued, but I am now forwarding them to you for your perusal.

With reference to the conversation which Dr. Pedley had with Mr. McConnell regarding some piece of research, I think there must be some misunderstanding. As I already wrote to Dr. Frankel, Dr. Pedley, while retaining his position as Professor of Industrial Medicine, was transferring some of his activities and time to the social welfare work of the city, which, of course, is very closely

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linked up with Industrial Medicine. Inasmuch, too, as the money which has been allocated to him for Industrial Medicine was voluntarily relinquished in view of the stipend which he received from the social welfare group, we felt it was a wise procedure to spend some of that money along lines of research. It was not at all intended, however, that this grant, which was meant for Industrial Hygiene in general, should be entirely devoted to that purpose.

On the other hand, we have under way a variety of investigations which relate to the subject of Industrial Medicine, e.g., a survey of tuberculosis in industries in the Province of Quebec, and this work is being undertaken by a committee and a group of experts who are taking the matter very seriously, and I think will get results which are very illuminating.

Inasmuch as a good deal of the work which is in contemplation is in connection with disease of industry, we had thought of engaging a chemist at a very modest salary, which would help in solving some of these problems we are investigating, such as the importance of mercury and sulphur dioxide in the etiology of industrial disease.

You already know, perhaps, of Dr. Pedley's very important investigations in the bronze industry, and of the work that he has done in cleaning up some of the lead poisoning situations in our own city.

What we should like to contemplate then, in the near future, is a continuance of the activities we have been doing, and the enlisting of the interests of more industries in forming health surveys and linking them up more closely with our hospital clinics. This, with the other activities mentioned in our report, as well as the efforts of research would embrace the work for the next two years.

Professor Fleming is Director of our Department of Public Health and Preventive Medicine, and under his aegis the work of Industrial Medicine is carried on and is kept closely in touch with all these activities. In view, too, of his very close connection with all the public health activities of the city and of the province, he has been a very significant help in the programme to enlarge its usefulness.

I feel sure that you will agree with me that this kind of work is of capital importance in approaching the subject, and its success depends largely on the firm establishment of the University and civic and provincial group before we embark on any wider national scheme. This is all the more true, inasmuch as a survey of the industries of the whole country will involve in a considerably larger outlay than we consider spending.

To summarize some of the activities, may I add the following:-

1. The establishment of an industrial clinic at the General Hospital.
2. The creation of medical departments in various industries, financed by the industries themselves.
3. The organization of a night dental clinic for workers on a cost basis.
4. The organization of the Industrial Medical Association of the Province of Quebec.
5. Courses of lectures on industrial hygiene to physicians.
6. Various studies of diseased conditions in industry.
7. Participation in the Montreal Health Survey - one of the finest surveys of the kind published in any city.

Add to this the very wide spread propaganda that is being carried on, and will continue to be carried on, to introduce the citizens to industrial hygiene; among which efforts may be mentioned the establishment of a workshop for handicapped individuals, the organization of occupational therapy workshops, and investigation into the health activities of the city in connection with the City Board of Health, which has been a real factor in promoting civic and industrial health.

In conclusion, I would merely say that the industrial hygiene work that is being done has been an acknowledged success by those who are competent to judge, and I feel is distinctly worthy of being supported and continued as much as possible.

Very cordially yours,

C. J. Martin.

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COPY/

REPORT OF THE ACTIVITIES OF THE INDUSTRIAL
CLINIC, MONTREAL GENERAL HOSPITAL, FOR THE
YEAR SEPTEMBER 1, 1929 to AUGUST 31, 1930.

CLINICAL

The clinical work in the Hospital as distinguished from that done in the field has continued as in the past, and an additional duty has been assumed, namely the supervision of the health of the Hospital employees. This was undertaken as a service to the Hospital, and has little value from the University standpoint.

The new activity calls for an examination of all new employees of the Hospital, and requires that all cases of illness among the Hospital employees be reported to the Industrial Clinic. During the year 80 pre-employment examinations and 38 periodic re-examinations were performed. 410 sick employees of the Hospital were seen and followed until the termination of their illness. This system, as it operates at present, is not entirely satisfactory on account of the number of departments which engage their own personnel, and a considerable number of new employees are being engaged with no examination. However, it is hoped that as the value of this examination becomes appreciated all departments will take advantage of it.

The study of occupational diseases among the Out-patients of the Hospital continues. Some results of this work are now appearing. One concern, which formerly contributed a large number of cases of lead poisoning to this Clinic, has established a new factory, partly on account of the severe lead hazard which existed in the old plant, and another firm has installed a fume removal system which should reduce the hazard very considerably. 22 cases of active lead poisoning were treated and investigated. Two of these were of special interest, and have been written up for publication or report, one in the Journal of Industrial Hygiene and one before the Montreal Medico-Chirurgical Association. Lead poisoning was one of the principal diseases seen, although several cases of occupational skin diseases were investigated. In this connection an arrangement was made between one manufacturer and the Skin Department of this Hospital to undertake an investigation of a dermatitis caused by a certain lotion of his. This investigation was carried through to a very satisfactory conclusion by the Skin Department.

It may be stated here that the legal aspect of occupational diseases is in a very unsatisfactory condition in this Province, since no provision is made for compensation through the Workmen's Compensation Act. This matter was brought to the attention of the Province of Quebec Safety League, and a committee was formed to investigate it, but so far, unfortunately, this committee has been very inactive.

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The Industrial Dental Clinic has had a very satisfactory year. Its clientele increased, and consequently an increase of staff was necessary. 268 new patients were treated and 984 treatments given. I believe this Clinic is of real value to the community. Industrial workers can get good dental service at a low cost, and since the Clinic is operated at night, they need not lose time from their work. The financial status of the Industrial Dental Clinic is satisfactory, the fees from the patients being sufficient to pay the operating cost.

FIELD ACTIVITIES.

The plant Medical Departments have continued to carry on their work, and have given general satisfaction so far as can be determined. It is our practice to send to each plant manager a monthly report covering the activities of his Medical Department, and indicating the state of health of his employees. Frequently suggestions are made as to improvements in his plant from the standpoint of health. These suggestions are always gladly received, and usually followed. In these Medical Departments 1056 physical examinations were made during the past year, 15,605 surgical treatments and 6336 sickness treatments were given, and 889 nursing visits made to the homes of the employees.

A number of firms have been approached in regard to establishing medical departments, but no success has attended our efforts this year. I believe there is no doubt that the services already established have given satisfaction, but the idea has not sold itself, and we have had very few unsolicited requests for information and advice about the organization of medical services. It is possible that the general industrial depression has been responsible for this.

Four new activities were proposed during the year:

- (1) A study of asbestos workers.
- (2) A study of a large group of workers by X-ray to determine the incidence of tuberculosis.
- (3) A study of psychological tests for automobile drivers with the view to decreasing accidents.
- (4) The organization of an Occupational Therapy Workshop and an Industrial Workshop for handicapped individuals.

(1) The asbestos study is nearing completion. 102 individuals were examined clinically and by X-ray at the plant of the Canadian Johns-Manville Co. in Asbestos, P.Q. in July 1930. Other groups were examined at Thetford Mines in September 1930, but these do not come within the purview of this report. This study is being carried on with the co-operation

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of the Metropolitan Life Insurance Co., and it is expected that valuable information on the subject of asbestosis will be forthcoming. It is hoped that permission to publish the results will be obtained.

(2) The Tuberculosis Survey will probably be commenced during the coming year in co-operation with the Canadian Tuberculosis Association, the Sun Life Insurance Co. and other bodies. Since tuberculosis is such an important disease in the Province of Quebec, particularly among industrial workers, it is expected that results of real value will accrue from this study.

(3) The psychological study of automobile drivers was discussed in committee and then proposed to the Insurance Casualty Underwriters Association, but they did not show sufficient interest to warrant continuing the matter.

(4) The organization of the Occupational Therapy and the Industrial Workshops for handicapped individuals is still mooted, and will, it is hoped, be accomplished in the future. In that connection the Director of the Industrial Clinic has served as President of the Association of Occupational Therapy and has visited a number of workshops in other cities to acquaint himself with their organization and operation.

EDUCATIONAL.

Lectures have been given at the University in the Faculty of Medicine, the School of Social Work, the School of Graduate Nurses and the Department of Architecture.

Several addresses have been given to clubs and societies in Montreal and elsewhere.

A paper, "Lead Poisoning in Brass and Bronze Industries" was read before the Industrial Hygiene Section of the American Public Health Association at its Annual Meeting in Minneapolis in October 1929.

Another paper, "The Incidence of Occupational Deafness and Methods for its Prevention", was read before the 11th Annual Meeting of the American Association of Organizations for the Hard of Hearing in New York in June 1930.

Through the Province of Quebec Safety League and the Montreal Council of Social Agencies representation was made to the Provincial Department of Public Works and Labour on behalf of handicapped workmen who are discriminated against by the Workmen's Compensation Act. In this connection the Director of the Industrial Clinic was asked to read a paper before the International Association of Industrial Accidents Board and Commissions at its Annual Meeting in Wilmington, Del. in Sept. 1930.

The Director of the Industrial Clinic served as Chairman of the Industrial and Economic Section of the 2nd Canadian Conference of Social Work held in Toronto in May 1930.

The Industrial Medical Association of the Province of Quebec has held five regular meetings during the year. The attendance at these meetings has been between 20 and 35. The members regularly attending the meetings appear to enjoy them, and I believe the organization of this Association has been well worth while. It plans during the coming year to send lecturers to different parts of the Province and so extend the influence of the Association more widely.

The Director of the Industrial Clinic attended six national or international meetings during the year as follows: The Annual Meeting of the National Safety Council, the Annual Meeting of the American Public Health Association, the Second Canadian Conference of Social Work, the American Association of Organizations for the Hard of Hearing and two meetings of the Conference Board of Physicians in Industry.

In resigning the position of Director of the Industrial Clinic I wish to say that it is my belief that the Industrial Clinic should be continued along the lines already established. Although numerically the number of cases seen and treated is not large, the location of the Clinic and its activities have served the useful purpose of gaining contact with industry, and it seems likely that as time goes on the field of usefulness of the Clinic will be enlarged.

It was my hope at first that more use could be made of the clinical material passing through the Compensation Clinic, but so far no method has been found to handle this material in a useful way. A study was carried on last year of the accident cases of several large firms, but since these firms did not send all their cases to the Clinic a proper statistical background could not be determined and the result of the study were of no practical value.

I believe that the present change in personnel affords a good opportunity for the re-organization of the Industrial Hygiene Service. There is need in this part of the country for a well trained chemist in the field of Industrial Hygiene, and it is my belief that one should be engaged. The space is available in the Department of Public Health and Preventive Medicine, and many problems await a man qualified in this field. At the present time Industrial Hygiene activities at McGill University are severely hampered by the absence of skilled assistance in chemistry.

Respectfully submitted,

(Signed) Frank G. Pedley,

The Industrial Clinic.

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REPORT OF THE ACTIVITIES OF THE INDUSTRIAL
CLINIC, MONTREAL GENERAL HOSPITAL, FOR THE
YEAR SEPTEMBER 1, 1928, to AUGUST 31, 1929.

CLINICAL

(A) The investigation of occupational diseases among the Out Patients of the Hospital has progressed this year in the same manner as the previous year. The number of cases for investigation does not appear to be increasing, and I am of the opinion that this aspect of the work, while valuable from a research standpoint, is less important than some of the other activities of the Clinic. Actually there were 523 cases referred to the Industrial Clinic during the period. Among these were 30 cases of active Lead Poisoning, 3 cases of chronic arsenic poisoning. Three cases of carbon monoxide poisoning were seen in the Hospital wards, but these were not Industrial cases.

(B) The examination of Food Handlers referred to the Hospital for certificates has been continued. Actually there have been 275 of these examined.

(C) 383 Industrial accident cases were questioned with regard to the causation. The figures for this study are in the process of compilation, and cannot be given. The difficulties of a study of this type from hospital records becomes apparent as soon as it is undertaken, for one has no assurance that all accident cases of a given company come to the Hospital for treatment.

FIELD ACTIVITIES.

(A) The Plant Medical Departments which were established in the first year of the operation of this Clinic have continued satisfactorily, and have handled a tremendous volume of work. In the year under review 1295 physical examinations have been performed, 17052 accident treatments given, 5914 sickness treatments and 947 nursing visits. These statistical statements only describe the work of these Medical Departments in part. I believe there is general satisfaction on the part of the various plant managers in the operation of these Medical Departments. A number of firms have been approached in regard to the formation of Medical Departments. but only 2 have done so. Both these firms have engaged physicians recommended by the Industrial Clinic, and are operating along the general lines recommended by the Clinic. During the year one large steel company established a Health Service with a full time physician in charge. The Industrial Clinic was consulted in regard to the organization of this, and actually conducted the service for six weeks during the absence of the physician on account of sickness. Another large plant manufacturing company established a Health Service, stimulated I believe by this Clinic, but the Clinic was not consulted as to its organization.

(B) The idea of co-operative Health Service to small plants, which was sponsored by the Canadian Manufacturers Association, has made no progress this year.

(C) There have been several calls for investigation of plant conditions. A fairly extensive study was made in one bronze foundry. A number of air analyses for lead were carried through. The results of these studies form the basis of a paper to be read at the annual meeting of the American Public Health Association this fall. A study of the carbon monoxide hazard in a large garage was commenced last winter, but was discontinued for lack of apparatus. The purchase of suitable apparatus is contemplated and it is hoped to continue this study during the coming year.

EDUCATIONAL.

(A) Lectures in Industrial Hygiene have been given to the third year students, the students in architecture, the School of Graduate Nurses, the School of Social Work and the pupil nurses of the Montreal General Hospital.

(B) A special course of 12 lectures with field visits was given to the Public Health Nurses in the School of Graduate Nurses.

(C) 6 Popular lectures have been delivered at various clubs and societies in Montreal, and one in Toronto.

MISCELLANEOUS.

(A) An Industrial Dental Clinic was opened in December 1928. The Clinic is self-supporting so far as running expenses are concerned, but the Hospital donates the use of the space without charge for rent, light, heat and laundry. At this Clinic 182 cases have been treated. There has been a total of 785 treatments given. In the organization of this Clinic two firms donated \$350.00 to purchase the necessary equipment. A total of \$1720.46 has been received by the Industrial Dental Clinic, of which the sum of \$1491.43 has been paid for salaries and supplies, leaving a balance of \$229.03. I wish to acknowledge here with thanks the services of the various dentists, who have spent their time at this Clinic with rather inadequate remuneration, and to the nurses, who voluntarily gave their time to assisting the dentists.

(B) The staff of the Clinic assisted in the production of the periodic Health Examination Film of the Canadian Medical Association. This occupied a very considerable amount of time, but was considered well worth the time spent.

(C) The Industrial Medical Association of the Province of Quebec conducted a successful year. A union of the French and English associations took place, and this united Association in collaboration with other organizations was able to render considerable service to the Workmen's Compensation Commission of the

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Province of Quebec in the extensive revision of their Tariff. Several general meetings were held during the year, and a very successful dinner meeting at the annual meeting of the Canadian Medical Association.

(D) An effort has been made to obtain permission to study the effect of asbestos fibre on the health of workers. Two large companies were approached in this regard. The first one, possibly on account of financial difficulties, was unwilling to sponsor such a study. The second has decided to undertake an investigation for itself with our assistance and advice. It is to be hoped that information of scientific value will be forthcoming from this.

(E) The director of the Industrial Clinic attended 4 conventions during the year under review.

Respectfully submitted,

(Signed) Frank G. Pedley,

The Industrial Clinic.

0459A

KG

February 11, 1931

Dr. Charles F. Martin
Dean of the Faculty of Medicine
McGill University
Montreal, Canada

My dear Doctor Martin

We want to confer with you a bit about the authorization from this Company under which McGill University has been carrying on a certain line of work since January 1926.

You will recall that under the terms of the authorization \$5,000 a year for five years was appropriated to pay the cost of a survey by the School or Chair of Industrial Hygiene of Industries in Canada "with a view of improving their hygienic conditions."

As we understand it your people did not do any work under that appropriation during 1926 but the \$5,000 drawn in 1926 was used for work done in 1927. We understand, further, that the work was likewise carried on in 1928 and 1929 and the appropriations were drawn to pay for it. We do not recall having seen any reports of the actual work performed, though, and we wonder whether you have copies of any such reports that you can send to us? The particular incentive for this inquiry at just this time is that we have a letter of January 28, 1931 from Dr. Frank G. Pedley which says: "When I was in New York a few weeks ago, I spoke to you on the subject of using the money granted by the Metropolitan Life Insurance Company to McGill University for Industrial Hygiene in some work of pure research. You were going to think the matter over and let me know what your ideas were on the subject. This letter is merely to jog your memory."

Will you please tell us now what special work is being carried on by McGill now that could be considered as under that authorization, or what you have in contemplation, and what you advise? Of course you know, and we know, that the terms of the appropriation could not possibly be changed.

With kindest regards and hoping that you will surely get into the way of coming to see us whenever you are down here, we are,

Very truly yours,

0460

METROPOLITAN LIFE INSURANCE CO.

0461

~~MR. RAY THOMPSON~~

~~CASHIER'S DIVISION~~

*Mr. R. Mackenzie
for Dr. King et al.
per
27*

SECOND VICE-PRESIDENT

Dr. FRANKEL

4th Floor

Dr. Frankel
May Dr. Lanza

& I see
you about
all of this?

Cordell
OK

W 30 1961

0462

CHAIRMAN, BOARD OF DIRECTORS
NORMAN DAWES

CHAIRMAN, BUDGET COMMITTEE
E. B. STEVENSON

CHAIRMAN, 1931 CAMPAIGN
H. P. THORNHILL

CHAIRMAN, EXECUTIVE COMMITTEE
F. D. KNOWLES

HON. TREASURER
J. DINHAM MOLSON

FINANCIAL FEDERATION

OF THE MONTREAL COUNCIL OF SOCIAL AGENCIES
1421 ATWATER AVENUE

EXECUTIVE DIRECTOR
~~FRANK G. PEDLEY, M.D.~~
FRANK G. PEDLEY, M.D.
MEDICAL ADVISOR
A. GRANT FLEMING, M.D.

MONTREAL
WILBANK 1151

SECRETARY
LIONEL E. BRITTLE
PUBLICITY SECRETARY
MARJORIE BRADFORD

January 28th, 1931.

J. W. McConnell Esq., M.D.,
Metropolitan Life Insurance Company,
1 Madison Ave.,
New York City, N.Y.

Dear Dr. McConnell;

When I was in New York a few weeks ago, I spoke to you on the subject of using the money granted by the Metropolitan Life Insurance Company to McGill University for Industrial Hygiene in some work of pure research. You were going to think the matter over and let me know what your ideas were on the subject. This letter is merely to jog your memory.

Yours very truly,



Frank G. Pedley, M.D.

FGP.GJ.

AP
J. W. McConnell
JAN 29 1931

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RECEIVED
C.M. [illegible]
[illegible]

POLICYHOLDERS SERVICE BUREAU

ROUTING	NOTED	DATE
<i>Mr. [illegible]</i>		

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... and no way of
... of [illegible]
... [illegible]
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... of [illegible]

TO: [illegible]

... [illegible]

McGILL UNIVERSITY
MONTREAL

FACULTY OF MEDICINE
OFFICE OF THE DEAN

19th August 1929.

*Subscribed
J. B. K.*

Dear Dr. Knight,

I beg to acknowledge with very many thanks your kind note and cheque for \$5,000.00 - made out to the order of McGill University. The Bursar will send an official receipt; this is merely to give expression to my personal appreciation of your continued courtesy.

With kind regards, believe me

Very sincerely yours,

C. Martin

Dr. Augustus Knight,
Medical Director -
Metropolitan Life Insurance Company,
1, Madison Avenue, New York.

0465

K G

August 16, 1929

Dr. Charles F. Martin, Dean
Faculty of Medicine
McGill University
Montreal, Canada

Dear Doctor

We are very pleased to enclose now the Company's check for
\$5,000 to the order of McGill University as this year's payment under the
terms of the appropriation.

Yours very truly,

MEDICAL DIRECTOR

0466

In re Appropriation of \$5,000 a Year for Five Years - McGill University, Montreal.

Mr. Sheehan, Auditor:-

In accordance with the resolution of the Board of Directors made January 6, 1926, will you please draw a check to the order of McGill University for \$5,000 for the subscription due for the year 1929, covering the cost of a Survey of Industrial Hygiene of Industries in Canada?

.....
Medical Director.

K-DG
August 14, 1929.

0467

426178
Canada

August 14, 1929.

K-DG

Doctor Charles F. Martin, Dean
Faculty of Medicine
McGill University
Montreal, Quebec
Canada

My dear Doctor Martin

In the absence of Doctor Wright your letter of August 6th has just been referred to me upon my return to the Home Office. The only reason that the payment from the Company for this year has not been made is because it had not been requisitioned by McGill. We are asking now that the check shall be sent immediately.

Yours very truly,

MEDICAL DIRECTOR.

0468

DR. KNIGHT
MEDICAL DIRECTOR

3d Floor

0469

For your information
Dr Wright is away on
vacation. Will

you reply to Dr
Martin?

agh.

aug 9/29

Last payt made 5/18/28
\$5000. If you will send the
Auditor a memo. he will
send check for 1929. ^{T-112}
8/11/29

agb

MCGILL UNIVERSITY
MONTREAL

FACULTY OF MEDICINE
OFFICE OF THE DEAN

August 6th, 1929.

Dr. Wade Wright,
Metropolitan Life Insurance Co.,
1, Madison Avenue, New York City.

AUG 14 1929

Dear Dr. Wright,

This is just a private letter to let you know that the Central Office of the University is embarrassed to know what to do about the grant of \$5,000.00 from the Metropolitan Life Insurance Company.

You will remember that they were good enough to give us that grant for five years, and this last year's grant has not been paid in. I hate to ask about it officially, but thought I might write to you privately to see what I could do about the matter.

With all kind regards and hoping to see you in Montreal again soon, -

Affectionately yours,

CJ Martin

0470

Welfare

Copy

January 6th, 1926

The President brought to the attention of the Committee the request from Sir Arthur Currie, Principal of the McGill University, that we make an appropriation of \$5,000. a year for five years to pay the cost of a survey by the school or chair of Industrial Hygiene of industries in Canada with a view of improving their hygienic conditions. The President said that this plan appealed very strongly to Dr. Wade Wright of the Home Office Staff, who has charge of the Industrial Hygiene, Dr. Knight of the Medical Division and Dr. Frankel, head of the Welfare Division. Under Group Policies in Canada, the Company has some 15,000 or 16,000 working men covered by group policies; in addition, we have well over a million lives insured in Canada, a large proportion of which are working people and their families. A survey such as proposed would be of great benefit to the Company in its care of these policyholders directly and through their employers. Such a survey has never been made in Canada; there is no institution and none of the Governments have taken up work of this character. In the United States the Federal Government and various other welfare agencies cover the field.

After thorough discussion by the Committee a resolution was passed making the appropriation requested.

Mr. Sheehan

Will you please send them \$5,000
for 2nd year?

May 17, 1928

(Signed) A. S. K.

0471

C. F. Martin
-yk

An extract of Doctor Knight's letter to Doctor Charles F. Martin
dated February 24th, 1927

Wade Wright has been telling me in repeated talks about your having appointed Dr. Pedley as Chief of the Industrial Clinic at the General Hospital and as Lecturer at the University. Wright feels certain that you are setting up an altogether worth while program and predicts certain success for it. Good for you! You certainly have our cordial best wishes in all that you undertake.

Very truly yours

MEDICAL DIRECTOR

0472

An extract of Doctor C. F. Martin's letter to Doctor Knight
dated February 19th.

Pedley has accepted the position as Chief of the Industrial
Clinic at the General Hospital and a lectureship in that subject
at the University. He will take on his duties in August.

Sincerely yours

(Signed) C. F. Martin

0473

C. file
174
Miss

February 9, 1925.

Dr. C. F. Martin,
Dean,
McGill University,
Montreal, Canada.

Dear Dr. Martin:

It was very pleasant to see again your name when Dr. Knight referred to me your request for information regarding the services which the Department of Public Health of McGill might offer to an insurance company which promised to help support it.

I am sending you several recent publications, the outgrowth of the Company's cooperation in community health activities, also a copy of a bulletin issued by the Bureau of which I am a member, indicating the sort of services in the field of industrial hygiene which we extend to our policyholders.

With kind regards to Mrs. Martin and your good self,
I am

Sincerely yours,

Wade Wright, M.D.
Assistant Medical Director
In Charge of
Industrial Hygiene

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Dr. KNIGHT

MEDICAL DIRECTOR

Phone, 154

3d Floor

0475

If you wish
I will get the
Wolff Div. publication
on community
health activities -
Munich or -
yes, please ask W.


WADE WRIGHT, M.D.

Asst. MEDICAL DIRECTOR
Room 3069 Phone 50

*For your
sight ask*



0476

T-245

McGILL UNIVERSITY
MONTREAL

FACULTY OF MEDICINE
OFFICE OF THE DEAN

January
Twenty-sixth,
1925.

WJ
73

Dr. A. S. Knight,
Metropolitan Life Insurance Co.,
NEW YORK.-

FEB 3 1925
CJ Martin

Dear Dr. Knight,

Ever so many thanks for your kind attention to my request. I was delighted to hear of Dr. Wade Wright; he was one of the bright jewels that I wanted to get into the McGill crown, but the monied interests of the Insurance Companies beat me out!

I can use the information you send on admirably, but I was also looking for literature which I thought might have been issued by some of the men in your Company who look after demonstrations, as in Tuberculosis, etc., in communities. However, I think I can get some from other sources. Meanwhile, accept my very best thanks for all your kindness and attention; it is a shame to bother so busy a man as yourself. If you want a rest, come up to Montreal, and I shall be glad to take care of you!

With all kind regards, believe me

Very cordially yours,

CJ Martin

0477

(COPY)

*original carbon copy
can't be found*

January 21, 1925

Dr. Charles F. Martin
Dean
Mc Gill University
Montreal, Canada

My dear Doctor Martin

Immediately upon receipt of your welcome letter of January 10th, I determined that the one present member of our medical staff who can best answer the questions that you ask is Dr. Waie Wright, formerly of Boston and now physician here as one of the Assistant Medical Directors, having particularly to do with the work and functions of the Group Health Division. Unfortunately Dr. Wright is at his home with an attack of the grip just at present, but he received your letter promptly and now says in reply:

Quotation

With kindest personal regards and trusting that you will come to us very freely and just as often as you ever feel like it for any information or any help that we might be able to give, I am,

Very truly yours,

MEDICAL DIRECTOR

0478

K-G

January 21, 1925

Dr. Charles F. Martin
Dean
McGill University
Montreal, Canada

0479

My dear Doctor Martin

Immediately upon receipt of your welcome letter of January 10th I determined that the one present member of our Medical Staff who can best answer the questions that you ask is Dr. Wade Wright, formerly of Boston, and now physician here as one of the Assistant Medical Directors having particularly to do with the work and functions of the Group Life Division. Unfortunately Dr. Wright is at his home with an attack of the grip just at present but he received your letter promptly and now says in reply, "Much interested in Dr. Martin's letter to you. Dr. Martin is a treasured friend. I have had some slight knowledge of his plans for the Department of Preventive Medicine at McGill University. The Department, unless I am much mistaken, is not a very thriving one as yet- but Martin has high hopes for it. He would know, I take it, 'what could a well organized, well financed department do?' The Sun Life might well ask- if it secured a mortgage on McGill for such service as we might ask: Technical guidance in regard to matters affecting community or individual health- such as, aid in preparation of publicity, occasional research matters not involving great outlays of money, field investigations as of sanitation, water, or milk supplies, or industrial hazards. The help of the University might well be enlisted in stimulating and guiding public health activities in communities in which the carrier might be particularly interested. I feel that the usefulness of the University could be made apparent in relation to group insurance much more readily than in any other way. It would serve, perhaps, in some such way as do our own Welfare Division and Policyholders' Service Bureau. This is vague, but discussion, I feel sure, could crystalize the vagueness into something definite. Observation of our scheme at Harvard leads me to add that Martin should not only be prepared to render certain types of service but certain services, more or less routine perhaps, should be specified. Unless there is a definite, tangible quid pro quo the interest of a financial supporter may well languish after a few years."

With kindest personal regards and trusting that you will come to us very freely and just as often as you ever feel like it for any information, or any help that we might be able to give, I am,

Very truly yours,

MEDICAL DIRECTOR

- : M E M O R A N D U M : -

TO: Dr. Knight

FROM: Dr. Wright

0480

J.A. Wright

Much interested in Dr. Martin's letter to you. Dr. Martin is a treasured friend. I have had some slight knowledge of his plans for the Department of Preventive Medicine at McGill University.

The Department, unless I am much mistaken, is not a very thriving one as yet - but Martin has high hopes for it. He would know, I take it, "what could a well organized, well financed department do?".

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January 19, 1925.

W.A. Wright
Per J.A.

McGILL UNIVERSITY
MONTREAL

FACULTY OF MEDICINE
OFFICE OF THE DEAN

January 10th, 1925.

A. S. Knight, Esq., M.D.
Metropolitan Life Insurance Company,
NEW YORK, N. Y.

W. C. W.
Jan 16 -
JAN 12 1925

0481

Dear Dr. Knight,

I wonder if you can do me a great favour! One of our local Insurance Companies here is, I think, interested in our Department of Public Health, and the authorities are willing to do something for the University provided I can show them in some concrete fashion along what lines a Department of Preventive Medicine can contribute, so to speak, dollar for dollar, on behalf of their policy holders.

While, of course, I have a very good notion on the academic side of how a Department of Preventive Medicine does this, I would like very much to get any "dope" I could to put on paper a formulated plan which would appeal to a business organization. I thought, perhaps, in view of the very extensive work along these lines that you are constantly doing, you might have some loose literature which you might pass on to me! It means a great deal to our School and to me personally if I can put a thing like this across, and any help you can give me would be very gratefully received.

With all good wishes for the New Year, believe me

Very sincerely yours,

C. Martin
DEAN

an excellent man
at McGill.

File

MEMORANDUM

MR. F. M. SMITH
VICE-PRESIDENT
INDUSTRIAL DIVISION

October 15, 1947

cc/✓

You asked about the Industrial Hygiene Bureau charges. Perhaps you would like more specific figures than I was able to give you over the phone.

The Industrial Hygiene Bureau, including the Industrial Hygiene Laboratory, spent approximately \$71,000 in 1946. The budget for 1947 was \$98,830, the increase being accounted for by the return of Dr. McConnell full time, the return of Mr. Ferry (a laboratory technician), the addition to the staff of Mr. Battista, a ventilation engineer, increased salary, and other costs, etc.

In the first eight months of 1947 the expenditures were \$63,493 or 64% of the budget, against a theoretical budget allowance of 66 2/3 %.

This expenditure is a part of general Welfare costs and is prorated accordingly. The prorates at present are as follows, based on policies in force on December 31, 1945 (including eligible Group certificate holders):

Industrial Department	- 7 ¹ / ₂ .33%
Ordinary Department	- 20.42%
Group Department	- 8.25%
Group Life	- 4.56%
Group Annuities	- .64%
Group Accident & Health	- 2.51%
Group Personal Accident and Health	- .54%

We make certain charges for travel and incidental expenses when field surveys are made for Group policyholders. In 1946 we collected on this account \$2,487.25. In nine months of this year we have collected \$2,336.51.

The great bulk of this expenditure goes to serve Group policyholders. There is of course a small use of industrial hygiene literature to meet requests from non-insured groups. We also receive and answer a certain number of inquiries regarding industrial health problems from non-insured individuals and agencies. This really amounts to probably not more than 1% of the total.

It is true that some of Dr. McConnell's time is given to other general Welfare matters, through consultation, service on committees, etc. In that way a small portion of his salary might theoretically be allocated to interests other than Group. His salary is in this budget. Dr. Lanza's is not.

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*cc - Mr. Armstrong
Mr. Lanza*

D. B. Armstrong, M. D.
Second Vice-President,
Health and Welfare

THE INDUSTRIAL HYGIENE LABORATORY

of the

METROPOLITAN LIFE INSURANCE COMPANY

W. J. McConnell, B.S., M.D.
Assistant Medical Director, in charge of
Industrial Health Service

The Metropolitan Life Insurance Company for many years has maintained in connection with the Industrial Health Service of the Policyholders' Service Bureau an industrial health research laboratory whose technical staff ~~and~~ *engaged in the promotion of industrial* facilities are made available without cost to Metropolitan Group policyholders *hygiene including studies* ~~and to industries where large numbers of Ordinary and Industrial policyholders are employed, for the study in factories, shops and offices of environmental conditions affecting health, such as:~~

Atmospheric pollution by injurious dusts and fumes

Ventilation

Illumination

Special occupational hazards

The work carried on in the Laboratory of Industrial Hygiene has so expanded in recent years that the Company will open in November in its new building model physical and chemical laboratories fully equipped for the study of industrial health problems. Chemists and technicians make the required observations in factories, mills or other industrial establishments, collect necessary air samples by means of the most modern devices, and subsequently complete their studies in the Laboratory at the Home Office. In connection with field studies, air samples are taken under actual industrial conditions and analyzed for the dust content or for poisonous substances in this laboratory. There is thus acquired definite information which furnishes a sound basis of knowledge which can ~~also~~ *serve* in the

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full recognition of unfavorable working conditions and in the development of measures for their abatement.

The Industrial Health Service fully recognizes the confidential relationship which should exist between the Company and those whom it serves. It undertakes no field investigation except on the invitation of the insured and with his unqualified cooperation.

Many of the scientific instruments used in these studies are designed especially for application to field studies. All instruments are calibrated in the physical laboratory before use in the field work.

Wherever the physical air factors are studied in working places, ~~by means of the Tycoos recording wet and~~ a record of outdoor conditions is made by means of the Tycoos recording wet and dry bulb thermometer, with a seven-day chart, ~~and~~ having a small electrically-driven fan for drawing the air over the thermometer bulb for determining the outside temperature and humidity conditions. For inside work, in addition to the sling psychrometer, specially constructed psychrometers are used. These consist of small electrically driven fans for drawing the air at a velocity of 600 linear feet per minute, first over a dry bulb thermometer and then over ~~the~~ ^{the} wet bulb thermometer, both mounted in a trumpet-shaped intake tube, painted dull black so as to avoid heat losses by radiation. The wick of the wet bulb thermometer is supplied with water in a small reservoir on the under side of the trumpet directly below the wet bulb thermometer. The whole apparatus is mounted on an adjustable stand. These instruments are set up in different sections of the plant and readings are taken at regular intervals, the number taken being determined by the rapidity of temperature and humidity changes. This type of instrument was adopted because it was found that the recording type of psychrometer was not sensitive enough to record small and rapid changes, due to the slow heat transfer, the quantity of metal, and the actuating liquid in the recording type.

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The anemometer is used for measuring high air velocities and the kata-thermometer is used to determine air motion of low velocities. The kata-thermometer is an instrument designed to record temperatures in degrees proportionate to body temperatures. By measuring the rate of cooling of the kata-thermometer, it is possible to calculate the air motion.

In order to correlate the significance of skin temperatures of workers exposed to high temperatures and humidities, these are measured by means of an instrument, built according to specifications developed by the U.S.P.H.S. and the U.S. Bureau of Mines, cooperating with the American Society H. & V.E. The thermo-electric method used depends on the fact that whenever two dissimilar metals are in contact an electro-motive force is set up, the magnitude of which depends upon the temperature of the point of contact. A measure of this electro-motive force is, therefore, a measure of the temperature of the junction of the two metals. The thermocouple is made by welding one end of each of two wires of different metals or alloys, as copper and constantan, the junction of these wires is placed at the point the surface of which is to be measured. The copper wire goes directly to a potentiometer, an instrument for measuring electro-motive force. The other end of the constantan wire is joined in a constant temperature bath, to a second copper wire, which also goes to the indicating instrument. The thermocouple is standardized by immersion in constant temperature baths in thermos bottles, so that electro-motive force readings on the potentiometer indicate temperature directly.

The method usually employed for collecting air samples for dust determinations is known as the Greenburg-Smith impinger method. This apparatus is very efficient and readily transportable and also easily adaptable for taking half hour air samples at the breathing level and in close proximity to the worker. By means

of the impinger a column of air is drawn through a glass tube, through a constricted orifice and then impinged at right angles upon a horizontal surface immersed under a liquid (either distilled water or distilled water and alcohol) in a wide mouthed pyrex flask. Thus the surface tension of the liquid is broken down and the dust particles are entrapped in the solution. The impinger is actuated by suction supplied by steam ejectors operated by compressed air. The rate of air flow, during sampling, is measured by means of a small vacuum gauge inserted into the suction line. The flasks are then corked with rubber stoppers and transported to the laboratory for analysis and counts.

The electric precipitator, an instrument designed upon the principle of a Cottrell precipitator, is used for collecting air samples for the purpose of determining particle size measurements of dust. The electric precipitator is placed in a position similar to that of the impinger. The air is drawn through this instrument by means of a ^{small} rotary fan, run by a motor, the quantity being measured by a flow meter.

Wherever grab samples of air are desired either the konimeter, an instrument much used for dust determinations in South Africa, or the Owens jet dust counter and settling chamber, a method popular in Great Britain, is used.

The samples collected in the field are subjected in the laboratory to either a chemical analysis whenever poisonous substances, such as lead, mercury, manganese, etc. are inspected, or dust counts and particle size measurements are made of such substances as silica, asbestos, and dusts known to cause changes in the lungs when inhaled.

It is obvious that only particles in a state of very fine subdivision can possibly penetrate to the lung tissue. It has been commonly accepted that only particles of less than 10 microns can reach the lung tissue. A micron is one-twenty five-thousandth of an inch.

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It, ~~therefore~~, is necessary to count with the aid of the microscopes, ~~and~~ using a standard procedure, these minute particles in order to estimate the dosage of harmful dusts to which workers are exposed.

Particle size measurements are made by taking microphotographs at a known magnification of the dust and then enlarging the negative further by projecting the images upon a screen by means of a stereopticon. The longest diameters of the images of the dust particles are then measured upon the screen. From the results of a sufficient number of these measurements a curve is plotted of the size frequency relations on Hazens' logarithmic probability paper, the logarithms of ~~the~~ ^{the} function measured in microns plotted as ordinates and the probability of occurrence as abscissae. It is a simple procedure to interpolate from these plots, which develop into straight lines, the frequency of occurrence of any sized dust particle ~~less~~ ^{less} than ten microns present in the particular dust under investigation.

~~These are illustrative of the type of analyses the laboratory is called upon to make.~~ Other analyses, ~~such as~~ the determination of carbon monoxide gas escaping into rooms occupied by workers; analyses of water used for drinking purposes; and the collection and detection of poisonous vapors of all varieties escaping into workrooms ~~are functions of this laboratory.~~

Illumination studies are conducted in factories where adequate and proper lighting is ^{an} essential factor in production and in the protection of workers. Standard methods used for measuring levels of illumination are employed. Photographs are made of hazardous processes and of the locations where samples are taken for the purposes of identification.

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Recent studies of the Laboratory of Industrial Hygiene have concerned such matters as the effects upon the lungs of various inorganic dusts such as rock dust produced in hard rock drilling; the atmospheric pollution by specific poisonous substances; temperature, humidity and air movement in various industries. For example, dust studies were made in foundries and in asbestos mills and reports were prepared concerning the extent of the dust hazard and embodying recommendations for its control.

The Laboratory has at its command exceptional library facilities to supplement the many sources of information made available through its wide

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and numerous contacts with health work in various industrial and mercantile organizations. The Service endeavors in every instance to be of the utmost practical assistance to those who submit problems for its consideration. When indicated, visits are made to policyholders to assure a comprehensive first hand understanding of the circumstances which are involved.

The study of those insured Groups showing an unfavorable and excessive sickness or death rate, makes it possible to localize, by cause or sex or age group, the particular health problems most urgently calling for attack. The individual policyholder thus receives direct information of the objectives against which corrective measures should be directed.

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1927

Activities of the Metropolitan Life Insurance Company
for Maintaining and Promoting Public Health and Personal Hygiene.

The program of the Metropolitan Life Insurance Company for the promotion of public health and personal hygiene is carried out primarily through the Welfare Division of the Company. This program is aimed essentially at the health of the policyholders, numbering approximately 25,000,000, (and particularly the industrial policyholders - about 21,000,000), though indirectly it affects the well-being of the general population of the country.

The principal lines of effort are as follows:

A. Health Education

Essentially this involves the interpretation of scientific findings concerning disease prevention and health promotion in popular terms, and their presentation to the policyholders in an attractive, intelligible form.

This involves:

1. The distribution of literature.
From 1909 until July 1, 1927, the Company distributed, through its field force or through health officers, schools, and social agencies, a total of 462,442,053 publications dealing with the prevention of disease and with health promotion. The great bulk of these publications was placed in the homes of policyholders by field agents in making their routine insurance contacts.
2. The use of health films.
The three most important films of the Company, dealing with smallpox, diphtheria, and health examinations, have already been seen by reported audiences of over eight million people.
3. This educational work is supplemented by the use of exhibits, posters, film strips for use in projection machines, the carrying on of clean-up campaigns, anti-diphtheria campaigns, health examination campaigns, lectures, talks, etc.
4. For work with schools, parent-teachers associations, and women's clubs, special literature, films, exhibits, posters, scientific papers, and other material are prepared.

In schools, a special effort is being made to educate the children concerning the heroes of preventive medicine, such as Jenner, Reed, Pasteur, and Trudeau; in cooperation with parent-teachers associations, a special campaign is being conducted to

encourage the thorough examination of and defect correction among the preschool population of the United States; with the aid of women's clubs, special studies in hundreds of communities are under way, concerning the health laws of those cities, and the rights and duties under those laws of the citizens.

5. For immigrants and those seeking citizenship, a special service is carried on, involving advisory care of immigrant friends of policyholders, cooperation with local agencies in citizenship campaigns, and the distribution of citizenship literature, 460,394 booklets of this type having been used in 1926.

B. Nursing Care to Policyholders

The Company provides a visiting bedside nursing service, without cost, to all acutely ill industrial policyholders, in over 4,250 cities and towns in the United States and Canada. This service is provided either directly by salaried nurses or through cooperative affiliations with local nursing associations. The nurse, who gives care only when the patient is under the supervision of a physician, aims to follow out the physician's instructions as to the needs of the patient, advises a member of the family as to how to give supplementary care, and instructs all members of the family concerning disease prevention, home hygiene, and related subjects.

Within the last eighteen years, over 27,000,000 nursing visits have been provided for industrial policyholders. In 1926, a total of 3,188,417 visits were given to sick industrial, intermediate, or group policyholders.

efforts
This service is supplemented by others on the part of the Company, to insure the high standard and efficiency of the work done. Through scholarships at nursing schools, public health nursing institutes, a correspondence course, and through the establishment of public health nursing training centers, the staff of graduate and registered nurses is kept in closest touch with the latest developments in the public health nursing field.

C. Experiment and Demonstration

In addition to bedside care and the popularization of scientific knowledge, the Company has endeavored through a number of channels to contribute to the body of scientific fact essential to the conquest of preventable disease. Examples of such efforts are as follows:

1. The Framingham community health and tuberculosis demonstration in Massachusetts, where, over a period of seven years, the Company financed, through the National Tuberculosis Association, an effort to control tuberculosis, resulting in a drop in the tuberculosis death rate from 121 per hundred thousand to 38 per hundred thousand in the seven year period.
2. The Thetford Mines infant welfare experiment. In Thetford Mines, Quebec, a demonstration of methods of child care and infant mortality prevention resulted in a drop in the infant death rate from 300 to 96 per thousand born, following which the Province of Quebec appropriated \$500,000 for similar work throughout the Province.
3. Subsequent to the influenza epidemic in 1918, the Company appointed and financed an Influenza-Pneumonia Commission, which has been making significant studies into the cause of influenza, improved serological methods of treating pneumonia, bacteriological factors in common colds, etc.
4. A special campaign to eliminate diphtheria has been carried on for a number of years, culminating in a five year anti-diphtheria campaign in New York State. For this work, special literature, a film, an exhibit, a poster, and other material have been provided, for use not only by the Company's field staff, but also by cooperating health and social agencies. Since the initiation of this campaign in 1921, the diphtheria mortality among the children of the policyholders of the Company has declined 80.1%.
5. At the present time the Company is also financing a special study of burial problems and funeral costs, questions with which insurance companies and social agencies have for many years been deeply concerned.

D. Cooperation with Other Agencies

From time to time, the Company has found it expedient to extend aid to established and reputable health movements, both public and private in character. Through these channels, appropriate opportunities have been taken advantage of for furthering important public health activities. From time to time, new and much needed work has been initiated, subsequently to be taken over by an established public health agency. Efforts of this kind have been found to be of direct, as well as indirect benefit to policyholders.

Temporary financial grants or staff assistance in important pieces of work, or awards, prizes, or scholarships have been extended to such agencies as the United States Public Health Service, United States Department of Labor, the Post Office Department, state and local health departments, voluntary organizations working in the tuberculosis, child health, social hygiene, and mental hygiene fields, schools, and colleges.

As examples of movements fostered in this way, there may be mentioned a standard milk ordinance campaign being conducted in cooperation with the United States Public Health Service; an extensive survey of municipal health conditions, initiated through the American Public Health Association; a prize essay contest offered through the American Social Hygiene Association; the development of a Department of Industrial Hygiene at McGill University in Montreal; the establishment of a summer course for health officers at the Massachusetts Institute of Technology; etc.

Through cooperation with such agencies, and with the aid of the Company's field staff, much has been done in many communities to create and crystallize public sentiment in favor of health laws; bond issues for public improvements, such as water supplies, sewage disposal systems, tuberculosis hospitals, etc.; the adoption of milk ordinances; the development of opposition to anti-vaccination and anti-vivisection propaganda and legislation, etc.

This program of the Welfare Division of the Company is supplemented by related efforts carried out through other divisions of the Company's organization. Chief of these are as follows:

I. The Medical Division

Through this Division, a periodic medical examination service is extended to ordinary, intermediate, and group policyholders. For many years this service has been offered to ordinary policyholders, and up to the present time, over 350,000 examinations have been given at the Company's cost, through the medium of an outside, independent agency, namely, the Life Extension Institute. That this service is a valuable one is indicated by the fact that among policyholders who have been examined and advised concerning their health, the death rate has been 18% lower than the actual mortality of all ordinary policyholders who could properly be compared with them.

II. The Group Division

Through the Policyholders' Service Bureau of this Division, reaching, as it does, large groups of employees in a great variety of industries, there is extended, for the benefit of employer and employee, an industrial hygiene service, including industrial health surveys, advice on medical, nursing, clinical, and health educational problems, aid in the prevention of health and safety hazards, supplemented in the safety field by cooperative efforts at street and community, as well as factory accident prevention.

III. The Publicity Division

The educational work carried on by the Welfare Division, as outlined above, is supplemented by daily morning radio exercises offered through a number of the more important radio stations, radio health talks, and an extensive series of health advertisements in the popular magazines, reaching a group of readers estimated to be in the neighborhood of 60 to 80 million.

IV. The Statistical Division

In this Division, a great deal of statistical research is carried on in health, medical, and social problems. An extensive series of community surveys as to sickness prevalence has been carried out, and numerous contributions are made to the statistical side of disease control.

V. Real Estate Division

Under the auspices of this Division, the Company several years ago initiated an important housing development in a congested neighborhood of New York City, where hygienically constructed and economically operated living facilities are provided for over 2,100 families in low-priced dwellings, affecting the welfare of thousands of individuals. This demonstration of the practicability of establishing sanitary, yet reasonably profitable housing facilities in congested neighborhoods at low rentals, has been a very far-reaching and significant stimulus to the development of similar projects under various auspices.

VI. Health Work for Employees (Approximately 41,000)

While this is not strictly a matter of public health promotion, yet the example set by the Company in providing for the welfare of its employees has undoubtedly been an important factor in the development of similar measures in other fields. In the Metropolitan, this work is the responsibility of the Medical, Personnel, Commissary, and other branches of the organization. It includes a compulsory annual medical examination of all employees, a semi-annual dental examination, the operation of a sanatorium for tuberculosis and other conditions, of 290 beds at Mount McGregor, N. Y., a luncheon service for Home Office employees, and the fostering of numerous educational classes, recreation developments, etc. The morbidity and mortality experience among the employee group clearly demonstrates the hygienic, as well as the economic advantages of these constructive health measures.

Costs and Results:

The more or less intangible effects of the general public health efforts of the Company, as carried out in cooperation with numerous outside agencies, are, of course, hard to determine. There seems to be no question but that these efforts have stimulated and aided many important developments in the United States and Canada. This fostering of much needed practical services has been paralleled by the Company's efforts to contribute to scientific research, as indicated.

It is, however, possible to measure the value of the public health and personal hygienic activities carried out essentially for policyholders. It is possible to measure this by means of a satisfactory criterion, namely, the death rate. The accomplishments in this field may be indicated as follows:

Since 1909, the Company has spent \$8,445,877.11 for general welfare work, including health education, research, etc. During this period, it has also spent \$20,418,738.36 for nursing service to policyholders. This represents a total expenditure over this period of \$28,864,615.47.

The effect of this among the industrial policyholders may be measured by:

1. Health Results

In 1911, the general mortality of the industrial policyholders of the Metropolitan Life Insurance Company was 24.5% higher than the mortality of the population of the Registration Area of the United States as a whole. By 1925, the mortality among Metropolitan policyholders had improved at such a rate as to bring it 1.3% under the rate for the Registration Area.

From 1911 to 1925, the average duration of life for the country as a whole increased by 5.1 years. For Metropolitan industrial policyholders, this increase was 8.8 years.

During this period, ^{the} decline in tuberculosis mortality in the Registration Area was 45%; for Metropolitan industrial policyholders, it was 56.5%. During the same period, the Metropolitan typhoid fever mortality declined 81.6%, and the death rate for communicable diseases of children declined 58.2%. In all instances, the Metropolitan death rate went down much faster than ~~that of the~~ ^{the} general population.

2. Economic Results

During the period 1911 to 1928, the general mortality rate among Metropolitan industrial policyholders improved so much more rapidly than that of the general population as to result in a cumulative net saving in mortality, in excess of the general population improvement, of approximately 275,000 lives. In deferred death claims, this represents a saving of about \$85,000,000. As indicated above, all of this work was carried out at an approximate expense of \$27,000,000, resulting in a theoretical profit of \$58,000,000 - a profit which, in a mutual cooperative enterprise, such as the Metropolitan Life Insurance Company, must go back to the owners of the Company - ~~the~~ the policyholders - in increased dividends or cheaper insurance, a financial benefit supplementary to the disease prevented, the health conserved, and the lives prolonged.

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RESEARCH ACTIVITIES

of the

METROPOLITAN LIFE INSURANCE COMPANY

1 Madison Avenue

New York

1. Framingham Community Health and Tuberculosis Demonstration:
Appropriations for research in tuberculosis and community health problems; through committee of the National Tuberculosis Ass'n., 1916-1924: \$189,511.60
2. Thetford Mines (Quebec); Infant Welfare Experiment:
Study and demonstration of infant mortality prevention: 1921-1926: \$29,556.29
3. Study of Visiting Nursing Costs and Accounting Methods:
Through committee of National Organization for Public Health Nursing; 1922-1925: \$19,603.95.
4. Influenza-Pneumonia Commission:
Study of etiological factors; serological methods of treatment; etc. 1919 - June 30, 1927: \$277,029.87 plus \$25,000 appropriated for current year.
5. Study of Snuffles in Rabbits:
1926-1927: \$5581.85
6. Bacteriological Study of Common Colds:
Dec. 1925 -- to date: \$20,000 per year.
7. Calmette Vaccine Inquiry:
Appropriation for case studies in New York City and laboratory work on animals at Company Sanatorium; 1926 to-date: Approximately \$3000 yearly in New York, together with \$6176.71 to date at the Sanatorium research laboratories.
8. Study of Measles Immunology:
1924-1925: \$6089.77
9. Studies of Municipal Health Department Practices:
Through committee of American Public Health Ass'n.; 1920 - to date: \$60,000.
10. Tuberculosis Among School Children:
Appropriation to special committee of Company, Oct. 1926: \$12,000 annually for three years.

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11. Tuberculosis and Silicosis Among Miners:
In Picher, Okla., district, in co-operation with the United States Bureau of Mines; 1927 — : \$8000 annually for three years.
12. Study of Bacillus Abortus Infections and Related Problems:
1927: \$5000.
13. Study of Morbidity Statistics:
Sickness surveys in many cities: 1915-1927
14. Studies of School Hygiene, through Metropolitan Advisory Educational Group:
Diphtheria immunization methods: Hand-washing facilities, etc.
1925-1927: \$6000.
15. Studies and Demonstrations in Industrial Hygiene in Canada:
Conducted for Company by McGill University, Montreal; 1926 — : \$5000 annually for five years.
16. Study of Typhoid Fever Incidence, Carriers, etc.:
In Montreal; 1927 --- : \$6500.
17. Burial Problems and Funeral Cost, Through Burial Survey Committee:
September 1926: \$25,000 appropriated.
18. Studies of Air Pollution By Dust, Fumes, and Gases:
At Home Office Industrial Hygiene Laboratory; 1926 — : \$6000 annually.
19. Quantitative Analysis of Urine Specimens:
Conducted through Home Office Laboratory Facilities.
20. After-Mortality of College Athletes:
For "Presidents' Committee of Fifty on College Hygiene." \$1000 plus statistical work.
21. Surveys of Unemployment in American Cities:
1914-1915: A general study in co-operation with the United States Bureau of Labor Statistics.
22. Economic Value of Human Life:
A general study of human life values. To be published in 1928.
23. Relation Between Climate and the Deathrate:
For National Research Council, Committee on the Atmosphere and Man. (1923-1927)

24. Many Additional Statistical Studies of Morbidity, Mortality, Longevity, etc.
Carried out through the facilities of the Company's Statistical Division, the more important of which are:

- a. Typhoid Fever in American Cities, 1860 to 1926.
- b. Cancer Mortality Data, 1911-1922.
- c. Cancer in Relation to Overweight.
- d. Suicide Mortality.
- e. Mortality in Childbirth and in Early Infancy, 1923-1927.
- f. Mortality Among Insured Wage Earners and Their Families, 1911 to 1916.
- g. Mortality According to Build, Height, and Spine Length, 1923-1926.
- h. Heights and Weights of New York City children, 14-16 Years of Age, 1915.
- i. Mortality of Southern Communities from Typhoid Fever, Malaria, Pellagra, Tuberculosis, and all causes, 1916.
- j. Life Tables of the American Population (Annually).
- k. Population Growth and the Size of the Family.
- l. Status of Maternity and Infant Hygiene in the United States, 1927.

25. Additional Laboratory Investigations:

In the John Rogers Hegeman Memorial Laboratory at the Company's Sanatorium at Mt. McGregor, New York, including:

- a. Studies upon the sedimentation reaction and the complement fixation test in tuberculosis.
- b. The action of alpha-lobelin on respiratory stimulation in animals.
- c. The action of mineral oil in the lungs.
- d. Histological examinations of tonsillar tissues; blood examinations in specialized group of tuberculous patients, etc.

26. Personnel Studies, including:

- a. Clerical Test Scores and Schooling.
- b. Study of one and two days absences by age and cause.
- c. Study of value of mental tests in terms of efficiency ratings, schooling, and turnover.

27. Trade Inquiries:

Conducted through the Group Division and the Policyholders Service Bureau of the Company, including:

- a. Study of research methods as employed by New England industries, at the request of the New England Council.

- b. Study of methods employed by railroads in promoting co-operation between employees and management.
- c. Analysis of management methods in iron foundries.
- d. Studies of industrial, street, and home accidents and accident prevention.
- e. Incuities, at request of the California Vineyardists Ass'ns., concerning grape packing, distribution, and related problems.
- f. Study of Migration of Industry, at request of National Electric Light Ass'n.

RESEARCH ACTIVITIES
of the
METROPOLITAN LIFE INSURANCE COMPANY

Expenditures Since 1916, Current Costs, and Commitments

1. Framingham Community Health & Tuberculosis Demonstration	\$ 189,511.60
2. Thetford Mines Infant Welfare Experiment	29,556.29
3. Study of Visiting Nursing Costs	19,603.93
4. Influenza-Pneumonia Commission	302,029.87
5. Snuffles in Rabbits	5,581.85
6. Bacteriological Study of Common Colds	40,000.00 (2 yrs.)
7. Calmette Vaccine Inquiry	9,176.71
8. Measles Immunology	6,089.77
9. Municipal Health Department Practices	60,000.00
10. Tuberculosis Among School Children	36,000.00 (3 yrs.)
11. Tuberculosis and Silicosis Among Miners	24,000.00 (3 yrs.)
12. Bacillus Abortus Infections	5,000.00
13. Sickness Surveys *	
14. Studies of School Hygiene	6,000.00
15. Industrial Hygiene in Canada (McGill Univ.)	25,000.00 (5 yrs.)
16. Typhoid Fever in Montreal	6,500.00
17. Burial Survey	25,000.00
18. Studies at Industrial Hygiene Laboratory	12,000.00 (2 yrs.)
19. Quantitative Urinalysis *	
20. After-Mortality of College Athletes	1,000.00
21. Unemployment Surveys *	
22. Economic Value of Human Life *	
23. Climate and the Death Rate *	
24. Additional Statistical Studies on Morbidity, Mortality, Longevity, etc. *	
25. Additional Laboratory Investigations Into Pathology and Histology of Tuberculosis, etc. *	
26. Personnel Studies *	
27. Trade Studies	
TOTAL	\$ 802,050.02

* Costs absorbed in routine laboratory or division operations.

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11. Tuberculosis and Silicosis Among Miners:

In Picher, Okla., district, in co-operation with the United States Bureau of Mines; 1927 --- : \$3000 annually for three years.

12. Study of Bacillus Abortus Infections and Related Problems:

1927: \$5000.

13. Study of Morbidity Statistics:

Sickness surveys in many cities: 1915-1927

14. Studies of School Hygiene, through Metropolitan Advisory Educational Group:

Diphtheria immunization methods: Hand-washing facilities, etc.
1925-1927: \$6000.

15. Studies and Demonstrations in Industrial Hygiene in Canada:

Conducted for Company by McGill University, Montreal; 1926 --- : \$5000 annually for five years.

16. Study of Typhoid Fever Incidence, Carriers, etc.:

In Montreal; 1927 --- : \$6500.

17. Burial Problems and Funeral Cost, through Burial Survey Committee:

September 1926: \$25,000 appropriated.

18. Studies of Air Pollution By Dust, Fumes, and Gases:

At Home Office Industrial Hygiene Laboratory; 1926 --- : \$6000 annually.

19. Quantitative Analysis of Urine Specimens:

Conducted through Home Office Laboratory Facilities.

20. After-Morbidity of College Athletes:

For "Presidents' Commission of Fifty on College Hygiene." \$1000 plus statistical work.

21. Survey of Unemployment in American Cities:

1914-1916: A general study in co-operation with the United States Bureau of Labor Statistics.

22. Economic Value of Human Life:

A general study of human life values. To be published in 1928.

23. Relation Between Chlorine and the Dechlorate:

For National Research Council, Committee on the Atmosphere and Man. (1925-1927)

24. Many Additional Statistical Studies of Mortality, Morbidity, Longevity, etc.

Carried out through the facilities of the Company's Statistical Division, the more important of which are:

- a. Typhoid Fever in American Cities, 1930 to 1936.
- b. Cancer Mortality Data, 1911-1932.
- c. Cancer in Relation to Overweight.
- d. Suicide Mortality.
- e. Mortality in Childbirth and in Early Infancy, 1925-1927.
- f. Mortality Among Insured Life Farmers and Their Families, 1911 to 1916.
- g. Mortality According to Build, Weight, and Stature, 1927-1936.
- h. Heights and Weights of New York City children, 14-18 Years of Age, 1915.
- i. Mortality of Southern Communities from Typhoid Fever, Malaria, Pellagra, Tuberculosis, and all causes, 1916.
- j. Life Tables of the American Population (Annually).
- k. Population Growth and the Size of the Family.
- l. Status of Maternity and Infant Hygiene in the United States, 1927.

25. Additional Laboratory Investigations:

In the John Robert Freeman Memorial Laboratory at the Company's Sanatorium at St. McGregor, New York, including:

- a. Studies upon the action of thiopental and the complement fixation test in tuberculosis.
- b. The action of alpha-tocopherol on respiratory stimulation in animals.
- c. The action of mineral oil in the lungs.
- d. Histological examinations of tonsillar tissues; blood examinations in specialized groups of tuberculous patients, etc.

26. Personnel Studies, including:

- a. Clerical Test Scores and Schooling.
- b. Study of the mental aptitudes by age and sex.
- c. Study of value of mental tests in terms of efficiency ratings, schooling, and turnover.

27. Trade Inquiries:

Conducted through the Crown Division and the Policymakers Service Bureau of the Company, including:

- a. Study of research methods as employed by New England industries, at the request of the New England Council.

24. Many Additional Statistical Studies of Mortality, Morbidity, Longevity, etc.

Carried out through the facilities of the Company's Statistical Division, the more important of which are:

- a. Typhoid Fever in American Cities, 1880 to 1926.
- b. Cancer Mortality Data, 1911-1922.
- c. Cancer in Relation to Overweight.
- d. Suicide Mortality.
- e. Mortality in Childbirth and in Early Infancy, 1925-1927.
- f. Mortality Among Industrial Laborers and Their Families, 1911 to 1916.
- g. Mortality According to Build, Weight, and Stature Length, 1925-1926.
- h. Heights and Weights of New York City children, 14-16 Years of Age, 1915.
- i. Mortality of Southern Communities from Typhoid Fever, Malaria, Pellagra, Tuberculosis, and all causes, 1916.
- j. Life Tables of the American Population (Annually).
- k. Population Growth and the Size of the Family.
- l. Status of "Maternity and Infant Hygiene in the United States, 1927.

25. Additional Laboratory Investigations:

In the John F. Crowe Research Memorial Laboratory at the Company's Sanatorium at St. McGeorge, New York, including:

- a. Studies upon the action of the reaction and the complement fixation test in tuberculosis.
- b. The action of alpha-laculin on respiratory stimulation in animals.
- c. The action of mineral oil in the lungs.
- d. Histological examinations of tonsillar tissues; blood examinations in specialized groups of tuberculous patients, etc.

26. Personnel Studies, including:

- a. Clerical Test Series and Schedule.
- b. Study of the mental tests conducted by the company.
- c. Study of value of mental tests in terms of efficiency ratings, schedule, and turnover.

27. Training Program:

Conducted through the Crowe Division and the Policyholders Service Bureau of the Company, including:

- a. Study of research methods as employed by New England industries, at the request of the New England Council.

MEMORANDUM

December 7, 1929

Dr. Frankel: -----

A Possible Hospital Insurance Project

For purposes of orientation, I'd like to set up on paper, certain angles of a possible insurance project for hospital care, along the lines of previous and current discussions. Of course many facts, possibly including certain essential ones, are lacking. For this and other reasons of expediency, it may be only for theoretical consideration at this time.

Following conferences with the A.M.A. representatives and others, I suggested some time ago, the possible advisability of a private, joint session between representatives of certain medical, social, and insurance agencies, for the consideration of numerous projects under way or being proposed in the medical service fields. There ~~are~~ almost an infinite variety of complications and possibilities, and whether such a conference would accomplish any more than is being done through the Committee on the Cost of Medical Care, is a question.

However, as you said recently, probably the only way to test the practicability of certain proposals is to try them out in a limited way. It seems probable that a number of experiments, in addition to those already under way, will be initiated during the next decade. Among these possibilities, a simple hospital treatment scheme would seem to have many advantages and fewer hazards than a project that might involve outpatient or home methods of care, as has been indicated, indeed, by the suggestions which you, yourself, have made to hospital organizations in times past in New York City.

Obviously, there is to you in the subsequent suggestions, little if anything that is new, and probably much lacking that you would add. Its value, if any, lies in the mechanical assembling of ideas and suggestions from several sources, that seem to bear on the problem.

Relative Advantages of a Hospital Care Project

Compared with home or other treatment proposals, the outlining of a hospital care project would seem to be relatively simple and promising for a number of reasons. Hospital care would involve for the most part, operative needs and might indeed be restricted to that in the beginning. It is much easier to estimate the probable costs of operative care than of general medical care, and much simpler to get surgeons to agree to a standard scale of charges. It would be easier to secure the collective commitment of a group of doctors to a set of hospital operative charges, and this might be done without materially reducing the average income of the surgeon from operations -- a consideration that would favor the cooperation, or at least the acquiescence of the doctors from the start.

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Dr. Frankel2.
December 7, 1929

This type of project is also one which has received some promotion and publicity through A.M.A. executives (particularly Dr. Harriss). It is a project in which a number of medical and social groups are interested, and probably willing to cooperate. The possibilities of securing aid and initial underwriting from such an agency as the Rosenwald Fund are excellent. One would suppose that for insurance company participation, with our accident and health precedent, there would be required no special legislation and no particular appropriations beyond the overhead for the establishment of a new bureau or division for the administration of the carrier's obligations in such an insurance plan.

Possible Site

It would seem that such an experiment might best be initiated in a medium sized city, where there is a fairly closely knit and relatively small medical organization, one or more good general hospitals open to most of the medical and surgical practitioners in the community, and an industrial organization and situation which would promise to furnish the channels for the promotion of the insurance through large, well-distributed groups in the community. New Bedford, itself, has many advantages from the point of view of size, medical organization, and hospital equipment, though the economic situation there is not favorable. It might even be done in as small a community as Framingham, where incidentally, there is an excellent tie-up between hospital, medical group, and leading industries. It is not inconceivable that it can be tried in a restricted city area, if excellent and sympathetic medical leadership were assured, as might be the case in Brooklyn. Then, there are the California possibilities, and recently Dr. Michael Davis has indicated that there may be an unusually promising opportunity in Durham, N.C.

Participating Agencies

In any event, the principal participants in such a project might be several if not all of the following groups:

1. The local hospital organization.
2. The hospital medical staffs and the county medical society.
3. Local industries.
4. An outside contributor for the experimental overhead, such as the Rosenwald Fund.
5. An insurance company as carrier or re-insurer.
6. The citizens themselves, either individually, or as employees, or through employee organizations.
7. The local health organization, in its preventive medical activities — health education, health examinations, etc.
8. The state government through its Insurance Commission or department.

Administration

For the operation of such an experimental unit, there would probably have to be organized, a responsible local group, representing possibly several of

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the potential participating agencies, but essentially the hospital and medical groups, the insurance carrier, and the underwriting fund. This group would have the general responsibility of government of the experiment, the determination of policies, the administration of a special reserve, the direction of sales and promotion, and the initial planning in order to guard against the outstanding difficulties, such as:

Chief Difficulties

1. The determination of a satisfactory relationship for the physicians and surgeons with the hospital, and with the insurance scheme in general.
2. The working out of sales and promotion methods which would insure a wide coverage and avoid an adverse selection.
3. The determination of an experimental basis for setting a premium that would cover the costs of assured benefits, etc.

Functions of Participants

Without attempting a detailed statement, it can be generally indicated that the hospital would be responsible for providing the facilities, probably for making the collections and distributing fees for medical service in accordance with a uniform and approved scale.

The physicians on the hospital staff would have to agree as to a uniform scale of fees and the hospital, itself, would have to work out, probably through its medical staff, an understanding with the county medical group, that would cover specific problems of eligibility for physicians to perform certain types of medical and surgical work, a method for a check upon certifications of illness or disability, etc. The New Bedford experience seems to indicate that this may not be as complicated as would at first appear.

Local industries might participate in several ways. In New Bedford, they are making a contribution to the reserve for every individual employee who joins either as an individual or through a mutual aid association.

The private fund would be responsible for a special reserve and assistance in carrying the initial expense and overhead for an experimental period.

The insurance company would have to assume the responsibility and be given the final authority in the determination of risks, premiums, range of benefits, etc. It would act directly or indirectly as the carrier, and might be used through its local machinery to aid in the promotion and sales of the sickness or hospital insurance.

The preventive medical aspects of the experiment would be fostered by the local health authorities, and an intensive and adequate sanitary and preventive medical program might prove to be a considerable factor in producing a favorable experience as regards the incidence of illness, especially if the scheme reached

Dr. Frankel4.
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beyond operative needs.

The ~~citizens~~ themselves might be related to the medical service and insurance privileges either as individuals, as is now being attempted in New Bedford; or on a family basis, as is being tried out in Brattleboro; or as groups of employees, as in the Tennessee Coal and Iron Company, or the Endicott-Johnson plant; or through mutual aid association relationships, as has been pretty thoroughly developed in the Dennison plant in Framingham; or possibly in relationship to previously established group insurance contacts.

Possible Advantages

There are, of course, not inconsiderable hazards in such a project as well as difficulties as yet unsolved and not accurately measureable. However, the advantages of such an experiment, should it be at all successful, promise to be many.

1. It might stand as a very important pioneering experiment and demonstration in the fields of medicine and insurance.
2. It should furnish accurate and uniquely valuable data on the cost of sickness care.
3. It ought to insure for the group covered, more adequate hospital care than has hitherto been devised, and if successful, would demonstrate a method for materially enhancing the financial resources of the hospital itself, probably relieving it to a great extent, of a load of charitable or inadequately compensated service.
4. It is believed that thus relating more closely individuals to medical service and thus encouraging individuals to purchase medical care on a wholesale basis in advance, would have a distinct preventive effect through the encouragement of early diagnosis and adequate treatment.
5. If successful, it might lead to an extension of a service that would cover acute illness, outpatient care, home medical and nursing provisions, etc.
6. It ought to improve the economic and professional status of the medical profession and the cohesion and stability of the medical personnel. Through a free choice of physicians within a legitimate range, it should preserve the essential values of the private practice of medicine and at the same time, decrease public patronage of quackery and cultism. It should also launch the private practitioner more extensively into the field of the private practice of preventive medicine.
7. The scheme, if a success, might furnish a procedure which could be demonstrated to be preferable to the compulsory sickness and health insurance schemes of foreign countries, and might open up a very extensive field for private insurance endeavor.

Donald B. Armstrong, M.D.
Fourth Vice-President

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Welfare Div

1911

PUBLIC EDUCATIONAL OR RESEARCH ACTIVITIES OF THE WELFARE DIVISION
OF THE METROPOLITAN LIFE INSURANCE COMPANY

1. In 1915, at the request of the United States Department of Labor, unemployment surveys were made by the Company's agents in forty-five cities. The surveys were published by the Department of Labor.
2. Between 1915 and 1917, the Company conducted sickness surveys in various cities and in certain coal mining regions. These were made to secure adequate morbidity statistics and, in particular, to determine the percentage of individuals not receiving adequate medical care.
3. In 1916 the Company cooperated with the National Tuberculosis Association in conducting a seven-year experiment in tuberculosis control in the town of Framingham, and financed the project. At the end of the seven years, the death rate from tuberculosis had dropped from 121 per 100,000 to 38 per 100,000.
4. In 1918 an extensive survey of health and sanitary conditions in the city of New Orleans was undertaken jointly with the Board of Health of that city.
5. In 1920 a grant was made to the American Public Health Association to cover the expense of a Committee organized to study health department practices in the larger American cities, to determine the relative effectiveness of various methods employed by health departments and to standardize and improve municipal health machinery. The work of this Committee has resulted in the establishment by the Association of a permanent field service for advising and assisting health officers of municipalities, counties, and states in their problems of administration and public health procedure.
6. A demonstration was undertaken in Thetford Mines, Quebec, to reduce the infant death rate in the Province. A maternity center and baby clinic, in charge of a French physician and French-speaking nurses, was opened to give instruction to mothers in prenatal and postnatal care. At the end of three years, the infant death rate had dropped from 300 per 1,000 born to 96 per 1,000. These results induced the Provincial government to appropriate \$500,000.00 for similar work in other communities.
7. An independent Advisory Committee was appointed to make a thorough and impartial study of funeral costs. The result of this study has been published in a book by John C. Gebhart, Director of the Survey, entitled "Funeral Costs", and has resulted in the undertakers, themselves, appointing an Advisory Bureau, in an endeavor to standardize burial costs.
8. In order to standardize the cost of the nursing visit in various cities, the Company made an appropriation to a committee appointed by the National Organization for Public Health Nursing, to make a study of this subject. The results have been published and are being used by nursing association throughout the country in computing costs.

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9. The Company cooperated with the Canadian National Committee for Mental Hygiene in a campaign to disseminate information relative to mental health. The Company also cooperated in the educational campaign of the Social Hygiene Association of Canada.
10. The Company cooperated with the American Child Health Association in printing copies of the reports of the Health Sections of two meetings of the World Federation of Education Associations.
11. Cooperation with the Children's Bureau of the National Tuberculosis Association, the Boy Scouts of America, and the Director of the Census to procure legislation in six states compelling registration of vital statistics.
12. Cooperation with a special committee to bring about a coordination of welfare activities in the various departments of the Federal Government.
13. Cooperation with the Kings County Medical Society in the preparation of a manual for health examinations to be distributed to all physicians in the United States.
14. Cooperation with the American Child Health Association in providing a scholarship for a teacher in Memphis, Tennessee, who gave the most practical instruction promoting good health and sanitation, and also providing a health education traveling fellowship which was won by a teacher to study health education in Europe. In November, 1917 and 1918, the Company also provided scholarships for nurses to take courses in public health nursing through the George Peabody College of Nashville, Tennessee, and the School of Social Work and Public Health of Richmond, Virginia.

The following are current educational or research activities:

1. Influenza-Pneumonia Commission and the bacteriological study of common colds.
2. The Calmette vaccine inquiries at the Hegeman Memorial Laboratory at Mt. McGregor, and at Bellevue Hospital under the direction of Dr. Park.
3. Studies of School Hygiene through the Metropolitan Advisory Educational Group:
Diphtheria Immunization in Schools, made through the Massachusetts Institute of Technology.
Handwashing Facilities in Schools, made through the Massachusetts Institute of Technology.
Teachers Health, made through Teachers' College of Columbia University.
School Health Study of Newton, Massachusetts, made through the University of Michigan.
4. Studies of typhoid fever incidence, carriers, etc., following the typhoid epidemic in Montreal.
5. Continued diphtheria prevention campaign in cooperation with State and local Departments of Health.
6. Continued campaign for the adoption of standard milk ordinances in cooperation with the United States Public Health Service.
7. Health appraisals of cities and small towns in cooperation with the National Federation of Women's Clubs.
8. Cooperation with the National Parent-Teachers Association in the summer round-up of pre-school children and other activities.
9. Campaign for the development of school debates on health heroes in cooperation with schools and educational leaders.
10. Survey of Cost of Medical Care, in cooperation with the Committee on Cost of Medical Care. This committee is composed of representatives of medical and health organizations throughout the country. A five year program has been planned, covering various phases of medical care. The Company is making a special study of cost of medical care in families among its Industrial policyholders.
11. Special cancer campaigns in cooperation with the American Society for the Control of Cancer, especially in Massachusetts, North Carolina, and Missouri.
12. Activities of the Immigrant Service and Citizenship Bureau in promoting citizenship among foreign-born policyholders, in developing English classes, etc.

13. An educational campaign, in cooperation with the American Heart Association, to disseminate throughout this country and Canada information concerning the prevention and treatment of diseases of the heart.
14. For the past two years the Company has been cooperating with the Massachusetts Institute of Technology in a summer course in public health for health officers.
15. Cooperation with the University of Montreal, the Health Department of Montreal, and the Tuberculosis League of Montreal in developing a school for public health nursing for French-speaking nurses in that city, to raise the standards of nursing and develop modern technique.

The above list of welfare activities does not take into account our more or less routine though extensive piece of work in the nursing field, the use of the new exhibit for county fairs and elsewhere, etc.

In addition, there are activities primarily fostered by other divisions, but in which we are interested, that ought to be included in any complete list of Company measures. I have in mind such studies as the following:

A - Medical Division interests in

1. The tuberculosis study among school children in Philadelphia.
a. X-ray study of tuberculosis of school children at Saranac Lake.
2. The studies of bacillus abortus infections.
3. The health examination propaganda carried on with the Gorgas Memorial Institute.

B - Activities of the Policyholders Service Bureau, such as

1. Tuberculosis and silicosis among miners in Picher, Oklahoma, in cooperation with ~~the United States~~ Bureau of Mines.
2. Studies and demonstrations in industrial hygiene in Canada in cooperation with McGill University.
3. Studies of air pollution, dust, silicosis, etc., among rock workers in New York City.

C - Additional special laboratory ~~studies~~ being carried out either at Mt. McGregor or in the Home Office Laboratory.

D - The Company's Economist's studies, with which the Welfare Division has been cooperating, into the questions of insurance among indigents, possible over-insurance of Industrial policyholders, etc.

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EXHIBIT A

To Policy-holders' Service Bureau:

Form G.L.I.81C
June, 1922

METROPOLITAN LIFE INSURANCE COMPANY

In re John Smith & Co.

Date June 6, 1923 192

Address New York City.

A Group {Health and Accident} Contract has been closed on date of Feb. 2, 1923 192
Life

by Manhattan, New York City District.

Business Dept. Store No. of Lives 140 Amt. of Ins. {Health
Life \$70,000

Commission to Assistant Manager Jones

Credit to " " "

Over-riding credit to Sales Representative Supervisor Macy

Policy is effective Feb. 2, 1923 192 on {Contributory
Non-contributory} basis.

Correspondence should be conducted with Mr. R.H. Wait, President Title

Branches of firms are also located at

Schedule of Insurance: At least 3 months of service or over, \$500. a piece.
Executives may be covered for 2 1/2 times the average of the balance of
the Group at the time of writing. Proceeds of the Policy to be paid
in 52 weekly installments. To remain fixed.
Threemonths probationary period.
Annual basis. \$150. check received as advance payment.

Forms 50 will be sent in this week.

Remarks:

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Manager, Group Division.

The Group Sales Division gets their information from the salesman on the attached form.

Metropolitan Life Insurance Company

TO THE GROUP LIFE DIVISION:

Date _____ 192__

In re _____
(Firm Name)

Address _____ Nature of Business _____

A Group Life Application is attached together with check in amount of \$ _____

Was binding receipt given? (Yes—No) _____

Number of lives covered _____ Estimated Total Amount of Life Insurance \$ _____

Correspondence with firm should be addressed to Mr _____ Title _____

(Print Name)

Give name and location of branches included in this group _____

Give name and location of branches not included, if any _____

Commission to _____ Debit No. _____

(Title)

Credit to _____ District _____

(Title)

RATE

Was a definite rate quoted? (Yes—No) _____

Rate estimated was _____ because (advise per cent. colored, nationality of employees, standard of working and living conditions, mentioning all extra hazards involved) _____

Will the employer pay the entire premiums? (Yes—No) _____ If not, what proportion? _____

CERTIFICATE MATERIAL

Is certificate material attached? (Yes—No) It will be forwarded by _____ 192__

What have you promised regarding certificate material _____

FORMS

The Forms G.L.I.50 will be forwarded by _____ 192__

ANNOUNCEMENTS

- I. Is suggested copy for local Newspaper Publicity wanted? (Yes—No) _____
- II. Is a write-up for firm's magazine wanted (Yes—No) _____
- III. "You are Insured" posters will be forwarded from Home Office.
(If special individual announcements are requested, so state, giving reasons.) _____

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NURSING

Are employees located in your District covered by Nursing Service? (Yes—No) _____
State what branches, if any, are not covered by Nursing Service. _____

F

-

-

F.

The information on the form G.L.I. 61 is often not complete, and we have discovered branches of a Group which have been insured but which have never had service, as we have been notified only of the main office. The salesmen are more careful than formerly, as they are using our service more, but their reports still are not very full. This last week we have had two cases where our original letters to manager and nurse were both sent out incorrectly due to meagre information.

3. OUR PROGRAM OF ACTION

The Groups are divided territorily among four correspondents, whose duty it is to see that the Groups are informed of the nursing, literature and welfare services, that shipments of literature are made them every six weeks, and that other services such as physical examination are suggested to them, and that information that they request is given to them. To carry out this program, the form announcing the closing of a Group, with a history card the top of which has been filled out, like attached (Exhibit B) is sent to the proper correspondent. She proceeds as follows:

A. Checks up with the Welfare Division on the nursing situation.

B. Studies the situation with the Group, taking into consideration its size, location, industry, nationality of workers. If sold by a Home Office salesman, she usually consults with him. (See Exhibit C) Taking all these things into consideration, with the local situation with this manager if he has handled other Groups, she then writes her initial letter.

The form from the Sales Division shows whether the service for a particular Group is to be handled with the Group direct or with a local manager. About five-sixths of the Groups are handled through our managers.

4. CONTENT OF LETTERS

(I would like to emphasize that these are not form letters and that the material is adapted to local situations. The content is similar in most cases).

1. WITH NURSES

(a) If this nurse has never had Groups before, a letter similar to Exhibit D is sent. This letter includes the name of the Group, a paragraph explaining Group Insurance, and paragraphs explaining the Group Nursing Forms which are sent with the letter. A questionnaire, asking that she call on the Group and report back to the Metropolitan, is included; also a leaflet on instructions and recommendations in re nursing for employees insured under Group Insurance policies. The nurse is told that enough N. S. 2Gs and N.S. 3s have been sent her to cover the insured,

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silicosis study

✓
DR. CHRISTIE NIN
ASSISTANT MEDICAL DIRECTOR

SEP 17 1934
ask

I am in receipt this morning of a letter from Dr. Gardner, in which he states as follows:

"I received this morning the first annual contribution from the Mutual Companies of \$5000 with assurance that it would be continued during 1935 and 1936.

"The stock companies are still debating but I have been told that when the summer vacation period is over the matter will receive attention by the proper authorities. You recall that on July 2nd, a resolution was passed as follows:

'I move that this meeting instruct Mr. Whitney to present a resolution to the Executive Committee of the National Bureau (of Casualty and Surety Underwriters,) recommending that the Bureau appropriate \$5000 for each of three years to the Saranac Laboratory for research on silicosis problems specified by the Medical Directors Committee and the Engineering Department of the Bureau.'

September 4, 1934

AJZ
A. J. Canza, M.D.
Assistant Medical Director

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To the Executive

0519

Co.
Subscriptions

On June 28, 1929 the Welfare Committee "authorized an appropriation of \$5,000. per year for five years to the Saranac Laboratory for the purpose of enabling it in cooperation with this Company to continue bacteriological studies of silicosis."

December 14, 1933 I wrote to Doctor Lanza, "I showed to the President the first and second paragraph on Page 2 of Dr. Gardner's letter of December 12th to you; and the President says that with events turning as they are now we must not promise far in advance but that you can say that we look upon the proposition and upon the results that are being accomplished with favor and that our disposition will be to recommend renewal of the \$5,000 appropriation for another two years beginning July 1, 1934 unless meanwhile something happens to make us consider such action inadvisable." (Those two paragraphs were: "Had a meeting in Chicago with representatives of the Mutual Insurance Companies (Liberty, Lumbermans, Employers and American, I think.) Whiting and Keuckle organized it to consider a research program which they would finance here at the laboratory. In my speech to them I mentioned that the Met. had carried us for \$5,000 annually during the last 5 years, but that I was not very certain that you would be able to continue. I therefore asked them to replace this grant with \$5,000 of their own to continue the study on TB and silicosis. They had previously written me for a schedule of necessary experimental work in which I included a study of solubility, neutralization of silica action in the body and immunity in TB and pneumonia. After my speech they took my breath away by asking me if I could do all this program simultaneously if they gave me \$10,000 a year for the next 3 years and persuaded you to continue with your present contributions. It can be done and I told them so. They are putting it up to their chiefs and seem to feel that there is good prospect of success."

"However, I don't want to be put in the position of having assumed that the Met. is going to quit before I have asked for a renewal of the appropriation and I don't want them to be bargaining with you to do something when you have already done as much and may not feel able to do more. So I lay all cards on the table."

The 5 year appropriation described above will terminate at the end of this month. Doctors Lanza and McConnell attended the Conference on Silicosis at Saranac last week and Doctor Lanza says that on June 20th he "had lunch with Dr. Gardner, in company with three or four representatives of the Association of Mutual Casualty Companies. During the luncheon, Dr. Gardner received a telegram from the Secretary of this Association, notifying him that the Association had made him a grant of \$5,000 and would be inclined to listen favorably to a request for the renewal of this grant for a period of years and also possibly the increasing of the amount. It was the hope of the representatives of the Association present to have this grant increased to \$10,000 a year for three years. Mr. Graff, who represents the National Board of Surety and Casualty Underwriters, stated that he thought it was probable that the stock companies included in this Association would also support the Saranac Laboratory and it is my intention to discuss this with

Mr. Albert Whitney at a meeting that we are to have this week. As soon as I hear of any further action by the casualty companies, I shall inform you."

The question of occupational diseases which are associated with tuberculosis is of more importance to-day to the firms and wage earners which we cover with insurance, than at any time previous. Results of great value have already been attained by these research workers at Saranac Laboratory, and the promises of further and continued discoveries in the near future are brilliant. The high mortality from tuberculosis among our Industrial policyholders who are engaged in harmful occupations can and should continue to be attacked by just such research as the Saranac group are making and putting into operation.

We therefore recommend that this Company's appropriation of \$5,000 per year beginning July 1, 1934 be renewed for 3 years, if possible, and for 1 year anyway.

June 29, 1934
K-G.

0520

To the Executive

On June 25, 1929 the Welfare Committee "authorized an appropriation of \$5,000. per year for five years to the Saranac Laboratory for the purpose of enabling it in cooperation with this Company to continue bacteriological studies of silicosis."

December 14, 1933 I wrote to Doctor Lanza, "I showed to the President the first and second paragraph on Page 2 of Dr. Gardner's letter of December 12th to you; and the President says that with events turning as they are now we must not promise far in advance but that you can say that we look upon the proposition and upon the results that are being accomplished with favor and that our disposition will be to recommend renewal of the \$5,000 appropriation for another two years beginning July 1, 1934 unless meanwhile something happens to make us consider such action inadvisable." (These two paragraphs were: "Had a meeting in Chicago with representatives of the Mutual Insurance Companies (Liberty, Lumbermans, Employers and American, I think.) Whiting and Keuckle organized it to consider a research program which they would finance here at the Laboratory. In my speech to them I mentioned that the Met. had carried us for \$5,000 annually during the last 5 years, but that I was not very certain that you would be able to continue. I therefore asked them to replace this grant with \$5,000 of their own to continue the study on TB and silicosis. They had previously written me for a schedule of necessary experimental work in which I included a study of solubility, neutralization of silica action in the body and immunity in TB and pneumonia. After my speech they took my breath away by asking me if I could do all this program simultaneously if they gave me \$10,000 a year for the next 3 years and persuaded you to continue with your present contribution. It can be done and I told them so. They are putting it up to their chiefs and seem to feel that there is good prospect of success.

"However, I don't want to be put in the position of having assumed that the Met. is going to quit before I have asked for a renewal of the appropriation and I don't want them to be bargaining with you to do something when you have already done so much and may not feel able to do more. So I lay all cards on the table.")

0521

The 5 year appropriation described above will terminate at the end of this month. Doctors Lanza and McConnell attended the Conferences on Silicosis at Saranac last week and Doctor Lanza says that on June 20th he "had lunch with Dr. Gardner, in company with three or four representatives of the Association of Mutual Casualty Companies. During the luncheon, Dr. Gardner received a telegram from the Secretary of this Association, notifying him that the Association had made him a grant of \$5,000 and would be inclined to listen favorably to a request for the renewal of this grant for a period of years and also possibly the increasing of the amount. It was the hope of the representatives of the Association present to have this grant increased to \$10,000 a year for three years. Mr. Graff, who represents the National Board of Surety and Casualty Underwriters, stated that he thought it was probable that the stock companies included in this Association would also support the Saranac Laboratory and it is my intention to discuss this with

Mr. Albert Whitney at a meeting that we are to have this week. As soon as I hear of any further action by the casualty companies, I shall inform you."

The question of occupational diseases which are associated with tuberculosis is of more importance to-day to the firms and wage earners which we cover with insurance, than at any time previous. Results of great value have already been attained by these research workers at Saranne Laboratory, and the promises of further and continued discoveries in the near future are brilliant. The high mortality from tuberculosis among our Industrial policyholders who are engaged in harmful occupations can and should continue to be attacked by just such research as the Saranne group are making and putting into operation.

We therefore recommend that this Company's appropriation of \$5,000 per year beginning July 1, 1934 be renewed for 3 years, if possible, and for 1 year anyway.

June 29, 1934
K-G.

0522

K-G

Silicosis study

Co.

Subscriptions

November 1, 1929

Dr. Leroy U. Gardner
Director
Saranac Laboratory for the Study of Tuberculosis
7 Church Street
Saranac Lake, New York

My dear Doctor Gardner

Thanks for your good letter of October 18th. I am glad, indeed, that you and Mr. Cummings could go along with Dr. Lanza to Thetford and that you found that visit well worth while.

You are correct in doing as you like about traveling expenses to Picher. They could be taken out of the Metropolitan authorization, if you chose, but it is better to take them from the Public Health Service so long as Dr. Thompson has expressed a willingness to allow it.

I had quite a long talk with President Ecker about the contents of the third paragraph of your letter and he thinks that this Company really should confine its work to the United States and Canada where it conducts its business and that it would not be possible to spare Dr. Lanza for the length of time that the visit to South Africa would take. I have discussed it all with Dr. Lanza since talking with the President and I find that he and I both agree that that attitude is the right one to take. I hope, therefore, that you can agree, without disappointment, although I can well appreciate what a fine thing it would be if you and Dr. Drinker and Dr. Lanza could go to that Continent as representatives of the Public Health Service.

With kindest personal regards and hoping to see you soon, I am,

Yours very truly,

0523

Dr. Knight was obliged to leave the office before signing the above letter dictated by him.

MEDICAL DIRECTOR

THE EDWARD L. TRUDEAU FOUNDATION
OF THE
TRUDEAU SANATORIUM

SARANAC LABORATORY
FOR THE STUDY OF TUBERCULOSIS

SARANAC LAKE, N. Y.

OFFICE OF THE DIRECTOR
7 CHURCH STREET

Dr. Augustus Knight, Medical Director
The Metropolitan Life Insurance Company
New York, New York

Dear Dr. Knight,

I wish to report that both Mr. Cummings and I went to Thetford with Dr. Lanza and Mr. Burnett and enjoyed a most profitable inspection of the production of asbestos. The background which such trips afford for experimental work well repays the time spent, I am certain.

Dr. Lanza told me that you had said that I might take the expense of a trip to Picher out of the Metropolitan funds. We have decided that it would be more useful to employ these funds in experimental work, and Dr. Thompson is willing to allow travel expenses from the Public Health Service. We will therefore not encroach at this time upon the Metropolitan account.

When I was in Washington recently, the Surgeon-General asked me if I would be able to go to South Africa next summer to represent the Public Health Service at the Conference of the Investigators of Dusty Trades. He suggested that it might be desirable to have the United States represented by three men. One of the Drinkers could cover the attempts at prevention of dust inhalation; Dr. Lanza would be able to report on the working conditions and the clinical picture in various types of pneumokoniosis in America; and I would represent those interested in the experimental aspects of the problem. He intimated that my expenses might be paid by the Public Health Service, but said nothing about those of the other men suggested. I sincerely hope that if this delegation can go, the Metropolitan could arrange to take care of Dr. Lanza,

*this would make
a wonderful
Committee -
ask*

*President
says no
ask*

*Dr. Lanza is going to
see Dr. Gardner in
October 12, 1929
Jest says OCT 22 1929*

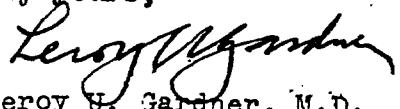
0524

Dr. Augustus Knight -2- October 18, 1929

for I at least would feel somewhat timid in attempting to interpret the general phases of this problem, without more knowledge than I possess at the present time.

With best wishes, I am,

Very sincerely yours,


Leroy S. Gardner, M.D.
Director

LUG:KA

0525

K/AG

October 14, 1929

Mr. Roy Dayton, Secretary
The Edward L-Trudeau Foundation
Trudeau Sanatorium
Saranac Lake, New York

Dear Sir

Replying to the last paragraph of your letter of October 7th, please do not hesitate at all to send the bills and vouchers to us for we are glad to see them and handle them for you.

Very truly yours

MEDICAL DIRECTOR

0526

THE EDWARD L. TRUDEAU FOUNDATION
FOR RESEARCH AND TEACHING IN TUBERCULOSIS
OF THE
TRUDEAU SANATORIUM

THE TRUDEAU SCHOOL OF TUBERCULOSIS
OFFICE OF THE SECRETARY
SARANAC LAKE, N. Y.

RESEARCH AND CLINICAL LABORATORY
TRUDEAU, N. Y.

THE SARANAC LABORATORY
SARANAC LAKE, N. Y.

OFFICE OF THE DIRECTOR
SARANAC LAKE, N.Y.

October 7th, 1929.

Dr. Augustus S. Knight, Medical Director,
Metropolitan Life Ins. Co.,
New York City.

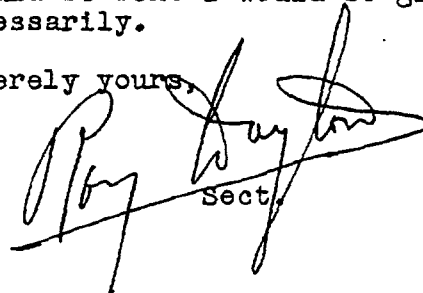
OCT 9 1929

My dear Doctor Knight:

In accordance with our correspondence of August 20th and 22d, I beg to enclose in the form of a bill our statement of expense during August and September in connection with the silicosis studies at the Saranac Laboratory, together with invoices for the various amounts paid by the Foundation on this account.

If there is someone else in the Metropolitan organization to whom these bills should be sent I would be glad to know so as not to bother you unnecessarily.

Very sincerely yours,


Sect.

0527

THE EDWARD L. TRUDEAU FOUNDATION
FOR RESEARCH AND TEACHING IN TUBERCULOSIS
OF THE
TRUDEAU SANATORIUM

THE TRUDEAU SCHOOL OF TUBERCULOSIS
OFFICE OF THE SECRETARY
SARANAC LAKE, N. Y.

OFFICE OF THE DIRECTOR
SARANAC LAKE, N. Y.

RESEARCH AND CLINICAL LABORATORY
TRUDEAU, N. Y.

THE SARANAC LABORATORY
SARANAC LAKE, N. Y.

September 25th, 1929.

Dr. August S. Knight,
Medical Director,
Metropolitan Life Ins. Co.,
New York City.

Dear Doctor Knight:

I regret that the resolution was not enclosed in your letter, but I think you must have received it by this time from Dr. Trudeau, as it was my intention that he would forward it to you. We certainly appreciate your help and without it much of our work would have to be curtailed. As it is, we have not sufficient income to carry the Trudeau School and we are trying to carry on with a considerable demand from various sources, having at present thirteen enrolled for next year's course. Our budget for the school is \$5000, and it was supported by Mr. Samuel Mather for the first ten years; but now we must look elsewhere, though we have good hopes.

I hope you will stop and see us whenever you are in the neighborhood.

Very sincerely yours,

Edward L. Trudeau

0528

SEP 26 1929

z
September 26, 1929.

K-DC

Doctor F. B. Trudeau, Secretary
Trudeau Sanatorium
Trudeau, New York

My dear Doctor Trudeau

Thank you ever so much for a copy of the appreciative resolution concerning this Company which the Trustees of the Trudeau Sanatorium passed at their meeting of September 7th.

I am sending it along to the President, and know that he will read it with interest and pleasure.

Yours very truly,

MEDICAL DIRECTOR.

0529

JAMES ALEX. M. D.
PRESIDENT

GEORGE S. BREWSTER
TREASURER

FRANCIS B. TRUDEAU, M.D.
SECRETARY

EDWARD R. BALDWIN, M.D.
CHAIRMAN EXEC. COMMITTEE

TRUDEAU SANATORIUM
TRUDEAU, N. Y.

C. R. ARMSTRONG
SUPERINTENDENT

September 23, 1929.

Dr Augustus S Knight,
Metropolitan Life Insurance Company
New York City.

SEP 25 1929

Dear Dr. Knight:

It gives me great pleasure to inclose a resolution passed at the last meeting by the board of trustees of the Sanatorium, thanking you and your Company for the coöperation in our work at the Saranac Lake Laboratory, and for your generous financial aid.

Very sincerely yours,

F B Trudeau
Secretary

FBT:MAT

0530

JAMES ALEX. M^{FR}ER, M.D.
PRESIDENT

GEORGE S. BREWSTER
TREASURER

FRANCIS B. TRUDEAU, M.D.
SECRETARY

EDWARD R. BALDWIN, M.D.
CHAIRMAN EXEC. COMMITTEE

TRUDEAU SANATORIUM
TRUDEAU, N.Y.

C. R. ARMSTRONG
SUPERINTENDENT

Resolution Passed at the Summer Meeting of the Trustees of the
Trudeau Sanatorium, September 7th, 1929

To the Metropolitan Life Insurance Company: The
Trustees of the Trudeau Sanatorium are conscious of their obligation to the Metropolitan Life Insurance Company for their pledge to the aid of the scientific work of the Saranac Laboratory directed by Dr. Gardner, and wish to inscribe a vote of thanks upon the minutes.

0531