

Annual report of the Department of Health, Ontario, Canada.

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DEPARTMENT OF HEALTH

Twelfth Annual Report

OF THE

Department of Health

Ontario, Canada

FOR THE YEAR

1936

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO



ONTARIO

TORONTO

Printed and Published by T. E. Bowman, Printer to the King's Most Excellent Majesty

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TO THE HONOURABLE HERBERT ALEXANDER BRUCE,
M.D., R.A.M.C., F.R.C.S. (Eng.),

Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

I herewith beg to present for your consideration the Twelfth Annual Report of the Department of Health, for the year 1936.

Respectfully submitted,

J. A. FAULKNER,

Minister of Health.

TO THE HONOURABLE J. A. FAULKNER, M.D.,

Minister of Health,

SIR,—I have the honour to submit for your approval the Twelfth Annual Report of the Department of Health, made in conformity with and under the provisions of The Public Health Act, for the year 1936.

I have the honour to be, Sir,

Your obedient servant,

B. T. MCGHIE,

Deputy Minister of Health.

DEPARTMENT OF HEALTH

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DEPARTMENT OF HEALTH

Minister

HONOURABLE J. ALBERT FAULKNER, M.D.

Deputy Minister

B. T. McGHIE, M.D.

Chief Medical Officer of Health

JOHN T. PHAIR, M.B., D.P.H.

Sanitary Engineering Branch

A. E. Berry, M.A.Sc., C.E., Ph.D.....	Director
A. V. Delaporte, B.A.Sc., Chem.E., F.C.I.C.....	Chemist In Charge of Experimental Station
O. V. Ball, B.A.Sc.....	Assistant Sanitary Engineer
G. A. H. Burn, B.A.Sc.....	Assistant Sanitary Engineer
E. W. Johnston, B.A.Sc.....	Assistant Sanitary Engineer
A. T. Byram, B.A.Sc.....	Assistant Sanitary Engineer
G. M. Galimbert, B.A.Sc.....	Assistant Sanitary Engineer
W. R. Edmonds, M.A.Sc.....	Assistant Sanitary Engineer
L. A. Kay, M.A.Sc.....	Assistant Sanitary Engineer
J. G. Duncan, B.A.Sc.....	Assistant Chemist
H. G. Tyler.....	Sanitary Investigator

Preventable Diseases Branch

A. L. McKay, B.A., M.B., D.P.H.....	Director and Epidemiologist
R. P. Hardman, M.D., D.P.H.....	Associate Epidemiologist

Tuberculosis Prevention Branch

G. C. Brink, M.B.....	Director
K. M. Shorey, M.B.....	Clinical Specialist
G. W. Cragg, M.B.....	Clinical Specialist
E. R. Harris, M.B., Physician in Charge, Traveling Clinic.....	North Bay
A. A. Powers, M.D., Physician in Charge, Traveling Clinic.....	Ottawa
G. C. Brearley, M.D., Physician in Charge, Traveling Clinic.....	Belleville

Child Hygiene and Public Health Nursing

John T. Phair, M.B., D.P.H.....	Director
Edna L. Moore, Reg.N.....	Chief Public Health Nurse

Laboratories Branch

Andrew L. MacNabb, B.V.Sc.....	Director
H. A. Ansley, M.B., D.P.H.....	Pathologist
A. R. Bonham, B.A.Sc., F.C.I.C.....	Chemist
Wallace B. McClure, M.B., D.P.H.....	Bacteriologist
A. D. McClure, B.A.....	Assistant Bacteriologist
A. E. Allin, B.A., M.D., D.P.H.....	Assistant Bacteriologist
J. E. Fasken, B.A.Sc.....	Assistant Chemist

Branch Laboratories

A. J. Slack, Ph.C., M.D., D.P.H., Director.....	London
James Miller, M.D., F.R.C.S. (Edin.), Director.....	Kingston
J. W. Bell, M.B., Director.....	Fort William
N. F. W. Graham, M.B., Director.....	Sault Ste. Marie
W. M. Wilson, M.D., Director.....	North Bay
C. B. Waite, M.D., Director.....	Peterborough
F. L. Letts, M.B., D.P.H., Director.....	Ottawa

Industrial Hygiene Branch

J. G. Cunningham, B.A., M.B., D.P.H.....	Director
A. R. Riddell, B.A., M.B., D.P.H.....	Clinical Specialist
F. M. R. Bulmer, M.B., B.Sc., Med.....	Special Research
H. E. Rothwell, B.A.Sc.....	Chemist
C. M. Jephcott, M.A., Ph.D.....	Assistant Chemist
John D. Leitch, B.Sc., M.A.....	Physicist

Sanitary Inspectors

D. McKee.....	Sudbury
J. Richardson.....	North Bay
John Sime, A.R., San. I.....	Fort William
R. B. McCauley.....	Sault Ste. Marie
Hugh McIntyre, A.R., San. I.....	Kirkland Lake
A. S. O'Hara, M.R., San. I.....	Sioux Lookout

Dental Services Branch

W. G. Thompson, D.D.S.....	Director
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Nurse Registration Branch

A. M. Munn, Reg.N.....	Inspector of Training Schools for Nurses
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Public Health Education Branch

Mary Power, B.A.....	Director
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Honourary Consultants

Public Health Administration.....	J. G. Fitzgerald, M.C., F.R.S.C.
Pediatrics.....	Alan Brown, B.A., M.B.
Obstetrics.....	William B. Hendry, M.D., D.S.O.
Dental Services.....	Harold Keith Box, D.D.S.
Public Health Nursing.....	Miss Elizabeth Smellie, C.B.E., Reg. N.

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ANNUAL REPORT

of the

Department of Health

For the Calendar Year Ending December 31st, 1936

In the presentation of the annual report of the Department of Health for the calendar year 1936, reference should be made to the emphasis placed on the more effective control of tuberculosis. The establishment of three new clinic centres with appropriate personnel and equipment has made possible a material extension of the diagnostic service. The substantial aid given the united counties of Dundas, Stormont and Glengarry in the establishment of a sanatorium to serve the extreme easterly part of the province and the efforts of the Department to secure the discharge of those who have already received the maximum of benefit from sanatorium treatment has made available a large number of beds for those suffering from what is described as minimal tuberculosis. Such measures are ultimately bound to favourably influence the morbidity rate from this disease.

The appointment of Dr. Hardisty Sellers as Medical Statistician has enabled the Department to more adequately assay the value of the programme for cancer treatment so heavily subsidized by the Government, and to ensure a better type of approach to the problems resulting from increased hospitalization.

The burden of payment for insulin to those diabetics presumably unable to secure such treatment for themselves has been materially lessened by the forced assumption of 25% of the cost by the municipalities in which such patients are resident. A more equitable distribution of Department subsidies to municipalities assuming their responsibilities under The Venereal Diseases Prevention Act has acted as an additional stimulus in the control of these diseases.

Every effort is being made to focus the attention of both the Board of Health and the local Medical Officer of Health on their stated and implied obligations in respect to the various aspects of an acceptable type of community health programme.

The Regulations issued pursuant to The Milk Control Act respecting the equipment and operation of milk plants place certain well defined responsibilities on the staff of the Department. The acceptance of these regulations by those distributors interested in the sale of a satisfactory product has been more than favourable.

The activities of the various Divisions of the Department follow in some detail.

REPORT OF THE SOLICITOR

K. G. GRAY, M.D., *Solicitor to the Department*

The matters dealt with in this office during the year 1936 have included the drafting of proposed legislation; legal advice to various Departments of the Government and various divisions of the Department of Health; legal advice to officers of the Ontario Hospitals, public hospitals, tuberculosis sanatoria, local boards of health and medical officers of health. The extent to which this service is utilized is illustrated by the fact that over 1700 written communications were sent from the office during the year, and an even greater number of opinions were given by telephone or interview.

Legislation introduced by the Minister of Health and passed by the Legislative Assembly at the Session held in 1936 includes the following:

The Embalmers and Funeral Directors Amendment Act, 1936, chap. 20.

The Public Health (Fumigation of Premises) Act, 1936, chap. 51.

The Public Hospitals Amendment Act, 1936, chap. 52.

The Sanatoria for Consumptives Amendment Act, 1936, chap. 54.

The following regulations were approved by the Lieutenant-Governor in Council on the recommendation of the Minister of Health:

Regulations pursuant to:

The Embalmers and Funeral Directors Act, 1928, chap. 31, December 21, 1936

The Public Health Act, R.S.O., 1927, chap. 262, for the control of fumigation, May 20, 1936.

The Registration of Nurses Act, R.S.O., 1927, chap. 360, December 10, 1936.

The Mental Hospitals Act, 1935, chap. 39, February 22, 1936.

The Private Hospitals Act, 1931, chap. 77, July 7, 1936.

The Mental Hospitals Act, 1935, chap. 39, January 29, 1936.

Orders-in-Council:

Directions for distribution of Insulin, July 7, 1936.

Under *The Hospitals Act, 1931*, chap. 78, "Tisdale Public Hospital," April 1, 1936.

The St. Lawrence Sanatorium, September 16, 1936.

The Venereal Diseases Prevention Act, R.S.O., 1927, chap. 264, section 12, February 5, 1936.

The Solicitor collaborated with the Milk Control Board in the drafting of certain regulations under The Milk Control Act, which were approved on April 3rd, 1936.

Invitations were received to address the Ontario Health Officers' Association in May; the Ontario Hospital Association on October 22nd; the Ontario County Medical Society in Oshawa on November 25th; and the Seminar conducted by the director of the Toronto Psychiatric Hospital in November. Weekly lectures during the academic year were delivered in the Department of Law, Faculty of Arts, University of Toronto, and a number of lectures were given to the post-graduate course for medical practitioners at the Toronto Psychiatric Hospital.

The following papers were written and published:

- | | |
|--|---|
| "The Mental Hospitals Act, 1935" | in the Toronto Academy of Medicine Bulletin, January, 1936. |
| "Privileged Communications—
Physician and Patient" | in the Ontario Medical Association Bulletin, March, 1936. |
| "Public Health Administration
in Ontario" | in the Home and School Review, September, 1936. |
| "The Mental Hospitals Act, 1935" | in the University of Toronto Law Journal, vol. II, No. 1. |
| Review of "An Enquiry into the
Prognosis in the Neuroses" | in the Journal of the Canadian Medical Association, August, 1936. |
| Review of "Crime and Sexual
Development" | in the American Journal of Psychiatry, September, 1936. |

LEGISLATION PASSED DURING 1936

1. This Act may be cited as *The Embalmers and Funeral Directors Amendment Act, 1936*.
2. Section 3 of *The Embalmers and Funeral Directors Act, 1928*, as amended by section 2 of *The Embalmers and Funeral Directors Act, 1932*, is repealed and the following substituted therefor:
 - 3.—(1) The Board of Examiners shall consist of three qualified funeral directors who shall be appointed by the Lieutenant-Governor in Council and shall hold office during pleasure and who may be paid such fees or other remuneration as the Lieutenant-Governor in Council deems proper.
 - (2) The Lieutenant-Governor in Council may appoint any member of the Board to act as chairman and any other member to act as vice-chairman and the third member of the Board shall be the secretary-treasurer.
 - (3) Two members of the Board shall constitute a quorum and the decision of the majority of the members of the Board shall be final and binding on the Board.
3. (1) Subsection 1 of section 4 of *The Embalmers and Funeral Directors Act, 1928*, is amended by striking out the word "three" in the last line and inserting in lieu thereof the word "two" so that the said subsection shall now read as follows:
 - (1) The Board shall hold meetings at least three times in every year at such time and place as may be deemed advisable by the majority of the members and may hold additional meetings at the call of the chairman or any two members.
 - (2) Subsection 2 of the said section 4 is repealed and the following substituted therefor:
 - (2) Notice of every meeting, whether general or special, shall be sent by the secretary-treasurer by prepaid registered post to every member of the Board at his address as last entered upon the register, not less than seven days before the day of the holding of the meeting.
 - (3) The said section 4 is further amended by adding thereto the following subsection:
 - (3) Notwithstanding any of the provisions of this section, a meeting of the Board may be held at any time and place, provided all the members of the board are present and waive notice and consent to the holding of such meeting.
4. *The Embalmers and Funeral Directors Act, 1928*, is amended by adding thereto the following section:
 - 6a.—(1) The Board shall have power to authorize any person, partnership, association or educational institution to establish and conduct one or more schools or colleges for instruction in embalming and general preparation for and burial of the dead human body, and shall have power to pay out of the funds held by the Board such sums as it may deem proper to assist in the establishment and maintenance of any such school or college.
 - (2) Subject to the approval of the Board, any such school or college may conduct a course of instruction in embalming and general preparation for and burial of the dead human body for articulated students, provided the Board shall conduct the examination of students and shall have exclusive authority to grant a certificate of qualification as an embalmer to any such student who has passed such examination.

- (3) Every articulated student registered after the 1st day of March, 1936, before writing the examination for such certificate of qualification, shall, in addition to the requirements of this Act and the regulations, produce evidence satisfactory to the Board that he has completed the full course of instruction in one of such schools or colleges.
- (4) The Board may exempt from the provisions of sub-section 3 any person who has qualified as an embalmer in a place outside of Ontario, provided the qualifications required in such place are, in the opinion of the Board, equal to the qualifications required by this Act and the regulations.
- (5) Subject to the approval of the Board, any such school or college may conduct a post-graduate course of instruction for embalmers.

5. (1) Section 11 of *The Embalmers and Funeral Directors Act, 1928*, is amended by inserting after the word "license" in the third line the words "issued under this Act"; by inserting after the word "every" in the third line the word "person"; by inserting after the word "such" in the sixth line the word "person"; by inserting after the word "licensed" in the seventh line the words "under this Act" and by inserting after the first word "the" in the eighth line the word "premises," so that the said section shall now read as follows:

11. Except as otherwise provided in this Act, every person carrying on business in Ontario as a funeral director shall have a license issued under this Act as an embalmer and funeral director and every person, partnership, firm or corporation carrying on such business shall have as manager of each establishment or branch operated by such person, partnership, firm or corporation a person licensed under this Act as an embalmer and funeral director, and in all cases the premises, furnishings and equipment shall be subject to the approval of the Board.
- (2) The said section 11 is further amended by adding thereto the following subsection:
 - (2) For the purposes of this section "establishment" and "branch" shall include any premises or location operated for the promotion of any of the purposes for which a license as a funeral director is granted under this Act, but shall not include a store-room in which caskets or other furnishings are stored in their original containers and not displayed for purposes of sale.

6. Section 13 of *The Embalmers and Funeral Directors Act, 1928*, is amended by adding thereto the following subsection:

- (2) All moneys and securities received or held by the Board shall be held in the name of "Board of Examiners under *The Embalmers and Funeral Directors Act, 1928*," and moneys may be deposited in a branch of a chartered bank or a Province of Ontario Savings office and shall be withdrawn by the secretary-treasurer on the order of the Board, and securities shall be purchased and sold by the secretary-treasurer on the order of the Board.

7. Section 16 of *The Embalmers and Funeral Directors Act, 1928*, is amended by inserting after the word "interment" in the fourth line the words "by an embalmer," so that the said section shall now read as follows:

16. The body of every deceased person who has died in Ontario and is destined for interment outside the Province shall, before being removed from Ontario, be prepared for interment by an embalmer in accordance with the rules and regulations of the Department of Health and in accordance with the provisions of this Act and the regulations made thereunder.

8. This Act shall come into force on the day upon which it receives the Royal Assent.

1. This Act may be cited as *The Public Health (Fumigation of Premises) Act, 1936*.

2. Section 1 of *The Public Health Act* as amended by section 2 of *The Public Health Act 1934*, is further amended by inserting therein the following clauses:

- (ccc) "Fumigation" shall mean fumigation by the use of hydrocyanic acid or cyanide compounds;
- (cccc) "Fumigator" shall mean any person who by himself or his associates, employees servants, assistants or agents carries on the business or occupation of the fumigation of premises.

3. Section 6 of *The Public Health Act* as amended by section 3 of *The Public Health Act, 1932*, and section 2 of *The Public Health Act, 1933*, is further amended by adding thereto the following clauses:

- (w) prescribing the terms and conditions upon which a license for fumigation may be issued, the fees payable therefor, the form and term thereof and the terms and conditions upon which any such license may be renewed, suspended and revoked;

- (x) fixing the amount and type of bond or insurance which shall be furnished or carried by a fumigator and prescribing the form, requirements and terms thereof;
- (y) prescribing the procedure, methods and conditions for fumigation and prescribing the qualifications and providing for the licensing of every apprentice, employee, servant or assistant of any fumigator;
- (z) the issuing of permits by the local medical officer of health for the fumigation of any premises to be fumigated and the terms upon which any such permit may be issued, suspended or revoked;
- (aa) requiring every substance which is or is intended to be used for fumigation to be approved by the Minister and prescribing the conditions upon which such approval may be granted.

4. *The Public Health Act* is amended by adding thereto the following sections:

72a.—(1) No person other than a fumigator licensed under the regulations shall be engaged in or perform any fumigation of premises anywhere in Ontario, except by permission in writing granted by the Minister.

(2) No fumigator shall be engaged in or perform the fumigation of any premises except under and according to the terms of a permit issued under the authority of the regulations for such premises.

(3) Every licensed fumigator shall with respect to the fumigation of any premises be responsible for the acts or omissions of his employees, servants or agents in respect of such premises.

72b.—(1) Subject to the approval of the Minister, every municipality shall have authority to enact by-laws respecting fumigation not inconsistent with the provisions of this Act and the regulations.

(2) Any municipality may by by-law require that a fee of \$1 shall be payable to the municipality and collected by the medical officer of health for every permit for fumigation issued under this Act and the regulations, and for the purpose of administering and enforcing the provisions of this Act, the regulations and any by-law relating to the fumigation of premises, the council of every municipality shall appoint such inspectors as the Minister may deem necessary, provided that if any such municipality fails to comply with the provisions of this section the Lieutenant-Governor in Council may make such appointments and all inspectors so appointed shall be paid by the municipality such remuneration as the Lieutenant-Governor in Council may determine.

72c.—(1) At least twenty-four hours before commencing fumigation operations, the fumigator shall deliver a notice in writing to every adult person residing in the premises to be fumigated and at least one adult person residing in each of the following premises:—

(a) buildings adjoining the buildings to be fumigated; and

(b) premises which form part of an apartment building or semi-detached house of which the premises to be fumigated form a part; and

(c) premises so located that the fumigation of the premises to be fumigated constitutes an actual or potential hazard to the occupants of premises so located.

(2) Every such notice shall state that there is danger that a poisonous gas which is to be used in fumigation operations may enter adjoining premises and shall indicate what premises are to be fumigated, the date and day of the week of such fumigation, the hour at which fumigation operations are intended to be commenced and the approximate time during which the occupants of all such premises are required to absent themselves therefrom.

(3) All occupants of such premises shall vacate and remain out of the premises during the entire period of fumigation and airing-out and it shall be the duty of the fumigator to inform the occupants when it is safe to re-enter the premises.

(4) Every police officer, police constable and other person appointed under the provisions of any Act of the Legislature of Ontario for the preservation and maintenance of the public peace is empowered to remove any person from any of the buildings and premises mentioned in subsection 1 upon being satisfied that the provisions of the said subsection have been complied with and in order to effect such removal may use such force as is reasonably necessary.

(5) The fumigator shall see that all such premises are thoroughly aired out before re-occupancy.

5. Subsection 1 of section 111 of *The Public Health Act* is amended by striking out the figures "72" in the second line and inserting in lieu thereof the figures and letter "72c"

6. This Act shall come into force on the day upon which it receives the Royal Assent.

1. This Act may be cited as *The Public Hospitals Amendment Act, 1936*.

2. Subsection 1 of section 18 of *The Public Hospitals Act, 1931*, as re-enacted by section 3 of *The Public Hospitals Act, 1933*, and amended by subsection 1 of section 16 of *The Statute Law Amendment Act, 1934*, is further amended by striking out the figures and word "90 cents" where they occur in the amendment of 1934 and inserting in lieu thereof the symbol and figures "\$1.25" so that the said subsection shall now read as follows:

(1) Subject as in this Act may otherwise be provided, when any patient in a hospital other than a hospital for incurables is an indigent person or a dependent of an indigent person, that municipality in which such person was a resident at the time of admission shall be liable to the hospital for payment of the charges for treatment of such patient at a rate not exceeding \$1.75 per day, except in the case of a hospital which, under the regulations, is classed as a convalescent hospital the payment of such charges shall be at a rate not exceeding \$1.25 per day, and when any patient in a hospital for incurables is certified in accordance with the regulations to be an incurable person, that municipality in which such person was a resident at the time of admission shall be liable to the hospital for incurables for payment of the charges for treatment of such patient at a rate not exceeding \$1.50 per day.

3.—(1) Section 22 of *The Public Hospitals Act, 1931*, is amended by striking out the words "or after admission" in the first line, so that subsection 1 of the said section shall now read as follows:

(1) Upon admission to a hospital of any patient who is or is represented to be or becomes an indigent person or the dependent of an indigent person the superintendent shall by registered letter notify the clerk of the municipality in which such indigent person is or is represented to be a resident, of such admission, giving such particulars as may be ascertainable to enable the clerk to identify the indigent person.

(2) The said section 22 is further amended by adding thereto the following subsection:

(2) Where any patient becomes an indigent after admission to a hospital the superintendent shall notify the clerk of the municipality in accordance with the provisions of subsection 1 when the indigency becomes known to the superintendent.

4. Clause *c* of section 25 of *The Public Hospitals Act, 1931*, is amended by inserting after the word "university" in the third line the words "training school for nurses established under *The Registration of Nurses Act*" so that the said clause shall now read as follows:

(*c*) If such patient has been living in the municipality by reason of being a pupil in any school, college, university, training school for nurses established under *The Registration of Nurses Act*, or other seminary of learning therein and at the time he became such a pupil was not a resident therein; but in such cases the patient shall for the purpose of this Act be deemed to be a resident in that municipality in which he was a resident at the time he became such a pupil; or.

5. Paragraph *a* of subsection 1 of section 34 of *The Public Hospitals Act, 1931*, as amended by subsection 2 of section 16 of *The Statute Law Amendment Act, 1934*, and subsection 2 of section 15 of *The Statute Law Amendment Act, 1935*, is further amended by striking out the figures "30" where they occur in the amendment of 1934 and inserting in lieu thereof the figures "40" so that the said paragraph shall now read as follows:

(*a*) For treatment of every patient who is an indigent person or the dependent of an indigent person, other than a baby, as in paragraph *b* mentioned, at the rate of 60 cents per day for every day up to one hundred and twenty days that such patient is receiving treatment in a hospital except in the case of a hospital which under the regulations is classed as a convalescent hospital, payment shall be at the rate of 40 cents per day up to one hundred and twenty days, provided that in either case the inspector shall have authority to extend payment up to an additional sixty days in any case where he deems further treatment to be essential.

6. This Act shall come into force on the day upon which it receives the Royal Assent.

1. This Act may be cited as *The Sanatoria for Consumptives Amendment Act, 1936*.

2. Subsection 1 of section 38 of *The Sanatoria for Consumptives Act, 1931*, as amended by subsection 1 of section 18 of *The Statute Law Amendment Act, 1934*, is amended by striking out the figures and word "90 cents" where they occur in the amendment of 1934 and inserting in lieu thereof the symbol and figures "\$1.25" so that the said subsection shall now read as follows:

(1) Subject as in this Act may otherwise be provided when any patient in a Sanatorium is an indigent person or a dependent of an indigent person, that municipality in which such person was a resident at the time of admission shall be liable to the sanatorium for payment of the charges for treatment of such patient at the rate not exceeding

\$1.50 per day except in the case of a sanatorium which under the regulations is classed as a convalescent sanatorium the payment of such charges shall be at a rate not exceeding \$1.25 per day.

3. —(1) Section 41 of *The Sanatoria for Consumptives Act, 1931*, is amended by striking out the words "or after admission" in the first line so that subsection 1 of the said section shall now read as follows:

(1) Upon admission to a sanatorium of any patient who is or is represented to be or becomes an indigent person or the dependent of an indigent person, the superintendent shall by registered letter notify the clerk of the municipality in which such indigent person is or is represented to be a resident, of such admission, giving such particulars as may be ascertainable to enable the clerk to identify the indigent person.

(2) The said section 41 is further amended by adding thereto the following subsection:

(2) Where any patient becomes an indigent after admission to a sanatorium the superintendent shall notify the clerk of the municipality in accordance with the provisions of subsection 1 when the indigency becomes known to the superintendent.

4. Clause *c* of section 44 of *The Sanatoria for Consumptives Act, 1931*, is amended by inserting after the word "university" in the third line the words "training school for nurses established under *The Registration of Nurses Act*" so that the said clause shall now read as follows:

(c) if such patient has been living in the municipality by reason of being a pupil in any school, college, university, training school for nurses established under *The Registration of Nurses Act*, or other seminary of learning therein and at the time he became such a pupil was not a resident therein; but in such cases the patient shall for the purposes of this Act, be deemed to be a resident in that municipality in which he was a resident at the time he became such a pupil; or.

5. Clause *a* of subsection 1 of section 51 of *The Sanatoria for Consumptives Act, 1931*, as amended by subsection 2 of section 18 of *The Statute Law Amendment Act, 1934*, is further amended by striking out the figures "30" where they occur in the amendment of 1934 and inserting in lieu thereof the figures "40" so that the said clause shall now read as follows:

(a) for treatment of every patient who is an indigent person or the dependant of an indigent person, at the rate of 75 cents per day for every day that such patient is receiving treatment in a sanatorium, except in the case of a sanatorium for consumptives which under the regulations is classed as a convalescent sanatorium, payment shall be at the rate of 40 cents per day.

6. This Act shall come into force on the day upon which it receives the Royal Assent.

Copy of an Order-in-Council, approved by The Honourable the Lieutenant-Governor, dated the 21st day of December, A.D., 1936.

Upon the recommendation of the Honourable the Minister of Health, the Committee of Council advise that pursuant to section 6 of *The Embalmers and Funeral Directors Act*, the attached regulations, which have been passed by the Board appointed under the said Act, be approved by Your Honour.

Certified,

C. F. BULMER,
Clerk, Executive Council.

REGULATIONS Pursuant to *The Embalmers and Funeral Directors Act*.

1. Subsection 1 of clause *b* is amended by inserting after the word "change" in the seventh line the words "and every student shall continue to serve as an articulated student until he succeeds in passing the examinations for an Embalmer's Certificate, or is otherwise dropped from the register."

2. Clause *b* is amended by adding thereto the following subsection:

b (3) Every funeral director shall, when taking a student on his staff, explain to such student the provisions of the Act and regulations pertaining to articulated students and during the course of his term shall instruct such student to the best of his ability in the work of a funeral director and embalmer.

3. Subsection 7 of clause *d* is repealed and the following substituted therefor:

d (7) Candidates who fail to pass the examinations shall try the examinations the next year following unless excused by the Board, and failing to do this their names shall be dropped from the register.

4. Subsection 1 of clause *c* is amended by striking out the word "three" in the sixteenth line and inserting in lieu thereof the word "two."
5. Clause *f* is amended by adding thereto the following subsections:
 4. Any embalmer who has not renewed his license for a period not exceeding five years may renew his license on payment of all arrears, together with the fee for the current year, but in every such case the Board shall be satisfied as to the moral standing and character of the applicant.
 5. Any embalmer who has not renewed his license for a period exceeding five consecutive years shall in addition to the payment of arrears of license fees demonstrate to the satisfaction of the Board that he is qualified to do the work of an embalmer.
 6. (1) In order to be in good standing for renewal of license every embalmer licensed by the Board shall at least once every five years attend a two-day course of instruction in embalming, restorative art, sanitation and funeral management.
(2) Such course shall be provided each year by the Board or an institution or organization approved by the Board.
(3) Every embalmer who attends the full two-day course shall be furnished with a certificate of attendance and shall mail such certificate forthwith to the secretary of the Board, who shall keep a record thereof.
6. Clause *g* is amended by inserting after the word "furnishings" in the fifth line the word "premises" and by adding the following subsections:
 - g* (2) Every license issued to a funeral director shall specify by name the person to whom it is issued, the particular place (street and number where possible) at which and the name under which the business shall be carried on, and shall authorize the conduct of such business only at the particular place, and by the person and under the name so designated, and only one such license shall be granted to or held by any person.
 - (3) In the event that a funeral director desires to change his place of business from that for which his license has been granted he shall notify the secretary of the Board before making such change, giving full description of the new premises and shall return his funeral director's license to the secretary for cancellation and make application in the regular manner for funeral director's license to enable him to operate from the new premises.
7. Clause *j* is amended by adding thereto the following subsection:
 - j* (4a) Notice of cancellation or suspension of certificate and license as provided in the next preceding subsection shall be forthwith sent by registered prepaid post to the address of the person required to be served, as last entered upon the register, or served on him personally, notifying him of the cancellation of his license and ordering him to forthwith deliver to the secretary, or to some member of the Board, his certificate and license and in default of his delivering to the secretary, or to some member of the Board forthwith, the Board shall have power to retake possession of the said certificate and license.
8. Subsection 6 of clause *j* is repealed and the following substituted therefor:
 - j* (6) In the case of any person whose conduct is the subject of any inquiry, the secretary shall serve on such person, personally, or shall send by prepaid registered post to the address of the person required to be served as last entered upon the register, at least ten days before the holding of the inquiry, notice of the charges made against him, and such notice shall contain a statement of the subject matter of the inquiry and shall specify the time and place of the meeting to hold such inquiry.
9. Subsection 7 of clause *j* is amended by striking out the word "personal" in the third line and the words "the notice required shall be deemed to have been duly served in accordance with the provisions of this section if sent by registered mail prepaid at the address of the person required to be served as last entered upon the register" in lines 9, 10, 11, 12, 13 and 14.
10. Clause *j* is amended by adding thereto the following subsection:
 - j* (7a) If any person, whose license has been cancelled or suspended under the authority of any of the foregoing subsections shall apply to the Board for reinstatement and the Board is satisfied, after full inquiry, that the person applying should be reinstated, the Board shall have full power and authority to reinstate such person, either conditionally or unconditionally, as the Board deems expedient.
11. "M." Notwithstanding the regulations, the Board of Examiners may, upon the payment of a fee of twenty-five dollars (\$25.00), grant to any person, holding a valid, unrevoked and unexpired license in any other province of the Dominion of Canada, outside the

Province of Ontario, or in any state in the United States of America, having substantially similar requirements to those existing in this province, provided such province or state will recognize licenses issued by the Board of Examiners under *The Embalmers and Funeral Directors Act* in the Province of Ontario, a License to practise in this province upon filing with the secretary of the said Board a certified statement from the secretary of the Examining Board of the province or state in which the applicant holds a license, showing the rating upon which said license was granted, together with his recommendation, and verification that the applicant has, during the past ten years held continuously a license in said province or state, and providing the application is satisfactory to said Board.

Copy of an Order-in-Council approved by The Honourable the Lieutenant-Governor, dated the 20th day of May, A.D., 1936:

Upon the recommendation of the Honourable the Minister of Health, the Committee of Council advise that pursuant to the provisions of clauses (w), (x), (y), (z) and (aa) of section 6 of *The Public Health Act*, the attached regulations be approved by Your Honour.

Certified,

C. F. BULMER,
Clerk, Executive Council.

REGULATIONS for *The Use of Hydrocyanic Acid or Cyanide Compounds for Fumigation.*

1. (1) Every applicant for a license shall submit to the medical officer of health of the municipality in which he resides an application and a certificate signed by a qualified medical practitioner that such applicant is in good health and physically fit to perform the fumigation of premises.
- (2) If, in the opinion of the Medical Officer of Health, a license should be issued, the Medical Officer of Health shall transmit to the Minister the application and certificate together with his recommendation.
- (3) The Minister may require the applicant or the Medical Officer of Health to furnish him with such further or other information regarding the applicant as he may desire and may require the applicant to attend before an officer of the Department at such place as he may designate and to submit himself to such examination as he may prescribe.
- (4) If the Minister is satisfied that the applicant is a fit and proper person to be licensed, he may cause a license to issue to him.
- (5) Every license shall be issued for a term of one year from the date of such issue and may be renewed from time to time for a similar period, and on every application for renewal the Minister may require the certificate mentioned in subsection 1 and such information and attendance as is provided for by subsection 3.
2. (1) Every applicant for a license shall furnish a policy of insurance in a form approved by the Superintendent of Insurance.
- (2) Every policy shall insure the applicant against any liability imposed by law arising out of the death of any employee or the injury to or death of any other person resulting from the fumigation of any building or premises in a negligent manner:
 - (a) in the case of any employee to the limit of at least \$3,500; and
 - (b) in the case of any one other person to the limit of at least \$10,000 and in the case of two or more other persons to the limit of at least \$20,000.
- (3) Upon cancellation or discontinuance of any such policy of insurance, the license of the insured shall be automatically cancelled and shall not be renewed within one year from the date of issue.
- (4) The Minister may exempt any applicant from the provisions of this section on the condition that such applicant shall not conduct the fumigation of any of the buildings referred to in clauses (a), (b) and (c) of subsection 1 of section 4.
3. (1) A license may at any time be suspended or revoked upon the order of the Minister and such order shall be final and conclusive and there shall be no appeal therefrom.
- (2) No fumigator whose license has been suspended or revoked or who has been refused a permit by the local Medical Officer of Health shall be engaged in or perform any fumigation or any activity connected with the preparation of or actual fumigation of any premises.
4. (1) Fumigation of the following classes of buildings shall not be conducted without the simultaneous use of a warning and expulsive gas:
 - (c) buildings used for human habitation;

- (b) buildings adjoining buildings used for human habitation;
 - (c) buildings so located that the fumigation of the same constitutes an actual or potential danger to the occupants of other buildings; and
 - (d) any buildings designated by the local Medical Officer of Health.
- (2) For fumigation of premises referred to in subsection 1, no substances shall be used until the composition, quantity and kinds of gases evolved therefrom, manufacture, method of using the same and the amount to be used have been approved by the Minister.
5. (1) Every fumigator shall obtain a permit from the local Medical Officer of Health at least twenty-four hours before each fumigation and no fumigation shall be conducted unless a permit to conduct the same has been obtained.
 - (2) The application for the permit shall be in writing and shall contain the following information:
 - (a) the date of the proposed fumigation, the hour at which fumigation will commence, and the hour before which the building will not be opened for airing out except in case of accident;
 - (b) the name and amount of the fumigating materials to be used;
 - (c) the location of the building or portion thereof to be fumigated, and the number of cubic feet capacity of such building or portion;
 - (d) whether such building is a detached or semi-detached house, an apartment or a portion thereof, or other premises;
 - (e) what other portions of the building or of adjacent buildings will be affected by or require to be vacated during the fumigation;
 - (f) the date upon which the applicant has inspected the building and premises which will be affected by the fumigation; and
 - (g) the name, address and duties of any person who will be employed by or assist the fumigator in the course of such fumigation.
 - (3) Only one permit shall be required for the fumigation of adjoining buildings or buildings owned by the same person and located on the same parcel of land provided such buildings are fumigated at the same time.
 - (4) For fumigation of buildings other than the buildings described in subsection 1 of section 4, the Medical Officer of Health may issue a permit for such term and upon such conditions as the Medical Officer of Health may deem expedient.
 - (5) Every fumigator shall perform the fumigation of any premises in accordance with the method and particulars set out in the application for a permit and shall not alter or vary such method or particulars without the permission of the local Medical Officer of Health.
6. Where it is made to appear to a Medical Officer of Health that a fumigator is unfit to perform the fumigation of premises or has conducted a fumigation in an improper or unsatisfactory manner, and in every case where death occurs, the Medical Officer of Health may refuse to issue further permits to such fumigator and may cancel any unused permit already issued to him and shall advise the Minister of all the facts in his possession relating to the fumigation in question and shall make a recommendation to the Minister respecting the suspension or revocation of the license of such fumigator.
7. In every case where death occurs under circumstances which indicate that such death might have been caused by fumigation operations, the fumigator conducting such operations shall forthwith report the circumstances of such death and particulars of such operations to the Minister.
8. All cracks, crevices, flues, drains, pipe-openings, hot-air registers and ventilators and any openings into adjacent or adjoining premises shall be sealed so as to completely and effectively prevent the escape of gas from the building or portion thereof being fumigated during the fumigating process.
9. The fumigator shall remove from the premises to be fumigated all substances such as water, plants or food-stuffs which may absorb hydrocyanic acid gas or any substance used in the process of fumigation.
10. Where re-occupancy of any of the buildings coming within any of the classes of buildings set out in section 4 is intended during the same day upon which the fumigation occurs, no fumigation shall be commenced after the hour of ten o'clock in the forenoon.
11. The temperature in the buildings to be fumigated shall be maintained at not less than 70 degrees Fahr. throughout the whole period of fumigation.

12. Just before the gas is released, the fumigator shall make a careful examination of:
 - (a) all parts of the buildings to be fumigated;
 - (b) all parts of all buildings adjoining buildings to be fumigated;
 - (c) all buildings so located that the fumigation of any other buildings constitutes an actual or potential hazard to the occupants of buildings so located; and the fumigator shall satisfy himself that there is no human being in such buildings.
13. (1) After excluding all occupants and before taking the materials for generating the gas into the buildings to be fumigated, the fumigator shall attach to each door or entrance leading into the buildings a placard at least 14 inches in length and 10 inches in width designed to attract immediate attention bearing the word "Danger" in red-coloured block letters at least $2\frac{1}{2}$ inches in height and indicating that the buildings are being fumigated with a poisonous substance, and every such placard shall be illuminated from sundown until sunrise.
 - (2) The fumigator, in addition, shall place similar placards on the buildings mentioned in section 12.
 - (3) No placard shall be removed until the buildings are fit for re-occupancy and shall be removed only by or on the instructions of the fumigator.
14. (1) The fumigator shall prevent every person other than a person who is engaged by him and who is protected in accordance with the provisions of section 15 from entering the buildings which are being fumigated, as well as such adjoining or adjacent buildings as may be vacated for the fumigation, from the time at which the occupants are excluded until after the fumigation when the buildings are, in the opinion of the fumigator, fit for re-occupancy and, in any event, the fumigator shall prevent any child under the age of ten years from entering any building which is being fumigated until at least ten hours after the re-opening of such building.
 - (2) For the purpose of carrying out the provisions of subsection 1 the fumigator shall employ locks or barricades and shall employ one or more capable adult male persons as guards.
15. (1) From the time the gas is about to be released until leaving the building to be fumigated, and from the time the building is re-entered until it is fit for re-occupancy, the fumigator and all persons employed by him while in such building shall wear such a gas-mask of a type approved by the Minister for fumigation purposes, and after fumigation of any premises having a capacity exceeding 15,000 cubic feet outside measurement, two or more persons, each wearing a gas-mask, shall re-open and re-enter such premises in the presence of each other.
 - (2) The fumigator shall provide refills for the canisters of the masks at each fumigating job and shall keep an accurate record of the length of time during which the gas canister has been used in order that it may be replaced as required.
16. Every building which has been fumigated, shall be thoroughly aired for a period of not less than four hours after fumigation before re-occupancy and, if weather conditions are unfavourable for dispersion of gas, the period of airing shall be extended accordingly.
17. (1) After every fumigation the fumigator shall cause all mattresses, pillows and cushions to be compressed and shaken or beaten to remove gas, and shall cause all bed-clothing to be shaken in the open air and shall take all necessary precautions to render the clothing and bedding of babies and small children free from gas.
 - (2) The fumigator shall cause all closets, cupboards, wardrobes, drawers, trunks, boxes and other enclosures and containers to be opened and thoroughly aired, and shall cause fresh air to be circulated to all parts of the building, paying particular attention to those parts of the building where pockets of gas are likely to form.
 - (3) The fumigator shall take all necessary precautions to prevent the gas from entering adjoining buildings.
18. Unless otherwise authorized in writing by the local Medical Officer of Health, the residue from materials used for fumigation and sealing cracks and crevices shall be burnt or buried.
19. Vaults, chambers or other enclosed compartments for commercial fumigation shall be located, constructed and ventilated in such a manner as to meet the requirements of the local Medical Officer of Health.

Copy of an Order-in-Council approved by the Honourable the Lieutenant-Governor, dated the 10th day of December, A.D., 1936.

Upon the recommendation of the Honourable L. J. Simpson, Acting Minister of Health, the Committee of Council advise that pursuant to the provisions of *The Nurses Registration Act, R.S.O., 1927*, chapter 360, Your Honour may be pleased to approve the attached regulations with respect to Training Schools for Nurses.

Certified,

C. F. BULMER,
Clerk, Executive Council

REGULATIONS Pursuant to *The Registration of Nurses Act, R.S.O., 1927*, chap. 360.

INTERPRETATION

1. In these regulations:
 - (a) "Approved training school" shall mean a training school for nurses established and approved under *The Registration of Nurses Act* and the regulations.
 - (b) "Council" shall mean Council of Nurse Education appointed under *The Registration of Nurses Act* and the regulations;
 - (c) "Department" shall mean the Department of Health;
 - (d) "Director" shall mean the Director of Nurses' Registration appointed in accordance with the provisions of *The Registration of Nurses Act* and the regulations;
 - (e) "Hospital" shall mean an hospital under *The Public Hospitals Act*, an hospital or hospital school under *The Mental Hospitals Act, 1935*, a sanatorium under *The Sanatoria for Consumptives Act*, and a sanitarium under *The Private Sanatarium Act*;
 - (f) "Inspector" shall mean The Inspector of Training Schools for Nurses appointed in accordance with the provisions of *The Registration of Nurses Act* and the regulations;
 - (g) "Minister" shall mean the Minister of Health or such member of the Executive Council as may for the time being be charged with the administration of *The Registration of Nurses Act*;
 - (h) "Registered Nurse" shall mean a nurse who has been registered according to the provisions of *The Registration of Nurses Act* and the regulations.

APPLICATION OF REGULATIONS

2. These regulations shall not be construed to affect or apply to the gratuitous nursing of the sick by friends or members of the family of the sick person nor to any person nursing the sick for hire who does not in any way assume to be a registered nurse.

REGISTRATION

3. (1) Every applicant for registration as a registered nurse shall submit to the Director an application in the prescribed form and a certificate of qualification from an approved trained school and such other information as the Director may require.
 - (2) The applicant shall submit such application to the Director at least one month prior to the time set for the examinations mentioned in section 7.
 - (3) The superintendent of every approved training school shall issue to every student nurse who has completed the course of instruction and any other requirements for graduation from such training school to the satisfaction of the superintendent a certificate of qualification signed by the superintendent.
4. The Director may register any person who furnishes evidence satisfactory to the Director that she:
 - (a) is a graduate of an approved training school; and
 - (b) is residing in the Province of Ontario; and
 - (c) is of good moral character; and
 - (d) is at least twenty-one years of age; and
 - (e) has passed the examinations mentioned in section 7.
5. (1) Any nurse who has been graduated by an approved school for nurses outside of Canada may be entitled to sit for examination to qualify for registration in the Province of Ontario provided that:
 - (a) such nurse has been registered under regulations satisfactory to the Department of Health; and
 - (b) the country, province or state in which such nurse has been registered extends a similar privilege to registered nurses of the Province of Ontario; and
 - (c) such nurse complies with the requirements of section 3; and
 - (d) such nurse pays an examination fee of \$5.00 and a registration fee of \$5.00.

- (2) Any nurse who has been graduated by an approved school for nurses in the Dominion of Canada may be registered in the Province of Ontario provided that:
 - (a) such nurse has been registered under regulations satisfactory to the Department of Health; and
 - (b) the province in which such nurse has been registered extends a similar privilege to registered nurses in the Province of Ontario; and
 - (c) such nurse complies with the requirements of section 3; and
 - (d) such nurse pays a fee of \$10.00.
6. (1) The Department shall issue to every registered nurse a certificate of registration signed by the Minister and by the Director.
- (2) The Minister, upon the recommendation of the Council, may suspend or revoke any such certificate whenever it has been shown to the satisfaction of the Council that the holder of the certificate has been guilty of:
 - (a) procuring registration by misrepresentation or fraud; or
 - (b) malpractice; or
 - (c) has been convicted of any criminal offence associated with the practice of nursing; or
 - (d) is mentally or physically incapable of the practice of nursing.

EXAMINATIONS

7. (1) The Minister, upon the recommendation of the Council, shall prescribe examinations for registration as a registered nurse and the Director shall conduct or cause to be conducted such examinations at least once a year at such times and places as the Minister may deem necessary.
- (2) Every person who passes such examination shall register according to the provisions of section 4 forthwith and upon failure to register within a period of one year shall forfeit any right acquired by passing the examinations, provided the Minister on the recommendation of the Council, may exempt any person from the provisions of this sub-section.

FEEs

8. (1) Every registered nurse shall pay to the Department an annual fee of \$1.00 payable on or before the first Monday in February and upon payment of such fee the Department shall issue an annual certificate signed by the Director.
- (2) Such certificate shall state the date upon which the nurse has been registered pursuant to sections 4 or 5 and that the certificate is in force for a term of the calendar year in which the fee is paid.
- (3) No annual fee shall be payable by any registered nurse for the calendar year in which such nurse has been registered.
- (4) Every person who fails to pay the annual fee in accordance with the provisions of this section shall automatically cease to be a registered nurse within the meaning of *The Registration of Nurses Act* and the regulations and shall not use the title "registered nurse" provided such nurse may be registered, on payment of all arrears in the annual fee.

DIRECTOR

9. (1) The Lieutenant-Governor in Council shall appoint a registered nurse to be Director of Nurses' Registration who shall hold office during the pleasure of the Lieutenant-Governor in Council and be paid such salary as may be determined by the Lieutenant-Governor in Council.
- (2) The Director shall be responsible to the Minister for the enforcement and carrying out of the provisions of *The Registration of Nurses Act* and the regulations.
- (3) The Director shall keep a register of all approved training schools.
- (4) The Director shall keep a record of the results of every examination conducted in accordance with the provisions of section 7.
- (5) The Director shall keep a register and shall enter therein the name and address of every person to whom, and the date upon which a certificate of registration is granted in accordance with the provisions of sections 4 and 5, and shall also keep a register of the persons to whom is issued the annual certificate mentioned in section 8.
- (6) The Director may, upon the direction of the Minister, assume from time to time the duties and responsibilities of the Inspector.

INSPECTOR

10. (1) The Lieutenant-Governor in Council shall appoint a registered nurse to be Inspector of Training Schools for Nurses who shall hold office during the pleasure of the Lieutenant-Governor in Council and be paid such salary as may be determined by the Lieutenant-Governor in Council.
- (2) Subject to the direction of the Director, the Inspector shall have the powers and duties prescribed by *The Registration of Nurses Act* and the regulations.

COUNCIL OF NURSE EDUCATION

11. (1) The Lieutenant-Governor in Council shall appoint a Council of Nurse Education consisting of not more than eight members.
- (2) The Deputy Minister of Health and the Director shall be members *ex officio*.
- (3) The remaining members shall be:
- (a) an inspector appointed under *The Public Hospitals Act* who shall be a medical practitioner and who shall be appointed for a term of one year; and
- (b) a medical practitioner who is connected in a teaching capacity with an approved training school and who shall be appointed on the recommendation of The Registered Nurses' Association of Ontario for a term of one year; and
- (c) an officer of the Department of Education who shall be appointed for a term of one year; and
- (d) a registered nurse who shall be connected in a teaching capacity with an approved training school and appointed on the recommendation of The Registered Nurses' Association of Ontario for a term of three years; and
- (e) a registered nurse who shall be connected in a teaching capacity with an approved training school and appointed on the recommendation of The Registered Nurses' Association of Ontario for a term of two years; and
- (f) a registered nurse who shall be connected in a teaching capacity with an approved training school and appointed on the recommendation of The Registered Nurses' Association of Ontario for a term of one year.
- (4) In the event that any member retires before the expiration of his term of office, the Lieutenant-Governor in Council shall appoint some person to serve for the unexpired term in accordance with the conditions attaching to the appointment of the retiring member.
12. The Council shall appoint annually from their members, a chairman, a vice-chairman and a secretary, who shall hold office during the pleasure of the Council.
13. Five members of the Council shall constitute a quorum, and all acts of the Council shall be decided by the majority of the members present.
14. The Council may by resolution determine the time and place of meetings, the procedure of summoning and conducting meetings and may from time to time make recommendations to the Minister for the better carrying out of the provisions of *The Registration of Nurses Act* and the regulations.
15. The chairman or vice-chairman, when in the chair, and the chairman of any meeting shall have the same right to vote as any member of the Council, but shall have no casting vote and in the event of an equality of votes, the question shall be declared lost.

ESTABLISHMENT OF APPROVED TRAINING SCHOOLS

16. (1) Subject to the provisions of *The Registration of Nurses Act* and these regulations, any hospital and any university may establish, conduct and maintain an approved training school.
- (2) Any such hospital or university desiring to establish an approved training school shall submit to the Minister an application in the prescribed form signed by the chairman of the governing board and the superintendent of nurses.
- (3) The Minister may send the application to the Council with a request that the Council consider such application and make a recommendation in respect thereof.
- (4) Upon receipt of such application and recommendation, if any, the Minister may issue a certificate in the prescribed form certifying that such hospital or university is authorized to conduct an approved training school.
- (5) The Minister may suspend, cancel or revoke any such certificate at any time for failure to observe the provisions of *The Registration of Nurses Act* and these regulations.

ANNUAL REPORT

17. The superintendent of every approved training school shall make an annual report in the prescribed form to the Director not later than the 31st day of October in each year.

APPROVED TRAINING SCHOOL TO PROVIDE COURSE OF INSTRUCTION

18. (1) Every approved training school shall be connected or affiliated with an hospital or university and shall provide a course of at least three years' instruction in one or more hospitals.
- (2) The Minister, upon the recommendation of the Council, shall prescribe the minimum course of instruction which shall be given to every nurse in an approved training school.

- (3) Where, in the opinion of the Council, the instruction and hospital services in any approved training school do not meet with the requirements set out in these regulations, the Council may approve an arrangement whereby the student nurses in such training school may take an affiliated course in some other approved training school.

STAFF OF APPROVED TRAINING SCHOOL

19. Every approved training school shall provide an adequate staff for the instruction of student nurses and, in any event, shall appoint a superintendent of nurses, an assistant superintendent of nurses, a night superintendent and an adequate number of nurse supervisors, all of whom shall be registered nurses, but the superintendent of nurses may also be the superintendent of the hospital in which the training school is established.

EQUIPMENT AND ACCOMMODATION

20. (1) Every approved training school shall provide for the use of the nurses therein, adequate lavatory facilities, single beds and quiet residential accommodation for night nurses, and so far as possible, a separate building for nurses' residence with separate bedroom and clothes cupboard for every nurse, and a recreation room.
- (2) Every approved training school shall provide for the use and instruction of the nurses therein, adequate classrooms and laboratories and all necessary equipment including blackboards, anatomical charts, skeleton specimens of bones, demonstration beds, manikin, students' chairs, reference books, cupboards for demonstration equipment and sufficient apparatus to demonstrate the ordinary laboratory tests.

ADMISSION OF STUDENT NURSES

21. (1) No approved training school shall admit any person as a student nurse in such school who is less than eighteen years of age or who has not completed the following educational requirements:
- (a) until July 1st, 1937, complete lower school standing as prescribed by the Department of Education;
- (b) after July 1st, 1937, and until July 1st, 1939, complete lower school standing as prescribed by the Department of Education and the certificate of the said Department that four middle school subjects have been satisfactorily completed;
- (c) after July 1st, 1939, the completion of middle school standing in twelve papers as follows:

Six Required Papers:

English Literature
 English Composition
 One subject of Mathematics
 Physics
 Chemistry
 Canadian History

Six Papers Optional:

Languages—not more than four papers in two subjects:

Latin—Literature—Composition
 French—Literature, Composition
 Spanish—Literature, Composition
 Greek—Literature, Composition
 German—Literature, Composition

Agriculture No. I and No. II.
 Household Science No. I and No. II.
 Geometry
 Ancient History
 Arithmetic (special)
 Zoology (special)

- (2) The superintendent shall require every applicant for admission to a training school as a student nurse to file a birth certificate before admission is granted.

22. For the purpose of simplifying the teaching of nurses, students shall be admitted at stated times throughout the year so as to form classes.

23. The superintendent of every training school shall send a notice in the prescribed form to the Director of the admission of every person as a student nurse in such training school, but such notice shall not be required in the case of any student nurse who has not completed the period of probation mentioned in section 24.

24. Before allowing any student nurse to assume responsibility as a nurse, the superintendent of a training school shall require such student nurse to complete a probation period of not less than three months during which there shall be given a preliminary course of study which shall include practical demonstration of and practice in nursing methods.

COURSE OF INSTRUCTION

25. (1) Every approved training school shall provide and every student nurse therein shall complete the course of instruction set out in this section.

(2) Every student nurse shall spend not less than the time set out in the following schedule on hospital services:

Schedule of Hospital Services:

Medical Nursing.....	3 months
Surgical Nursing.....	3 months
Obstetrical Nursing.....	2 months
(Including assistance at delivery of ten cases)	
Diet Kitchen.....	1 month
Operating Room.....	2 months

(3) Upon the recommendation in writing of the Council, the Director shall require any approved training school to provide courses of instruction in any or all of the following:

Nursing in Children's Diseases
 Nursing in Contagious Diseases
 Nursing in Mental Diseases
 Nursing in Tuberculosis Diseases
 Public Health Nursing
 Visiting Nursing

(4) Every student nurse shall spend not less than the time set out in the following schedule on theory of nursing:

Schedule of Theory of Nursing:

	Hours
1. <i>Instruction In:</i>	
(a) Nursing Principles and Methods.....	110
(to as great an extent as possible by practical demonstration).	
(b) Charting.....	2
2. <i>Instruction In:</i>	
(a) Dietetics.....	24
(to include instruction and practice in Diet Kitchen).	
(b) Hospital Housekeeping.....	3
(c) History of Nursing and Ethics.....	6
3. <i>Instruction In:</i>	
(a) Bacteriology.....	5
(b) Chemistry.....	10
(c) Urinalysis.....	4
(d) Hygiene and Sanitation.....	6
4. <i>Instruction In:</i>	
(a) Anatomy and Physiology.....	32
(b) Materia Medica.....	25
(c) Medicine:	
1. General.....	10
2. Contagious Diseases.....	4
3. Tuberculosis.....	6
4. Venereal Diseases.....	6
5. Mental Diseases.....	4
6. Diseases of the Skin.....	2
7. Children's Diseases (including infant feeding).....	6
(d) Surgery:	
1. General.....	8
2. Orthopedic.....	4
3. Gynæcological.....	4
4. Eye, Ear, Nose and Throat.....	4
(e) Obstetrics.....	12

HOURS OF DUTY

26. (1) Any student nurse shall not be required to give more than 58 hours per week to hospital work, either on day or night duty including class hours.

(2) Every student nurse shall be given vacation of not less than two weeks in every year.

RECORDS

27. Every training school shall keep a record of every student nurse, containing the following particulars:

- (a) the educational qualifications and birth certificate mentioned in section 21;
- (b) time spent by such nurse on hospital services as provided in subsections 2 and 3 of section 25;
- (c) time spent on theory as provided in subsection 4 of section 25;
- (d) time spent on services not mentioned in section 25;
- (e) subjects taught and by whom;
- (f) time lost through illness or leave of absence;
- (g) any characteristics or particulars affecting or in any way relating to the efficiency of such nurse;
- (h) such details of health examination as the Minister may require.

STUDENT NURSES ON SPECIAL DUTY

28. The superintendent of any approved training school may require any student nurse therein to perform special duty service for short periods not exceeding in the whole more than two months in the course, but where a student nurse is so employed the hospital in which the training school is established shall not collect any special fees for such service.

TRANSFER OF STUDENTS

29. (1) No approved training school shall admit as a student nurse therein any person who has been discharged from an approved training school except with the approval of the Director.
- (2) No student nurse in an approved training school shall transfer to another training school except with the approval of the Director.
- (3) Where the Director has approved the transfer of a student nurse from one approved training school to another approved training school, such nurse shall be given such credit for the time spent in the training school from which she is being transferred as the Director may allow, providing that where any nurse is claiming a time allowance exceeding one year the matter shall be referred to the Council and the decision of the Council shall be final.

FORMS

30. The forms in the schedule to these regulations shall be sufficient in the cases thereby respectively provided for, and where no forms are prescribed new ones may be framed to meet the circumstances of the case, conforming as nearly as may be to those set out in the said schedule, being made short and concise, in the mode indicated therein.

REGULATION AND FORM NUMBERS

31. Regulation and form numbers are for reference purposes only, and do not form part of the regulations, and the Minister from time to time may rearrange and renumber all regulations and forms heretofore and hereafter published, and insert therein the correct references thereto, and publish the same in pamphlet form.

EXISTING REGULATIONS REPEALED

32. Any regulations heretofore approved pursuant to *The Registration of Nurses Act* are hereby repealed.

Copy of an Order-in-Council approved by the Honourable the Lieutenant-Governor, dated the 22nd day of February, A.D., 1936.

Upon the recommendation of the Honourable the Minister of Health, the Committee of Council advise that regulation No. 1, of the regulations pursuant to *The Mental Hospitals Act, 1935*, and approved by your Honour on the 26th day of June, 1935, as amended by Orders-in-Council dated the 22nd day of October, 1935, and the 29th day of January, 1936, be further amended by adding thereto the following:

"The premises commonly known as the Industrial Farm at Fort William, henceforth to be known as the Ontario Hospital, Fort William."

so that the regulations as amended shall now read as follows:

The following institutions shall be hospitals and hospital schools established under *The Mental Hospitals Act, 1935*, and shall be subject to the provisions of the said Act and these regulations:

- The Ontario Hospital, Brockville.
- The Ontario Hospital, Cobourg.
- The Ontario Hospital, Hamilton.
- The Ontario Hospital, Kingston.
- The Ontario Hospital, London.
- The Ontario Hospital, New Toronto.
- The Ontario Hospital School, Orillia.
- The Ontario Hospital, Penetanguishene.
- The Ontario Hospital, Toronto.
- The Ontario Hospital, Whitby.
- The Ontario Hospital, Woodstock.

The premises commonly known as the Industrial Farm at Fort William, henceforth to be known as the Ontario Hospital, Fort William.

The Committee further advise that this amendment shall come into force on the first day of March, 1936.

Certified,
(Signed) C. F. BULMER,
Clerk, Executive Council.

Copy of an Order-in-Council, approved by the Honourable the Lieutenant-Governor, dated the 7th day of July, A.D., 1936.

Upon the recommendation of the Honourable the Minister of Health, the Committee of Council advise that pursuant to the provisions of Section 4 of the *Private Hospitals Act, 1931*, your Honour may be pleased to approve the attached regulations with respect to Private Hospitals.

Certified,
C. F. BULMER,
Clerk, Executive Council.

REGULATIONS pursuant to *The Private Hospitals Act, 1931.*

GENERAL

1. No private hospital shall conduct a training school for nurses or issue any diploma for nursing or practical nursing.
2. No private hospital shall engage in, or permit its name to be used in or in connection with, any undertaking, occupation, scheme or business other than that for which it is licensed.
3. No patient shall be admitted to or treated in any private hospital without being under the active care of a legally qualified medical practitioner.
4. Every private hospital shall submit any publication, writing, advertising or other material, including any letter heads or cards, which is intended or likely to attract the attention of the public, to the Minister for his approval, and the Minister may refuse to approve any material which, in his opinion, is not in the interest of the public.

SUPERINTENDENT

5. For every private hospital there shall at all times be a superintendent resident on the premises who may be the licensee if qualified under this Act, but shall be either a legally qualified medical practitioner or a registered nurse.

STAFF

6. The hospital staff shall consist of such graduate nurses, servants and employees as are necessary to give adequate nursing care to the number and type of patients for which the license is granted.

ADMISSIONS

7. No private hospital shall admit any person as a patient who, by reason of any fact, may constitute a danger to other patients.

RESTRAINTS

8. The superintendent of a private hospital shall not physically restrain any patient or cause or permit any patient to be physically restrained.

ORDERS FOR TREATMENT

9. Subject to the provisions of these regulations, every order for treatment shall be in writing, either on the treatment sheet or in the order book provided for such purpose, and shall be signed by a legally qualified medical practitioner.

CASE RECORDS

10. A complete history with report of physical examination and provisional diagnosis of every patient shall be written within thirty-six hours of the patient's admission to hospital.

11. The attending physician shall be responsible for the preparation of a complete medical record, including identification, complaint, present history, family history, physical examination, special reports, including reports of consultations, laboratory examinations, X-ray, provisional diagnosis, medical or surgical treatment, pathological findings, progress notes, reports of operations and anaesthesia, final diagnosis, condition on discharge and follow-up records.

12. The superintendent, for the time being, of every private hospital shall retain and preserve in a place of safe keeping all records relating to every patient of the hospital.

EXAMINATION OF TISSUES REMOVED AT OPERATION

13. (1) Any tissues or sections of tissues removed at operation or curettage shall be immediately set aside by the surgeon operating and shall be forwarded by the superintendent with a short history of the case and a statement of the findings at the operation to a laboratory approved by the Minister for examination, provided that any tonsil, tooth, frenum, hemorrhoid, finger, toe, hand, foot, arm or leg removed or amputated shall not be so forwarded unless the surgeon desires a special examination.
- (2) The pathological report received from the laboratory shall become part of the patient's case record.

OPERATIONS

14. No surgical operation shall be performed on any patient in a private hospital without the consent in writing signed by the patient or his legally qualified representative provided that where the patient is unable to give consent and where, in the opinion of the surgeon, delay would endanger the patient's life, such consent shall not be necessary.

15. (1) A complete history, physical examination and a written pre-operative diagnosis shall be furnished by the operating surgeon or any legally qualified medical practitioner authorized by him before a patient is submitted to any anaesthetic or surgical operation.
- (2) Where the surgeon is of opinion that the delay that would be occasioned in obtaining the foregoing information would be detrimental to the patient, he shall so state in writing but, in such event, the pre-operative diagnosis shall be furnished in writing signed by the operating surgeon.

16. Every operation performed in a private hospital shall be fully described in writing by the surgeon and such written description shall form part of the patient's record.

17. The anaesthetist shall be a legally qualified medical practitioner and shall furnish a record showing the type of the anaesthetic given, amount used, length of anaesthesia and the condition of the patient following the operation.

18. In any case where a patient is admitted in the condition of abortion, or threatening abortion, or where therapeutic abortion is indicated or wherever emptying of the uterus is indicated for whatever reason, two legally qualified medical practitioners shall examine the patient and shall make and sign records of their findings and recommendations before any operative interference is carried out.

19. The superintendent of every private hospital shall, within twenty-four hours after the death of any patient therein directly or indirectly resulting from pregnancy, report such death upon the prescribed form to the department.

20. The superintendent of every private hospital shall, within twenty-four hours of any curettage or emptying of the uterus of a patient, report such curettage or emptying of the uterus in writing to the Director of Maternal and Child Hygiene giving the reason therefor and the name of operating surgeon and consultants.

21. No major surgical procedure shall be performed in any private hospital which does not provide sterilization, operating and other equipment to the satisfaction of the inspector.

22. No surgical procedure shall be attempted within a private hospital without sufficient qualified assistants.

Copy of an Order-in-Council approved by the Honourable the Lieutenant-Governor dated the 29th day of January, A.D., 1936.

Upon the recommendation of the Honourable the Minister of Health, the Committee of Council advise that the Order-in-Council approved by your Honour on the 22nd day of October, A.D., 1935, amending Regulation No. 1 of the Regulations pursuant to *The Mental Hospitals Act, 1935*, be repealed.

Certified,

(Signed) S. F. BULMER,
Clerk, Executive Council.

Copy of an Order-in-Council approved by the Honourable the Lieutenant-Governor, dated the 7th day of July, A.D., 1936.

Upon the recommendation of the Honourable the Minister of Health, the Committee of Council advise that the attached Directions for the Distribution of Insulin, with two forms, be approved by Your Honour.

Certified,

(Signed) C. F. BULMER,
Clerk, Executive Council.

DIRECTIONS FOR THE DISTRIBUTION OF INSULIN

1. The Department of Health may supply Insulin to any indigent person in accordance with the provisions of these directions:

2. (1) Any indigent person who requires Insulin shall forward or cause to be forwarded to the Department a requisition in the form prescribed by the Lieutenant-Governor in Council signed by a medical practitioner, and by the patient or his legal representative, and by the clerk of the municipality in which such patient resides, provided that where such person is a patient in a public hospital the form shall be signed by the patient or his legal representative and the superintendent of the hospital.
- (2) Upon receipt of such requisition the Department may supply the Insulin thereby requisitioned.
3. (1) Where the clerk of any municipality signs such a requisition, such municipality shall pay to the Department 25% of the cost to the Department of the Insulin supplied.
- (2) Where the person requiring Insulin is a patient in a public hospital and the superintendent of the hospital certifies that a municipality is paying for the maintenance of such person in the hospital such municipality shall pay to the Department 25% of the cost to the Department of the Insulin supplied.
- (3) Where the person requiring Insulin is a patient in a public hospital and the superintendent of the hospital certifies that the Province is paying for the maintenance of such person in the hospital at the rate of \$2.00 per day as provided by clause (d) of subsection 1 of section 34 of *The Public Hospitals Act*, the Province shall bear the entire cost of the Insulin supplied.

4. The Department shall send to the clerk of every municipality a quarterly statement showing the amount of Insulin supplied to patients residing in such municipality during the preceding three months, and the amount due and owing by such municipality for the Insulin supplied during the preceding three months.

5. Where a municipality fails to pay such amount within 30 days after receipt of the statement, the Department may refuse to supply Insulin to or for any resident of such municipality until the amount is paid.

6. A municipal clerk shall not sign any requisition for Insulin unless in his opinion the patient for whom such Insulin is required is unable to pay for the same.

7. No charge shall be made to any person for any Insulin supplied by the Department on requisition.

- 8. The attached forms numbered 1 and 2 are approved.
- 9. These directions shall come into force on the first day of September, 1936.

Forward this form to a Department of Health distributing centre.
 (See reverse side for nearest distributing centre.)

NOT TO BE SENT TO CONNAUGHT LABORATORIES

Order No.....

REQUISITION TO THE DEPARTMENT OF HEALTH
 FOR
 FREE INSULIN

Name of patient.....
 (Write plainly or print)

Address of patient.....

County or District.....

Length of residence in Ontario.....

Was patient under observation in hospital?.....

Requirement of patient per day in units.....

Supply Requested for.....days.....units
 (Limit 30 days)

IMPORTANT—All spaces on this form must be filled in.

Type of Package		Number of Vials Required
10cc. vial containing 200 units (20 units per cc.) (Supplied only to patients using 1000 units or less per month)	BLUE LABEL	
10cc. vial containing 400 units (40 units per cc.)	YELLOW LABEL	
10cc. vial containing 800 units (80 units per cc.)	GREEN LABEL	

THIS INSULIN IS NOT TO BE SOLD

I Certify that the patient is unable to pay for this Insulin.

(Signature).....Physician

.....Address

I,.....solemnly declare that I am unable to pay for
 (patient or legal representative)

the supply of Insulin ordered herein.

.....
 Patient or legal representative.

I,.....municipal clerk for the municipality of.....

.....solemnly declare that to the best of my knowledge and belief the statements made herein are correct.

.....
 Municipal Clerk.

This supply to be sent to— DOCTOR
 PATIENT

Date.....

DISTRIBUTING CENTRES

Main Laboratories,

Parliament Bldgs., Toronto.

Branch Laboratories at:

Fort William
 Sault Ste. Marie
 North Bay
 Ottawa
 Kingston
 Peterborough
 London

Also:

Dr. James Roberts, M.O.H., Hamilton
 Dr. W. L. Hutton, M.O.H., Brantford
 Dr. Fred Adams, M.O.H., Windsor
 Dr. H. G. Murray, M.O.H., Owen Sound

Forward this form to a Department of Health distributing centre.
 (See reverse side for nearest distributing centre.)

NOT TO BE SENT TO CONNAUGHT LABORATORIES

REQUISITION TO THE DEPARTMENT OF HEALTH
 FOR
 FREE INSULIN

Name of patient.....
 (Write plainly or print)
 Address of patient.....
 County or District.....
 Length of residence in Ontario.....
 Requirement of patient per day in units.....
 Supply Requested for.....days.....units
 (Limit 30 days)

IMPORTANT—All spaces on this form must be filled in.

Type of Package	Number of Vials Required
10cc. vial containing 200 units (20 units per cc.) (Supplied only to patients using 1000 units or less per month)	BLUE LABEL
10cc. vial containing 400 units (40 units per cc.)	YELLOW LABEL
10cc. vial containing 800 units (80 units per cc.)	GREEN LABEL

THIS INSULIN IS NOT TO BE SOLD

I Certify that the patient is unable to pay for this Insulin.

(Signature).....Physician

.....Address

I,.....solemnly declare that I am unable to pay for the supply
(patient or legal representative)

of Insulin ordered herein.

.....
Patient or legal representative

The above named is a public ward patient whose maintenance is being paid by the
Municipality of.....
or the Ontario Government.
Admission was awarded on.....

Registered No.....

And to the best of my knowledge and belief the statements made herein are correct.

.....
Superintendent

.....
Hospital

Date.....

DISTRIBUTING CENTRES

Main Laboratories, Parliament Bldgs., Toronto

Branch Laboratories at:

Fort William
Sault Ste. Marie
North Bay
Ottawa
Kingston
Peterborough
London

Also:

Dr. James Roberts, M.O.H., Hamilton
Dr. W. L. Hutton, M.O.H., Brantford
Dr. Fred Adams, M.O.H., Windsor
Dr. H. G. Murray, M.O.H., Owen Sound

ONTARIO EXECUTIVE COUNCIL OFFICE

Copy of an Order-in-Council approved by the Honourable, the Lieutenant-Governor,
dated the 1st day of April, A.D., 1936.

Upon the recommendation of the Honourable the Minister of Health, the Committee of
Council advise that "Tisdale Public Hospital" be approved under the provisions of section 4,
subsection 2 of the *Public Hospitals Act, 1931*, and that the said Institution be placed on the
list to receive Government aid.

Certified,

(Signed) C. H. BULMER,
Clerk, Executive Council.

Copy of an Order-in-Council approved by the Honourable, the Lieutenant-Governor, dated the 16th day of September, A.D., 1936.

Upon the recommendation of the Honourable the Minister of Health, the Committee of Council advise that the creation, establishment, incorporation and operation by the United Counties of Stormont, Dundas and Glengarry, of a Sanatorium to be known as "The St. Lawrence Sanatorium," be approved.

Certified,

H. A. STEWART,
Asst. Clerk, Executive Council.

Copy of an Order-in-Council approved by the Honourable the Lieutenant-Governor, dated the 5th day of February, A.D., 1936.

WHEREAS according to the provisions of section 12 of *The Venereal Diseases Prevention Act, R.S.O., 1927*, chapter 264, the Department with the approval of the Lieutenant-Governor in Council may out of any moneys appropriated by the Legislature for the purposes of the Department provide for the payment of certain expenses:

AND WHEREAS the Legislature has appropriated certain moneys for the purposes of the Department for the fiscal year ending March 31st, 1936:

THEREFORE the Minister recommends that your Honour approve of the payment by the Department out of the said moneys appropriated by the Legislature of a part of any expenses which have been paid by any municipality pursuant to the provisions of section 13 of the said Act, and that the Department pay to every such municipality a part of such expenses which shall be in proportion to the total expenses paid by all municipalities.

The Committee of Council concur in the recommendation of the Honourable the Minister of Health, and advise that the same be acted upon.

Certified,

(Signed) C. F. BULMER,
Clerk, Executive Council.

DIVISION OF PREVENTABLE DISEASES

A. L. MCKAY, B.A., M.B., D.P.H., Director

A total of 108,842 cases of communicable disease was reported to the Department of Health by the local boards of health during 1936. For the previous year the total was 113,995, the decrease in the number of cases being largely due to the fewer cases of measles reported. There was, however, an appreciable increase in the number of cases of german measles and mumps over the experience of the previous year.

Typhoid Fever

The total number of cases of typhoid fever reported was 251, with 39 deaths being the lowest incidence rate ever reported in the Province.

One outbreak, which was investigated by the Division, occurred in an isolated spot in the Cochrane District, called Blueberry Lake, where there had been a gathering of people living under unsanitary conditions, engaged in picking blueberries. Nine cases of typhoid fever resulted from this epidemic, all of which were hospitalized in Matheson, Cochrane and Hearst. The cause was ascribed to the pollution of the water supply by an undiagnosed mild case of typhoid fever living near the point from which drinking water was taken.

Another smaller outbreak of five cases occurred at Fenelon Falls, where the source of infection was a contaminated well. This was also investigated by the Provincial Epidemiologist.

Investigation of isolated cases has brought to light and identified many typhoid carriers. These have been warned as to their activities in food handling and milk handling by the Division and through the local medical officer of health, and obliged to conform to the regulation of the Department with respect to typhoid carriers.

The incidence of typhoid fever was below the endemic index for all months, the peak, however, occurred in October, as has been the experience in previous years.

Smallpox

For the first time in the history of the Province there were no cases of smallpox reported to the Department of Health. This should not be taken, however, as an indication of the extent and thoroughness of smallpox vaccination, as many municipalities have neglected this form of protection for many years and the introduction of this disease will result in a widespread epidemic unless smallpox vaccination is carried out more completely by the local health authorities.

Scarlet Fever

Scarlet fever has, during the past year, continued to be an important cause of illness, in that 8,927 cases were reported by the local boards of health, and 76 deaths. For each month, except December, during the year the incidence was above the endemic index.

In a few localities the local boards have offered protection in the way of active immunization against the disease to school and pre-school children by the use of the Dick test and scarlet fever toxin. In these localities, although this form of immunization did not prove one hundred per cent. effective, it did result in an apparent decrease in the incidence of the disease amongst those children so protected.

Poliomyelitis

During the year there was a slight increase in the number of cases of poliomyelitis, 208 cases being reported and 23 deaths, an increase of 100 cases over the previous year's experience. However, except for the month of October when 89 cases were reported, the experience was within the endemic index for the previous six years.

As in the past, convalescent serum was prepared and distributed by the Department and widely used by practitioners who were treating cases in the early stages of the disease. This service for payment of donors cost \$3,158.00.

An arrangement has been made with the Ontario Society for Crippled Children to follow up through the attending physician every case of poliomyelitis which had resulted in a measure of residual paralysis. A letter was forwarded to the physician who had attended such cases as had been reported during 1935 and 1936 and consultant orthopedic service was offered where deemed necessary. The Ontario Society for Crippled Children, in the case of parents being unable to pay for such service, provided transportation for the case to a hospital centre or in some instances, provided consultant service in the home. Of the thirty-one cases investigated, twenty-four have been provided with adequate orthopedic care. Of the remainder, some had died and some had cleared of all symptoms of paralysis since the original report had been received.

Measles

The epidemic of measles which started during 1935 continued for the first six months of 1936. Since that time the incidence has been approximately at the level of the endemic index. A total of 26,429 cases was reported during the year which was a decrease of 18,000 cases from the experience of the previous year. Eighty-four deaths were recorded.

Very little advantage was taken of the offer by the Department of a solution of sodium citrate to be used in an attempt to avoid or abort an attack by the use of whole blood drawn from a parent who had had the disease previously, citrating it and injecting it into the exposed child. It is not deemed feasible to provide convalescent serum and the method recommended did not prove sufficiently convenient for the profession to use it to any great extent.

Whooping Cough

A total of 7,890 cases of whooping cough were reported and 111 deaths, which is a slight increase over the number reported during the previous year. The incidence by months, except for April and July, was above the endemic index. Vaccine made from freshly isolated strains of the organism, has been made available by the laboratories of the Department for free distribution, and is recommended by the laboratories for both prophylaxis and treatment. It is to be hoped that within the next year the evaluation of this method of prophylaxis will be available.

Undulant Fever

During the year there were 127 cases of undulant fever reported and 2 deaths, which is an increase of 41 cases over the previous year's experience. For the first six months of the year undulant fever was above the endemic index and accounted for more cases reported in the Province, for those months, than typhoid fever. This disease will continue to be present until there is more widespread adoption of the most effective method of its control, namely, efficient pasteurization. Each positive laboratory report is investigated for source of infection by epidemiological case card, and appropriate recommendations made as to elimination of the source of infection.

Cerebro Spinal Meningitis

Fifty-two cases of this disease were reported for the year, being an increase of 20 cases over that of the previous year. Twenty deaths occurred. For seven months of the year this disease was slightly above the endemic index. Cases reported were from scattered points and in no community did it reach epidemic proportions.

Diphtheria

During the year there have been reported 290 cases of diphtheria and thirty-one deaths, which is the lowest incidence ever recorded in this Province and is less by 71 cases than the experience in the previous year. For every month diphtheria was one-half or less of the endemic index.

During the year a study was made of the result of the use of diphtheria toxoid in every municipality in the Province, estimating the number of children under fourteen years of age in each municipality and the percentage of those who had been given the benefit of immunization against diphtheria with diphtheria toxoid by the local health authorities. No attempt was made to obtain figures giving the number of children immunized by the family physician.

Since 1923, 431,311 children have been immunized against diphtheria in schools and pre-school clinics in the Province. Since the distribution of toxoid in the Province was commenced there has been a distinct saving, not only in cases and deaths but also in the amount of money expended by the Province on diphtheria antitoxin. In 1924, \$40,000 was expended in the distribution of diphtheria antitoxin in the treatment of the disease and only \$1,800 was expended in diphtheria prevention, namely, toxin antitoxin, toxoid and Schick test material, whereas in 1935, only \$10,865 was expended in the provision of diphtheria antitoxin for treatment and \$12,442 on toxoid and Schick test material.

Comparing the number of cases and deaths occurring in 1924 with the number of cases and deaths occurring in 1935, we have a saving of over 3,000 cases and 285 fewer deaths.

The following Table 1 shows how toxoid has been administered in Ontario in the various municipalities according to their size of population. It will be noted that of the total 885 municipalities, 406 of these had not administered toxoid to their school or pre-school population. Of these municipalities who had not given toxoid, 295 were townships and 102 villages and towns under 5,000 population.

TABLE I
NUMBER OF MUNICIPALITIES IN ONTARIO
ADMINISTERING TOXOID

MUNICIPALITIES	Toxoid before and including	Toxoid commencing	No Toxoid	Total
	1930	1931		
Cities of 10,000 and over.....	14	16	0	30
Suburban townships, 10,000 and over...	6	2	.....	8
Towns, 5,000 to 10,000.....	8	15	5	28
Townships, 5,000 to 10,000.....	6	7	4	17
Towns, 1,000 to 5,000.....	26	66	41	133
Townships, 1,000 to 5,000.....	32	160	147	339
Villages under 1,000.....	7	48	61	116
Townships under 1,000.....	12	54	148	214
Totals.....	111	368	406	885

In the counties where toxoid had been given to large numbers of children and this practice had been continued each year, there has been a most remarkable decrease in the number of cases and deaths, notwithstanding the fact that diphtheria is ordinarily more prevalent in the larger centres of population. This decrease is more apparent in those municipalities where toxoid immunization was started and maintained for a period of between eight and ten years. To be most effective, toxoid immunization should be continued each year.

Table II shows the work which has been accomplished each year for the period 1923 to 1935. A falling off will be noted for the figures of 1935 as compared with the figures of the previous year. It is urged that all boards of health should redouble their efforts in this important means of prevention against one of the most serious diseases of childhood.

TABLE II
ANNUAL IMMUNIZATION AND
ESTIMATED PERCENTAGE IMMUNIZED

Year	Population	Number Immunized	Estimated Percent. Immunized Population 0-14 yrs.
1923	3,033,266	780	.09
1924	3,083,068	560	.06
1925	3,132,870	4,118	.5
1926	3,182,672	14,413	1.6
1927	3,233,474	18,350	2.0
1928	3,283,276	18,576	2.0
1929	3,333,078	21,284	3.0
1930	3,382,880	33,461	3.5
1931	3,431,683	52,217	5.4
1932	3,483,000	79,186	8.1
1933	3,524,000	61,849	6.0
1934	3,563,000	70,542	7.1
1935	3,596,000	55,975	5.5
Total		431,311	

The mortality rate from diphtheria in 1921 was 22 per 100,000 of population and in 1935 it had dropped to 1 per 100,000 of population, bringing the death rate down to approximately that of typhoid fever for that year.

Of those municipalities who have not as yet offered this form of protection to the children, the Division is planning to stimulate them in this effort which has proven so effective in those municipalities in which it has been carried out and maintained.

Dysentery

During the year there have been reported to the Department 91 cases of dysentery and thirty-four deaths, practically all of which were of the bacillary type. It is considered, however, that this problem of dysentery is of much greater importance than this figure would indicate from the amount of laboratory work which has been done on a few cases. We must realize that bacillary dysentery, usually of the *B. dysenteriae* Flexner type is present in the Province, especially during the later summer months. In the resort areas outbreaks of diarrhoea have occurred of more or less short duration, but sufficiently severe to cause alarm amongst those engaged in the tourist business. In the past such outbreaks have occasionally been reported to the Department but at too late a date to accomplish much in the way of identification of the type of the disease or the probable source of infection.

It is considered that this is of sufficient importance to the continuance of the extensive tourist traffic in the Province, for particular attention to be paid to these outbreaks and effective measures for control recommended.

During the summer of 1937 it is planned to elicit the co-operation of the resort owners in the areas reporting such occurrences so that effective measures can be put into effect promptly to control the outbreak and to prevent their recurrence.

Co-operation has been given to the Hospitals Division of the Department in investigating and instituting control measures for communicable diseases which have from time to time occurred in the Ontario Mental Hospitals during the year.

Educational material on the communicable diseases pamphlets, etc., was forwarded from the Division in the number of 78,324, to physicians, parents, school teachers, women's institutes and other voluntary health agencies.

VENEREAL DISEASE CONTROL

There are at present eighteen Venereal Disease Clinics in the Province with Provincial grants. The amalgamation of the Toronto Western Hospital with the Grace Hospital, Toronto, occasioned the combining of the two former clinics operating in these hospitals, making one clinic at the Toronto Western Hospital.

The Clinics are situated as follows: Toronto (5), Hamilton, Brantford, London, Windsor, Owen Sound, Ottawa, Fort William, Kitchener, St. Catharines, Kingston, Peterboro, Sault Ste. Marie and Sudbury.

For some years a clinic for the treatment of syphilis has been operating in the Toronto East General Hospital. Application was made by this Hospital to recognize the clinic as one under Provincial subsidy and at the present time arrangements are being completed to this end. This Clinic will serve the large area of Toronto east of the Don River and the adjoining Township of East York.

Since April first, 1935, the payment for treatments given in the clinics was reduced from thirty-five cents to twenty-five cents per treatment, which reduction resulted in a saving of approximately \$20,000 per year.

For some time it was realized that the scheme of subsidizing only clinics taking care of the larger centres of the Province and the municipalities adjoining, did not provide for those unable to pay for venereal disease treatment in

the remainder of the Province, which accounts for approximately 2,000,000 of the population. This was not a fair distribution and it was decided to utilize the money saved in the reduction of payments to the clinics in assisting municipalities without clinic facilities in the discharge of their responsibility respecting treatment, which is obligatory under The Venereal Diseases Prevention Act. The following Order-In-Council, therefore, was passed on February 5th, 1936:

"Copy of an Order-In-Council approved by the Honourable, the Lieutenant-Governor, dated the 5th day of February, A.D., 1936.

WHEREAS according to the provisions of section 12 of The Venereal Disease Prevention Act, R.S.O., 1927, Chapter 264, the Department with the approval of the Lieutenant-Governor in Council may out of any moneys appropriated by the Legislature for the purposes of the Department provide for the payment of certain expenses:

AND WHEREAS the Legislature has appropriated certain moneys for the purposes of the Department for the fiscal year ending March 31st, 1936:

THEREFORE the Minister recommends that your Honour approve of the payment by the Department out of the said moneys appropriated by the Legislature of a part of any expenses which have been paid by any municipality pursuant to the provisions of section 13 of the said Act, and that the Department pay to every such municipality a part of such expenses which shall be in proportion to the total expenses paid by all municipalities.

The Committee of Council concur in the recommendation of the Honourable the Minister of Health, and advise that the same be acted on.

Certified (sgd.) C. H. BULMER,

Clerk Executive Council."

All municipalities were circularized calling their attention to this Order-In-Council and outlining the method by which accounts that they had paid for the treatment of venereal disease would be reimbursed in part by this Department. At the present time the Department is reimbursing these municipalities for fifty per cent. of their expenditures, based on the following schedule of fees: Two Dollars for each intravenous treatment, One Dollar for each intramuscular treatment, Two Dollars when both forms of therapy are administered on the same occasion, and One Dollar for each treatment for gonorrhoea. During the year \$6,256.66 was paid to municipalities under this scheme.

It was found that not all of the municipalities were assuming their responsibilities in this regard, and using the results from the laboratory service and reports from the local boards of health, a survey is being carried out in three of the cities of Ontario to determine why this has not been done.

In the case of patients from unorganized districts, physicians in the area are paid by the Department on the schedule of fees stated above.

The following is a summary of the work carried out in the eighteen Venereal Disease Clinics during the year:

1. Number examined and found positive.....			3,899
2. Number carried over from previous year.....			6,662
3. Number of new cases (never previously treated in clinic).....			2,498
4. Number of cases readmitted.....			754
5. Number previously treated patients.....			647
6. Number of cases treated.....			10,561
7. Number of treatments.....			166,596
8. Number of contacts and sources examined.....			1,215
9. Number of visits made by nurses.....			5,281
Number of cases treated.....			10,561
New Cases (never previously treated in clinic).....			2,498
	Male	Female	
Syphilis.....	511	321	
Gonorrhoea.....	1,250	377	
D. I.....	21	18	
Number of cases re-admitted.....			754
	Male	Female	
Syphilis.....	224	144	
Gonorrhoea.....	281	53	
Double Infection.....	34	18	
Number of patients previously treated.....			647
	Male	Female	
Syphilis.....	232	135	
Gonorrhoea.....	192	73	
Double Infection.....	5	10	
Number of new cases Syphilis classified.....			1,192
	Male	Female	
Primary.....	130	43	
Secondary.....	82	62	
Tertiary.....	521	354	
New cases of Gonorrhoea.....			2,032
	Male	Female	
1. Under 1 month.....	1,159	153	
2. Under 2 months.....	137	124	
3. Over 2 months.....	250	209	
Number of paid treatments classified.....			166,596
	Male	Female	
Syphilis.....	54,637	38,019	
Gonorrhoea.....	60,530	13,410	
Number of Contacts and Sources examined.....			1,215
Positive for Syphilis.....		188	
Positive for Gonorrhoea.....		199	
Number of children treatments.....			7,364
	Male	Female	
Syphilis.....	2,783	2,573	
Gonorrhoea.....	68	1,940	
Number discharged from clinics.....			4,198
Number discharged apparently cured.....			1,991
	Male	Female	
Syphilis.....	354	260	
Gonorrhoea.....	988	295	
Double Infection.....	66	28	
Number transferred.....			824
	Male	Female	
Syphilis.....	240	205	
Gonorrhoea.....	238	97	
Double Infection.....	21	23	

Number discharged without permission.....			1,383
	Male	Female	
Syphilis.....	421	253	
Gonorrhoea.....	517	122	
Double Infection.....	42	28	
Social Histories taken in Clinics			3,609
Cases referred by: Doctors, 742; self, 1,150; friends, 161; hospitals, 599; other clinics, 339; social agency, 109; Department of Health, 139; jails, 40; readmissions, 300; police, 30.			
Number of cases referred to M. O. H.....			1,156
Source.....		134	
Contact.....		135	
Non-attendance.....		887	
Number of cases placed under V. D. Act.....			123
Number of cases prosecuted under V. D. Act.....			37
Analysis by Age Groups of New Admissions.....			3,129
	Male	Female	
Under 16 years.....	36	60	
16-19 years.....	179	111	
20-29 years.....	1,003	425	
30-39 years.....	541	157	
Over 40 years.....	492	125	
Number of visits of Social Service Nurses.....			5,281
Number of patients treated in hospitals where clinics are situated.....			756
	Male	Female	
Syphilis.....	130	107	
Gonorrhoea.....	295	217	
Double Infection.....	2	5	
Number of days in hospital.....			10,177
	Male	Female	
Syphilis.....	1,919	1,281	
Gonorrhoea.....	3,398	3,579	
Laboratory Examinations.....			29,946
	Positive	Negative	
Syphilis:			
Blood.....	6,039	8,947	
Cerebro Spinal fluid.....	100	232	
Darkfield.....	55	100	
Gonorrhoea:			
Diagnosis.....	2,283	5,910	
Prognosis.....	1,845	4,426	
Treatment for Syphilis:			
Diarsenol.....			6,368
Novarsan.....			20,615
Other arsenicals, including Mapharsen and Tryparsamide.....			10,713
Mercury.....			8,089
Bismuth.....			40,547
Medicines.....			8,324
Other and advice.....			4,550
Treatment for Gonorrhoea:			
Irrigations.....			68,265
Douche.....			3,484
Injections.....			3,192
Prostatic Massage.....			15,241
Instrumentation.....			2,208

Deep Instillation.....	2,401
Topical Application.....	12,253
Vaccine.....	3,356
Examinations.....	5,033
Medicines.....	820
Total.....	215,458

Drugs for the free treatment of venereal disease were distributed as follows:

	Ampoules	Grams.
Diarsenol.....	2,496	3,399.16
Novarsan.....	26,181	20,437.63
Mapharsen.....	9,450	630
Bismuth Oxychloride.....	68,583	174,238 grains
Mercury Salicylate.....	13,690	16,106 grains
Sodium Hydroxide.....		1,152 ounces
Distilled Water.....		53,434 ounces

Fewer new cases were admitted to the Clinics; a total of 832 new cases of syphilis who had never previously been treated, were admitted during the year as compared with 1,531 during the previous year. This may mean that there are fewer new infections, which is probably true, because during the year there were only 173 cases of primary syphilis admitted to the Clinics as compared with 209 during the previous year. There may also be the factor of a certain number of patients who are on medical relief applying to medical practitioners for treatment in a few centres. This factor, however, should not be taken as the only reason for a reduction in the number of new cases. It would seem that the efforts of the Department in venereal disease control, continued since its inception in 1920, is bearing fruit in the reduced number of new cases of syphilis applying for treatment. There has been no such marked reduction in the new cases of gonorrhoea.

During the year 1,991 were discharged as cured from the Clinics, which is an increase over the previous year, which was 1,809. There were, however, 1,383 patients who were discharged without permission, which means that they were lost. In the case of patients who are in the early acute infectious stages of the disease, this is a disquieting figure, and to further reduce the number of patients lost in this way will require intensive effort on the part of social service nurses working in the clinics and the closest co-operation by the medical officers of health.

There were 37 prosecutions of former patients in the venereal disease Clinics, under The Venereal Diseases Prevention Act, which is an increase over the previous year of 24 cases, but this reflects great credit on the tact and assiduousness of social service nurses in that such a small number of patients, out of a total registration of 10,561, were required to be brought before a magistrate in order to have them continue with their necessary treatment.

Drugs for the free treatment of venereal disease, supplied to clinics and private physicians on their signed requisition that the patients were unable to pay for the drugs, were supplied as above.

From February, 1936, the Department made available for distribution to the Clinics only, supplies of Mapharsen, a newer form of arsenical which had already received some clinical trial in three of the Clinics. Reports received from the Clinics after the first year of the use of this drug, were guarded in their opinions as to its effectiveness and asked for a longer period of time for clinical trial before any definite opinion could be given as to its status in the recognized arsenicals used for the treatment of syphilis.

STATEMENT OF COMMUNICABLE DISEASES IN 1936

	Smallpox		Scarlet Fever		Diphtheria		Measles		Whooping Cough		Typhoid Fever		Tuberculosis		Poliomylitis		Cerebro Spinal Meningitis		Influenza		Pneumonia		Syphilis		Gonorrhoea		Chickenpox		Encephalitis		German Measles		Mumps		Septic Sore Throat		Undulant Fever		Dysentery		Erysipelas		Paratyphoid Fever	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths		
January.....	0	0	1,189	8	34	0	4,027	1	992	5	13	2	213	45	1	0	3	1	202	6	66	199	217	0	287	0	1,688	0	2	2	1,598	0	1,822	0	11	1	12	0	2	0	17	1	9	0
February.....	0	0	1,443	8	18	0	5,812	4	1,121	3	14	3	214	54	1	1	7	7	627	16	124	264	205	1	211	0	1,204	0	2	1	4,513	2	2,069	0	19	3	7	1	4	1	15	1	3	0
March.....	0	0	1,248	6	25	0	4,368	1	785	0	15	1	152	51	0	0	7	4	347	8	142	223	128	0	174	0	1,038	0	1	2	10,146	1	2,237	0	8	1	9	0	2	0	14	0	2	0
April.....	0	0	990	4	17	0	3,053	1	704	2	9	1	178	45	0	0	7	4	156	5	69	166	169	0	236	0	801	0	1	0	5,633	0	1,920	0	13	2	21	0	2	0	15	2	1	0
May.....	0	0	718	3	23	1	3,052	5	717	4	7	3	264	49	1	0	3	4	144	4	95	259	210	3	288	0	903	0	1	5	5,466	1	2,097	0	20	3	12	0	1	0	16	4	3	0
June.....	0	0	653	1	10	0	1,509	0	474	2	9	0	202	52	4	0	1	0	208	1	53	147	141	4	156	0	741	0	1	1	1,442	0	1,190	0	8	1	22	0	1	0	16	4	3	0
July.....	0	0	391	1	16	2	952	2	360	1	12	3	186	66	5	0	0	4	1	22	138	80	1	121	0	472	0	1	372	0	418	0	2	3	3	0	11	1	11	0	4	0		
August.....	0	0	268	1	31	0	328	0	475	1	40	2	158	43	20	1	4	1	36	2	21	114	184	1	302	0	191	0	2	35	0	210	0	2	1	10	0	12	0	5	2	11	0	
September.....	0	0	277	3	25	1	353	2	484	5	47	3	184	43	64	2	5	2	40	1	21	90	148	1	198	0	266	0	1	0	46	0	280	0	18	1	11	0	27	0	13	1	13	1
October.....	0	0	550	1	39	0	1,231	1	672	1	60	6	204	42	88	6	3	5	52	2	54	198	214	2	363	0	842	0	0	1	36	0	390	0	16	0	6	0	4	0	14	3	7	0
November.....	0	0	727	3	33	2	800	1	672	3	18	2	159	34	23	2	6	4	18	1	72	155	110	0	220	0	1,481	0	3	33	0	483	0	30	2	11	0	2	0	15	1	3	0	
December.....	0	0	473	2	19	2	944	0	434	2	7	1	163	30	1	0	6	2	38	5	49	163	194	2	182	0	1,674	1	0	31	0	583	1	13	1	3	1	4	0	20	2	2	0	
1936 Total.....	0	0	8,927	41	290	8	26,429	18	7,890	29	251	27	2,277	554	208	12	52	38	1,809	53	788	2,116	2,000	15	2,738	0	11,301	1	12	18	29,351	4	13,699	1	160	19	127	2	291	2	168	18	59	1
1935 Total.....	7	0	7,245	33	361	16	44,958	21	7,663	38	310	26	2,416	474	108	5	32	23	1,845	48	625	1,881	1,900	9	2,559	0	13,116	2	6	5	20,627	1	9,568	2	202	2	86	0	37	6	129	7	58	0
1934 Total.....	1	0	6,057	42	371	16	2,392	1	7,624	36	547	22	2,149	513	326	23	35	12	343	30	511	1,539	2,055	8	2,205	1	10,829	2	2	4	350	0	5,920	1	98	6	97	2	34	12	133	13	88	1

1936

These figures are as reported by Local Boards of Health. For Official number of deaths, see Report of Registrar General

STATEMENT

BIOLOGICAL PRODUCTS AND INSULIN

APRIL 1st, 1935 TO MARCH 31st, 1936

SUMMARY 1935-36

DIPHTHERIA:			
Antitoxin.....	6,401 M units at 14c per M units.....	\$ 896 14	
	79,360 M units at 12c per M units.....	9,523 20	
			\$ 10,419 34
Schick Test.....	4,092 Outfits at 20c each.....	\$ 818 40	
Toxoid.....	14,802 x 1 person at 20c each.....	2,960 40	
	2,752 x 6 persons at 80c each.....	2,201 60	
	6,840 x 12 persons at \$1.00 each.....	6,840 00	
	460 Diluted at 20c each.....	92 00	
			12,912 40
			<u>\$ 23,331 74</u>
TETANUS:			
Antitoxin.....	72,944,500 units at 30c per M units.....	\$ 21,883 35	
Intraspinal Outfits.....	236 units at 45c each.....	106 20	
			21,989 55
SCARLET FEVER:			
Antitoxin.....	7,721 prophylactic doses at 40c each.....	\$ 3,088 40	
	2,314 prophylactic doses at 75c each.....	1,735 50	
	9,630 treatment doses at \$2.25 each.....	21,667 50	
	2,282 treatment doses at 2.75 each.....	6,275 50	
			\$ 32,766 90
Toxin.....	6,870 x 1 person at 30c each.....	\$ 2,061 00	
	3,583 x 6 persons at 1.00 each.....	3,583 00	
Dick Test.....	6,187 Outfits at 20c each.....	\$ 1,237 40	
			6,881 40
			<u>\$ 39,648 30</u>
ANTI-MENINGOCOCCUS:			
Serum.....	1,382 x 20cc vials at 1.00 each.....	\$ 1,382 00	
Intraspinal Outfits.....	231 at 45c each.....	103 95	
			<u>\$ 1,485 95</u>

STATEMENT OF BIOLOGICAL PRODUCTS AND INSULIN SUMMARY Continued

SMALLPOX:			
Vaccine.....	5,824 x 2 point pks. at 12c per pk.....	698 88	
	109,795 points at 4.5 per point.....	4,940 77	
			5,639 65
RABIES:			
Vaccine.....	37 treatments at \$10.50 each.....	388 50	
ANTI-ANTHRAX:			
	1 x 50cc vial at 1.75 each.....	1 75	
	TOTAL COST BIOLOGICAL PRODUCTS.....		\$ 92,485 44
INSULIN.....			
	21,684 x 200 units vials at 47½c each.....	\$ 10,299 91	
	9,560 x 200 units vials at 40c each.....	3,824 00	
	<u>31,244</u>		
	52750 x 400 units vials at 85c each.....	44,837 50	
	26500 x 400 units vials at 70c each.....	18,550 00	
	<u>7 250</u>		
	3,202 x 800 units vials at \$1.60 each.....	5,123 20	
	1,497 x 800 units vials at 1.30 each.....	1,946 10	
	<u>4,699</u>		
	TOTAL COST INSULIN.....		\$ 84,580 71
	TOTAL COST BIOLOGICAL PRODUCTS AND INSULIN.....		\$ 177,066 15

STATEMENT OF BIOLOGICAL PRODUCTS AND INSULIN—Continued

MONTH	DIPHtheria ANTITOXIN				DIPHtheria TOXOID									
	1M and 5M Units	Cost \$ C	10M 20M 40M Units	Cost \$ C	Syringes	Cost \$ C	One Person	Cost \$ C	Six Persons	Cost \$ C	Twelve Persons	Cost \$ C	Diluted	Cost \$ C
1935	M		M											
April.....	567	79 38	9670	1,160 40	100	20 00	946	189 20	214	171 20	289	289 00	33	6 60
May.....	571	79 94	4730	567 60	9	1 80	981	196 20	333	266 40	494	494 00	63	12 60
June.....	853	119 42	6930	831 60	149	29 80	697	139 40	59	47 20	93	93 00	55	11 00
July.....	473	66 22	3850	462 00	81	16 20	1150	230 00	150	120 00	135	135 00	28	5 60
August.....	575	80 50	3400	408 00	110	22 00	914	182 80	80	64 00	346	346 00	39	7 80
September.....	577	80 78	9540	1,144 80	75	15 00	1698	339 60	353	282 40	1078	1,078 00	26	5 20
October.....	754	105 56	9600	1,152 00	112	22 40	1776	355 20	564	451 20	1373	1,373 00	68	13 60
November.....	761	106 54	8180	981 60	138	27 60	1604	320 80	269	215 20	937	937 00	61	12 20
December.....	330	46 20	6310	757 20	135	27 00	1255	251 00	115	92 00	381	381 60	32	6 40
1936														
January.....	338	47 32	7090	850 80	125	25 00	1413	282 60	319	255 20	689	689 00	31	6 20
February.....	511	71 54	6010	721 20	88	17 60	1240	248 00	172	137 60	552	552 00	13	2 60
March.....	91	12 74	4050	486 00	104	20 80	1128	225 60	124	99 20	473	473 00	11	2 20
	6401	896 14	79360	\$9,523 20	1226	\$245 00	14802	2,960 40	2752	2,201 60	6840	6,840 00	460	\$92 00

STATEMENT OF BIOLOGICAL PRODUCTS AND INSULIN—Continued

MONTH	DIPHtheria SCHICK TEST		TETANUS ANTITOXIN				Cost
	Outfits	Cost	Units	Cost	Syringes	Outfits	
1935							
April.....	244	48 80	4,948,500	1,484 55	179	8	3 60
May.....	212	42 40	5,280,000	1,584 00	114	14	6 30
June.....	216	43 20	8,103,000	2,430 90	400	52	23 40
July.....	275	55 00	10,485,500	3,145 65	414	24	10 80
August.....	260	52 00	8,592,500	2,577 75	250	22	9 90
September.....	469	93 80	8,943,000	2,682 90	339	58	26 10
October.....	467	93 40	7,990,500	2,397 15	280	21	9 45
November.....	414	82 80	6,185,500	1,855 65	156	12	5 40
December.....	352	70 40	4,032,000	1,209 60	165	4	1 80
1936							
January.....	333	66 60	2,690,500	807 15	65	15	6 75
February.....	445	89 00	2,057,500	617 25	65	1	45
March.....	405	81 00	3,636,000	1,090 80	100	5	2 25
	4092	818 40	72,944,500	21,883 35	2527	236	106 20

STATEMENT OF BIOLOGICAL PRODUCTS AND INSULIN—Continued

MONTH	SCARLET FEVER ANTITOXIN				DICK TEST		SCARLET FEVER TOXIN				
	Prophy-lactic	Cost	Treat-ments	Syringes	Cost	Dick Test	Cost	One Person	Cost	Six Persons	Cost
1935											
April.....	812	\$ 324 80	1012	136	\$ 27 20	692	\$ 138 40	711	\$ 213 30	325	\$ 325 00
May.....	844	337 60	786	184	1,768 50	261	52 20	314	94 20	200	200 00
June.....	604	241 60	1004	125	2,259 00	278	55 60	422	126 60	95	95 00
July.....	438	175 20	792	100	1,782 00	280	56 00	401	120 30	179	179 00
August.....	624	249 60	830	75	1,867 50	322	64 40	300	90 00	177	177 00
September.....	493	197 20	958	100	2,155 50	468	93 60	588	176 40	363	363 00
October.....	945	378 00	1218	125	2,740 50	533	106 60	548	164 40	369	369 00
November.....	859	343 60	828	125	1,863 00	599	119 80	910	273 00	396	396 00
December.....	957	382 80	1091	301	2,454 75	600	120 00	623	186 90	322	322 00
1936											
January.....	1145	458 00	1111	274	2,499 75	651	130 20	872	261 60	562	562 00
February.....	1238	928 50	1154	225	3,173 50	858	171 60	502	150 60	379	379 00
March.....	1076	807 00	1128	250	3,102 00	645	129 00	679	203 70	216	216 00
	10035	4,823 90	11912	2020	27,943 00	6187	1,237 40	6870	2,061 00	3583	3,583 00

STATEMENT OF BIOLOGICAL PRODUCTS AND INSULIN—Continued

MONTH	ANTI-MENINGOCOCCUS SERUM			SMALLPOX VACCINE			RABIES VACCINE		ANTI-ANTHRAX VACCINE	
	20cc Vials	Cost \$ C	Outfits	2 Point Packages	Cost \$ C	5 and 10 Point Packages	Treatments	Cost \$ C	50cc Vials	Cost \$ C
1935										
April.....	142	142 00	6	426	51 12	Pts. 12,520	4	42 00	.....	.....
May.....	172	172 00	29	425	51 00	14,220	3	31 50	.....	.....
June.....	122	122 00	36	545	65 40	8,795	3	31 50	.....	.....
July.....	80	80 00	13	684	82 08	7,110	7	73 50	.....	1 75
August.....	161	161 00	20	556	66 72	10,330	4	42 00	.....	.....
September.....	127	127 00	25	613	73 56	12,875	4	42 00	.....	.....
October.....	32	32 00	7	477	57 24	13,440	.....	.....	.....	.....
November.....	138	138 00	29	443	53 16	6,560	3	31 50	.....	.....
December.....	80	80 00	15	223	26 76	2,420	2	21 00	.....	.....
1936										
January.....	85	85 00	10	679	81 48	6,140	3	31 50	.....	.....
February.....	138	138 00	24	242	29 04	5,640	2	21 00	.....	.....
March.....	105	105 00	17	511	61 32	9,745	2	21 00	.....	.....
	1382	1,382 00	231	5824	698 88	109,795	37	388 50	1	1 75

STATEMENT OF BIOLOGICAL PRODUCTS AND INSULIN—Continued

MONTH	INSULIN				Cost
	200 Units	400 Units	800 Units	Cost	
1935					
April.....	3720	7500	640	\$ 9,166 00	
May.....	2774	6700	255	7,420 65	
June.....	3310	8000	350	8,932 25	
July.....	2305	6885	335	7,483 13	
August.....	2950	7325	390	8,251 50	
September.....	1900	5625	380	6,291 75	
October.....	2650	4775	462	6,056 70	
November.....	2075	3940	3 0	6,658 63	
December.....	2120	6525	307	5,814 60	
1936					
January.....	2800	6650	510	6,438 00	
February.....	2380	6950	335	6,252 50	
March.....	2260	6375	345	5,815 00	
	31244	79250	4699	84,580 71	

SUMMARY

Biological Products.....	\$ 93,640 04
Syringe Containers.....	1,154 60
Net Cost.....	\$ 92,485 44
Insulin.....	\$ 84,580 71
Total Cost.....	\$177,066 15

DIVISION OF MATERNAL AND CHILD HYGIENE
AND PUBLIC HEALTH NURSING

JOHN T. PHAIR, M.B., D.P.H., Director
EDNA L. MOORE, CHIEF PUBLIC HEALTH NURSE

The interest of the Division in the field of maternal mortality has been largely confined to a continuance of the effort to uncover the significance of the various factors which presumably contribute towards deaths among pregnant women. While the Department is appreciative of the fact that such deaths occur with a greater frequency than would appear to be warranted, it is also impressed with the necessity of knowing first, whether the conditions presumed to be responsible are the causative factors or whether their contribution is a casual one.

The so-called toxæmias of pregnancy head the list of causes of maternal deaths. As a matter of fact, from the available data over the years in which this intimate study has been made, it would appear that toxæmias were on the increase; 24% of the deaths were reported to be from this cause. The percentage of deaths from abortions is somewhat lower than in the preceding year; 18% as compared to 20%; the specific death rate for abortions being .9 per 1,000 living births. In 86% of those dying from abortion sepsis was reported.

It is of interest to note that the percentage of those dying from puerperal septicaemia, (not associated with abortion), appears to be steadily declining. In the first year that the study was undertaken, 23% were noted as dying from puerperal septicaemia as compared with 15% in the present year. Deaths from haemorrhage have also declined from 13% in 1933 to 11% in 1935.

Deaths from ectopic gestation have remained practically the same throughout the years under review; approximately 4% dying from this cause.

Embolism, thrombosis and sudden deaths would appear to be responsible for 12% of the deaths, while accidents of pregnancy and childbirth were given as the cause of death in 16%.

That the practising physicians themselves are concerned with the problem of reducing the toll of maternal deaths would appear to be a safe premise. This is best demonstrated by the fact that in the first year for which a request was made for such reports, 75% of the physicians responded, while last year approximately 96% of the report forms were returned.

Infant Mortality—The infant death rate has been declining steadily since 1931. The rate for 1935 is ostensibly the same as that for the previous year, namely 55.7. The continued maintenance of this downward trend requires the sustained effort of all agencies, either directly or indirectly, concerned with this significant aspect of public health effort.

Health of the School Age Group—The Division continues to assume the responsibility delegated by the Department of Education for the supervision of the local programme carried out in the 105 centres in which school health supervision forms a significant part of the community health programme.

For the second year the Division assisted the Department of Education in supplying nursing personnel and arranging for the complete physical examination of all applicants to the teacher-training schools. The examining

physicians' findings would appear to reflect the absence of any very serious concern as to the present health of the students in the secondary schools of the Province.

Handicapped children of school age, in the rural and smaller urban centres, who require special teaching, continue to receive physical examination under the auspices of this Division at the request of the Department of Education.

The co-operative effort sponsored jointly by the Departments of Health and Education some five years ago, designed to evolve a more acceptable approach to the problems of health teaching in the elementary schools, has been continued throughout the year, and for the fourth consecutive year a summer course on Health Teaching was held, the Director of the Division again acting as Principal. It is interesting to note that since the inception of this course, the attendance has practically doubled each year.

Further: Analytical surveys of existing health services of certain larger centres, for the purpose of measuring the effectiveness of the local programme, have been carried on at the request of the municipality concerned.

PUBLIC HEALTH NURSING

The activities of those members of the Division staff concerned chiefly with the field of public health nursing is reported on, as follows, by Miss E. L. Moore, Chief Public Health Nurse:

From January to June the public health nursing staff consisted of fourteen members assigned to the following duties:

General supervision of official public health nursing activities throughout the Province—3;

Generalized public health nursing service in Temiskaming District—1;

Health Education—1;

Eastern Ontario Health Unit—one supervisor and eight staff nurses.

In June, Miss Edna Howey, senior supervisor, was granted leave of absence to participate in the Vimy Pilgrimage and to take the public health nursing course of the Florence Nightingale International Foundation at Bedford College, University of London, (Eng.). Miss Howey's absence necessitated the transfer of Miss Bertha Johnson from the Health Unit staff to assist the other supervisors. In September, Miss Ola Dancause, a graduate of the public health nursing course, University of Western Ontario, was taken on the temporary staff for duty in the Health Unit during a leave of absence granted to Miss Ora Lefler.

Early in the year the public health nursing service at Sturgeon Falls was discontinued. Fort Frances re-established a service in September after a lapse of several years. In Midland, the service which had formerly included the school age group only, was expanded, in September, to include a measure of public health nursing service for all age groups. The Ontario Red Cross Society and the local Branches established, during the year, a generalized public health nursing service in Manitoulin Island.

The nursing activities of the Eastern Ontario Health Unit are reported upon in full elsewhere.

The supervisors visited 90 of the 117 centres where public health nursing is organized. Included in this number are municipalities in which the school

health service is carried out by public health nurses employed by the Red Cross, the Victorian Order of Nurses and the St. Elizabeth Visiting Nurse Association through arrangements with the local School Boards.

In the 90 centres visited there are 204 nurses serving a total population of 996,712. Eighty-two centres received one visit, 6 centres 2 visits and 2 centres 3 visits during 1936. These visits include the introduction of fourteen newly appointed nurses to the local situation, the authorized programme and recording system. Following each supervisory visit a report was sent to the local authorities.

The urgent need for Daily and Monthly Report forms, that would assist nurses to evaluate their work in terms of the accepted objectives of public health nursing, has been felt for some time. During the year two forms for reporting activities in generalized and school services were devised and used for an experimental period of three months by some forty nurses. The criticism and suggestions received will help greatly in developing the final make-up of these forms.

The Chief Public Health Nurse, four supervisors and two staff nurses assisted with the examination of 1,348 students applying for admission to the Normal Schools of the Province and the College of Education. Two supervisors were engaged in the preliminary organization work for the Dental Hygiene Campaign which was carried on in twelve towns and cities of southwestern Ontario.

Through the co-operation of local Boards of Health and School Boards in centres where public health nursing programmes are organized, plans were made for fifteen graduate students in public health nursing at the University of Toronto to receive one month of field observation and practice. Six undergraduate students of the University School of Nursing received similar experience. Aid was extended to those responsible for the direction of the public health nursing course at both the University of Toronto and the University of Western Ontario by members of the staff.

Four staff members attended a Refresher Course on Changing Practices in Child Hygiene at the School of Nursing. A resume of the lectures was prepared and distributed to the public health nurses of the Province.

Temiskaming District is extensive and the population scattered. There are 92 schools with 123 classrooms for elementary and 2 for high school work. Each school is visited once in two years unless emergent conditions demand precedence over planned activities. An increased amount of time was spent in Tuberculosis work in the area. Health officers were assisted in the organization and conduct of toxoid and vaccination campaigns. Child Health Conferences were conducted regularly in one centre and in other centres as the weather and the demands of the programme permitted. The nurse, Miss H. Elizabeth Smith, is well known throughout the district and the local authorities and interested citizens continue to notify her promptly when problems arise.

A one-day regional conference was held in Kirkland Lake in October. Seventeen public health nurses from six centres attended. Discussion was keen and constructive.

That there is a continued interest in the possible extension of service to centres not already employing public health nurses is evidenced by the relatively large number of requests received for information in respect to the

establishment of such programmes. Some twenty-four meetings were addressed by Miss Moore and members of the supervisory staff. Many of these were called by agencies interested in fostering local public health nursing programmes. The Division continued to act as liaison officer between the public health nursing group and municipalities desirous of securing the services of qualified nurses.

ANNUAL REPORT OF THE EASTERN ONTARIO HEALTH UNIT

The annual report of the Unit this year might be considered as a review of progress made in terms of our original objectives.

Having in mind the significance of communicable disease control, in any scheme of community public health, I am presuming to record the diseases of this type as they have been reported either directly or indirectly to the Unit headquarters.

TABLE 1
CASES OF COMMUNICABLE DISEASE REPORTED

1936

Chickenpox.....	194
Diphtheria.....	29 (2 deaths)
Gonorrhoea.....	4
German Measles.....	479
Measles.....	746 (1 death)
Mumps.....	5
Paratyphoid Fever.....	1
Poliomyelitis.....	1
Scarlet Fever.....	81
Septic Sore Throat.....	1
Smallpox.....	2
Syphilis.....	4
Typhoid Fever.....	14 (1 death)
Whooping Cough.....	247 (1 death)

These figures indicate improvement in reporting contagious diseases rather than an actual increase in the number as compared with last year's figures, but if cases of communicable diseases were reported direct to the Unit, even better results might be obtained.

In the two cases of smallpox, the diagnosis was in doubt, and when reported to this office two weeks after the onset, they had completely recovered. In the case reported as septic sore throat, the diagnosis was not confirmed.

The physician attending the one case of anterior-poliomyelitis (which occurred in the Town of Hawkesbury), enforced rigid quarantine and precautions against the spread of the disease. Though it was a very mild case, the positive laboratory diagnosis (as a result of the examination of the spinal fluid), resulted in the early use of serum with excellent results.

There were 29 cases of diphtheria reported, 20 occurring in the Cornwall area in children of families recently arrived who had never received toxoid. The other 9 cases were scattered over 7 townships.

Table II shows the number of children in the area who received, during the year, toxoid protection against diphtheria and vaccination against small-

pox. Table III gives an estimate of the percentage of the child population (including both school and pre-school) who were protected against diphtheria and smallpox at the end of the years 1934, 1935 and 1936.

TABLE II
DIPHThERIA TOXOID IMMUNIZATION AND SMALLPOX VACCINATION
NUMBER PROTECTED DURING 1936

COUNTY	Diph. Toxoid		Vaccination	
	School	Pre-school	School	Pre-school
Glengarry.....	.....	.....	6	.....
Stormont.....	142	.....	506	.....
Prescott.....	374	251	4	.....
Russell.....	666	149	701	220

Stormont figures do not include Town of Cornwall.

TABLE III
ESTIMATED PERCENTAGE OF CHILD POPULATION
(Including School and Pre-school)
PROTECTED AGAINST DIPHThERIA AND SMALLPOX

COUNTY	Diphtheria			Smallpox		
	1934	1935	1936	1934	1935	1936
Glengarry.....	37	34	32	.....	17	16
Stormont.....	13	19	20	.....	25	33
Prescott.....	46	43	45	.....	14	13
Russell.....	15	34	44	.....	.....	17

Stormont figures do not include Town of Cornwall.

Tuberculosis

To accomplish anything in the way of controlling this disease, which in January, 1935, had a higher death rate in the four counties served by the Unit than in any other four counties of the Province, it was necessary, first, to ascertain where the cases were, and secondly, to remove all open cases from contact with their families, which, in most cases, consisted of a large number of children. When efforts were made to get these cases into a sanatorium, we were faced with the refusal of both the individual sufferer and his family to allow him to go far away from home. The Royal Ottawa Sanatorium was the only one to which they would agree to be admitted, and, as this institution was primarily for the service of the City of Ottawa and Carleton County, it was obvious that it would take months to have patients from the Unit area admitted to the Royal Ottawa owing to the length of the waiting list.

It was, therefore, decided to enlist the efforts of all Medical Officers of Health in the district, the Medical Profession generally, and public organizations such as the Women's Institutes, the Catholic Women's Leagues, the Junior Farmers' Associations, etc., in an endeavour to convince the two County Councils of the area that the erection of a sanatorium was imperative. This effort resulted in the Council of the United Counties of Stormont, Dundas

and Glengarry going ahead with the erection of a 100 bed sanatorium near Cornwall, which is at present under construction, and should be completed in the Spring and ready to receive patients by the month of June, 1937. Substantial assistance in bringing about this most desirable advance was given by both the Department and the Government as a whole. A grant of one hundred thousand dollars was made by the Administration toward the cost of the sanatorium building.

We now feel that we know where practically every case of tuberculosis in the Unit area resides, and their contacts, if any, and, with the service rendered by the Division of Tuberculosis Prevention of the Provincial Health Department, we are having these examined by the Travelling Diagnostic Clinic allocated to Eastern Ontario. When the new St. Lawrence Sanatorium is ready to admit patients we should, in time, with the follow-up service carried on by the Public Health Nurses attached to the Unit, be able to control the problem of tuberculosis in the area.

In co-operation with the Division of Tuberculosis Prevention, Clinics were held at Casselman, Plantagenet, Alexandria, Hawkesbury and Rockland, at which a total of 703 cases and contacts were examined.

A number of cases and suspects have also been examined at Ottawa by Dr. Powers.

The distribution of the cases and contacts in the following tables is by Field Nursing Stations. Table IV gives figures regarding the examination of contacts, while Table V shows the number of new contacts found in each district during the year. Table VI gives the known cases of tuberculosis, by districts, there now being 305 known cases, of which 83 are active cases living at home, with 46 receiving care in sanatoria. Table VII shows new cases found and deaths during 1936, along with other pertinent data.

TABLE IV

EXAMINATION OF TUBERCULOSIS CONTACTS

DISTRICT	Total Known Contacts		Contacts Examined	
	25 years and under	26 years and over	25 years and under	26 years and over
Alexandria.....	148	70	93	31
Lancaster.....	122	66	65	19
Hawkesbury.....	252	111	183	62
Plantagenet.....	112	37	62	10
Casselman.....	77	19	26	2
Rockland.....	110	61	56	15
Cornwall.....	67	28	32	14
Finch.....	40	17	25	4
TOTAL.....	928	409	542	157
Per cent. examined...	.....	.....	58.4%	38.3%

TABLE V
SUMMARY OF KNOWN CONTACTS OF TUBERCULOSIS CASES

DISTRICTS	Total Dec. 31, 1935		Re-examination not indicated		Left the District		New Contacts		Total Dec. 31, 1936	
	25 yrs. and under	26 yrs. and over	25 yrs. and under	26 yrs. and over	25 yrs. and under	26 yrs. and over	25 yrs. and under	26 yrs. and over	25 yrs. and under	26 yrs. and over
Alexandria.....	142	74	8	9	11	0	25	5	148	70
Lancaster.....	102	37	0	0	0	0	20	29	122	66
Hawkesbury.....	222	91	2	1	0	0	32	21	252	111
Plantagenet.....	56	18	8	3	2	0	66	22	112	37
Casselman.....	64	20	0	2	1	0	14	1	77	19
Rockland.....	44	12	1	4	0	0	67	53	110	61
Cornwall.....	55	24	1	3	0	0	13	7	67	28
Finch.....	27	9	3	4	0	0	16	12	40	17
Total.....	712	285	23	26	14	0	253	150	928	409

TABLE VI
KNOWN TUBERCULOSIS CASES—EASTERN ONTARIO HEALTH UNIT—
DECEMBER 31st, 1936

DISTRICT	Grand Total	STAGE OF DISEASE						ACTIVITY				In Sana- toria
		Min.	Mod. Adv.	Adv.	Child- hood	Other	Undeter- mined	Act	Quiesc.	Arr.	Undeter- mined	
Alexandria.....	69	26	15	8	3	1	6	14	16	24	5	10
Lancaster.....	40	11	5	6	.....	4	5	5	5	16	5	9
Hawkesbury.....	79	28	20	9	1	6	7	22	23	16	10	8
Plantagenet.....	40	22	8	3	.....	1	1	16	7	11	1	5
Casselman.....	16	7	4	.....	2	.....	.....	6	2	5	.....	3
Rockland.....	32	12	6	4	1	3	2	12	6	6	4	4
Cornwall.....	20	3	5	3	.....	.....	2	6	5	.....	2	7
Finch.....	9	4	.....	1	4	.....	.....	2	1	5	1	.....
Total, December, 1936.....	305	113	63	34	11	15	23	83	65	83	28	46
Total, December, 1935.....	250	84	61	31	13	5	18	68	43	80	21	38

TABLE VII
SUMMARY OF TUBERCULOSIS CASES

	Alexandria	Lancaster	Hawkesbury	Plantagenet	Casselman	Rockland	Cornwall	Finch	Total
Cases on Jan. 1st, 1936.....	59	37	61	34	15	16	19	9	250
New cases found during year.....	23	10	34	18	6	20	4	5	120
Total carried during year.....	82	47	95	52	21	36	23	14	370
DEATHS.....	6	5	9	10	5	2	2	4	43
Diagnosis reversed.....	1	.....	6	1	.....	2	.....	.....	10
Removed from district.....	6	2	1	1	.....	.....	1	1	12
Total Cases, January, 1937.....	69	40	79	40	16	32	20	9	305

Figures for Cornwall do not include the Town of Cornwall.

Typhoid Fever

There have been fourteen cases of Typhoid Fever in the Unit area during the past year of which nine occurred in two small outbreaks, one in Cornwall Township on the outskirts of Cornwall as the result of the use of a contaminated well, and the other in the vicinity of Casselman in Cambridge Township, Russell County, the source of which we were unable to determine as there was no apparent connection between any of the cases. Some of the sources of water were doubtful but others were good. There was no history of contact with previous known cases or suspect carriers.

Veneral Diseases

The reporting of cases of Syphilis and Gonorrhoea is not all that might be hoped for; there is also urgent need of greater facilities for the treatment of these conditions. The only Clinic available is at Ottawa and cases from Russell County and some from along the Ottawa River in Prescott County go there, but it is difficult to get them to continue treatment for any length of time. If Clinics were established at Hawkesbury and Cornwall, much more could be accomplished in controlling this problem. The action of the Department in assuming part of the cost of treatment for those affected with these diseases throughout the Province generally, should materially increase the number receiving adequate medical care.

CHILD HYGIENE

Infant and Pre-school Hygiene

The reduction of the very high infant mortality rate of the Unit area was the second urgent problem requiring attention at the time the Unit was organized. From the following table and the graph attached, it will be seen that some progress has been made as the result of the Child Health Conferences held each month and follow-up visits made by the nurses to the Mothers, not only of babies attending these Conferences, but to others who for one

reason or another have found it impossible to avail themselves of the Clinic service. From the graph, will be noted the increased rate of reduction in the Infant Mortality in Glengarry County, which has the best showing of any of the Counties in this respect, and in which there have been three monthly Child Health Conferences operated during the past year and a half, as compared with two in Russell and one in Prescott County, operating since March, 1936. The only death occurring among Clinic attendants was accidental (drowning.)

TABLE VIII

INFANT MORTALITY RATES—EASTERN ONTARIO HEALTH UNIT

Year	Glengarry	Stormont	Prescott	Russell	All Unit
1925	97	101	112	102	104
1930	78	89	99	95	91
1931	109	104	81	110	99
1932	94	80	97	110	93
1933	85	62	110	119	90
1934	73	100	119	107	103
1935	43	72	108	88	81
1936	36	69	84	84	71

These rates are per 1,000 living births.

It was necessary to estimate the figures for the last three months of 1936 and, in this estimation, figures for the last three months of 1935 were used.

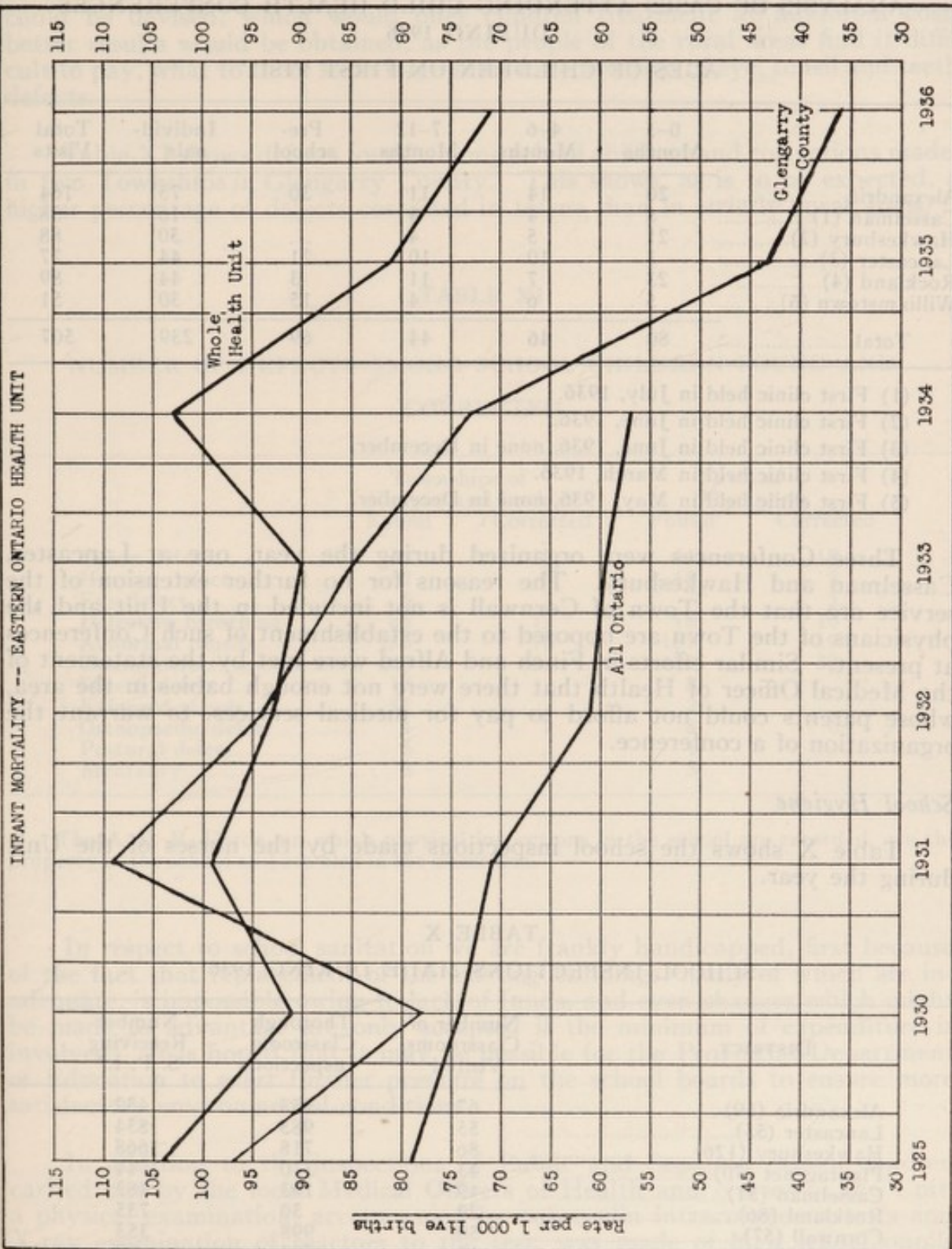


Table IX gives details of Child Health Conferences.

TABLE IX
ANALYSIS OF CASES ATTENDING CHILD HEALTH CONFERENCES
DURING 1936
AGES OF CHILDREN ON FIRST VISIT

	0-3 Months	4-6 Months	7-12 Months	Pre- school	Individ- uals	Total Visits
Alexandria.....	20	14	11	30	75	164
Casselman (1).....	8	4	4	....	16	38
Hawkesbury (2).....	21	5	4	....	30	88
Lancaster (3).....	3	10	10	21	44	77
Rockland (4).....	23	7	11	3	44	89
Williamstown (5).....	5	6	4	15	30	51
Total.....	80	46	44	69	239	507

(1) First clinic held in July, 1936.

(2) First clinic held in June, 1936.

(3) First clinic held in June, 1936, none in December.

(4) First clinic held in March, 1936.

(5) First clinic held in May, 1936, none in December.

Three Conferences were organized during the year, one at Lancaster, Casselman and Hawkesbury. The reasons for no further extension of the service are that the Town of Cornwall is not included in the Unit and the physicians of the Town are opposed to the establishment of such Conferences at present. Similar efforts in Finch and Alfred were met by the statement of the Medical Officer of Health that there were not enough babies in the area, whose parents could not afford to pay for medical services, to warrant the organization of a conference.

School Hygiene

Table X shows the school inspections made by the nurses of the Unit during the year.

TABLE X
SCHOOL INSPECTIONS MADE DURING 1936

DISTRICT	Number of Classrooms Visited	Thorough Classroom Inspections	Number Receiving S. P. I.*
Alexandria (69).....	67	953	432
Lancaster (55).....	55	985	854
Hawkesbury (126).....	86	718	1668
Plantagenet (70).....	43	370	744
Casselman (51).....	19	193	482
Rockland (86).....	29	30	735
Cornwall (57).....	50	998	353
Finch (47).....	13	293	99
Total (561).....	362	4540	5367

*S.P.I.—Special Physical Inspection.

Number of classrooms in the district given in brackets.

This phase of the nurses' work is the one which consumes most time and effort, necessitating a great deal of travel, and, considered from the number of defects corrected, it is doubtful if the time expended is warranted. If some scheme of contributory Oculist, Nose and Throat, and Dental service could be devised, which would offer children treatment at minimum cost, better results would be obtained, as the people of the rural areas find it difficult to pay, what to them seem large sums for correction of eye, tonsil and teeth defects.

Table XI shows defects found among school children and corrections made, in two Townships in Glengarry County. This shows, as is to be expected, a higher percentage of defects corrected in towns than in strictly rural areas.

TABLE XI
NUMBER OF DEFECTS AMONG SCHOOL CHILDREN FOUND AND
CORRECTED

	Townships of Kenyon and Lochiel		Town of Alexandria	
	Found	Corrected	Found	Corrected
Vision defect.....	86	17	44	18
Hearing defect.....	42	9	18	8
Eye defect.....	5	3	7	5
Defective breathing.....	65	11	18	10
Abnormal tonsils.....	286	16	131	19
Dental defect.....	496	84	193	30
Speech defect.....	13	....	8	....
Enlarged glands.....	51	....	2	....
Orthopaedic defect.....	4	2	8	6
Postural defect.....	5	....	1	....
Mentality.....	8	....	5	....

The A. P. R. Cards, on which physical inspections in the school are recorded, are the property of the school and are filed in the classroom.

In respect to school sanitation we are frankly handicapped, first because of the fact that replacement of the existing buildings, many of which are inadequate, is impossible owing to lack of funds, and even changes which might be made to advantage are only accepted if the minimum of expenditure is involved. It is hoped that it may be possible for the Provincial Department of Education to exert further pressure on the school boards to ensure more satisfactory environmental conditions.

In addition to the inspections of Public and Separate School children carried out by the local Medical Officers of Health and Nurses of the Unit, a physical examination, accompanied by tuberculin intracutaneous tests and X-ray examination of reactors to the test, was made of high school pupils at Finch, Avonmore, St. Andrews and Wales in Stormont County. These examinations were made in co-operation with the Division of Tuberculosis Prevention and at the request of the various school boards concerned, who undertook to provide the cost of the X-ray examinations. The results of these examinations appear in the following table.

REPORT ON INSPECTIONS OF HIGH SCHOOL PUPILS

Finch, Avonmore, St. Andrews and Wales

Total number of pupils examined.....	281
Total number of reactors to tuberculin test.....	98
Total number of pupils with defects.....	160

made up as follows:

Defective vision.....	41
Defective nasal breathing.....	17
Abnormal tonsils.....	64
Cardiac defect.....	4
Dental defect.....	15
Postural defect.....	8
Renal defect.....	1
Speech defect.....	1
Enlarged cervical glands.....	90
Enlarged thyroid glands.....	34
Bronchial asthma.....	1
Nervous disorders.....	1
Undernourished.....	14
Anaemic appearance.....	8
Skin disease.....	3
Pulmonary tuberculosis—suspects.....	3

Nursing Service

At the beginning of the year, the public health nursing staff was composed of a supervisor of nursing and eight staff nurses.

In August, Miss Bertha E. Johnson, staff nurse in the District of Finch (Townships of Finch and Roxborough, Stormont County), was transferred to relieve on the supervisory staff of Head Office. Arrangements were made to secure an additional French-speaking nurse for the Unit, and Miss Ola Dancause reported for duty, September eighth. Miss Ora Lefler was out of the district for several months on leave of absence.

In September, the supervisor of nursing and a staff nurse, for a period of a week, assisted with the yearly physical examination of Normal School students in Ottawa; also a staff nurse was loaned to the Hospitals Division of the Provincial Department of Health for one week.

At the International Ploughing Match, held in Cornwall from October 6th to 9th, an exhibit covering sanitation of milk and rural water supplies was shown, and a nurse was present during the four-day period. Literature on Tuberculosis, communicable disease, immunization and general health was distributed to a large number of people who showed a very definite interest in this material. A First-Aid tray was available and several cases of minor injuries were treated.

In November, the supervisor of nursing also assisted with the organization of a Chest Clinic, conducted by the Division of Tuberculosis Prevention, at Brockville.

During the year, 7,440 visits were made to and in behalf of patients. These figures compare favourably with those of last year when reckoned on the basis of a staff of seven nurses instead of eight. Visits to individual cases were made with more frequency and regularity and an effort was made, with some degree of success, to improve the quality of visits.

Little progress has been made toward increasing the medical and nursing supervision of antepartum and postpartum cases. There are a number of reasons for this. Perhaps one of the foremost is the rather conservative attitude of the physicians toward this type of preventive service.

The nurses are serious in their efforts to encourage the teachers to follow some planned programme for teaching correct health habits, but no definite scheme has been worked out. Many of the teachers, although realizing the need for more effective health teaching, find it difficult to accomplish much unless some well defined programme is outlined for them, owing to the fact that the school attendance is so large and the curriculum so full.

A very small proportion of the nurses' time is spend on bedside nursing, only demonstrations of bedside care and emergency work at the doctor's request being attempted. In such instances, the opportunity to teach proper care of the sick and prevention of the spread of disease is utilized as much as possible.

The nursing staff has assisted with the examination of: 703 patients in chest clinics held in the Unit area by the Division of Tuberculosis Prevention; 29 orthopaedic cases in a clinic sponsored by the Ontario Society for Crippled Children and the Alexandria Catholic Women's League; and 8 cases at the Mental Health Clinic conducted by a clinician from the Ontario Hospital, Brockville. They also assisted with 1,582 toxoid immunizations and 1,437 vaccinations against Smallpox done by the local Medical Officers of Health.

Much of the responsibility for the organization and management of monthly conferences in six centres at which 239 infants and pre-school children were examined was assumed by the nursing staff. Some inconvenience has resulted from the fact that part of the equipment used at the conferences has to be transported from one conference meeting place to another.

Five classes in Home Hygiene and Care of the Sick were conducted in three communities with an average attendance of 18. These classes were in session for two hours a week for an average of eight weeks. Classes were commenced in three other centres.

Two new Advisory Health Committees were organized in connection with the Women's Institutes. These were in small communities where it was not feasible to organize a separate group. With her already full schedule, it does not seem practicable for one nurse to try to undertake more than one such committee. An endeavour was made to have representatives from outlying centres act on the Alexandria Committee but due to the difficulties of transportation, this was abandoned in favour of working through local organizations for the time being.

Table XIII is a summary of the activities of the nursing staff during the year, exclusive of school inspections. (Table X.)

TABLE XIII
SUMMARY OF NURSING ACTIVITIES FOR THE YEAR 1936

Activity	Home Visits
Health Supervision.....	4,545
Maternity.....	508
Tuberculosis.....	910
In behalf of Cases.....	825
Morbidity (Illness).....	363
Bedside Care.....	217
	7,440

There were 1,471 additional visits made for furthering special activities, thus making in all 8,911 visits.

Other Activities

Nurses assisted at clinics where 1,582 children received toxoid and 1,437 children were vaccinated against Smallpox.

72 meetings were attended.

9 school fairs were attended.

48 sessions in Home Hygiene and Care of the Sick were conducted.

Sanitary Engineering

During 1936, the work in this division was carried on along the same lines as in the previous year. No attempt was made to inaugurate any special campaigns in the field of sanitation. Certain routine work, chiefly with respect to municipal water supplies and local dairies was carried out and attention given to requests for advice or assistance received from local public bodies or private citizens.

Sixteen routine inspections of the chlorination equipment installed to protect the water supplies of Alexandria, Cornwall Township, Hawkesbury and Rockland were made. Eleven additional visits were made in connection with the failure of the equipment at Rockland and with the automatic operation of the plant at Alexandria. Eight visits of inspection were made to the municipal plants located at Alfred, Plantagenet, Clarence Creek, Bourget and Hammond. There were no cases of Typhoid or Paratyphoid Fever in the area attributed to the use of water from any of municipally owned distribution systems.

The system of collection of milk samples in the various centres of population in the area, which was inaugurated in 1935, was continued. Three hundred and one milk samples secured from 124 distributors in 20 towns and villages were examined. Five series of samples were secured from 13 centres and 4 from the remainder. As the result of the activity of Dr. F. Ladouceur, local Medical Officer of Health, a local milk by-law was passed in the Village of Casselman. In July, regulations were enacted by the Milk Control Board concerning the equipment and operation of dairies throughout the Province. As yet, the only work done in the Unit under these regulations has been in the suburban area adjoining the Town of Cornwall. By the end of 1937, practically all of the milk distributors in the Unit should be operating under either a provincial license or permit.

The regular inspection of highway service stations, refreshment booths and motor tourist camps was discontinued, this work having been transferred to the local Medical Officers of Health. Routine inspections were made of seven Agricultural Society Fair Grounds located in the area.

During the early part of October, the annual meet of the International Ploughmen's Association was held in Cornwall Township. Previous to the meeting, samples of well water were secured from all of the farms on which competitions took place and the quality of the water reported to the owners. During the meet, which lasted four days, an exhibit featuring matters of interest in the field of rural sanitation was maintained on the grounds. This exhibit appeared to be well received and a considerable quantity of literature was distributed. A report, covering observations made concerning the sanitary arrangements and recommendations with regard to future gatherings of this kind, was made to the Executive of the Association.

Following the receipt of requests for advice and various complaints, a number of special inspections and investigations were made. Requests from 26 schools came from: Medical Officers of Health, 13; School Boards, 2; Public Health Nurses, 6; School Inspectors, 4; Teachers, 1. Twenty-one other problems were investigated, 11 being requested by Medical Officers of Health and 10 by private citizens. Three complaints received from Head Office in Toronto were investigated. In addition, nine other investigations of a routine nature were made.

It is interesting to note the extent to which local Medical Officers of Health have availed themselves of the services offered by the sanitary engineer. There are 28 municipalities in the Unit area, served by 25 doctors. Only 10 of these men referred specific problems to the engineer for investigation. However, the work of the engineer was fairly well distributed over the whole area. Supervision of the municipal water supplies involved work in 7 municipalities. Milk samples were collected from centres located in 15 and fair grounds were inspected in 7 municipalities. Inspections and reports concerning school sanitation were made in 9 municipalities. Special investigations resulting from requests from all sources involved work in 11 municipalities. Summarizing all activities, some work was done in 26 of the 28 municipalities comprising the Unit area. All Medical Officers of Health except two were personally visited at least once during the year.

Despite the lack of anything in the nature of a publicity campaign, there has been a marked increase in requests for the services of the engineer from private individuals. A considerable portion of this increase may be attributed to contacts made with other government officials working in the area, school inspectors, cheese instructors, and agricultural representatives.

DIVISION OF TUBERCULOSIS PREVENTION

G. C. BRINK, M.B., Director

During the past year the activities of the Division have been extended. The professional and technical staff has been increased.

It would appear that tuberculosis is gradually being brought under greater control but a great deal of energy and money must yet be expended before the desired goal is reached. The death rate from tuberculosis reached an all time low for the Province, of 36.2 per 100,000 population in 1935, the last year for which vital statistics are available.

Table I shows the deaths and rates over a period of fifty years.

TABLE I

Year	Deaths	Rate per 100,000 Population
1885	2499	125.0
1895	2472	115.4
1905	2667	114.9
1915	2466	91.9
1925	1842	59.3
1930	1791	52.8
1931	1728	50.4
1932	1604	46.1
1933	1465	41.5
1934	1337	37.5
1935	1303	36.2

This decline in the death rate is mainly due to—

(1) A greater percentage of tuberculosis patients under treatment and segregation in sanatoria.

(2) Better diagnostic and treatment facilities.

(3) A greater appreciation on the part of the public that tuberculosis is a communicable disease, that it can be prevented and that early treatment will effect a permanent cure in a greater number of cases.

Although no definite data is available for comparison, indications are that the morbidity of and the number of persons infected with tuberculosis is decreasing. Some of the indications are—

(1) The average age of patients being treated in sanatoria is gradually rising.

(2) Fewer persons up to the age of twenty-five show infection with the tubercle bacillus as indicated by the tuberculin reaction. In analysing the results of tuberculin testing 3,014 Normal and College of Education students in the past two years it was found that 916 or 30.3% were found to give a positive reaction. Twenty years ago it was considered that at least sixty per cent. of the population on reaching adolescence was tuberculin positive, that is, infected with tubercle bacilli.

The various activities of the Division in the past year will be dealt with separately.

THE TRAVELLING DIAGNOSTIC CLINICS

During the year the Travelling Clinics operated with centres in Toronto, Ottawa, and Belleville. In May, a Clinic was established with Headquarters in North Bay, Dr. E. R. Harris, being transferred from the Toronto Office to take charge. The Division was fortunate in securing the services of Dr. G. W. Cragg of St. Michael's Hospital Chest Clinic, Toronto, who joined the staff in March, 1936.

The number of persons examined and the number of centres visited annually has steadily increased since the inception of the Clinics. Table II shows the analysis of the work of each from 1930 to 1936 inclusive.

TABLE II

Year	Number of Clinics Held	No. of Centres Visited	No. of Persons Examined	No. of Tuberculous Suspects	No. of Pathological conditions other than Tuberculosis	No. of Tuberculous cases Examined	No. of Active Cases	No. of Quiescent or Arrested Cases	Percentage of all cases examined Showing Tuberculosis
1930	22	22	1204	135	103	260	154	106	21.6
1931	21	21	1406	171	82	342	181	143	23.6
1932	28	28	2331	223	143	438	233	205	18.7
1933	26	26	2740	122	118	456	186	270	16.6
1934	38	38	3398	80	199	667	231	436	15.4
1935	31	31	4781	61	248	702	225	477	14.7
1936	113	97	8856	126	574	1367	478	889	15.4

The following tables give a summary of each Clinic's work—

TABLE III
CENTRAL CLINIC, TORONTO

Town	Month	No. Exam.	T. Bc. not a Factor	Suspicious	Other Conditions	Tuberculosis				Active	Quiesc. or Arrested	% T. Bc.	Rec. for San.	New T. Bc. Found
						Childhood	Min.	Mod. Adv.	Adv.					
Sudbury.....	Jan.	301	230	1	15	5	26	17	7	16	39	18.2	16	11
Sault Ste. Marie..	Feb.	128	94	0	10	1	13	5	5	9	15	18.7	7	4
Port Hope.....	Feb.	49	41	0	3	0	3	1	1	2	3	10.2	3	3
Cobourg.....	Feb.	88	75	0	2	1	5	3	2	5	6	12.5	5	2
Midland.....	Feb.	46	37	1	3	0	2	2	1	1	4	10.9	1	1
Penetanguishene.	Feb.	64	54	0	5	0	3	2	0	2	3	9.3	1	2
Lindsay.....	Mar.	114	86	2	9	2	5	5	5	10	7	14.9	6	9
Newmarket.....	Mar.	57	40	1	4	2	5	2	3	6	6	21.0	5	2
St. Thomas.....	Apr.	95	70	1	9	2	4	6	3	7	8	15.7	8	7
Ridgetown.....	Apr.	80	63	1	8	1	1	2	4	6	2	10.0	5	3
Leamington.....	May	113	79	1	15	5	5	3	5	6	12	15.9	6	12
Orangeville.....	May	18	13	1	4	0	0	0	0	0	0	0	1	0
Chapleau.....	June	41	32	0	2	1	3	1	2	6	1	17.0	6	6
Schreiber.....	June	39	32	1	2	0	3	1	0	1	3	10.3	1	0
Dryden.....	June	42	28	0	7	0	4	2	1	2	5	16.6	2	2
Kenora.....	June	94	69	1	8	0	6	5	5	6	10	17.0	6	3
Sioux Lookout.....	June	73	55	4	2	4	3	4	1	2	10	16.4	1	5
Rainy River.....	June	49	40	0	2	1	2	3	1	2	5	14.3	2	0
Fort Frances.....	June	75	64	0	2	0	2	5	2	4	5	12.0	5	1
Emo.....	June	47	41	0	0	0	1	4	1	0	6	12.8	1	1
Owen Sound.....	July	163	121	5	2	3	16	9	7	14	21	20.2	15	9
Chesley.....	July	68	46	1	7	3	4	5	2	6	8	20.6	7	10
Walkerton.....	July	57	41	3	5	1	3	1	3	2	6	14.0	3	2
Parry Sound.....	Aug.	46	30	3	2	1	6	2	2	6	5	23.9	6	6
Mount Forest.....	Aug.	37	31	0	1	0	2	1	2	2	3	13.5	2	1
Arthur.....	Aug.	51	42	1	2	1	3	2	0	3	3	11.7	3	2
Drayton.....	Sept.	48	46	0	1	0	0	1	0	1	0	2.0	1	0
Fergus.....	Sept.	71	61	1	2	1	3	1	2	2	5	9.8	1	0
Palmerston.....	Sept.	51	31	1	11	0	4	2	2	2	6	15.7	2	1
Listowel.....	Oct.	62	49	2	5	3	0	3	0	3	3	9.7	1	4
Warton.....	Oct.	21	19	0	0	0	1	1	0	2	0	9.5	2	2
Southampton.....	Oct.	32	28	0	0	0	2	2	0	0	4	12.5	0	2
Tillsonburg.....	Oct.	94	81	3	2	1	3	2	2	2	6	8.5	2	4
Wingham.....	Oct.	50	44	1	3	0	0	1	1	1	1	4.0	1	0
Lucknow.....	Oct.	40	33	0	1	0	3	2	1	1	5	15.0	2	4
Kincardine.....	Oct.	40	26	2	3	1	5	2	1	0	9	22.5	0	2
Oshawa.....	Nov.	203	151	2	15	3	13	11	8	9	26	17.2	11	7
Brockville.....	Nov.	123	83	5	6	9	8	9	3	8	21	23.6	8	12
Hanover.....	Dec.	106	75	3	13	0	4	7	4	7	8	14.1	7	3
Durham.....	Dec.	33	27	0	1	1	1	3	0	0	5	15.1	0	0
Shelburne.....	Dec.	33	24	1	3	0	3	2	0	0	5	15.1	0	1
Orangeville.....	Dec.	12	9	0	1	0	0	2	0	1	1	16.6	1	1
Totals.....		3,054	2,341	49	198	53	180	144	89	165	301	15.2	163	147
							466			466				

TABLE IIIA
EASTERN CLINIC, OTTAWA*

Town	Month	No. Exam.	T.Bc. not a Factor	Suspicious	Other Conditions	Tuberculosis				Active	Quiesc. or Arrested	% T.Bc.	Rec. for San.	New T.Bc. Found
						Childhood	Min.	Mod. Adv.	Adv.					
Smith's Falls....	Jan.	95	78	1	3	1	5	2	5	5	8	13.68	4	2
Carleton Place..	Jan.	64	45	2	8	0	6	1	2	2	7	14.06	3	1
Perth.....	Feb.	66	51	2	2	0	6	3	2	6	5	16.6	6	2
Almonte.....	Feb.	37	29	1	4	0	2	0	1	1	2	8.10	1	1
Finch.....	Feb.	48	0	3	0	0	1	0	0	0	1	1.92	0	0
Avonmore.....	Feb.	27	26	1	0	0	0	0	0	0	0	0.0	0	0
Morrisburg.....	Mar.	38	31	0	1	1	3	0	2	1	5	15.78	1	0
Kemptville.....	Mar.	58	43	1	2	1	11	0	0	1	11	20.68	1	3
Winchester.....	Apr.	62	51	0	3	2	2	3	1	2	6	12.90	1	0
Prescott.....	Apr.	83	60	1	5	1	8	4	4	5	12	20.48	5	1
Casselman.....	May	39	25	1	3	0	5	4	1	8	2	25.64	5	0
Chesterville.....	May	65	55	1	2	0	3	2	2	3	4	10.76	3	0
Arnprior.....	June	72	55	0	4	2	9	2	0	2	11	18.05	0	2
Plantagenet.....	June	75	53	3	3	0	9	5	2	9	7	21.33	8	4
St. Andrew E.....	June	19	17	2	0	0	0	0	0	0	0	0.0	0	0
Alfred Industrial School...	June	71	69	1	1	0	0	0	0	0	0	0.0	0	0
Alexandria.....	June	222	146	9	6	3	30	14	14	22	39	27.47	22	14
Hawkesbury.....	Aug.	231	182	3	8	2	20	8	8	12	26	16.45	9	7
Rockland.....	Aug.	131	105	2	5	1	11	1	6	10	9	14.50	8	5
Pembroke.....	Oct.	137	107	0	0	0	17	6	7	7	23	21.89	5	4
Wales.....	Oct.	10	10	0	0	0	0	0	0	0	0	0.0	0	0
Renfrew.....	Nov.	76	57	0	2	0	12	3	2	4	13	22.36	0	6
Smith's Falls....	Nov.	124	97	2	1	1	12	8	3	6	18	19.35	3	4
Carleton Place..	Dec.	69	51	1	9	1	5	2	0	3	5	11.59	2	2
Perth.....	Dec.	97	85	0	0	1	7	2	2	3	9	12.37	3	2
Ottawa Clinic....	Dec.	70	32	5	6	0	14	6	7	10	17	38.57	6	5
Totals.....		2,090	1,608	39	81	17	198	76	71	122	240	17.38	96	65
							362			362				

TABLE IIIB
MID-EASTERN CLINIC, BELLEVILLE

Town	Month	No. Exam.	T. Bc. not a Factor	Suspicious	Other Conditions	Tuberculosis				Active	Quiesc. or Arrested	% T. Bc.	Rec. for San.	New T. Bc. Found
						Childhood	Min.	Mod. Adv.	Adv.					
Belleville.....	Jan.													
Marmora.....	Feb.	295	206	0	32	4	24	22	7	12	45	19.3	12	26
Belleville.....	Mar.	78	67	1	3	0	3	2	2	3	4	9.0	3	2
Stirling.....	Mar.	319	299	3	3	0	11	3	0	6	8	4.4	4	5
Madoc.....	Apr.	41	31	2	3	0	3	2	0	2	3	12.2	2	2
Belleville.....	Apr.	76	63	1	6	0	5	1	0	3	3	7.9	3	4
Picton.....	Apr.	46	23	4	8	0	4	3	4	6	5	24.0	5	7
Belleville.....	May	101	81	2	7	2	4	4	1	3	8	10.9	1	3
Wellington.....	May	55	36	0	9	0	3	3	3	6	3	16.4	6	7
Campbellford....	June	65	54	3	3	0	2	2	1	2	3	7.7	1	2
Belleville.....	June	62	47	1	6	0	1	3	4	4	4	12.9	4	7
Tweed.....	June	81	58	1	4	2	6	8	2	8	10	22.2	7	11
Belleville.....	July	53	35	3	10	1	2	1	1	2	3	9.4	2	2
Bancroft and Coehill.....	July	36	28	0	5	1	1	0	1	2	1	8.3	2	1
Deseronto.....	Aug.	88	73	1	7	0	3	1	3	2	5	8.0	2	2
Belleville.....	Aug.	41	27	1	6	2	0	3	2	4	3	17.1	2	5
Napanee.....	Aug.	56	40	1	6	1	3	3	2	4	5	16.1	5	4
Gananoque.....	Aug.	51	37	1	1	3	3	4	2	10	2	23.5	7	8
Colborne.....	Sept.	13	11	0	0	0	0	1	1	2	0	15.4	2	2
Belleville.....	Sept.	23	15	2	1	1	1	1	2	2	3	21.7	3	2
Hastings.....	Sept.	48	29	0	7	0	4	6	2	4	8	25.	2	3
Belleville.....	Oct.	52	35	2	3	2	3	5	1	1	10	21.2	1	7
Brighton.....	Oct.	49	29	2	3	1	5	6	3	5	10	30.6	5	5
Trenton.....	Oct.	43	39	1	2	0	1	0	0	0	1	2.3	0	0
Belleville.....	Oct.	32	20	0	6	2	1	3	0	1	3	18.8	3	3
Madoc.....	Nov.	42	24	1	5	0	6	5	1	5	9	28.6	3	4
Stirling.....	Nov.	38	28	0	4	0	3	3	0	2	4	15.8	2	1
Marmora.....	Nov.	31	26	0	1	1	0	3	0	1	3	12.9	1	1
Belleville.....	Nov.	54	43	1	3	0	3	2	2	2	5	13.0	0	3
Belleville.....	Dec.	80	69	0	3	2	4	1	1	3	5	10.0	3	3
Totals.....		2,049	1,573	34	157	25	109	101	48	107	176	13.3	93	132
							283			283				

In addition to the clinic work 90 pneumothorax treatments were given at the Belleville centre.

TABLE IIIC
NORTHERN CLINIC, NORTH BAY

Town	Month	No. Exam.	T.Bc. not a Factor	Suspicious	Other Conditions	Tuberculosis					Quiesc. or Arrested	% T.Bc.	Rec. for San.	New T.Bc. Found
						Childhood	Min.	Mod. Adv.	Adv.	Active				
North Bay.....		304	220	1	41	2	19	10	11	19	23	13.8	13	8
Cochrane.....	July	186	160	0	6	4	8	5	3	7	13	10.8	4	8
Kapuskaing.....	July	61	42	0	5	2	6	2	4	2	12	23.0	1	2
Hearst.....	July	121	101	0	7	4	6	1	2	3	10	10.7	2	8
Matheson.....	July	15	11	0	3	0	0	1	0	0	1	6.7	0	1
Mattawa.....	Aug.	32	26	1	1	1	1	0	2	3	1	12.5	1	2
Burk's Falls.....	Aug.	58	49	0	4	0	1	1	1	1	2	5.2	1	1
Englehart.....	Aug.	36	27	0	6	0	0	3	0	1	2	8.3	1	1
Iroquois Falls....	Aug.	49	41	0	0	1	4	0	3	3	5	16.3	2	2
Sturgeon Falls....	Sept.	73	61	0	6	0	3	2	1	1	5	8.2	3	2
Richard's Land....	Sept.	36	29	0	2	0	3	1	1	1	4	13.9	1	3
Desbarats.....	Oct.	39	31	1	1	1	4	0	1	3	3	15.5	0	2
Bruce Mines.....	Oct.	20	10	0	3	0	2	0	5	4	3	35.0	3	3
Massey.....	Oct.	8	6	0	1	1	0	0	0	0	1	12.5	0	0
Thessalon.....	Oct.	58	39	0	5	0	9	2	3	4	10	24.1	4	7
Blind River.....	Oct.	55	44	0	2	0	6	3	0	4	5	16.4	3	6
Sault Ste. Marie	Nov.	159	107	2	16	1	16	10	7	10	24	21.4	5	6
Mattawa.....	Nov.	41	23	0	4	1	5	2	6	9	5	34.1	4	5
Sudbury.....	Dec.	312	235	0	25	4	26	16	6	9	43	16.7	6	10
Totals.....		1,663	1,262	4	138	22	119	59	56	84	172	15.4	54	77
								256		256				

Altogether 113 Clinics were held, forty centres were visited for the first time, thus affording a better service for local physicians. 8,856 examinations were made, 1,367 or 15.4% of those examined being tuberculous. Of these 478 or 34.9% of the total were considered active. 421 or 30.8% of the tuberculous cases examined had not been diagnosed prior to attending the Clinics. 406 or 29.7% were recommended for admission to sanatorium.

Of the 406 cases of tuberculous disease recommended for sanatorium treatment, 163 were examined by the Central Clinic, 96 by the Ottawa Clinic, 93 by the Belleville Clinic, and 54 by the North Bay Clinic. They were classified as follows.

TABLE IV

Childhood		Minimal		Mod. Adv.		Advanced		Miliary Tuberculosis	Suspects	Silicosis & Tuberculosis	Pleurisy with Effusion	Tuberculous Cervical Adenitis	Tuberculous Empyema
Act	Inact	Act	Inact	Act	Inact	Act	Inact						
11	0	90	8	99	6	167	9	1	6	4	2	1	2

Of the 421 cases who were not previously diagnosed as tuberculous, 147 were examined by the Central Clinic, 65 by the Ottawa Clinic, 132 by the Belleville Clinic and 77 by the North Bay Clinic. The following is their classification.

TABLE V.

Childhood		Minimal		Mod. Adv.		Advanced	
Active	Inactive	Active	Inactive	Active	Inactive	Active	Inactive
19	32	92	106	58	33	77	4

The 198 minimal cases represent 47.0% of the total. However, of the 370 cases of tuberculous disease of the adult type, the 198 minimal cases represent 53.5% of those diagnosed.

TABLE VI.

Reasons Why Newly Discovered Cases were Referred to Clinics

All Centres

(Schools and Old Peoples Homes not included)

Contact	Totals	Childhood		Minimal		Mod. Adv.		Advanced	
		Act.	Inact.	Act.	Inact.	Act.	Inact.	Act.	Inact.
Positive	259	Contact 15	Contact 31	Contact 42	Contact 39	Contact 14	Contact 7	Contact 6	Contact 1
		Suspect 2		Suspect 25	Suspect 24	Suspect 15	Suspect 8	Suspect 30	
Negative	148	Suspect 1	Suspect 1	Suspect 28	Suspect 33	Suspect 29	Suspect 16	Suspect 39	Suspect 1

Of the 407 cases recorded, 155 or 38.0% were referred to the Clinic on account of contact alone and did not have symptoms suggestive of tuberculosis.

Of the 191 diagnosed as minimal, 81 or 42.4% were referred solely because of contact. 259 of the cases, 63.6% of the total were in the contact group. 130 or 50.0% of these were classified as minimal.

The above table demonstrates the value of the examination of contacts.

TABLE VII.
Tuberculosis Disease in Relation to Contact, Age and Sex
All Centres

Age Group	Contact	Sex	Disease	Totals	
0 to 4	+	M F	15 8	23	23
	—	M F	0 0	0	
5 to 9	+	M F	26 37	63	65
	—	M F	1 1	2	
10 to 14	+	M F	19 27	46	63
	—	M F	5 12	17	
15 to 19	+	M F	36 51	87	128
	—	M F	17 24	41	
20 to 24	+	M F	39 93	132	203
	—	M F	24 47	71	
25 to 29	+	M F	23 72	95	185
	—	M F	36 54	90	
30 to 34	+	M F	22 54	76	162
	—	M F	45 41	86	
35 to 39	+	M F	22 42	64	128
	—	M F	32 32	64	
40 to 44	+	M F	19 21	40	92
	—	M F	34 18	52	
45 and up	+	M F	64 94	158	318
	—	M F	100 60	160	

Total, 1367

With history of Contact—784 or 16.4% of contacts examined.

With no history of Contact—583 or 14.1% of non-contacts examined.

Only 2 cases of tuberculous disease were present in the age group 0 to 10 without a definite history of contact as against 86 with history of contact.

EXAMINATION OF STUDENTS IN NORMAL SCHOOLS AND COLLEGE OF EDUCATION

At the opening of the Fall term, the staff co-operated with the Department of Education in tuberculin testing and X-raying 1,140 students entering the Normal Schools, as well as 297 students entering the College of Education. The findings are given in the following table.

TABLE VIII.

	Number Tested	Positive Reactors	Per Cent. Positive Reactors	Number showing Disease
Normal School.....	1,140	330	29.0	8 with Min. Disease 2 with Mod. Adv. Disease
College of Education.....	297	139	46.8	1 with Minimal Disease

The Division has, with the co-operation of the Department of Public Welfare, conducted surveys of the students in the Industrial Schools of the Province.

The staff of the Belleville Centre made surveys of the students in the Belleville Collegiate and in the Hastings Old People's Home. Four cases of tuberculous disease were found in the former and eleven in the latter.

INSPECTION OF SANATORIA

A survey of patients in sanatoria was made during the Spring with the object of having many cases which had obtained maximum benefit from their stay in sanatorium either discharged to their home or placed in suitable boarding houses or other institutions.

TUBERCULIN TESTING AND X-RAYING OF NURSES

The returns from the tuberculin testing and X-raying of student and graduate nurses were tabulated. These reports were far from complete in many instances. The following table shows a summary of the returns made.

TABLE IX.

	Number Employed	Number Reported	Tuberculin Positive	Per Cent.	Tuberculin Negative	Per Cent.	Number X-Rayed	Total showing Disease	Per Cent.	Active	Quiescent or Arrested
Students.....	3,170	3,029	1,267	41.8	1,756	57.9	1,681	18	.55	8	10
Graduates.....	1,230	1,141	737	64.5	424	37.1	730	15	1.3	4	11

In an attempt to find out why cases of definite tuberculous disease, who had been recommended for sanatorium treatment, failed to find admission to sanatorium, a questionnaire was sent to each family physician covering the period January 1st, 1935, to June 30th, 1936.

During this time 359 cases had been recommended for sanatorium treatment. The following table gives a summary of their disposal.

TABLE X.

	Number	Per Cent.
Admitted to Sanatorium.....	152	42.3
Died before admission.....	16	4.4
Not yet admitted.....	191	53.3
Total recommended.....	359	100.0

Of the 191 not yet in sanatorium our questionnaire received no answer in 72 cases, the reasons given in the other 119 cases are listed as follows:

Averse to sanatorium care.....	66
Unable to pay maintenance.....	12
Sanatorium too far away.....	10
Worried about family.....	5
Municipality refused to pay, not able to pay or not interested.....	7
Under care of own doctor or doctor did not think sanatorium care needed.....	4
Cases in hospital.....	2
Reasons not known.....	2
Cases lost sight of.....	4
Other reasons.....	7

DIVISION OF SANITARY ENGINEERING

A. E. BERRY, M.A.Sc., C.E., Ph.D., Director

The year 1936 was a most unusual one in many ways with respect to problems created in sanitary engineering. The extremely hot summer, accompanied by an abnormal low rainfall in many parts of the Province, had a decided effect upon water supplies and stream sanitation. Many streams either dried up completely or were so low that the disposal of sewage involved unusual difficulties. A number of municipal water supplies were found inadequate to cope with the situation, and to supply the demand for water during that period. These occurrences will call for a review of the facilities in use in the municipalities to meet prolonged drought. Complaints of odours and unsanitary conditions were more numerous than usual during the summer, and requests were received by the Department from many municipalities. Apart from these difficulties the year brought a forward step in the control of milk supplies, and advances in water treatment and sewage disposal. New regulations were adopted which places the control of milk distributing plants under the Province.

Waterworks System

Expenditures in the construction of new waterworks and extensions to existing systems has not yet approached what might be regarded as an average figure. The expenditures approved by the Department totalled \$683,600.04. There was an indication of an upward trend toward the latter part of the year but in most cases this did not reach the stage where a definite decision had been made to proceed with the work. The improvement in general financial conditions will be reflected in the construction of new waterworks systems for the smaller centres and further extensions in the larger places. An encouraging sign is noted in the interest shown in waterworks systems for places with populations less than 1,000.

There is in the Province at present 284 municipal centres supplied by public waterworks systems. This represents a total population of 2,400,000 or 70% of the total of the Province. In this group there are 58 filtration plants and 137 water chlorination plants. The source of supply for these systems may be grouped as follows:

Surface Waters.....	189
Wells.....	65
Springs.....	30

Some of the principal changes involved during the past year in the waterworks systems of the Province include the following: New systems started for Bolton, Mersea Twp., Exeter and West Lorne; a new supply main from Hamilton to Dundas; and substantial extensions of mains in Cornwall, Leaside, Ottawa, Sarnia, Stratford, Teck Twp., and Tisdale Twp.

Waterworks Operation

Operation of the public waterworks systems in the Province continued at a high standard during the year. As a result of this, and in spite of difficult water conditions, no illness or epidemics of any kind could be attributed to

any public waterworks system in the Province. There has now been no typhoid fever epidemic in the Province which can be traced to a public supply since the year 1929. The operation of filtration plants and chlorination equipment has shown steady improvement for each year. Waterworks operators have added to their knowledge in this field with the result that the consumer has benefitted by a safer water, as well as a supply of better quality in tastes and in other respects. Special efforts are being directed to control tastes and to make the water as palatable as possible.

The unusual conditions encountered during the summer, and which tended to decrease the supply of water created a shortage in several centres. Not only was this shortage due to inadequate supply, but it was also due to deficient treatment works and supply works. The Town of Dundas experienced a severe shortage of water, and the creek which had been sufficient under all conditions in the past completely dried up. Water for drinking purposes was supplied by tank cars from adjoining municipalities, and the town was able to utilize another source of supply for pumping into the mains for domestic purposes. This latter supply, while heavily chlorinated, was unfit for drinking. It served a useful purpose during the critical period. Such a failure in the future has been avoided by constructing a supply main to connect with the City of Hamilton. The Town can in future supplement their own supply by water from that City as required.

The rainfall during the months of July, August and September was very considerably lower than the normal for these months. Other municipalities also experienced shortage. The Town of Essex was unable to supply the demand from its deep wells. A number of other municipalities encountered similar difficulties for short periods. This unexpected drought and high water consumption should result in a revision of a number of water supply systems with the objective of providing adequate quantities to meet similar conditions in future.

An advance was made during the year in water softening. The first municipal water softening plant in the Province, installed in Etobicoke Township, continued to give satisfactory results. The Town of Simcoe put into service a water softening unit to both soften the water and remove the iron. This plant is a zeolite equipment, and provision is also made for removal of iron partly by zeolite filters and partly by aeration. The results of the operations of these two plants will be watched with interest in moulding proper opinion on the value and feasibility of water softening for municipal installations. The hardness and iron content of the Etobicoke supply are approximately 325 parts per million and 1.5 part per million respectively, while at Simcoe the hardness is approximately 200 parts per million and the iron is about 2.4 parts per million.

During the year the engineers of this Division continued to supervise the operation of water treatment plants throughout the Province. Periodic visits were made to ensure that the treatment process was being carried on properly and that the consumer was safeguarded against disease transmission. This service continues to be of value in assisting operators in plant control. A number of unsatisfactory conditions were discovered and corrected. In addition to this the engineers of the division have been on call at all occasions to assist municipal engineers and water plant operators in any problems with which they are faced.

Sewerage Systems

The figure of \$875,868.32 expenditure approved by the Department for sewerage construction is substantially lower than that of years prior to the

depression. The return of normal financial conditions will bring about an upward trend in this field, as in waterworks. Sewerage programs generally lag behind those of waterworks and when financial conditions are unfavourable there is a tendency to put off expenditures for sewers and sewage disposal. There is at present in the Province 134 municipal sewerage systems. These supply a population in these centres of 2,033,000. Dilution continues to be the most general method for the disposal of sewage from these systems. The type of treatment practised has been mostly activated sludge where complete treatment is called for. There are at present in the Province 28 activated sludge disposal plants, 9 trickling filter plants and 33 sedimentation tanks, and two fine screening plants. The remainder dispose of their sewage by dilution in nearby waters.

Operation of Sewage Plants

The operators of municipal sewage disposal plants were probably faced during the summer season with the most difficult time experienced for many years. Extremely hot weather and low rainfall called for a high standard in the effluent if offensive conditions were to be avoided. In some places the streams which normally have a reasonably good summer flow of water were completely dry, and the effluent had to be discharged into a dry creek bed. Furthermore, in some cases the sewage flow had completely disappeared from the stream a short distance below the outfall. As a result of these conditions complaints of odours in rivers and other waters were not uncommon. Emergency measures had to be taken in a number of places to bolster up the effluent of the plant and in this way an attempt was made to control the condition of the stream as far as possible.

The Department has been at the service of the municipalities at all times to assist them in operating problems. Situations of this kind have indicated the importance of having well trained operators for sewage disposal plants. If a plant is to meet these unusual demands and avoid offensive conditions in the stream it must be operated carefully and intelligently.

The disposal of sludge still proves to be a difficult problem, and one which has not yet reached a final solution. A variety of methods are employed in this Province and while many of these are working quite satisfactorily there is need for a change in a number of other works. The Ontario plants utilize sludge disposal by digestion, open sand bed drying, covered drying beds, vacuum filtration, disposal on the land, and there is now in operation as an experimental unit, a centrifuge in the North Toronto plant. Developments are taking place rapidly in this field and it is felt that a more permanent solution will be reached in the near future. Some municipalities have been able to get rid of their sludge in liquid form by disposing, for fertilizing purposes, on the land. While this has been somewhat expensive it has been possible to follow this practice and keep the expenditure within reasonable limits. Some difficulty has been experienced with odours from land upon which this material was deposited. An interesting test was carried on at Kitchener on a full plant scale for part of one day, using chemical precipitation. This sewage contains a large amount of trade waste which gives the effluent a brown colour. It was shown that the chemicals (ferrisul) would remove the colour and would also reduce very materially the solids in the effluent.

Stream Pollution

The past summer called for much work in the investigation of stream conditions. An engineer from the Department was stationed in the vicinity of Kitchener to make observations on the Grand River during the summer

months. He also supervised the operation of sewage disposal plants in that area. Examinations were also made on the Thames River in the vicinity of London and Chatham. Both of these streams carried very reduced rates of flow, and in the Grand River an all time low mark was experienced. Further tests were also made on the Avon River at Stratford, as well as different other streams throughout the Province. The Old Welland Canal was given further consideration in the vicinity of St. Catharines.

On the Grand River the minimum flow recorded for any one day was 20 c.f.s. The previous low mark was 29 c.f.s., which occurred in the year 1934. The survey made on this stream involved chemical analyses and oxygen tests daily for some considerable period. During the low flow it was found that the oxygen content of the water in certain parts of the stream reached a low point and odours were complained of. The situation was further complicated by the extensive growth of algae and its subsequent decomposition.

In the Thames River the flow below London was so curtailed that many complaints were made concerning odours. The West End Plant of the City discharges into the river above the park dam. The low flow made this somewhat stagnant. The extensions to the sewage treatment plant were not entirely completed until after the summer season. At Chatham again low water was experienced and odours were prevalent in certain sections of the river. An examination of the situation at that point revealed the need for removal of some of the solids before the sewage and trade wastes are discharged into the stream. In the Old Welland Canal progress has been made towards a solution of the difficulty. During the year the Dominion Department of Transportation appointed a consulting engineer to study various procedures which might be adopted to take care of the situation when this section of the canal is dewatered. It is hoped that a final solution to this problem may be reached in the near future.

The conditions which resulted during the summer of 1936 have brought to light the necessity for more active studies in stream pollution in the Province. It would appear necessary to keep a close check on a number of streams if it is to be possible to determine the requirements for sewage treatment, and to forestall unfavorable conditions.

Milk Control

A distinct change was brought about in milk legislation during the year. New regulations were introduced under the Milk Control Act through which the Department of health was charged with the supervision of all milk distributing plants throughout the Province, including both raw and pasteurized supplies. The regulations consist of minimum standards which are in force all through the Province. These plants are being examined by members of the staff, and an effort is made to see that the standards are complied with. The local municipalities will still continue to carry on inspections in these dairies as before and in co-operation with the Department.

Refuse Collection and Disposal

The municipal collection and disposal of refuse is gaining throughout the Province. There is an effort to provide for the removal of this material by the municipality. It has been found to be cheaper than disposing of it by other means. Two methods of disposal of garbage are generally used in the

Province, viz., dumping and incineration. Dumping has been utilized in the smaller centres, while in the larger, incineration is gradually replacing this method.

Recreational Sanitation

During the year there was a change in the control of recreational sanitation throughout the Province. In former years it had been the practice of the Division to make examinations at tourist camps, highway refreshment booths and similar facilities. In 1936 the health officers were all circularized and given instructions for inspection of these places. They were also asked to report to the Department on their inspections. The division did carry on some supervision in the Lakeland regions and in those places where the tourists congregated for the summer.

Complaints on Sanitation

During the summer of 1936 the Department received a great many requests for assistance in the solution of complaints made concerning odours, drainage and various matters involving sanitation. The larger number of these were due no doubt to weather conditions. These requests come chiefly from the Medical Officers of Health and municipal officials. Over 300 requests were received during the year, all of which is in addition to the regular routine work of the Division.

Attached is a list of the waterworks and sewerage certificates issued during the year.

SUMMARY

Re Waterworks:	Estimated cost
Extensions to existing system.....	\$ 606,034 22
Purification of water supplies.....	42,219 82
New systems.....	35,346 00
Total.....	\$ 683,600 04
Re Sewerage:	
Extensions to existing system.....	\$ 868,868 32
Treatment works.....	7,000 00
New sewerage systems.....	.....
Total.....	\$ 875,868 32

The total number of applications favorably reported upon re waterworks and sewerage for the year was 166 and involves an estimated expenditure of.....\$ 1,559,468 36

CERTIFICATES ISSUED RE WATER MAIN EXTENSIONS, PURIFICATION, Etc.,
for the year 1936

Municipality	No. of Certificates Issued	Water Main Extensions	Supply and Purification	New
Almonte.....	1	\$ 1,292 87		
Barton Twp.....	2	8,848 00		
Belle River.....	2	3,346 97	\$ 2,605 00	
Bolton.....	1			\$ 30,000 00
Cobourg.....	1	17,000 00		
Cornwall.....	2	41,030 00		
Dundas.....	1	31,000 00		
Eastview.....	1	646 00		
East Whitby Twp.....	2	6,950 00		
East York Twp.....	1	250 00		
Englehart.....	1		12,000 00	
Exeter.....	1		6,000 00	
Forest Hill.....	5	20,566 00		
Fort Frances.....	1	2,174 08		
Fort William.....	3	7,023 08		
Grantham Twp.....	2	8,100 00		
Grimsby.....	1	8,660 00		
Hamilton.....	4	18,455 00		
Hespeler.....	1		3,514 82	
Kitchener.....	4	11,073 80		
Leaside.....	3	24,582 14		
London.....	1	647 25		
Maidstone Twp.....	2	7,427 31		
Mersea Twp.....	2	3,787 00		5,346 00
North York Twp.....	2	13,264 66		
Ottawa.....	1	53,500 00		
Owen Sound.....	1	13,300 05		
Palmerston.....	1	314 00		
Port Perry.....	1	2,955 00		
Rockcliffe Park.....	1	3,064 41		
Saltfleet Twp.....	2	10,863 59		
Sarnia Twp.....	1	1,600 00		
Sarnia.....	2	32,140 00		
Simcoe.....	1		18,100 00	
Stamford Twp.....	1	427 00		
Stratford.....	1	20,000 00		
Sudbury.....	1	820 00		
Swansea.....	2	7,128 00		
Teck Twp.....	3	84,543 53		
Timmins.....	2	22,823 00		
Tisdale Twp.....	6	97,112 03		
Toronto Twp.....	2	3,579 00		
Toronto.....	5	3,845 00		
Waterford.....	1	628 70		
Waterloo.....	1	534 75		
Woodbridge.....	1	1,000 00		
York Twp.....	3	9,641 00		
Totals.....	80	\$ 606,034 22	\$ 42,219 82	\$ 35,346 00

CERTIFICATES ISSUED RE SEWERAGE FOR THE YEAR 1936

Municipality	No. of Certificates	Sewer Extensions	Disposal	New
Almonte.....	1	\$ 1,044 90		
Brampton.....	1	1,380 22		
Brantford.....	1	735 00		
Chesterville.....	1	1,600 00		
Crowland Twp.....	2	10,033 35		
Eastview.....	1	796 00		
Forest Hill.....	3	38,610 00		
Fort William.....	6	40,401 87		
Hamilton.....	1	3,500 00		
Kingston.....	2	29,649 87		
Kitchener.....	4	15,438 33		
Leaside.....	4	144,240 70		
London.....	7	89,540 28		
Morrisburg.....	1	3,412 15		
New Toronto.....	1	10,000 00		
North York.....	1	3,700 00		
Nipigon Twp.....	1	1,297 92		
Nipigon.....	1	1,524 85		
Orillia.....	1	693 60		
Ottawa.....	11	65,746 57		
Peterborough.....	2	4,307 28		
Rockcliffe Park.....	1	1,806 00		
St. Catharines.....	3	1,170 40		
Scarborough Twp.....	1	3,876 53		
Stamford Twp.....	3	1,810 25		
Stratford.....	2	112,702 55		
Swansea.....	3	4,865 00		
Teck Twp.....	2	74,754 93		
Timmins.....	3	42,642 00		
Tisdale Twp.....	3	44,370 67		
Toronto.....	7	93,301 00	7,000 00	
Waterloo.....	1	683 10		
Woodstock.....	1	750 00		
York Twp.....	3	20,483 00		
Totals.....	86	\$ 868,868 32	\$ 7,000 00	

DIVISION OF NURSE REGISTRATION

MISS A. M. MUNN, REG. N.
Inspector of Training Schools

Visits to Schools of Nursing

Fifty-eight schools were visited once and four schools were visited twice making a total of sixty-six visits to schools. This means that every school of nursing had a visit with the exception of the School of Nursing, University of Toronto, and the School of Nursing at the Niagara Falls General Hospital—this last was delayed because of a new appointment.

There have been twenty additional visits since October 1, 1936. Besides, visits have been made to four special hospitals to evaluate each as an affiliation centre—Niagara Peninsula Sanatorium, St. Catharines; Toronto Hospital, Weston; Children's Hospital, Buffalo; and Children's Memorial Hospital, Montreal.

Plan of Visits

During visits paid in 1936, hours of duty, health supervision with special emphasis on the enforcement of regulations with relation to X-ray and tuberculosis test for nurses, student enrolment, progress, any special problem and clinical facilities were checked. When possible to do so, a class in progress, and demonstrations were observed.

Special emphasis was given in selected centres to public health nursing experience in the third year.

Revision of Regulations

Early in the year a Joint Committee, composed of representatives of the Council of Nurse Education appointed by the Hon. the Minister of Health, and an equal number from the Legislation Committee of the Registered Nurses' Association of Ontario, met to consider the revision of regulations for registration of nurses and conduct of training schools.

Six meetings of this Joint Committee were held including one conference with the Hon. the Minister of Health and one with the Deputy Minister of Education, who gave valuable assistance in connection with the outline of educational qualifications for entrance to training schools for nurses. The regulations now provide definite instructions to Superintendents of Training Schools in this respect.

Hours of duty for nurses were closely studied and are now limited to fifty-eight hours weekly for night as well as day duty and including class hours.

Council of Nurse Education

According to the revised regulations the Lieutenant-Governor in Council shall appoint a Council of Nurse Education consisting of not more than eight members.

The Deputy Minister of Health and the Director shall be members *ex officio*. The remaining members shall be:

(a) an inspector appointed under The Public Hospitals Act who shall be a medical practitioner and who shall be appointed for a term of one year; and

(b) a medical practitioner who is connected in a teaching capacity with an approved training school and who shall be appointed on the recommendation of The Registered Nurses' Association of Ontario for a term of one year; and

(c) an officer of the Department of Education who shall be appointed for a term of one year; and

(d) a registered nurse who shall be connected in a teaching capacity with an approved training school and appointed on the recommendation of The Registered Nurses' Association of Ontario for a term of three years; and

(e) a registered nurse who shall be connected in a teaching capacity with an approved training school and appointed on the recommendation of The Registered Nurses' Association of Ontario for a term of two years; and

(f) a registered nurse who shall be connected in a teaching capacity with an approved training school and appointed on the recommendation of The Registered Nurses' Association of Ontario for a term of one year.

Affiliation

Nursing in Diseases of Children—The Toronto Hospital for Sick Children is now providing three months' training in Children's Nursing for students of the Royal Victoria Hospital, Barrie, and Ross Memorial Hospital, Lindsay.

An effort is being made to improve training in Children's services and it has been possible to secure some additional affiliation for training schools in the Eastern part of the Province with the Children's Memorial Hospital, Montreal. Additional experience is now available with the Children's Hospital at Buffalo and since this hospital is well staffed and equipped for teaching it is hoped that a few of the training schools may take advantage of this service.

Mental—One affiliation was arranged this year which provides experience for students from St. Joseph's Hospital, Hamilton, in the Ontario Hospital there. A definite programme can be planned for this service as soon as residence accommodation in connection with the Provincial Hospitals will justify this.

Tuberculosis—One new affiliation in Tuberculosis has been established, namely, that of the Victoria Hospital, Renfrew, with the Toronto Hospital, Weston.

Medical—The Toronto General Hospital is now accepting students from the Royal Victoria Hospital, Barrie, and the Ross Memorial Hospital, Lindsay, for a three months' term in acute Medicine and Dietetics.

Discontinued Training Schools

During the year the training school in connection with the Charlotte Eleanor Englehart Hospital, Petrolia, was discontinued and two students transferred to the General Hospital, Chatham, for the completion of their

training. The Great War Memorial Hospital, Perth, graduated the last class in July, 1936. This makes a total of forty-five discontinued training schools since the organization of this Department in 1926.

STATEMENT OF REGISTRANTS AND REVENUE

Total number registered, 1936.....	956
Total number taking Provincial Examinations, 1936.....	896
Total number registered since 1923.....	20,868

FINANCIAL STATEMENT

Registration and Re-Registration fees.....	\$ 18,515 50
Examination fees.....	5,306 00
Training School Records.....	63 75
Miscellaneous.....	33 54
Total.....	\$ 23,918 79

DIVISION OF HEALTH EDUCATION

MARY POWER, B.A., Director

I beg to submit herewith a report of the activities of the Division of Health Education.

I. School Health Education

For the school year 1935-6 the following service was given to Teachers who took the Summer Course in Health Teaching and to other Teachers requesting aids for Health Teaching. A total of 1,007 budgets containing 10,491 pieces of free material was sent out, each Teacher being sent material suitable for the particular grade he or she was teaching.

The Loan Service of books, etc., was given only to those Teachers who had taken the Summer Course in Health Teaching. To these Teachers who availed themselves of this service we sent 128 parcels containing 524 pieces of material, suitable in each case for the specified grade.

To Instructors in Normal Training School, 5,360 pieces of material were sent upon request.

II. Public Health Education

During the early part of the year the work of the Division continued as usual, literature and other health educational material being sent to Local Health Authorities, namely, Medical Officers of Health, Public Health Nurses, etc. Organizations and Clubs in various sections of the Province were given service upon request. The leaflets which continued to be popular and requested in quantities were: the Baby Book; Health Almanac; Resuscitation and publications concerned with the sanitation in the home.

III. The Summer Course in Health Teaching

Was repeated in the Summer of 1936 with an enrolment of 176 teachers. The Course covered a period of five weeks and lead to a credit for a teacher's permanent 1st or 2nd class elementary school certificate.

MINUTES OF THE 22ND MEETING OF THE ONTARIO HEALTH OFFICERS' ASSOCIATION—MAY 13, 14 and 15, 1936

The Annual Meeting this year was held in the Royal York Hotel with a total registration of 317.

The Resolutions Committee, under the chairmanship of Dr. J. W. Fraser, Medical Officer of Health, Kitchener, brought in the following resolutions:

1. "That the Secretary be instructed to write Dr. James Roberts, Medical Officer of Health, of Hamilton, a past-president of this Association, expressing regret at his enforced absence from the currant meeting, and expressing the sincere hope that he may have an early and complete recovery from his illness."

2. "That the Secretary be instructed to write Mrs. Hugh McColl, of Milton, expressing profound sympathy in her recent bereavement."

The Nominating Committee was presided over by Dr. Ward W. Woolner, M.O.H., Ayr, Ont., and the report as submitted resulted in the election of the following Officers and Executive:

OFFICERS

President—DR. C. E. HILL, M.O.H., North York Township, Lansing, Ont.
 1st Vice-Pres.—DR. W. H. BIRKS, M.O.H., Bowmanville, Ont.
 2nd Vice-Pres.—DR. T. H. MCCOLL, M.O.H., Tilbury, Ont.
 Secretary—MARY POWER, Parliament Buildings, Toronto, Ont.

EXECUTIVE COMMITTEE

DR. EDGAR DAVEY, Assistant M.O.H., Hamilton, Ont.
 DR. T. A. LOMER, M.O.H., Ottawa, Ont.
 DR. C. H. BIRD, M.O.H., Howe Island Township, Gananoque, Ont.
 DR. F. LADOUCEUR, M.O.H., Casselman, Ont.
 DR. JAS. W. MACKIE, M.O.H., Township Leeds & Lansdowne Front, Lansdowne, Ont.

Dr. A. E. Ranney, President, outlined the following Resolution, which, however, is entered in these Minutes as a matter of record, since it was not submitted to the Meeting by the Resolutions Committee:

"That a Control Bureau be established by the Executive of 'The Ontario Tuberculosis Sanatoria' which Bureau or Central Point could be communicated with when we wish to have a patient admitted to a Sanatorium, who would be in a position to inform us which institution had a waiting list and which had available vacant beds."

At the Luncheon, which formed the last Session of the Meeting, the members expressed their satisfaction with the new plan tried out this year, whereby the morning sessions were devoted to instruction on practical points arising in the daily routine of the Medical Officer of Health, and the afternoon sessions included outside speakers who were specialists in various fields of medicine and public health administration. The opinion was expressed by several members and applauded unanimously that the experiment had been successful, in so far as it gave practical help to the Medical Officer of Health and they requested that the plan be followed for future meetings.

TWENTY-SECOND ANNUAL MEETING ONTARIO HEALTH OFFICERS' ASSOCIATION

TORONTO, MAY 13, 14 and 15, 1936

HEADQUARTERS: ROYAL YORK HOTEL

PROGRAMME

Wednesday, May 13th

MORNING SESSION—Concert Hall.

9.00 a.m.—Registration.

10.30 a.m.—"Needs of the Medical Officer of Health, as shown by correspondence in the files of the Department"—Dr. J. T. Phair, Chief Medical Officer.

"The Legal Responsibility of the Medical Officer of Health"—Dr. K. G. Gray, Solicitor for the Department.

AFTERNOON SESSION, 2.15 p.m.—Concert Hall

- 2.15 p.m.—Address—The Honourable J. Albert Faulkner, Minister of Health, Ontario.
- 2.45 p.m.—Department Report on the Duties and Status of the Medical Officer of Health in Ontario—Dr. B. T. McGhie, Deputy Minister of Health.
- 3.15 p.m.—“Reasonable Interpretation of the Responsibilities of the Local Medical Officer of Health”—Dr. E. S. Godfrey, Jr., Commissioner of Health, New York State.

Thursday, May 14th

MORNING SESSION, 9.00 a.m.—Concert Hall

- A. Minimum Standards for Tourist Camps and other Recreational Facilities—Division of Sanitary Engineering.
- B. Protection from the Dangers of Cyanide Fumigation.
- The addition of Cancer to the list of Reportable Diseases.
- The importance of the Medical Officer of Health to Hygiene in Industry—Division of Industrial Hygiene.

 PARLOUR B

- Problems in the Control of Venereal Disease in Communities where Facilities are Available—program under the auspices of the Division of Preventable Diseases.
- Milk Control in Communities with a Pasteurized Supply—under the auspices of the Division of Sanitary Engineering.

BALL ROOM

- Milk Control in Communities with Raw Milk Supply—under the auspices of the Division of Sanitary Engineering.
- Venereal Disease Problems in Communities where Facilities are not Available—under the auspices of the Division of Preventable Disease.

AFTERNOON SESSION, 2.15 p.m.—Concert Hall

- 2.15 p.m.—The Local Board of Health as its own Publicity Agent—Dr. D. V. Currey, Medical Officer of Health, St. Catharines, Ontario.
- 2.45 p.m.—Can We Prevent Heart Disease?—Dr. John Hepburn, Toronto.
- 3.15 p.m.—Serum Therapy in Pneumonia—Dr. George Anglin, Toronto.
- 3.45 p.m.—Medical Supervision of the Dionne Quintuplets—Dr. A. R. Dafoe, Medical Officer of Health, Callander.

DINNER SESSION, 6.30—Crystal Ball Room

1. Presidential Address—Dr. A. E. Ranney, Medical Officer of Health, North Bay.
2. Guest Speaker—The Honourable Charles G. Power, Minister of Pensions and National Health, Ottawa.

Friday, May 15th

MORNING SESSION, 9.30 a.m.—Ball Room

- The Tuberculosis Situation in Ontario and the Problem it presents to the Medical Officer of Health—Division of Tuberculosis Control.

PARLOUR B

Nuisances as a Problem of the Medical Officer of Health—under the auspices of the Division of Sanitary Engineering.

Immunization Program in Communities where Help is Available to the Medical Officer of Health—under the auspices of the Division of Preventable Diseases.

CONCERT HALL

School Sanitation—under the auspices of the Division of Sanitary Engineering.

Immunization Program in Communities where the Medical Officer of Health is the Sole Agent—under the auspices of the Division of Preventable Diseases.

LUNCHEON SESSION, 12.30 p.m.—Private Dining Room No. 9

Summary: The 1936 Conference as an Effort to Assist the Medical Officer of Health in Meeting the Demands of His Office—Dr. J. T. Phair, Chief Medical Officer.

AFTERNOON SESSION, 2.30—Field Trips

Provincial Laboratories, Parliament Buildings.

Water Filtration Plant.

Modern Dairy Plant.

Sewage Treatment Works, etc.

THE LIBRARY OF THE DEPARTMENT OF HEALTH

FREDRITA HENLEY WRIGHT, Librarian

Since the enlarged Library service went into effect in 1935, all books for the Central Library, the thirteen Ontario Hospitals and outside units, are purchased through the Central Library. Placing of annual subscriptions to the numerous journals has also been done in this way.

All books are received at the Central Library, catalogued in the central catalogue and then forwarded to the Hospital, together with duplicate cards for insertion in the Hospital catalogue.

ACQUISITIONS

During 1936 the following additions were made:

Central Library

Books purchased.....	49
Journals.....	118 vols.
Reports.....	89
Pamphlets.....	1,453
	1,709
Total.....	1,709

A number of new journal subscriptions were added to the Library list during 1936, bringing the total number to 94, four of which were complimentary.

Ontario Hospitals

Books purchased.....	156
(Including books for training schools)	
Journal subscriptions.....	81
Periodical subscriptions.....	104
Newspaper subscriptions.....	130
	471
Total.....	471

LOAN SERVICE

There were 2,316 loans made by the Library; 2,041 were within the Department and 275 to the outside services and Ontario Hospitals. Journals on tuberculosis were circulated regularly to the Clinicians in charge of the Provincial Traveling Chest Clinics at North Bay, Belleville and Ottawa, and to the Tuberculosis Unit at the Ontario Hospital, New Toronto. Routine circulation of journals was made to the Branch Laboratories at North Bay, Fort William, Sault Ste. Marie, Peterborough and Ottawa.

SUMMER COURSE IN HEALTH TEACHING

To the Summer Course in Health Teaching, the Library loaned bound books, pamphlets and health journals to the number of several hundred.

The service was very much appreciated by the students and formed a valuable part of health instruction. The Library has extended this service since the Course was organized in 1933. The attendance at the 1936 session was one hundred and seventy-six teachers from Elementary Schools of the Province.

LIBRARY BULLETIN

Publication of "Articles of Interest" was resumed in July, 1936, as "Volume II, No. 1" (one number having been published in September, 1935) and with the September, 1936, edition the title was changed from "Articles of Interest" to "Library Bulletin." This Bulletin consists of a bibliography of articles of interest to all Divisions of the Department appearing each month in the library journals. It is distributed to each Divisional Director, to the Ontario Hospitals and all members of the outside service; one hundred copies are mailed each month.

SERVICE TO ONTARIO HOSPITALS

During the year a card catalogue, showing author and title, was made of the books in each of the thirteen Ontario Hospitals. This catalogue also gave the location of each book, i.e., whether in the Superintendent's office, training school for nurses, mental health clinic, dietitian's office or laboratory.

A further effort which has brought gratification to the Library is the completion, for the Central Library, of a combined catalogue of all books in the thirteen Ontario Hospitals. Thus the Central Library makes available to the Department officials and to the staff members of all hospitals, information regarding the location of every book in the service. Rare books and old editions are thus easily located for reference. The sections on psychiatry and allied subjects contained in the thirteen Hospitals become a comprehensive unit of the Library and greatly enhance the value of the facilities and equipment of the Departmental services.

During the month of December a number of books for use in the training schools of the Ontario Hospitals were purchased by the Central Library. These were received by the Library, catalogued in the central catalogue and forwarded to the training school, together with cards for the Hospital catalogue.

The library also reports with pleasure the extension of one branch of the service, i.e., the compilation of bibliographies on special subjects upon request. This service has been requested in some fifteen instances during the year.

Patients' Libraries

A number of new books were purchased for the patients' library in the following Ontario Hospitals: Brockville, 50; Fort William, 25; Cobourg, 36; Woodstock, 100. The "Boys' and Girls' House" of the "Toronto Public Library" were good enough to make a donation of discards to the Ontario Hospital at Cobourg.

The Central Library also contacted several Toronto publishers who have very generously agreed to donate unsold papers and periodicals each month. In addition, 50 copies each of two weekly papers are received at the Central Library and re-shipped each week to the patients in the 13 Hospitals, making a total of 5,200 copies distributed per year.

CONCLUSION

The past year has seen unprecedented activity in cataloguing, routine reference and general library work. The increased demands on our time and efforts, however, present a compensation in the increased service which the library is now being requested to provide.

The staff of the Library wishes to extend its thanks to the Deputy Minister of Health and the Chief Medical Officer of Health for their sympathetic support during the year, without which the Library could not have functioned as effectively as it has.

To the members of the outside services and to the staffs of the Ontario Hospitals whose co-operation has made the loan service possible, we also extend our thanks.

DIVISION OF DENTAL SERVICES

W. G. THOMPSON, D.D.S., F.A.C.D., Director

During the past year the Division has been increasing its services.

As in previous years, the Department has supplied literature and notification of defects forms in connection with school dental services. Lectures have been given to the students at the Normal Schools and suitable literature and charts distributed to them.

In co-operation with the Canadian Dental Hygiene Council a plan of intensive dental health education was inaugurated. This knowledge of preventive dentistry is being imparted to the general public through a programme of addresses to school children and to adults, in an endeavour to teach the general public that dental decay and dental disease can be greatly lessened through their own efforts. A start has been made in the southwestern section of the Province and the results achieved have been most gratifying. The dentists have generously responded by making a complete examination of the mouth of every school child, so that a chart can be sent into every home showing the actual condition of the mouths of the children.

The travels of the dental car have covered a wide area; as far north as Moosonee on the T. & N. O. Railway and to Hearst on the Algoma Central Railway; then transferring to the Canadian Pacific Railway to start working east from Ingolf on the Ontario-Manitoba boundary. The Car Clinic has done most effective work and provided facilities whereby hundreds, mostly school children, who cannot reach a dentist have the advantage of dentistry brought to them.

Owing to the many demands for emergent dental treatment for people in relief, it was found necessary to increase the amount of the appropriation for this work.

The programme of providing dental services for Mental Hospitals has been greatly extended. In several of the Clinics an increase in the number of working hours of the dentist has been necessary in order to take care of the increased numbers of patients.

A Central Laboratory has been established in the Toronto Hospital, where a permanent technician is employed. His work is confined to prosthetic work sent in from the various Institutions. Since this Clinic began to function it has supplied about 360 dentures and 375 rebases and repairs for the patients. This project has proved very satisfactory to all concerned.

A clinic is being planned at the Ontario Hospital in Toronto, to make an investigation and research as to the bearing that dental conditions have on certain types of mental disorders. Dental diagnoses with complete X-ray and laboratory findings will be carried on, in the hope that any patients suffering from dental lesions may be treated and any benefits that may accrue be noted.

DIVISION OF INDUSTRIAL HYGIENE**J. GRANT CUNNINGHAM, M.B., Director**

A number of inquiries have been received from industrial executives respecting plans for providing medical care for employees. Such arrangements based on industrial groups increase the opportunity for the application of preventive measures. However, it should be recognized that the wage-earning section of the population while interested in both sides of the subject has been more interested in a small assured income during sickness than in insurance coverage for medical care. It is for this purpose that employee contributions are primarily made. Immediate considerations loom largest, so that it is only after income during sickness and treatment of sickness are covered that prevention can receive much consideration. For some time to come it may be expected that such preventive work as can be accomplished must be initiated and largely carried through by industry or the state or both.

The work of this Division is intended to stimulate the interest and activity of industry to organize preventive work and assist in its accomplishment, with particular emphasis on the diseases directly associated with industrial work.

Tuberculosis: The Dust Hazard

Tuberculosis incidence is higher in the wage-earning population than elsewhere. It should be emphasized again that tuberculosis is a communicable disease, so that frequent contact such as obtains in industry and commerce may be expected to favor its spread although to a much less extent than is the case at home. British occupational mortality records show more tuberculosis among garment workers than in workers in cotton manufacture, the physical type of labor being comparable. The opportunity for infection is greater in the first instance.

Following the detection of a high incidence of tuberculosis cases in certain factories in Ontario last year, there were examined this year three hundred and five employees in two boot and shoe plants. There were four cases of active tuberculosis among them, with certain others in whom continued observation was desirable. This is not a high incidence, although some of them were at work in as close proximity to one another as was the case in rubber shoe plants investigated previously. A positive tuberculin test involves a mild local reaction at the site of injection of the material and indicates that infection has taken place although it is obvious that disease is not usually present when it is realized that the majority of adults present this reaction. Negative tests usually exclude the presence of tuberculosis. In these examinations as in groups elsewhere, an attempt was made to use the reaction to tuberculin to reduce the number of examinations necessary for this type of investigation. However, the test was positive in seventy-eight per cent. of the employees in these groups and their attitude to the procedure under these conditions was quite unfavourable, so that it is a question as to whether the test is warranted for this purpose.

Certain dust exposures in industry contribute to the amount of tuberculosis. In about five hundred workmen exposed to silica dust and examined

for survey purposes was one group of one hundred and thirty-eight workmen in one foundry in which there were detected seven cases of active tuberculosis—two with positive sputum. In the follow-up by the plant physician in the next nine months five of them returned positive sputum tests. Only two of these men had silicosis. Nothing could emphasize more clearly the importance of periodic examination of workers exposed to silica dust. It ensures that those with tuberculosis are placed under treatment as early as possible and, at the same time, avoids exposure of other workmen to the disease. Most of those with silicosis not complicated with tuberculosis should be allowed to continue in work with which they are familiar. Legislation in the Ontario Mining Act requires these examinations for miners. They have been recommended for workers in certain other silica processes, but have been adopted without legislation in twenty-four plants. Nearly four hundred cases were reviewed and chest X-ray interpretations given for industries now conducting periodic examinations of workers in dusty trades. The Silicosis Referee Board examined and reported on ninety-nine claimants referred by the Workmen's Compensation Board for diagnosis as to the presence of silicosis or silicosis and tuberculosis.

Upon the request of the Brotherhood of Boilermakers, Welders and Helpers, inquiry was made into the health of workers engaged in acetylene and electric welding. Sixty-four men were examined with particular attention to the eyes and chest. No evidence of effects from chromium, nickel or manganese, which might be volatilized as constituents of welding rods, was noted. The presence of sodium silicate and aluminum silicate in welding rods led to chest X-ray examination where it was noted that normal shadows were heavier than usual, while a few suggested minor changes (indefinite fine mottling), similar to those reported by Doig and McLaughlin in *The Lancet*, April 4, 1936. These changes are not necessarily associated with silica. In any case, it is essential that welding operations be conducted only under conditions where good ventilation can be made available. The subject warrants further inquiry.

The control of silica dust has involved detailed examination and recommendations for improvements in eight porcelain manufacturing plants. Definite progress has been made in some of these. Apart from the handling of raw materials, the clay body has varied in free silica content from twenty to thirty per cent. The average of dust counts at various operations in these plants was as shown in the following table, expressed in millions of particles per cubic foot of air, using the Greenburg-Smith Impinger and standard light field procedure:

Location	Plants							
	1	2	3	4	5	6	7	8
Loading raw materials.....			47		41	83	41	94
Sagger grinding and screening.....		128			32			
Blowing off.....	14	77			11	9		63
Trimming, fettling, etc.....		55	34			56	90	4
Cutting, turning, drilling.....	9 to 30				9	14 to 670		
Glaze spraying.....		58	22			9		11

Additional detailed inquiry has been made in certain foundries directed particularly to testing methods for the control of dust in operations like sand slingers, mechanized shake-out and sand recovery. In a survey of one hundred foundries there were fifteen out of four hundred and seventy-five solid type tumbling mills and thirty-six out of one hundred and ninety stationary grind

wheels, not ventilated. There is a gratifying increase in the number of foundries using steel shot or grit rather than sand abrasive. Most foundries are using parting sand with silica absent, or present only in small amounts. House-cleaning has improved materially but some types of equipment have received less attention than is necessary.

The results of the investigation to determine suitable means to be adopted for the control of dust produced by the hand-pneumatic tool and the surfaceing machine in granite shops have been published and referred to the Inspection Branch of the Department of Labour.

Regulations under the Factory, Shop and Office Building Act have been drafted for the control of dust in these three industries.

Lead Poisoning

There have been no cases of lead poisoning reported in vitreous enamel sprayers for some years until trouble arose this year in the enamelling of stove parts. Velocities across the mouths of the hoods were in all cases close to one hundred feet per minute. Samples of air taken from the breathing level of men at work showed from 0.5 mgs. to 29.4 mgs. per ten cubic meters of air. Examination of those without definite evidence of poisoning revealed one man with stippled cell count of 12,000 per million red cells and no symptoms. He was removed from exposure. While such factors as the size and shape of products being sprayed, the amount of lead in the paint and the technique of the operator arise, it appears that a linear velocity of one hundred feet per minute is not sufficient. Three plants are using positive pressure masks and others the filter mask at these spray booths. While comfort is greater without them, their use with proper maintenance removes the hazard from lead.

Air samples and blood examinations of workmen in a storage battery plant compared with similar determinations in a plant manufacturing lead arsenate as an insecticide and in a plant operating power grinders for the removal of excess lead on automobile bodies showed the presence of more extensive changes in the blood picture, in proportion to lead in air, in the storage battery workers than in the others.

With those exposed to lead in small quantities in the insecticide plant where the conditions are now well-controlled, the effort was made to determine the value of the basophilic aggregation test as compared with examination of stippled cells. While the aggregation test is easier, the blood smears must be stained shortly after they are obtained, making the procedure impractical for control by a central laboratory. The two methods used together are more informative of conditions than when either is used alone, because the stippled cell count is more *specifically* associated with lead absorption.

Benzol Poisoning

During the year there was one death from benzol poisoning in a process impregnating canvas with rubber dissolved in benzol. The air determinations showed concentrations of less than one hundred parts per million at the cement mixers, at the condensing tank used for recovery, and at the rollers. At the dipping tank under the hood the concentration of benzol was four hundred and thirteen parts per million. The opportunity for exposure here was very limited in time and the operator in question had been at work in this depart-

ment for nine years, with much heavier exposures to benzol previous to that time. No others were affected at this process, and no other cases appeared elsewhere last year.

After the appearance of a report by Yant, Schrenk and Patty, in the *Journal of Industrial Hygiene*, June, 1936, on this subject, urine sulphate ratios have been determined on numbers of benzol workers. These tests were checked with blood examinations and air determinations in the hope that more information might be available, to avoid disability from this exposure.

Detailed inquiry was made to determine what steps might be taken to eliminate cases of conjunctivitis in the manufacture of artificial silk. Ventilation equipment in use at present handles a tremendous volume of air to minimize the hazard. A modification of process to avoid exposure to hydrogen sulphide in the atmosphere now occupies the attention of the industry.

The Geiger-Mueller tube has been used in an investigation to determine the possible storage of radium salts in the bodies of workers engaged in the grinding of pitchblende ore. This report is being published.

Under the regulations of The Factory, Shop and Office Building Act, twenty-three plants conducted periodical physical examination of workers exposed to lead and benzol, with reports submitted to the Division at regular intervals.

Large numbers of analyses of samples were made in the laboratory for amounts and kinds of materials handled in industry, which might be dangerous to health, especially for the Factory Inspection Branch of the Department of Labour, the Workmen's Compensation Board, the Industrial Accident Prevention Associations, and for employers. Requests for field investigations if they required detailed examination including laboratory work have had to be delayed at times on account of the time involved. However, they reflect a widening interest in the effect on health which might be produced by the use of a great variety of substances. Some inquiries on account of more recent industrial developments include the use of chlorinated naphthalene in insulating material; the zinc chloride double salt of phenyl hydrazene for softening rubber; possible poisoning from spraying strontium and barium compounds in radio manufacture; the use of fluorescent paint in the theatrical costume trade; plating with rhodium or the use of monochlortoluene as a vehicle in coating metal. Such inquiries emphasize the importance of constant contact with newer industrial developments through field work and library facilities on current medical and industrial research.

There have been a number of addresses and technical articles prepared and delivered or published for interested groups such as:

"Ventilation," by Dr. F. M. R. Bulmer, Urban School Trustees Association, Windsor, May 20, 1936.

"When Are Poisons Dangerous," by Dr. F. M. R. Bulmer, published in "Health," Vol. 4, No. 4, 1936.

"Fumigation," by H. E. Rothwell, published in the Canadian Public Health Association Journal, July, 1936.

"Radium, Its Discovery, Properties, Preparation and Use," by J. D. Leitch.

"The Effect of Various Physical Factors on the Counting of Silica Dust Suspended in Water," by M. Annetts and J. D. Leitch, published in the Journal of Industrial Hygiene, Vol. 18, No. 10, February, 1936.

"Dust Control in the Granite Industry," by J. D. Leitch, Journal of Industrial Hygiene, Vol. 18, No. 10, December, 1936.

"Clinical and Radiological Aspects of Silicosis," by Dr. A. R. Riddell, published in the Canadian Public Health Journal, February, 1936.

"Gas Poisoning in Fires," by Dr. J. G. Cunningham.

Medical Care and Sanitation in Unorganized Territory

The enforcement of the regulations of the Department respecting camps, works and premises in unorganized territory involves the supervision of sanitation and medical care in operations which are rapidly increasing in number. In lumber, pulp and paper, mining, and construction camps there are now nearly 40,000 men. Their wide distribution and relative inaccessibility make it difficult to adequately cover this territory with the personnel available, although the system whereby sanitation contracts are required between employers operating these camps and physicians, makes it possible to utilize the services of about one hundred and twenty-five physicians for the improvement of sanitary conditions.

During the year arrangements were completed with the Department of Lands and Forests whereby check scalers with repeated and ready means of access to camps report the existence of unsanitary conditions to the District Sanitary Inspector, so that his attention may be concentrated upon operations conducted by those employers who themselves are not yet convinced of the importance of sanitation.

Apart from camps, the development of small centres of population at strategic points, without municipal organization, presents difficulty whether a townsite has been granted or not, since locally there is no one responsible for sanitary conditions. The Provincial Sanitary Inspectors with such large territory to cover are unable to devote the necessary attention to such items as water supply, milk supply, sewage disposal and nuisances associated with the individual household. In one district, a large camp of blueberry pickers grew up without reasonable regard for sanitation. Nine cases of typhoid resulted.

The sanitary inspector's first attention is directed to the control of communicable disease, receiving the assistance of contract physicians and under certain circumstances other practicing physicians where diagnosis is concerned. The record is fairly satisfactory. Reports show ten cases of typhoid fever with no deaths; twenty-two cases of dysentery with no deaths; and one case of smallpox which recovered, but it should be emphasized that this record can only be maintained with close supervision by medical personnel.

In connection with the medical contract system in effect in unorganized territory, it should be emphasized that the employer is responsible for medical care of his employees, that the contract is required only when the employer deducts from wages for this purpose as sanctioned by regulation, and that for isolated operations the physician is thus made available.

Additional safeguards required to ensure increased attention to medical care include regular reports of kinds and amount of sickness and hospitalization, attested statements of disposition of funds deducted and increased penalties for misappropriation.

Fumigation

Experience with the control of cyanide compounds for fumigation has resulted in amendments to The Public Health Act and to the regulations in June, 1936, whereby the responsibility for inspection to ensure compliance with the regulations has been placed upon the local municipality. At the same time, provision is made whereby the municipality might charge a fee for permits issued. In addition to public liability insurance to be carried by the licensed fumigator, he must also provide insurance coverage for his employees.

Considerable investigation has been conducted by the Department to determine the minimum allowable concentration of warning gas in cyanide products to be used for household fumigation. The details of the kinds and amounts of materials prescribed, as provided for in the regulations, have been sent to all licensed fumigators and to all Medical Officers of Health. This has been necessitated partly in order that the amount of cyanide used would be sufficient to carry with it an adequate supply of warning gas. Experience so far has justified the use of warning gas for household fumigation.

The Department has continued to render assistance to inspectors in municipalities where cyanide fumigation is carried on. These are not confined to those municipalities in which fumigators are licensed since it is a fairly common practice to bring fumigators some distance for this purpose.

There have been no serious accidents with the use of these compounds in 1936. The number of fumigators with licenses to conduct household fumigation has materially lessened. The total is twenty-seven at present, with fourteen others whose licenses are restricted to the conduct of commercial fumigation with cyanide compounds.

CANCER CONTROL

Radium

During 1936, 220 milligrams of radium formerly purchased from private physicians were refilled in tubes and needles of a design consistent with that used on all new radium purchases. A ten milligram plaque was purchased for the Ottawa Civic Hospital for use in the treatment of small skin lesions, while an additional 120 milligrams in needles and tubes were purchased for the Hamilton Clinic.

It is of interest to note the rapid fall in price of radium during the past four years since the Eldorado Gold Mines began to extract radium from pitchblende mined at Great Bear Lake. Latest purchases were made at \$30.00 per milligram compared with \$54.00 in 1932.

All outstanding orders for new and refilled radium have been completed. The following table gives the present distribution of the element:

Location	Amount	Approximate Cost
Toronto General Hospital.....	4,788 mgms.	\$225,800 00
Kingston General Hospital.....	410 "	21,500 00
London (Victoria Hospital).....	300 "	16,750 00
Hamilton (General Hospital).....	405 "	17,350 00
Ottawa Civic Hospital.....	510 "	25,630 00
Ottawa General Hospital.....	100 "	5,400 00
Windsor (Metropolitan Hospital).....	250 "	10,130 00
Radium Emanation Plant.....	302 "	18,900 00
Totals.....	7,065 mgms.	\$341,460 00

The distribution of radium emanation is given in the following table. Private physicians are charged \$1.00 per millicure for pay patients.

Distributed to	Millicuries	Revenue
Toronto General Hospital.....	4019.82	Free
Kingston General Hospital.....	445.54	"
London (Victoria Hospital).....	373.15	"
Hamilton General Hospital.....	132.52	"
Ottawa Civic Hospital.....	356.72	"
Ottawa General Hospital.....	0.00	"
Windsor (Metropolitan Hospital).....	743.76	"
Private Physicians.....	1525.38	\$569.24
Totals.....	7596.89	\$569.24

It is gratifying to note that only one 3 milligram needle (value about \$150.00) has been reported lost since the Government established its first cancer clinic in 1932. During the past year the Toronto General Hospital reported the loss of 80 milligrams of their own private supply. It was found at one of the Toronto dumps by means of the Geiger-Mueller detector built by the Department for this purpose in 1935.

Periodic calibration of the X-ray dosimeters used in the cancer clinics was continued throughout the year. The substandard ionization chamber belonging to the National Research Council of Canada was used for this purpose.

A number of calculations of radium dosage was made at the request of some of the clinic directors and a number of lectures on radium and X-rays was given to service clubs and other organizations throughout the year.

STATISTICAL REPORT ON CANCER FOR 1936

1—Cancer Records

The need for some uniformity in nomenclature and in methods of recording data on cases of cancer has occupied the attention of the clinic directors and officials of the Department. In the main, agreement has been reached and a complete scheme of records has been prepared so that the clinics will be supplied with suitable forms necessary for recording clinical data, follow-up and treatment of cancer patients. A summary card to be completed at

the clinics will contain essential information for analysis by the medical statistician of the Department to determine the number of cases treated with radium, X-ray or surgery or a combination of these; the number of new cases reporting; the stage in the disease at which they reported; the location and type of the lesion; results of treatment; extent of hospitalization etc. However, at most of the clinics the clerical staff is insufficient for record-keeping purposes. In spite of this, the clinic directors are co-operating fully in an effort to provide information as to what is being accomplished with the facilities established at these seven clinics in the Province for treatment of cases of cancer.

Dr. Sellers' report on cancer mortality, estimated number of cases in Ontario and number and kinds of new cases treated in the seven clinics, follows:

2—Cancer Mortality

The trend of mortality from malignant disease in Ontario during the last quarter century has been similar to that observed elsewhere. The recorded deaths and crude death rates for the last ten years are given in Table I.

TABLE I.
CANCER DEATHS IN ONTARIO, 1926-1935.

DEATHS			
Year	Number	Per Cent. of Total Deaths	Crude Death Rate
1926	3,116	8.7	99.0
1927	3,177	9.1	99.7
1928	3,441	9.3	106.6
1929	3,402	8.9	104.0
1930	3,635	9.7	109.7
1931	3,726	10.4	108.6
1932	3,825	10.5	110.1
1933	4,044	11.5	114.7
1934	4,034	11.5	113.2
1935	4,214	11.6	117.1

These data serve to illustrate the persistent increase in total deaths attributed to malignant disease and the increasing proportion of total deaths due to cancer. Little attention need be paid, however, to the trend in the crude death rates since much of this increase is apparent and due to "ageing" of the population.

3—Estimated Number of Cases of Malignant Disease

Reasonably accurate data on deaths from cancer are made available in the annual reports of the Registrar-General, but, so far, no reliable index of cancer morbidity is obtainable. Present knowledge based on published papers on the subject in England, however, has given us some information concerning the "natural duration" of life of persons with malignant disease of certain sites. Greenwood, who has brought much of this work together, and more recently Hoffman, have provided some basic figures on "natural duration" through which can be made a rough estimate of the number of cases in existence during a given year.

Hoffman, for example, indicates that *on the average* "the known duration of cancer (all sites) at the present time is 18 months; for the uterus 20.5 months, breast (female) 28.8 months, etc." These data are based on the returns of *duration* on the standard death certificate in certain centres of the United States. Greenwood's figures are, however, based on actual clinical records compiled by various observers. In some respects the two sets of data agree rather closely, in others, not so well.

Using the figures compiled by Greenwood the following estimate was made of the number of cancer cases in existence during 1935 in Ontario. The method consists merely in multiplying the number of deaths by the known duration (natural duration) in years. For sites for which no data on duration is available, one death has been presumed to represent one case (Table II.).

TABLE II.
ESTIMATED CASES OF MALIGNANT DISEASE

ONTARIO, 1935.

Organ or Site	Deaths in 1935	"Natural Duration" in Years	Estimated †No. of Cases
Breast.....	424	3	1,272
Uterus.....	353	1 2/3	471
Skin.....	87	5	435
Buccal Cavity and Pharynx x	167	1 1/3	223
Larynx.....	28	1 1/6	33
Oesophagus.....	79	1	79
Stomach and duodenum.....	868	1 1/3	1,157
Rectum.....	230	2 1/6	498
Other cancer of digestive tract†.....	946	—	946
Lung.....	98	—	98
Female Genital organs (except uterus).....	118	—	118
Male genito-urinary organs.....	369	—	369
Female urinary organs.....	87	—	87
Bone and joint	58	—	58
Brain.....	67	—	67
Others unspecified.....	235	—	235
All sites.....	4,214		6,146

† In existence at any stage during 1935.

x Including lip, tongue, mouth, jaw, fauces, palate, pharynx, tonsil.

† Including liver, gall bladder and pancreas.

In 1935, on this basis there were in existence (at any stage of the disease), 6,146 cases of malignant disease. This estimate is a conservative one and is possibly too low. It approximates very closely the assumption of 18 months duration on the whole, or three cases for every two deaths.

For malignant disease of those sites particularly amenable to treatment—breast, uterus, buccal cavity and skin, to which there were attributed a total of 1,031 deaths in 1935, the estimated cases (at any stage) from the preceding table stand at 2,401. It is of interest to compare the estimated number of cases of malignant disease in Ontario on the above basis with the actual number of new cases treated in the Clinics during 1936. (Table IV.)

These data support the *tentative assumption* that for every two deaths attributed to cancer during a given year, there are *at least three cases* at some stage of the disease requiring treatment.

SUMMARY OF ANNUAL REPORT OF THE INSTITUTES OF RADIO-THERAPY FOR 1936

The following are some of the basic data from the reports of the seven cancer clinics for the calendar year, 1936. During 1936, a total of 3,638 malignant and non-malignant new cases were recorded at the Centres. These were distributed as in Table III.

TABLE III.
RECORDED NEW CASES OF CANCER, 1936.
ONTARIO CANCER CENTRES.

Centre	Malignant			Non-Malignant	Total
	Private	Public	Total		
Hamilton.....	227	83	310†	229	539
Kingston.....	131	114	245	161	406
London.....	41	45	86	35	121
Ottawa (Civic).....	171	103	274‡	268	542
Ottawa (General).....	93	59	152x	25	177
Toronto.....	531	428	959	622	1,581
Windsor.....	108	52	160*	112	272
Totals.....	1,302	884	2,186	1,452	3,638

† Includes 35 malignant new cases treated by surgery alone.

‡ Includes all gastro-intestinal cases coming to hospital whether for treatment or solely for diagnosis.

x Includes 43 malignant new cases treated by surgery alone.

* Includes 8 malignant new cases treated by surgery alone.

"Private" includes all patients except municipal charges or welfare cases.

Thus a total of 2,186 "malignant" new cases were recorded during the year, that is, approximately one-third of the total estimated malignant cases for Ontario shown in Table II above.

The distribution of the "malignant" new cases by site is given in Table IV by Centres.

TABLE IV.

NEW CASES OF MALIGNANT DISEASE BY DIAGNOSIS.

ONTARIO INSTITUTES OF RADIOTHERAPY, 1936.

Centre	DIAGNOSIS								Total
	Breast	Carcinoma				Malignant Disease		Other Malig. Disease	
		Female Genitals	Lip Tongue Mouth	Upper Air Passages	Alimentary Tract	Skin	Bone		
Hamilton.....	59	55	30	6	67 (1)	55	5	33	310
Kingston.....	44	28	37	8	25	68	6	29	245
London.....	25	12	15	3	4	25	0	2	86
Ottawa (Civic)	42	28	47	0	26 (1)	78	3	50	274
Ottawa (Gen.)	24	23	20 (2)	—	53 (1)	8	3	21	152
Toronto.....	169	132	153	34	26	269	10	166	959
Windsor.....	31	27	17	5	20	31	1	28	160
Total.....	394	305	319	56	221	534	28	329	2,186

(1) Includes all cases in hospital whether referred directly to the clinic or not.

(2) Includes upper air passages.

It will be noted in this table that the actual new cases of cancer of the oral cavity and skin exceeds the estimate given in Table II, indicating that the estimates in these two instances are too low and the *actual number of cases requiring treatment* should be placed much higher. It is certain that not all cases of these types are now being treated in the seven Government Clinics. The possibility that the recorded deaths do not fully reflect the actual situation is another possible explanation.

Hospitalization of New Cases

As an illustration of the extent of hospitalization needed for the treatment of cases of malignant disease, Table V gives the data on hospitalized new cases available for four Centres. The total number of new "malignant" cases in each instance is given for comparison.

TABLE V.
HOSPITALIZATION FOR MALIGNANT DISEASE
NEW CASES IN CERTAIN CENTRES, 1936

Centre	Private Patients				Public Patients			
	No. of Cases	Number Hospitalized	Days' Stay	Aver. Stay	No. of Cases	Number Hospitalized	Days' Stay	Average
London.....	41	9	145	16.1	45	43	1,381	32.1
Ottawa (General).....	93	84	1,942	21.9	59	49	1,580	32.0
Toronto.....	.....	.....	.....	.....	.....	586x	16,183	27.6
Windsor.....	108	58	960	16.5	52	38	1,499†	39.5
Total.....	242‡	151	3,047	20.2	156‡	716	20,643	28.8

x Includes 212 old cases readmitted to hospital during 1936, only 374 actually of the 428 public new malignant cases being hospitalized during the year.

‡ Includes 2 patients who stayed a total of 450 days, excluding these, the average days' stay would be 29.1.

† Excluding the data for Toronto.

In each instance the average stay of "public" is markedly in excess of that for "private" patients. For the three Centres, London, Ottawa (General), and Windsor, the average number of hospital days *per new* malignant case is 12.6 for "private" patients and 28.6 for "public" patients.

DIVISION OF LABORATORIES

A. L. MACNABB, B.V.Sc., Director

The Division of Laboratories serves not only the various Divisions of the Department, but also, to an increasing extent each year, the local Health Officers, and practising physicians of every city, town and village as well as the Hospitals and other institutions located throughout the Province.

An earnest endeavour is being made to improve the service rendered by the various Branch Laboratories, especially those Laboratories situated in the Northern portion of the Province. The demands upon the Central Laboratory continue to multiply.

During the year 1936, the Division of Laboratories examined and reported on 433,519 specimens, which is an increase of 18,591 over the previous year. Of these increases, the following Laboratories contributed as follows:

Central Laboratory.....	9,809
Ottawa.....	318
Kingston.....	3,414
Fort William.....	1,406
Peterborough.....	282
North Bay.....	3,362

Several changes have occurred in the Central Laboratory staff. Mr. R. W. Hollinger, who had served the Department so faithfully in the shipping room, was superannuated on October 1, 1936. Miss J. MacAlpine, B.A., of our Ottawa Branch Laboratory, was transferred to the Central Laboratory, and Miss C. Wray, B.H.Sc., was appointed to fill the vacancy in the Ottawa Laboratory.

Mr. F. J. Murphy, who is our night laboratory technician, has familiarized himself with the work in connection with pneumococcus typing and has rendered very faithful and efficient service to the practitioners after the regular hours, and on Sundays and Holidays.

I have received very hearty co-operation from the Directors of the various Branch Laboratories, and co-operating laboratories. New equipment has been added to the Ottawa, Fort William, and North Bay Laboratories, to enable these Laboratories to not only improve the service, but also to widen the scope of the service rendered.

The maintenace of the standards relative to the various fields, and in support of the Branch Laboratory work, involved some investigational work being carried out at the Central Laboratory.

The technique used for the primary isolation of tubercle bacilli in the Central Laboratory, was published in the year book of the American Public Health Association. A second paper outlining the value of the various cultural media and the comparative study of cultural and animal inoculation tests was published in the Journal American Public Health Association, in February 1936.

Dr. W. B. McClure, Bacteriologist for the Central Laboratory, has carried out investigational studies relative to pneumococcus typing. Three hundred and seventy-nine strains of pneumococcus were isolated. A question-

TABLE I.—Continued

ROUTINE PROCEDURE	NUMBER OF EXAMINATIONS								Total
	Toronto	London	Ottawa	Fort William	Kingston	North Bay	Peterboro	Sault Ste. Marie	
BACTERIOLOGY—Cont'd									
Feces Examinations.....	1,320	552	136	27	77	76	29	19	2,236
Blood Cultures..... (Undulant Fever).....	2,035	1,223	49	95	168	189	85	15	3,859
Gonorrhœa— Smear Examinations..	15,088	3,179	3,990	2,149	1,306	1,721	1,057	1,286	29,776
Complement Fixation.....	110								110
Rabies.....	13	1							14
Spinal Fluids.....	303	884	44	102	68	26	33	47	1,507
Miscellaneous.....	9,227	3,320	186	398	424	668	146	942	15,311
Milk.....	4,142	2,492	3,628	2,061	2,881	1,063	1,735	1,240	19,242
Further Tests.....	1,234			16					1,250
Water.....	10,097	3,283	4,406	3,182	1,362	1,613	1,665	4,072	29,680
Further Tests.....	1,205								1,205
SYPHILIS:									
Dark Field.....	191	6	1	57	5	7	1	1	269
Blood Sera—									
S. Kahn.....	51,067	14,508	15,020	5,952	4,047	465			91,059
P. Kahn.....	602	3,294	5			8			3,909
K. Wassermann.....	50,631	14,865	15,783	6,021	4,101	464			91,865
D. Kline.....	491								491
Hinton.....	116								116
Spinal Fluids—									
S. Kahn.....	2,545								2,545
K. Wassermann.....	2,762								2,762
Colloidal Gold.....	2,784	880	472	94		11			4,241
Colloidal Mastic.....	2,091	694	192			11			2,988
Globulin.....	2,797	877	481	96	43	31			4,325
Further Tests.....				11					11
CHEMISTRY:									
Blood Sugar.....	11,944	2,099	427	214	273	238	159	392	15,746
N.P.N.....	5,499	1,359		63	6	74		12	7,013
Calcium.....									
Cholesterol.....									
Milk.....	2,236	2,219	3,748	1,034	365	2,164	2,432	2,344	16,542
Further Tests.....	52	495	19	4		4			574
Water.....	161	17	266			82		905	1,431
Further Tests.....	41		12						53
Coal Samples—									
Calorific Value.....	155								155
Ash.....	159								159
Moisture.....	238								238
Volatile Matter.....	20								20
Miscellaneous.....	3,947	381		212			75		4,615
Liquors—									
Alcohol.....	1,178								1,178
Beer.....	219								219
Spirits.....	282								282
Wines.....	337								337
PATHOLOGY.....									
	5,348	1,231			2,306		528	202	9,615
Total Exams. for Year....	224,564	75,207	56,786	24,137	20,072	11,773	9,175	11,805	433,519

Table II gives the number of specimens examined in each of the Laboratories from 1932 to 1936, inclusive. It will also be noted that this table shows the increase in the volume of work carried out in each Laboratory over the previous year.

TABLE II.

NUMBER OF SPECIMENS EXAMINED IN EACH OF THE LABORATORIES
FROM 1932-1936, INCLUSIVE.

	1932	1933	1934	1935	1936	Increase Over 1935
Toronto.....	160,711	180,050	201,904	214,755	224,564	9,809
London.....	58,408	65,657	67,487	75,213	75,207	.....
Ottawa.....	46,662	52,173	56,957	56,468	56,786	318
Kingston.....	14,087	15,882	16,304	20,723	24,137	3,414
Fort William.....	12,531	14,152	14,934	18,666	20,072	1,406
Peterborough.....	7,951	8,480	7,881	8,893	9,175	282
North Bay.....	7,706	6,353	6,238	8,411	11,773	3,362
Sault Ste. Marie.....	8,058	8,219	9,572	11,926	11,805	.....

Table III shows the number of outfits, prepared and distributed from the Central Laboratory during the past year, as well as for the five preceding years. It will be noted there was an increase of 6,927 over the preceding year.

TABLE III.

OUTFITS PREPARED AND DISTRIBUTED

OUTFITS SENT OUT	1931	1932	1933	1934	1935	1936
Bacterial Water.....	6,482	8,080	10,404	10,554	10,400	11,846
Diphtheria.....	15,108	12,669	10,079	14,496	10,709	10,177
Typhoid.....	4,078	3,557	3,561	4,892	3,092	3,991
Tuberculosis.....	17,371	14,446	17,890	15,744	15,405	20,972
Wasserman.....	58,638	66,681	73,941	71,525	81,879	77,914
Gonorrhoea.....	15,770	17,972	22,230	24,530	19,205	28,172
Blood Sugar.....	11,263	9,642	10,557	16,933	19,507	20,488
Non-Protein Nitrogen.....	4,112	4,690	5,360	6,784	9,131	9,360
Feces.....	2,672	1,946	2,882	3,504	3,029	3,508
Combined Blood Outfits....	2,161	2,492	3,717	2,322	2,150	1,253
Widal.....	411	1,669	433	103	279	.....
Pathology.....	2,720	3,246	4,306	4,632	4,517	6,056
Dark Fields.....	.....	.....	755	398	397	730
Bang's Outfits.....	.....	.....	.....	1,041	1,150	531
Miscellaneous.....	.....	.....	.....	168	1,790	3,224
Total.....	140,786	147,090	166,115	177,626	183,640	198,222

Table IV outlines the vaccines and chemical products prepared and distributed by the Central Laboratory, with the exception of Polio Serum and Rabies Vaccine, which are prepared by the Connaught Laboratories and distributed by our Division.

TABLE IV.

VACCINES AND CHEMICALS	1932	1933	1934	1935	1936
Typhoid Paratyphoid Vaccine, c.c....	69,340	49,810	31,170	55,890	66,260
Whooping-Cough Vaccine, c.c.....	104,070	88,825	79,885	80,260	110,525
Silver Nitrate for prevention of * ophthalmia, ampoules.....	57,871	56,507	58,093	59,629	57,842
Bismuth Oxochloride, grains.....	128,152	136,728	161,034	168,096	174,237
Mercury Salicylate, grains.....	16,734	17,448	16,248	15,096	16,107
Sodium Hydroxide in the treatment of V.D.S., ounces.....	3,117	2,423	2,162	1,762	1,152
Distilled water in the treatment of of V.D.S., ounces.....	49,696	57,262	55,101	50,225	53,437
Polio Serum.....	484	76	539	317	550
Rabies Vaccine.....	32	94	40	25	21
Sodium Citrate, ampoules.....				2,482	348

Diphtheria—Nine thousand five hundred and sixty-two (9,562) swabs were examined, which is 2,667 less than in 1935. Forty-one Kellogg tests were carried out to determine the antitoxin content of patients blood. These samples were submitted from individuals who gave a pseudo-Schick test reaction.

Tuberculosis—Eighteen thousand four hundred and eighty-seven (18,487) microscopic smear preparations were prepared and stained for the presence of tubercle bacilli. A cultural examination was carried out on 3,978 specimens and 1,319 animal inoculation tests were made. The comparative study of cultural and animal inoculation test was continued, and during the past year, this study included 780 samples of urine, joint fluid and spinal fluid specimens.

Cultural—For the cultural tests, Lowenstein's medium proved to be the most satisfactory for the isolation of tubercle bacilli of human origin.

Table V outlines the results of cultural examinations on 3,667 specimens.

TABLE V.

TABLE OUTLINING THE RESULTS OF CULTURAL TESTS ON 3,667 SPECIMENS

Type of Specimen	Total Number of Specimens	NUMBER OF POSITIVES			Number of Negatives	Percentage or Positives
		At 4 weeks	At 8 weeks	Total		
Sputa.....	1,903	181	86	267	1,636	14.03
Urine.....	727	71	21	92	635	12.65
Right ureter.....	182	8	6	14	168	7.69
Left ureter.....	177	3	4	7	170	3.95
Pleural fluid.....	278	21	11	32	246	11.47
Bone and joint fluid....	117	12	8	20	97	17.09
Pus.....	74	11	6	17	57	22.97
Ascites.....	32	1	0	1	31	3.12
Spinal fluid.....	85	11	10	21	64	24.70
Miscellaneous.....	92	5	2	7	85	7.60
Total.....	3,667	324	154	478	3,189	

Per cent. positive.....8.83 (67%) 4.2 (33%) 13.03
 Guinea pig positive, culture negative 6
 Total positive.....484
 Total % of positive.....13.2

It can be seen from the above table, that 13.2 per cent. of the specimens examined, yielded the presence of tubercle bacilli. It will also be noted that 8.83 or 67 per cent. of the specimens yielding tubercle bacilli, were found positive after four weeks incubation, while 4.2 or 33 per cent. were positive after eight weeks.

Of the 368 pleural fluids received at the Central Laboratory, in addition to these specimens being culturally tested for the presence of pyogenic organisms, T. B. cultural tests were also carried out. Table VI outlines the results of these examinations.

TABLE VI.
PLEURAL FLUIDS EXAMINED.
(Oct. 1st, 1935, to Sept. 30th, 1936)

Tuberculosis Positive on direct smear.....	12
Tuberculosis Positive on direct smear, haem. staphylococcus aureus.....	2
Tuberculosis Positive on direct smear, pneumococcus.....	4*
Tuberculosis Positive on culture.....	21
Tuberculosis positive on culture, haemolytic staphylococcus aureus.....	7
Tuberculosis Positive on culture, haemolytic staphylococcus aureus streptococcus viridans.....	1
Tuberculosis Positive on culture, B. proteus.....	1
Haemolytic staphylococcus aureus.....	36
Haemolytic staphylococcus aureus, non-haemolytic streptococcus.....	3
Haemolytic staphylococcus aureus, pneumococcus.....	3
Haemolytic staphylococcus aureus, B. coli.....	1
Haemolytic staphylococcus aureus, haemolytic streptococcus.....	1
Haemolytic streptococcus.....	13
Non-haemolytic streptococcus, streptococcus viridans.....	3
Pneumococcus.....	54
Spore bearing bacilli.....	18
B. coli 7, H influenza 1, B pyocyaneus 3, B. alkaligenes, 1.....	12
No growth.....	176
	368

*Same patients.

Table VII outlines the results of the comparative study on specimens on which cultural tests were controlled by animal inoculation.

TABLE VII.
TABLE SHOWING 780 SPECIMENS ON WHICH CULTURAL TEST WAS
CONTROLLED BY GUINEA-PIG INOCULATION

TYPE OF SPECIMEN	Total Number	GUINEA PIGS		CULTURES	
		Negative	Positive	Negative	Positive
Urine.....	166	133	33	131	35
Right ureter.....	178	168	10	166	12
Left ureter.....	167	163	4	160	7
Bone and joint fluid.....	88	73	15	74	14
Pus.....	38	28	10	28	10
Ascites.....	27	25	2	26	1
Spinal fluid.....	75	60	15	55	20
Miscellaneous.....	41	35	6	33	8
Total.....	780	685	95	673	107

It can be seen from the above table, 107 specimens yielded positive results with the cultural test, while animal inoculation tests yielded 95.

Table VIII is an analysis of the results obtained in Table VII.

TABLE VIII.

TABLE SHOWING THE TYPE OF SPECIMEN IN WHICH CULTURAL EXAMINATION WAS POSITIVE AND GUINEA-PIG INOCULATION NEGATIVE, OR VICE-VERSA

TYPE OF SPECIMEN	Culture Positive Guinea Pig Negative	Culture Negative Guinea Pig Positive
Urine.....	3	1
Right ureter.....	2	0
Left ureter.....	4	1
Bone and joint fluid.....	1	2
Pus.....	1	1
Ascites.....	0	1
Spinal fluid.....	5	0
Miscellaneous.....	2	0
Total.....	18	6

Spinal Fluids—(Bacteriological examination)—Table IX is an analysis of our results in connection with the examination of 303 spinal fluid specimens received at the Central Laboratory.

TABLE IX.

SPINAL FLUIDS EXAMINED IN YEAR 1936
BACTERIOLOGICAL FINDINGS

Total number examined.....	303
Negative findings.....	84
Pathological findings.....	219

	No.	Per Cent.
Gram negative bacillus belonging to the Proteus Group.....	1	.46
Staphylococcus aureus hemolyticus.....	8	3.65
Pneumococcus.....	9	4.11
Meningococcus.....	10	4.57
Streptococcus hemolyticus.....	12	5.48
Influenza Bacillus.....	12	5.48
Tubercle Bacillus.....	21	9.59
Cell count increased, no predominating type of cell. No diagnosis.....	29	13.24
Polymorphs predominating cell. No diagnosis.....	37	16.89
Lymphocytes predominating cell. No diagnosis.....	80	36.53

Of the 9 spinal fluids reported, Pneumococcus, it was found the organisms belong to the following types according to the Neufeld Method:

Pneumococcus Type I.....	1
Pneumococcus Type III.....	2
Pneumococcus Type IV.....	1
Pneumococcus Type V.....	1
Pneumococcus Type VII.....	1
Pneumococcus Type XVII.....	1
Pneumococcus Type XXII.....	2

Of the 21 spinal fluids reported Tubercle Bacilli present, the diagnosis was made as shown in the following table:

Microscopic +	Guinea Pig +	Culture +	4
" +	" (not done)	" +	1
" -	" +	" +	9
" -	" +	" (not done)	1
" -	" -	" +	6

Microscopic + 5. Guinea Pig + 14. Culture + 20.

Milk and Water—The number of milk and water specimens examined during the past year has again shown an increase. The Central Laboratory was one of the co-operating laboratories selected to carry out investigational work in connection with various media for the presumptive tests on the bacteriological examination of water samples. Two of the Branches, namely, Fort William and North Bay, also co-operated in this study. Dr. A. J. Slack, Director of Institute of Public Health, London, is a member of the Standard Methods Committee of the American Public Health Association on milk and dairy products.

Rabies—Fourteen dog's heads were examined for this infection. Rabies infection was not detected in the Province during the past year. In connection with this examination, the Seller's stain is used for staining smears. Animal inoculation tests are carried out on portions of the brain emulsion.

Miscellaneous—Miscellaneous examinations have again shown an increase of 1,335 specimens. The Central Laboratory has shown a decided increase in the number of specimens received on which pneumococcus typing results were requested. Table X shows the incidence of pneumococcus types identified in the various specimens received during the past year.

TABLE X.

INCIDENCE OF PNEUMOCOCCUS TYPES IN VARIOUS SPECIMENS

(Jan. 1, 1936, to Dec. 31, 1936)

Type	Sputum	Pleural Fluid	Spinal Fluid
1.....	34	34	1
2.....	12	4	
3.....	34	1	
4.....	16	1	1
5.....	13	3	1
6.....	17	2	
7.....	14		1
8.....	26	2	
9.....	5		
10.....	8		
11.....	3		
12.....	11	2	
13.....	4		
14.....	2	1	
15.....	9		
16.....	1		
17.....	8	1	
18.....	3		
19.....	13	2	
20.....	8	2	
21.....	3		
22.....	6	1	1
23.....	9		
24.....	5		
25.....	2		
27.....	2		
28.....	12		
29.....	5		
31.....	11		
32.....	1		
Undetermined.....	15	1	
Totals.....	312	57	5

Peritoneal fluid type 1.....	1
Peritoneal fluid type 13.....	1
Pericardial fluid type 1.....	1
Eye type 6.....	1
Blood culture type 5.....	1

Total Number of Isolations—

Sputum.....	312
Pleural fluid.....	57
Spinal fluid.....	5
Miscellaneous.....	5
Total.....	379

Colon Typhoid—Two hundred and eighty-five specimens of dried blood were examined for typhoid. Dried blood specimens do not afford the laboratory worker an opportunity of making a reliable examination. The routine carried out in connection with the examination of whole blood specimens has been continued, with the addition of rapid slide agglutination tests.

Table XI outlines the results of the whole bloods examined at the Central Laboratory, and the results of same from the year 1929 to 1936, inclusive.

TABLE XI
ANALYSIS OF WHOLE BLOOD EXAMINATIONS MADE FROM THE
YEAR 1929 TO 1936 (inclusive).

Year	Number Examined	B. TYPHOSUS		PARA B.		BR. ABORTUS	
		Number Positive	Per Cent Positive	Number Positive	Per Cent. Positive	Number Positive	Per Cent. Positive
1929	669	100	15.9	8	1.2	29	4.3
1930	1,125	193	17.1	30	2.7	54	4.8
1931	1,985	245	12.3	184	9.3	75	3.8
1932	1,373	169	12.3	43	3.1	64	4.7
1933	2,227	129	5.8	60	2.7	67	3.0
1934	2,155	218	10.1	66	3.0	80	3.7
1935	2,195	360	16.4	66	3.0	84	3.0
1936	2,035	196	9.1	72	3.5	73	3.6

Table XII outlines the blood culture results for the year 1936.

TABLE XII.
BLOOD CULTURES EXAMINED DURING 1936.

	Number Examined	Number Positive	Per Cent. Positive
B. Typhosus.....	2,035	35	1.72
Paratyphoid B.....	2,035	14	.68
Streptococcus viridans.....	2,035	17	.83
Staphylococcus aureus.....	2,035	45	2.2
Pneumococcus.....	2,035	3	.14
Alc. Faecalis.....	2,035	1	.049
Haemolytic streptococcus.....	2,035	34	1.67
Non-Haemolytic Streptococcus.....	2,035	3	.14

Table XIII is an analysis of the results in connection with whole blood examinations for the year 1936.

TABLE XIII.

TABLE SHOWING THE WHOLE BLOODS EXAMINED DURING 1936.

	Number Examined	Number Positive	Per Cent Positive
B. Typhosus.....	2,035	196	9.06
Para B., and Para B. group.....	2,035	72	3.53
Br. abortus.....	2,035	73	3.58

Syphilis (Serodiagnosis)—During the past year, some investigational work was launched relative to fixation test methods. An electroscopometer was placed in this Laboratory for the determination of total protein in spinal fluids. A report of the investigational work carried out in this connection will be available in the next annual report. The manner in which specimens are reported has been changed in accordance with the standard recommendations. The results of the tests are reported as either negative, positive, or doubtful. Quantitative Kahn tests are made on blood serum from treated cases of syphilis where the physician desires such.

Chemistry—The work in the chemistry department has again increased. The volume of work necessitated the appointment of a junior chemist. Experimental work relating to the phosphates content of pasteurized milk is being made.

I would like to again express my appreciation to the members of the staff of the Central Laboratory, and the directors and staffs of the Branch Laboratories, for the very hearty co-operation during the past year. Might I again express my deep appreciation to Dr. James Miller and to Dr. A. J. Slack.

A brief report by each Director of the Branches follows:

PATHOLOGY

During the year 1936 there has been a still further increase in the number of specimens reported upon by this Laboratory. The specimens reached a total of 5,967, or almost 500 per month. The steady and progressive increase in the number of specimens received (chart I) reflects the appreciation of this service by the smaller hospitals and by the practitioners throughout the Province of Ontario to whom the Department of Health has made it so readily available.

Because of the large turnover of specimens in the Central Laboratory and because of the modern equipment it is possible to offer a diagnosis upon a specimen within 24 hours of its arrival at the Laboratory. In this way the final diagnosis in many cases is available to the hospital as rapidly as if the tissues had been prepared for examination by slower methods on the premises. In urgent cases the diagnosis is wired, if so requested.

During the year specimens have been received from 200 communities. These are widely spread throughout Ontario, so that the services of this Laboratory are being utilized by all sections of the Province. An increasing number of hospitals have made it a routine procedure to forward all surgical

specimens, for microscopic analysis. This stimulates more accurate clinical diagnosis and also completes the clinical records of their cases. In addition many practitioners in rural districts have forwarded specimens from puzzling cases.

The scope of this Laboratory embraces the diagnosis of all manner of lesions in human tissues. The pathological processes encountered run all the way from congenital anomalies to inflammations, necroses, pigmentations, cysts, metaplasias and tumors. The specimens submitted include surgical, biopsy and autopsy materials.

One of the phases of the work of this Laboratory has to do with the problem of cancer, and more particularly to aid the practitioner in the early diagnosis of malignancy. The histological examination of tissues from a suspected area offers the earliest positive diagnosis of malignancy or of impending malignancy. By this method the changes occurring within individual cells may be studied, together with the behaviour of the suspected cells in relation to the adjoining tissues. Nor is it a simple matter for the pathologist to determine just when malignancy begins. The transition from active hyperplasia to malignancy is not sharply defined. Full blown malignant qualities do not appear in the matter of a few minutes, but extend over months or even years. There are, therefore, border-line cases encountered of which the correct interpretation required much time, much skill and much effort. These are the important cases for intensive study, for by the early recognition of malignant change the chances of a cure are greatly enhanced. The patients and the practitioners are recognizing this and this Laboratory is receiving an increasing number of specimens showing early stages of malignancy. If all cases of cancer could be diagnosed and treated while the condition remained localized the appalling mortality of those in the prime of life would be greatly reduced.

During the past year, 1,536 of the specimens examined were of neoplastic character. In an additional 120 cases where a clinical diagnosis of malignancy had been made, we were able to rule out this possibility. These specimens of tumors and suspected tumors comprised 27.75 per cent of all those examined. In many instances specimens were received without any clinical diagnosis, so that the actual number of specimens in which malignancy was suspected is probably much greater. The ruling out of the possibility of malignancy in the 120 cases above noted is of nearly as great importance as was the determining of its presence in 23 cases where clinically the lesion was thought to be benign. In the former cases it not only removed the dread of cancer from the minds of those patients concerned, but also spared them from serious, crippling and expensive operations. In the latter cases it promoted the recognition of cancer before it had become widespread. Some of the conditions mistaken for malignancy were Chronic Cervicitis, Endometrial Hyperplasia, Chronic Mastitis, Fat Necrosis, Chronic Ulcers, Epidermoid Cysts, Tuberculosis, and Chronic Inflammation. We regard such specimens as indicating an alertness on the part of the general practitioner to recognize cancer in its earliest stages with a view to undertaking treatment before the full blown stigmata of malignancy have developed and while there is good hope for a cure. There were 23 cases in which the cancerous nature of the condition had not been recognized clinically. Ten of these cases represented cancer of the breast which had been regarded clinically as chronic mastitis or as fibroma. Two cases looked upon as osteomyelitis proved to be osteogenic sarcoma, and another lesion regarded as a granuloma proved to be a melanotic sarcoma. A small lump of one week's duration removed from

the buccal mucous membrane as a mucous cyst was found to be an adenocarcinoma.

The incidence and distribution of the tumors is shown in Table I. Of the 1,536 specimens of tumor, 595 or 38.74 per cent. were malignant, and 941 or 61.26 per cent. were benign. Of the malignant tumors, 357 or 60 per cent. were in females, and 238 or 40 per cent. were in males. In females the tissues or organs most commonly affected were breast, uterus, skin and ovaries accounting for 68.34 per cent. of all malignant tumors. In males the tissues or organs most frequently involved were skin, intestine, lip and prostate, accounting for 50.83 per cent. Among some of the more interesting tumors were three cases of sarcoma of endometrial stroma, two cases of chorioepithelioma and a case of secondary carcinoma of the umbilicus. There were also cases of lymphosarcoma of intestine in a boy 9 years of age; granulosa cell tumor of ovary in a girl of 7; and osteogenic sarcoma in a boy of 12 which had been regarded clinically as osteomyelitis. In a child of 5 months we encountered a myxosarcoma of the neck which had clinically been regarded as a tuberculous lymphadenitis.

The incidence of tissues examined other than those relating to tumors is shown in Table II. Some of the more interesting of these include two cases of tuberculosis of the tongue, and one of actinomycosis of the tongue. One very interesting specimen of supposed miliary tuberculosis of the omentum in a young girl proved to be a talc granuloma, and it was subsequently learned that she had had two previous operations. Three cases of endometriosis of the abdominal wall were observed in addition to a number of cases of the same condition affecting the pelvic organs and the appendix. One case was found of death resulting in an infant from massive haemorrhage into both adrenals. The histological examination of surgical specimens has not only afforded an accurate diagnosis but in a number of instances has indicated further appropriate treatment for the individual case.

TABLE I.
SPECIMENS SHOWING TUMOUR

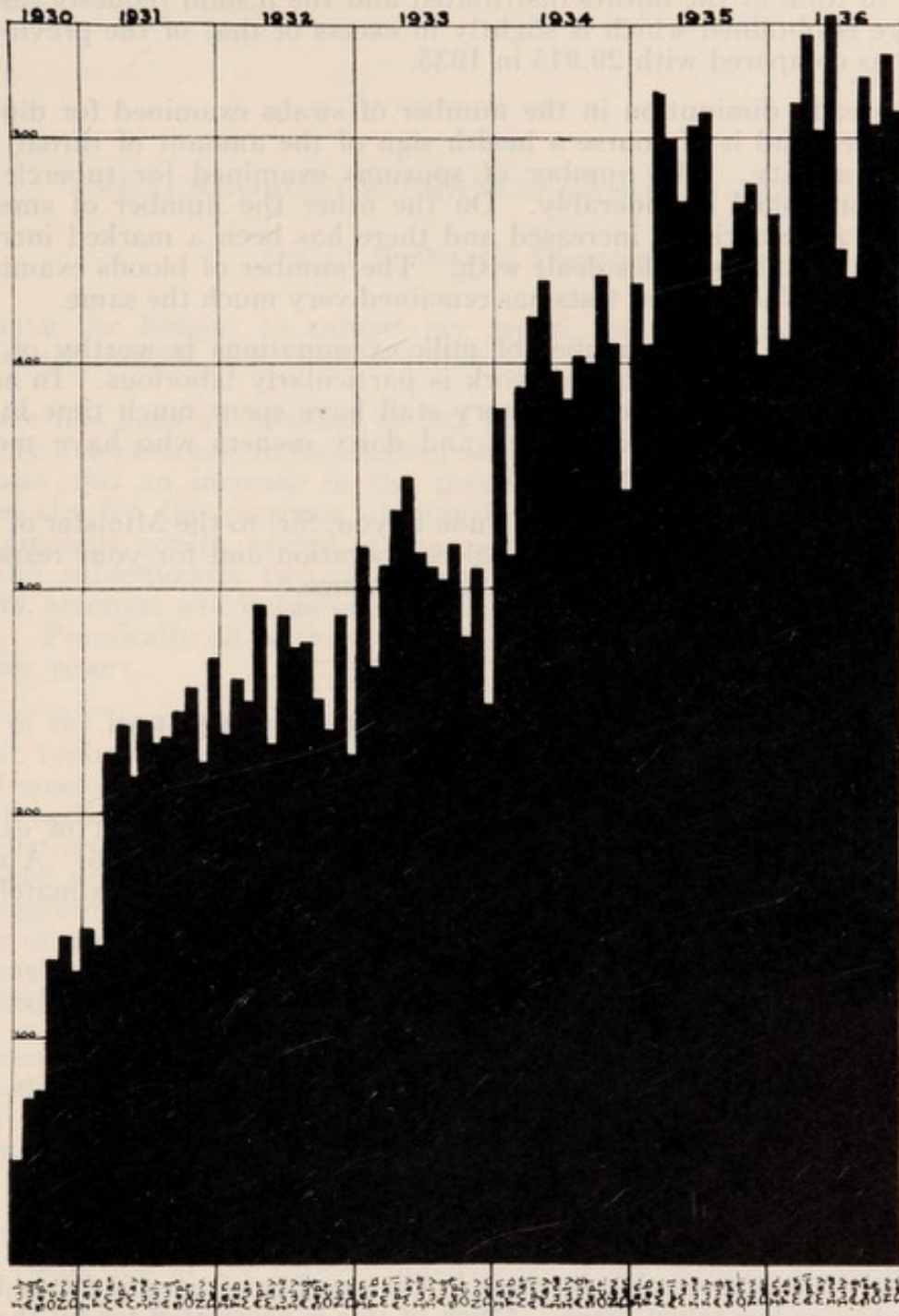
1936

	Benign		Malignant	
	Male	Female	Male	Female
Nose.....	6	8	2	2
Lip.....	3	6	26	4
Tongue.....	1	6	2	1
Mouth.....	8	14	7	2
Tonsil.....	2	1	—	—
Salivary Gland.....	—	—	6	10
Adamantinoma.....	—	—	2	—
Larynx.....	5	1	1	—
Oesophagus.....	—	—	1	—
Stomach.....	—	—	2	2
Intestine.....	7	7	27	10
Appendix.....	—	—	1	3
Gall Bladder.....	—	—	1	1
Skin.....	38	28	56	43
Naevus Type.....	9	19	4	10
Subcutaneous Tissues.....	36	46	2	4
Breast.....	—	85	—	115
Uterus.....	—	226	—	34
Cervix.....	—	90	—	36
Ovary.....	—	41	—	16
Prostate.....	49	—	12	—
Testis.....	—	—	7	—
External Genitalia.....	2	6	6	8
Kidney.....	—	—	5	1
Adrenals.....	1	—	2	—
Bladder.....	—	1	10	3
Thyroid.....	26	83	1	1
Nerve and Brain.....	2	6	4	4
Bone.....	6	5	5	4
Lymph Nodes.....	—	—	6	5
Endothelioma.....	15	30	1	2
Eye.....	—	—	2	—
Conjunctiva.....	1	—	—	—
Lung.....	—	—	2	—
Giant Cell Tumour (tendon).....	3	2	—	—
Hodgkins.....	—	—	4	—
Epulis.....	1	8	—	—
Secondary Carcinoma.....	—	—	23	23
Miscellaneous.....	—	1	8	13
	221	720	238	357

Total Benign Tumours..... 941
 Total Malignant Tumours..... 595
 Total Tumours..... 1,536

CHART I.

Division of Pathology
Number of Specimens per Month



RICHARDSON LABORATORY, QUEEN'S UNIVERSITY,
KINGSTON

PROFESSOR JAMES MILLER, M.D., Director

I beg to submit the statistics of the work done by the Kingston Branch Laboratory during the past year.

When the total number of examinations carried out and reports issued is added to total of the outfits distributed and the insulin requests responded to a figure is obtained which is slightly in excess of that of the previous year—30,326 as compared with 29,945 in 1935.

The steady diminution in the number of swabs examined for diphtheria has continued and is of course a health sign of the amount of throat trouble in the community. The number of sputums examined for tubercle bacilli has also diminished considerably. On the other the number of smears examined for gonococci has increased and there has been a marked increase in the number of milk samples dealt with. The number of bloods examined for the Widal and Wassermann tests has remained very much the same.

The increase in the number of milk examinations is worthy of special notice as this department of the work is particularly laborious. In addition to the actual tests done the laboratory staff have spent much time in giving advice to the various milk vendors and dairy owners who have met with problems in the course of their work.

I should like to express my gratitude to you, Sir, to the Minister of Health and to Dr. MacNabb for your cordial co-operation and for your response to our request for material and monetary assistance.

FORT WILLIAM BRANCH LABORATORY

DR. J. W. BELL, Director

I have the honour to submit herewith the tabular report of examinations made in the Fort William Branch Laboratory during 1936. A total of 24,137 specimens were examined, an increase of 5,479 or approximately 30% over the previous year.

The increase is distributed as follows:

Sputa for tuberculosis.....	199 or 21%
Agglutinations for the typhoid group.....	67 or 12%
Smears for gonococcus.....	733 or 52%
Milk plate counts.....	85 or 4%
Wassermann and Kahn tests	4,044 or 51%
Water for B. coli.....	177 or 6%
Blood Sugars.....	121 or 130%
Blood Ureas.....	46 or 270%
Spinal Fluids.....	157 or 116%
Other examinations.....	110

As for 1936 considerable increase in the number of examinations for the venereal disease has taken place. Much of this is accounted for by the opening up of the mining areas of the district and the submission of routine blood specimens by mine physicians. A part also of the general increase in work has come from the mining area, and it is hoped that the physicians in the unorganized territory will take still further advantage of facilities of this Laboratory.

Decrease of 220 and 40 specimens of swabs for diphtheria and faeces for typhoid respectively are to be noted, probably due to the absence of epidemics of these diseases from this area this year.

In addition to the work reported above this Laboratory has been conducting experiments in collaboration with and under the direction of Mr. M. H. McCrady of the Quebec Bureau of Hygiene on methods of water analysis. Forty-six specimens were examined involving some 3,500 separate examinations.

PETERBOROUGH BRANCH LABORATORY

DR. C. B. WAITE, Director

I have the honour to submit my report for the Branch Laboratory, Peterborough, for the year 1936, as follows:

There has been an increase of 282 specimens during the year. This is due chiefly to an increase in the number of milk and water specimens examined. There was also an increase in the tissues examined. We examined more throat swabs for the presence of diphtheria and there were six positives, mostly amongst adults, except in one case where a mother developed diphtheria and subsequently two of her children. There were more agglutination tests, amongst which was one positive for Para Typhosus B. and six for typhoid. Practically all of these were contracted in small communities or at a summer resort.

All of the bacteriological examinations of stools were carried out on convalescent typhoid patients. The physicians are apparently unaware of the value of stool examinations in the diagnosis of the enteric group of diseases. Although each summer there are many cases of gastro-enteritis, none of these in this district have been investigated bacteriologically and it is exceptional to be asked to examine a stool for the presence of dysentery organisms or to do any agglutination tests for the purpose of diagnosis of the dysentery group. In cases of gastro-enteritis in which the laboratory has been asked to help in diagnosis, it was invariably agglutinations for the enteric diseases which were asked for.

I therefore believe that it would be of some value to send out a circular letter in the spring of the year drawing the attention of the physicians to the value of stool cultures in the diagnosis of the enteric diseases and cases of gastro-enteritis.

My technician still is very much overworked and is really doing more work than he should be expected to do. This condition of affairs certainly calls for correction at the earliest opportunity. Our secretarial service is at present half-time and is taxed to the utmost. There is frequently no time for correspondence, all the time taken up with routine reports.

I wish to thank the director for his co-operation and assistance during the year.

All of which is respectfully submitted.

NORTH BAY BRANCH LABORATORY

DR. W. M. WILSON, Director

I have the honour to submit herewith a report of the examinations made during the year nineteen hundred and thirty-six in the Branch Laboratory at North Bay.

During the past year a total of eleven thousand, seven hundred and seventy-three (11,773) examinations were made. This represents an increase over nineteen hundred and thirty-five of three thousand, three hundred and sixty-two (3,362), (39.9 per cent.).

Further consideration of the figures for the year nineteen hundred and thirty-six show that this increase is made up largely by a rather general increase in all types of examinations. Part of this increase, however, is due to the fact that in the last quarter of nineteen hundred and thirty-six, Serology was established as a routine in this Branch.

In this Laboratory the Kahn and Kolmer Wassermann tests are being done on all specimens of blood and spinal fluids and the colloidal gold, colloidal mastic and globulin tests are also done on spinal fluids.

The number of swabs submitted for examinations for diphtheria bacilli shows a small increase. Only five cultures showed the presence of typical or a typical organisms. Virulence tests on all five cultures proved to be avirulent. The distribution of Toxoid appears to be an important factor in the control of diphtheria in this district. The number of specimens of sputa submitted for examination during nineteen hundred and thirty-six has a little more than doubled the number done in nineteen hundred and thirty-five. Part of this increase is doubtless due to the fact that the Department of Tuberculosis Prevention has established a clinic with headquarters in North Bay under the direction of Doctor E. R. Harris.

The number of dried bloods submitted for the agglutination test shows a small decrease while the number of whole bloods is markedly increased. We have attempted to encourage the use of whole bloods rather than dried bloods by the physicians. The response to this effort has been quite general on the part of the medical practitioner.

In the following tables I submit the difference in the number of specimens examined during nineteen hundred and thirty-five and nineteen hundred and thirty-six and the percentage changes.

EXAMINATIONS SHOWING INCREASE

	Increase No.	Percentage
Diphtheria Direct Smears.....	27	11.7%
Diphtheria Cultures.....	27	11.7%
Further cultures on diphtheria swabs.....	58	36%
Tuberculosis Smears.....	551	126%
Guinea pigs inoculated.....	6	25%
Cultures (tuberculosis).....	98	85%
Agglutinations (Whole Bloods).....	120	181.8%
Faeces.....	52	216%
Blood Cultures.....	126	200%
Gonorrhoea smears.....	587	51.7%
Spinal Fluids (bacteriological).....	11	73%
Miscellaneous specimens.....	307	85%
Water.....	144	9.9%
Dark field.....	5	250%
Blood Sugars.....	77	47.8%
N.P.N.....	49	196%
Miscellaneous Chemistry Urea Nitrogen, Van den Bergh, et cetera.....	12	17%
Outfits prepared.....	3,842	158%
Outfits distributed.....	4,266	50%
Examinations showing Decrease		
Dried Bloods.....	8	16.6%
Milks.....	70	6.2%

I wish at this time to express my appreciation of the co-operation received in this work from the members of the staff of this Laboratory and from the staff of the Central Laboratory in Toronto. I wish to especially express my gratitude to the Director of Laboratories, Doctor A. L. McNabb for all his interest and valuable assistance. This has been a great factor in the improvement which has been made this year.

SAULT STE. MARIE BRANCH LABORATORY

DR. N. F. W. GRAHAM, Director

In reviewing the work of the Laboratory for the year 1936, there is seen to be a slight decrease in the number of milk samples examined due to the fact that there are four pasteurizing plants in the City and eight fewer milk distributors. These latter ship to one pasteurizing plant. All plants now leave a bottle of milk every day of their own free will for regular check on their milk and are notified should the bacterial count rise thereby assuring control. The Local Board of Health regularly publish the count, sedimentation test and fat control.

The slight decrease in water analysis this year was due to the fact that the Sanitary Inspector was unable to cover the summer camps and tourist resorts as before. Also no night collection of samples of water were taken this year from Great Lakes vessels calling at this port.

Only one case of typhoid was found in Algoma District this year and on one throat swab showing any diphtheria, and that not in pure culture. There was one case of Tetanus in the district, no smallpox Poliomyelitis this district

has seen which took much of your Director's time for the month of September and part of October in doing spinal punctures and cell counts. Some of the cases called for drives of twenty miles into the country. Out of 54 cases residual paralysis occurred in six in the City and District. There were no deaths. Approximately 182 vials of Convalescent Sera was distributed.

Considerable time has been spent this year in blood grouping for transfusion and many times assisting with the transfusion. A large number of blood counts, haemoglobin estimations, differential bloods and some sedimentation tests. An increase is noted in pathological tissue examinations. Considerable time has gone to lecturing nurses in training school, and writing indigent Diabetic and other diets.

Out of a total of 11,805 specimens examined the following percentage increases are noted:

Blood Cultures.....	66 2/3%
Smears for Gonococcus.....	48%
Spinal Fluids.....	500%
Miscellaneous (Bact.).....	7%
Blood Sugars.....	57%
Miscellaneous (Chem.).....	12%
Tissue Examination.....	6%

Two important dairy herds were examined for the presence of Undulant Fever. Only one case was discovered in each herd.

During the year 3,457 outfits were prepared and 3,096 were distributed.

Therapeutic and Prophylactic preparations as follows were distributed:

Diphtheria Antitoxin.....	179,000 units
Diphtheria Schick Test packages.....	1
Diphtheria Toxoid sufficient for	449 persons
Tetanus Antitoxin.....	520,000 units
Scarlet Fever Antitoxin.....	494,000 units
Scarlet Fever Dick Test Pckgs.....	3
Scarlet Fever Toxin sufficient for.....	68 persons
Smallpox Vaccine.....	490 tubes
Silver Nitrate Ampoules.....	205 ampoules
Typhoid Para Typhoid Vaccine.....	13 vials
Pertussis Vaccine treatment	2 vials
Pertussis Vaccine Prophylactic	2 vials
Insulin 10cc vial 200 units.....	559 vials
Insulin 10cc vial 400 units.....	934 vials
Insulin 10cc vial 800 units.....	61 vials

INSTITUTE OF PUBLIC HEALTH, LONDON

DR. A. J. SLACK, Director

I beg to submit herewith a report of the laboratory examinations made during the year 1936 by the Branch Laboratory of the Department located in the Institute of Public Health, London. The total number of examinations is 75,207 which is practically the same as during the previous year when 75,213 examinations were made. Analysis of the figures shows no remarkable increase or decrease in any particular line of laboratory work. It is perhaps worthy of note that unavoidable absence from duty over extended periods, due to illness, depleted our staff to a greater extent than during any previous year.

We wish to express our appreciation for the aid extended by the Central Laboratory and the Division of Public Health Education in the preparation of an exhibit on "Laboratory Services to Physicians" which was shown during the annual meeting of the Ontario Medical Association.

It is also my privilege to again express my appreciation for the unfailing interest and co-operation extended to this Laboratory by Dr. MacNabb, Director of Laboratories.

OTTAWA BRANCH LABORATORY

DR. F. L. LETTS, Director

I have the honour to submit herewith our annual report of specimens examined at this Branch Laboratory in 1936.

Our total of 56,786 specimens for 1936 is only 318 more than the number for 1935. Probably the only significant increase is that of diphtheria cultures from 3,166 in 1935 to 3,716 in 1936; due chiefly to a few neglected foci in out-of-the-way places. The increase of 300 in specimens for T.B. and the decrease of 500 in those for G.C. may indicate variations in the activity of physicians rather than of disease. Examinations for the typhoid-dysentery group continue to be few in number. The points of origin of the specimens of milk and of water indicate a pretty fair check on these supplies throughout Eastern Ontario.

The preparation and distribution of diagnostic outfits and the distribution of therapeutic and prophylactic preparations still require a large proportion of our time and labor.

The wish to express our appreciation for the aid extended by the Central Laboratory and the Division of Public Health Education in the preparation of an exhibit on Laboratory Services to Physicians, which was shown during the annual meeting of the Ontario Medical Association is also our sincerest desire. It is also my privilege to again express my appreciation for the untiring interest and co-operation extended to the Laboratory by Dr. J. G. ...

OTTAWA BRANCH LABORATORY

Dr. F. L. Latta, Director

I have the honor to submit herewith our annual report of specimens examined at this Branch Laboratory in 1938.

Our total of 26,788 specimens for 1938 is only 318 more than the number for 1937. Probably the only significant increase is that of diphtheria cultures from 3,106 in 1937 to 3,710 in 1938; the chief reason for this increase is the decrease of 300 in specimens for T.B. and the decrease of 300 in those for G.C. This indicates variations in the activity of physicians rather than of disease. Examinations for the typhoid-dysentery group continue to be low in number. The points of origin of the specimens of milk and of water indicate a pretty fair check on these supplies throughout Eastern Ontario.

The preparation and distribution of diagnostic orders and the distribution of therapeutic and prophylactic preparations will require a large portion of your time and labor.

Category	Number
Specimens	26,788
Diagnostic orders	1,200
Therapeutic preparations	500
Prophylactic preparations	300
Other	100

INSTITUTE OF PUBLIC HEALTH, LONDON

Dr. A. J. Clark, Director

I have the honor to forward to you a report of the laboratory examinations conducted during the year 1938 by the Branch Laboratory of the Department of Health, Ottawa, Ontario. The total number of examinations conducted during the year was 26,788, which is a decrease of 318 from the total number of 27,106 conducted during the year 1937. The only significant increase is that of diphtheria cultures from 3,106 in 1937 to 3,710 in 1938; the chief reason for this increase is the decrease of 300 in specimens for T.B. and the decrease of 300 in those for G.C. This indicates variations in the activity of physicians rather than of disease. Examinations for the typhoid-dysentery group continue to be low in number. The points of origin of the specimens of milk and of water indicate a pretty fair check on these supplies throughout Eastern Ontario.

